ENVIRONMENTAL INVESTIGATION SERVICES

REPORT

TO

CADENCE PROPERTY GROUP PTY LTD

ON

STAGE 1/STAGE 2 ENVIRONMENTAL SITE ASSESSMENT AND PRELIMINARY SALINITY ASSESSMENT

FOR

PROPOSED WAREHOUSE DEVELOPMENT

AT

128 ANDREWS ROAD, PENRITH, NSW

30 OCTOBER 2018 **REF: E31675KRrpt Rev1**

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EXECUTIVE SUMMARY

Cadence Property Group Pty Ltd ('the client') commissioned Environmental Investigation Services (EIS) to undertake a Stage 1/Stage 2 contamination and preliminary salinity assessment for the proposed warehouse development at 128 Andrews Road, St Penrith, NSW ('the site'). The site location is shown on Figure 1. The sample locations for the assessments are shown on Figure 2.

The primary aims of the assessment were to identify any past or present potentially contaminating activities at the site, identify the potential for site contamination, and make an assessment of the soil, groundwater and surface water contamination conditions. The assessment objectives were to:

- Provide an appraisal of the past site use(s) based on a review of background information;
- Identify potential contamination sources/areas of environmental concern (AEC) and contaminants of potential concern (CoPC);
- Prepare a conceptual site model (CSM);
- Assess the soil, groundwater and surface water contamination conditions within the investigation area(s);
- Assess the risks posed by the contaminants via a Tier 1 risk assessment; and
- Assess whether the site is suitable or can be made suitable for the proposed development (from a contamination viewpoint).

The objectives, scope and findings of the salinity assessment are documented in the report attached in Appendix A.

The Stage 1/Stage 2 ESA included a review of site information and soil sampling from a total of 94 boreholes. Groundwater monitoring wells were installed in four selected boreholes. Surface water was sampled from an overland drain in the western section of the site. Preliminary sampling was undertaken from five stockpiles located in the western section of the site.

The site information identified various potential sources of contamination/AEC, including fill, historical agricultural land use, use of pesticides, hazardous building materials (i.e. asbestos containing material), soil stockpiles and off-site commercial/industrial and other properties. The site inspection identified a piece of potentially asbestos containing pipe in the bare area of the western section of the site. There were also various anthropogenic material scattered on the surface within this area.

Elevated concentrations of contaminants above the ecological site assessment criteria (SAC) were identified during the investigation. The contaminants included heavy metals and TRH F3 fraction in soil in the south-western section and western end of the site. The groundwater could not be assessed as the wells remained dry after installation. Elevated concentrations of copper and zinc were encountered above the ecological SAC in the surface water. The preliminary assessment of the soil stockpiles did not identify elevated concentrations of contaminants above the SAC, however the stockpiles will require further assessment. On this basis, EIS are of the opinion that potential risks to ecology, associated with contamination (i.e. the CoPC) within the site is present and are considered to be minor.

Due to the presence of the potential asbestos pipe on site, the likelihood of asbestos being present is possible, and this will require further consideration.

Remediation is not considered to be required. Potential risks associated with sources of contamination can be addressed via the proposed earthworks and implementation of recommendations outlined in Section 11 of this report.

Overall, EIS are of the opinion that the site can be made suitable for the proposed development outlined in Section 1.1 subject to the implementation of the recommendations outlined in Section 11.

The conclusions and recommendations should be read in conjunction with the limitations presented in the body of 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**
Data Quality Indicator	**DQI**
Data Quality Objective	**DQO**
Detailed Site Investigation	**DSI**
Ecological Investigation Level	**EIL**
Environmental Investigation Services	**EIS**
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	**HSLs**
International Organisation of Standardisation	**ISO**
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**

ABBREVIATIONS

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**
Standard Sampling Procedure	**SSP**
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

Cadence Property Group Pty Ltd ('the client') commissioned Environmental Investigation Services (EIS)[1] to undertake a preliminary Stage 1/Stage 2 Environmental Site Assessment (ESA) and a preliminary salinity assessment for the proposed warehouse development at 128 Andrews Road, Penrith ('the site'). The site location is shown on Figure 1 and the assessment was confined to the site boundaries as shown on Figure 2.

This report has been prepared to support the lodgement of a Development Application (DA) with Penrith City Council.

A geotechnical investigation was undertaken in conjunction with this assessment by JK Geotechnics[2]. The results of the investigation are presented in a separate report (Ref. 31675LBrpt, dated 17 August 2018[3]). This report should be read in conjunction with the JK report.

The objectives, scope and findings of the salinity assessment are documented in the report attached in Appendix A.

1.1 Proposed Development Details

The proposed development includes a 50,000m^2 warehouse to be constructed within the 85,000m^2 site. The warehouse will be accessed by pavements adjacent to the warehouse, and by a driveway constructed off Andrews Road to the east and north-east of the site. It is understood that the development will be constructed at about the existing surface level, with some cut and fill earthworks of approximately 1.5m.

1.2 Aims and Objectives

The primary aims of the assessment were to identify any past or present potentially contaminating activities at the site, identify the potential for site contamination, and make an assessment of the soil and groundwater contamination conditions. The assessment objectives were to:

- Provide an appraisal of the past site use(s) based on a review of historical records;
- Assess the current site conditions and use(s) via a site walkover inspection;
- Identify potential contamination sources/areas of environmental concern (AEC) and contaminants of potential concern (CoPC);
- Assess the soil, groundwater and surface water contamination conditions via implementation of a sampling and analysis program;
- Prepare a conceptual site model (CSM);

[1] Environmental consulting division of Jeffery &Katauskas Pty Ltd (J&K)

[2] Geotechnical consulting division of J&K

[3] Referred to as JK Geotechnics (2018 report)

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- 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;
- Assess whether the site is suitable or can be made suitable for the proposed development (from a contamination viewpoint); and
- Assess whether further intrusive investigation and/or remediation is required.

1.3 Scope of Work

The assessment was undertaken generally in accordance with an EIS proposal (Ref: EP47587KR) of 10 July 2018 and written acceptance from the client of 16 July 2018, and EIS proposal (Ref: EP47829KR) of 13 August 2018 and written acceptance from the client of 14 August 2018. The scope for the salinity assessment was accepted by the client via email of 21 August 2018.

The scope of work included the following:

- Review of site information, including background and site history information from a Lotsearch Pty Ltd *Environmental Risk and Planning Report* and other sources;
- Preparation of a 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)[4], other guidelines made under or with regards to the Contaminated Land Management Act (1997)[5] and State Environmental Planning Policy No.55 – Remediation of Land (1998)[6]. A list of reference documents/guidelines is included in the appendices.

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

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

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

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2 SITE INFORMATION

2.1 Background

2.1.1 Environmental Site Assessment

Information obtained from the council records and Section 10.7 certificate indicates that previous environmental investigations have been undertaken at the site potentially between 1998 and 2000. The following reports prepared for the site have been referenced within the council records:

- Remediation Plan. AGC Woodward – Clyde Pty Ltd. Ref: 3405/0004. Dated 17 September 1998; and
- Final Report. Validation Report for the Remediation of Affected Fill Materials, Crane Group Vacant Property, Castlereagh Road, Penrith. AGV Woodward – Clyde Pty Limited (Council reference DA 985916). Dated 24 February 2000.

EIS reviewed the February 2000 report available at the council. The report references numerous other documents including the following:

- AGC Woodward – Clyde Pty Limited (1993a). Environmental Site Assessment of GE Crane Holdings Pty Limited, Castlereagh Road, Penrith, New South Wales;
- AGC Woodward – Clyde Pty Limited (1993b). Results of Soil and Surface Water Sampling Program – Crane Enfield Metals Pty Limited, Vacant Property, Castlereagh Road, Penrith, New South Wales. Report prepared for Corrs Chambers Westgarth, December 1993;
- AGC Woodward – Clyde Pty Limited (1993c). Results of Preliminary Soil Sampling and Groundwater Bore Installation Program – Crane Enfield Metals Pty Limited, Vacant Property, Castlereagh Road, Penrith, New South Wales. Report prepared for Corrs Chambers Westgarth, December 1993;
- AGC Woodward – Clyde Pty Limited (July 1998). Environmental Management Plan, The Crane Group Vacant Site, Castlereagh Road, Penrith;
- AGC Woodward – Clyde Pty Limited (September 1998), Development Application for the Remediation of Affected Fill Material, Crane Group Vacant Property, Castlereagh Road, Penrith, New South Wales;
- AGC Woodward – Clyde Pty Limited (October 1998), Contract Documents for the Remediation of Affected Fill Material, Crane Group Vacant Property, Castlereagh Road, Penrith, New South Wales;
- Penrith City Council (24 November 1999). Notice of Consent for Development Application – DA 985916, Soil Remediation, Lot 2 DP 7471523, No. 128 Andrews Road, Penrith; and
- NSW EPA (22 December 1998). Consent to Dispose of Contaminated Soils, Reference 23862 76 1 S.

From our review of the February 2000 report, it is understood that the area being referred to as 'the site' in that report was the western end of the site applicable to the EIS Stage1/Stage 2 ESA. This included the western area to the west of the current overland drain, the drainage line being the eastern site boundary (Lot 2 DP787827 of approximately 2ha at the time). The current overland drain was an irregular shaped marsh/swamp at the time.

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Prior to the remediation the site was covered by fill material including foundry sands from the casting of plumbing fittings. Stormwater run-off from sealed areas of the main Crane Enfield Metals site (to the south) was directed to underground drains which reportedly drained via a stormwater collection tank, to a treatment facility which discharged to a licensed irrigation point in the marsh.

Prior to remediation, the site fill was assessed to contain elevated concentrations of total and leachable inorganics, principally copper, lead, zinc and nickel. Pockets of petroleum hydrocarbon contamination were also noted. No material was identified to be reusable on site. Any surface water or groundwater assessment results were not included in the February 2000 report.

The remediation area comprised the south-western section of the site (which is the south-western end of the current subject site), which made up an area of approximately 2,000m^2. The remediation included excavation of contaminated fill, treating it on-site using a stabilisation process and disposing off-site, followed by reinstatement of the remediation area. These works were conducted between December 1998 and April 1999. A total of 4,848m^3 of waste material was excavated and an additional 1,000 tons of demolition waste, including concrete slabs, screened from the material excavated. No organic contaminated materials requiring treatment (bioremediation/land farming) prior to off-site disposal, were encountered. The stabilising of the waste material included the use of Portland cement at a rate of 10% w/w to reduce the leachabilities of the metal contaminants.

Following validation, approximately 200 tonnes of validated clean grey claystone material was imported and placed to regrade the final surface level. Following regrading, the site surface was topsoiled and seeded using unhulled couch seeds.

2.2 Site Identification

Table 2-1: Site Identification

Current Site Owner:	Tradelink Pty Limited and Vicary Pty Limited.
Site Address:	128 Andrews Road, Penrith.
Lot & Deposited Plan:	Part Lot 20 DP1216618, Lot 21 DP1216618, Part Lot 3 DP747153 and Part Lot 13 DP217705.
Current Land Use:	Vacant land.
Proposed Land Use:	Warehouse (industrial) and associated pavement and driveway.
Local Government Authority:	Penrith City Council.
Current Zoning:	IN1 – General Industrial.
Site Area (m^2):	Approximately 85,000.

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RL (AHD in m) (approx.):	20 - 25
Geographical Location (decimal degrees) (approx.):	Latitude: -33.735836 Longitude:150.699299
Site Location Plan:	Figure 1
Sample Location Plan:	Figure 2

2.3 Site Location and Regional Setting

The site is located in a predominantly commercial/industrial area of Penrith and is bound by commercial/industrial properties to the north, west and south and by vacant land and an industrial property to the east. The site is located approximately 500m to the south and south-east of the Penrith Lakes.

2.4 Topography

The site is located in relatively level alluvial topography associated with the Nepean River floodplain. The site is relatively level.

2.5 Site Inspection

A walkover inspection of the site was undertaken by EIS on 25 July 2018 and during the site works between 20 and 24 August 2018. Selected site photographs obtained during the inspections are attached in the appendices.

A summary of the other inspection findings are outlined in the following subsections:

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

At the time of the inspections, the site was a vacant land.

2.5.2 Buildings, Structures and Roads

There were no buildings, structures or roads observed on site.

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2.5.3 Boundary Conditions, Soil Stability and Erosion

The site had metal fencing on much of the northern boundary and part of the western and southern boundaries. Access to the site was via a locked gate at the northern boundary or via the un-fenced vacant block of land off Lambridge Place to the north-west of the site.

At the western end of the site was a predominantly bare area showing some exposed soils. Signs of major erosion were not evident. An overland swale was also located in this area and the soils around the swale and at the base of it appeared to be predominantly silty and soft, potentially due to the ongoing contact with water within the swale.

2.5.4 Visible or Olfactory Indicators of Contamination

No staining or odours were noted on the site surfaces. No indicators of underground storage tanks (USTS) or above ground storage tanks (ASTs) were observed.

A piece of fibre cement pipe (potentially asbestos containing material - ACM) was observed at the ground surface within the bare area (in close proximity of BH181) in the western end of the site.

2.5.5 Presence of Drums/Chemicals, Waste and Fill Material

Up to five soil stockpiles were observed in the western end of the site, within the bare area. These have been numbered SP1 to SP5 for reference for the purposes of this investigation (Refer to Figure 2). A concrete pipe was observed within one of these stockpiles (SP5). These stockpiles were overgrown with weed and grass and some of them contained anthropogenic material i.e. concrete and brick fragments and ash.

There may be areas of fill within the site, particularly in the western section. Anthropogenic material such as solidified melted glass material, timber sheeting, metal stakes, plastic pipe pieces and other objects were observed scattered within the fill as well as on the surface, within the bare area in the western section of the site.

Some shipping containers with equipment in them, an oil drum store and a shed containing sodium hydroxide and potentially other chemicals were noted to the immediate north of the site, within the adjacent glass bottle manufacturing plant.

2.5.6 Drainage and Services

An overflow swale (overland drain) sloping towards stormwater pipes at the southern boundary was located at the western end of the site. This drain appeared to be connected to stormwater pipes located at the western boundary as well. Water was observed ponding within a locally deeper excavation adjacent to the pipes and in other low points along the swale.

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A stormwater drain and culvert was also observed to the immediate north of the northern boundary of the site.

Surface water flows and run off are likely to migrate via these drains and eventually into the stormwater systems in place.

2.5.7 Sensitive Environments

The overland drain on site could be considered a sensitive environment in a similar way as a wetland, pond or creek. Some of the natural vegetation on site could also be considered part of the sensitive environment.

2.5.8 Landscaped Areas and Visible Signs of Plant Stress

The site was predominantly overgrown with long grass, weeds and plants as tall as 0.5m-1.0m high, except within the bare area in the western end. A number of small trees were scattered across the site.

The vegetation appeared to be very dry and brown, possibly due to the lack of rainfall over recent months.

2.6 Surrounding Land Use

During the site inspection, EIS observed the following landuses in the immediate surrounds:

- North – Part of a vacant land, health and fitness club and spa, nutrition centre, a mechanical company, a printing company, some vacant warehouses/buildings, an online machinery and hardware specialist, a company named Dakota Industries – Aus Pits, a glass manufacturing premise and Andrews Road, with other commercial/industrial properties, some of the lakes of the Penrith Lakes Scheme and residential properties beyond;
- South – Part of an aluminium products manufacturer and supplier, part of a metals pipes and fittings manufacturing and supplying company and vacant land, with Penrith Sewage Treatment Works and other industrial properties beyond;
- East – A glass recycling company and vacant land, with a recreational park and vacant land, including a wetland beyond; and
- West – A timber wholesale operations and a tyre servicing company (a sign on the tyre servicing premise indicated that this was the location of former Mulgoa Quarries business). The Mulgoa Quarries business was a civil engineering projects, contaminated site remediation, bulk earthworks, contract quarrying, bulk haulage and disposal company. Castlereagh Road was located beyond these properties to the west.

Two petrol service stations were also observed to be located over 300m to the west and north-west of the site.

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EIS are of the opinion that some of the adjacent commercial/industrial and manufacturing properties are potential contamination sources due to their industrial nature.

2.7 Underground Services

The 'Dial Before You Dig' (DBYD) plans were reviewed for the assessment 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.

The DBYD plans indicated that a sewer rising main extends through the eastern end of the site in a north-south direction, and then turns towards the south-west. The rising main also extends through the neighbouring properties to the south and south-west which are the metal pipes and fittings company, the sewage treatment plant and potentially other commercial/industrial properties. Considering the geological conditions (discussed in Section 3.1), there is a potential for the sewer trench to act as a preferential pathway for contamination migration (i.e. through relatively permeable backfill). Copies of the relevant plans are attached in the appendices.

2.8 Section 149 Planning Certificate

The s149 (2 and 5) planning certificates were reviewed for the assessment. Copies of the certificates are attached in the appendices. A summary of the relevant information is outlined below:

- Environmental contamination assessments have been undertaken at the site previously and the site validation report is available with the council;
- The site is not located within an acid sulfate soil (ASS) risk area;
- The site is not located in a heritage conservation area;
- The land contains an environmentally sensitive area;
- The land is affected by the Asbestos Policy adopted by council;
- The land may be covered within the Bush Fire Risk Management Plan adopted by the council. All of the land is identified as bush fire prone land;
- The land is subject to Penrith Development Control Plan 2014 Section C3.5 Flood Planning and Section C2 Preservation of Trees and Vegetation and other relevant information; and
- The Threatened Species Conservation Act 1995 may be applied to this land.

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3 GEOLOGY AND HYDROGEOLOGY

3.1 Regional Geology

Regional geological information presented in the Lotsearch report (attached in the appendices) indicated that the site is underlain by Cranebrook Formation, which typically consists of gravel, sand, silt and clay.

3.2 Acid Sulfate Soil (ASS) Risk and Planning

The site is not located in an ASS risk area according to the risk maps prepared by the Department of Land and Water Conservation.

3.3 Hydrogeology

Hydrogeological information presented in the Lotsearch report (attached in the appendices) indicated that the regional aquifer on-site and in the areas immediately surrounding the site includes porous, extensive aquifers of high productivity. There were a total of 144 registered bores within the report buffer of 2,000m. In summary:

- The nearest registered bore was located approximately 12m from the site. This was utilised for monitoring purposes. This appeared to be part of a number of wells located in the aluminium products manufacturing and supplying and the metals pipes and fittings manufacturing and supplying industrial premise located to the immediate south and south-west of the site;
- The majority of the bores were registered for monitoring purposes;
- There were three registered bores located over 170m to the west and south-west of the site, installed for groundwater remediation purposes. These appeared to be located within the aluminium products manufacturing and supplying and the metals pipes and fittings manufacturing and supplying industrial premise located to the immediate south and south-west of the site;
- There was one nearby bore (i.e. within 500m) registered for general use, one for domestic use and two for irrigation uses. These were located either north or north-west of the site; and
- The drillers log information from the closest registered bores typically identified fill and/or clay and/or gravels and cobbles and/or sand and silt and basalt, granite and granodiorite boulders to depths of 13.0-14.7m, underlain by shale and sandstone bedrock. Standing water levels (SWLs) in the nearest bores ranged from 6.0m below ground level (BGL) to 8.47mBGL.

The information reviewed for this assessment indicated that the subsurface conditions at the site are expected to consist of moderate to high permeability (alluvial) soils overlying relatively deep bedrock. Abstraction and use of groundwater at the site or in the immediate surrounds may be viable under these conditions, however the use of groundwater is not proposed as part of the development. There is reticulated water supply in the area and use of groundwater as a drinking water resource is unlikely.

Considering the local topography and surrounding land features, EIS would generally expect groundwater to flow towards the south-west.

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3.4 Receiving Water Bodies

The site location and regional topography indicates that excess surface water flows have the potential to enter the swale or overland drain located in the western section of the site. Surface and stormwater flows also enter or migrate via this drain from off-site location to the south and west as pipe outlets were observed at the southern and western site boundaries in the alignment of the drain. This water body/feature is a potential receptor.

The site is also located to the west of Kingswood Park Wetland. The wetland is an environmentally sensitive area.

The closest surface water bodies are the Penrith Lakes located approximately 500m to the north and north-west of the site. Another surface water body is Boundary Creek located approximately 600m to the south of the site. The Boundary Creek is a tributary of Nepean River which is located approximately 1.0km west of the site. These are considered to be potential receptors.

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4 SITE HISTORY INFORMATION

4.1 Review of Historical Aerial Photographs

Historical maps and aerial photographs were included in the Lotsearch report (attached in the appendices). EIS has reviewed the maps and photographs and summarised relevant information in the following table:

Table 4-1: Summary of Historical Aerial Photographs

Year	Details
1942 (Historical Map)	The site appeared to be within vacant vegetated land. A rifle range and a motor car/motor cycle driving track known as Penrith Speedway were located to the south of the site.
1943	A partial image was available for the 1943 aerial photograph. Most of the site appeared to be vacant and appeared to be used as a market garden or for crop farming. Ploughing furrows were visible in this area. A creek or drainage channel was running in a north-south direction in the western end of the site (in approximately the same location of the current (2018) overland drain observed at the site). The surrounds appeared similar to the site and were most likely used for grazing and/or market garden purposes. Some buildings and structures were located to the west of the site and were most likely to be farmhouses and barns etc. Some buildings with two small circular structures and two other larger structures were located to the south of the site. This was at the location of the current (2018) Penrith Sewage Treatment Plant.
1956	The site appeared to be vacant and grassed, possibly used for grazing purposes and/or used as a market garden or for crop farming. Ploughing furrows were visible over most of the site. The creek or drainage channel as seen in the 1943 photograph was still visible in the western end of the site. Part of this channel was also potentially used as a stock dam. The surrounds appeared similar to the site and were most likely used for grazing and/or market garden and crop farming purposes. Some buildings appeared to have been built to the immediate south of the site, in close proximity of the drainage channel on-site. Other buildings, most likely to be farmhouses and associated structures, dirt roadways and tracks were visible to the west, north-west and north of the site. An oval feature on the ground was visible to the west of the site. Additional structures appeared to have been built to the structure with the circular features located to the south of the site (sewage treatment plant). A creek, drainage or marshy area was located to the south and east of this structure with the circular features.
1961	A dirt roadway or track was visible in the north-western section of the site. A road appeared to have been developed to the north of the site and an oval feature was noted on the ground to the north of the road. This road was at the location of the current (2018) Andrews Road.

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Year	Details
1965	The alignment of the dirt roadway or track as seen in the 1961 photograph, in the north-western section of the site, appeared to have been shifted to the further north-west end of the site and appeared to extend along the northern boundary to the east. Some objects, potentially a shed and associated objects were visible in close proximity of this dirt track in the north-western end of the site. Some objects were also visible at the southern boundary adjacent to the creek or drainage channel. A large warehouse building had been built to the south-west of the site. Some other warehouse and other buildings were built in place of some of the farmhouses or farming land to the west and north-west of the site. The oval feature located to the west of the site, as had been seen in the earlier photographs, was no longer visible. Some dirt driveways or tracks appeared to have been developed off the main road to the north of the site. The oval feature on the ground located to the north of the site, as seen in the 1961 photograph, appeared to have been widened. The drainage or marshy area located to the south and east of the site appeared to be more prominent in this photograph.
1970	No significant changes were noted on site, however the site was potentially no longer used as a farming land. Some developments appeared to have occurred in the surrounds, including a warehouse building and a small building built to the south-west, a small building located to the north-west extended to the south, construction of a large industrial complex underway to the immediate north and another larger circular structure and associated structures added to the structure with the circular features (sewage treatment plant) to the south. This structure appeared to be connected to a drainage channel or feature to the north-east of it and a dirt track extended from this structure to the east of it with a shed or building located at the very end of this dirt track.
1982	Minor earthworks may have been undertaken at the site. Significant changes had occurred in the surrounds. Additional warehouse buildings and industrial premises had been built to the south-west, west, north-west, north and north-east of the site, with associated asphalt paved areas in some of the developments. The large industrial complex that was observed to be undergoing construction in the 1970 photograph to the immediate north of the site, appeared to have been developed. Further extension of the structure with the circular features (sewage treatment plant) located to the south of the site appeared to have occurred to the south-east and east of it. The site surrounds were potentially no longer used for market gardens or crop farming purposes.
1991	There were no significant changes noted at the site. Further industrial developments appeared to have occurred to the south, south-west, north-west and north of the site. A new roadway was also developed to the north-west of the site.

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Year	Details
	The area with the circular features to the south of the site (sewage treatment plant) appeared to have been developed further to the south.
2002	The site appeared to be grass covered with some trees and scattered vegetation. Additional developments appeared to have occurred in the site surrounds, except for the area to the east. The area with the circular features (sewage treatment plant) to the south of the site appeared to have been further developed to the south and south-west. The road to the north of the site (Andrews Road) was further developed. The large oval feature located to the north of Andrews Road, as seen in the earlier photographs, was no longer visible.
2009	The site appeared similar to the previous photograph. Further developments appeared to have occurred to the south, north-west and north of the site. An industrial building complex located to the west of the site was demolished. A new road had been developed off Andrews Road to the north of the site, which was the current (2018) Lambridge Place. The area with the circular features (sewage treatment plant) to the south of the site appeared to have been further developed in the south-eastern section. One of the lakes of the current (2018) Penrith Lakes Scheme was evident to the north of the site and this area also included disturbed ground.
2016	The site appeared similar to the previous photograph. Some new development was evident to the immediate north-west of the site. Further developments had been undertaken to the north-west of the site. The land to the further north and north-west of the site appeared to have undergone earthworks and new roads were being developed.

4.2 Review of Historical Land Title Records

Historical land title records were reviewed for the assessment. The record search was undertaken by Advance Legal Searchers Pty Ltd. Copies of the title records are attached in the appendices. The title records indicate the following:

- The site was owned by various farmers from 1889 to 1961 and was acquired by a retired timber merchant in 1961;
- The site was owned by G.E. Crane and Sons Limited from 1961 onwards. The name of the company was changed to Crane Distribution Limited in 2008 and eventually changed to Tradelink Pty Limited in 2017; and
- A small strip of land at the north-western boundary was under ownership by Vicary Pty Limited in 2017.

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The historical land title records identified farming land use which could have resulted in contamination. It is unknown whether any activities were undertaken on site under the ownership of the timber merchant and the business entities from 1961 onwards.

4.3 Review of Council Records

Council records were sourced under an informal access to information request and were reviewed for the assessment. The council records indicate the following:

- A development application (DA) (DA 970166) was granted in August 1997 to build an aluminium billet plant at the site (based on the aerial photographs it is likely this development did not proceed);
- Soil remediation was undertaken at the site (within the south-western end of the current subject site) after November 1998 under DA 985916. This was in accordance with a Remediation Plan prepared by AGC Woodward – Clyde Pty Ltd (Ref: 3405/0004, dated 17 September 1998);
- A DA (DA 13/1174) was applied for an industrial development which would include construction of a warehouse/factory building, storage yard, tower and offices associated with a Plastic Manufacturing Facility, including drainage infrastructure, car parking, driveway access and landscaping works in October 2013 (based on the aerial photographs it is likely this development did not proceed);
- A DA (DA 13/1480) was granted for Riparian Landscaping Works (Nominated Integrated Development) at the site in August 2014. It is unknown whether the works were undertaken;
- A DA (DA13/1378 and DA13/1378.01) was granted under Section 96 Modification to an Approved Torrens Title Subdivision to enable driveway construction and drainage works in August 2014. This included swapping part of the land within the site with the adjacent 13-15 Lambridge Place and 16-19 Lambridge Place and boundary adjustment of the site with some of the adjacent lots; and
- The land (Lot 21) appeared to have been surveyed in December 2014 and the landowner signed the Terms of Restrictions on the use of land in February 2016 and May 2017, as the area was identified as the flood flow conveyance corridor for the 0.5% Annual Exceedance Probability Flood event as shown in plans by Worley Parsons, entitled “Figure A4 – Predicted Flood Levels at the Peak of the 200-year Recurrence Flood for Post-Developed Site Conditions’’, reference 301015-03461-IPLEX Development FIA. The restrictions on the use of land included the land not to be used for the permanent storage of goods, plant or machinery or other items likely to obstruct the free flow of flood waters, not to erect any structures in the area and not to have the surface level of the land altered.

4.4 SafeWork NSW Records

SafeWork NSW records were reviewed for the assessment. Copies of relevant documents are attached in the appendices. The search did not identify any licences to store dangerous goods including USTs, ASTs or chemicals at the site.

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4.5 NSW EPA Records

The Lotsearch report (attached in the appendices) included information from the NSW EPA databases for the following:

- 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)[7]; and
- Licensed activities under the Protection of the Environment Operations Act (1997)[8].

The search included the site area and surrounding areas in the report buffer of 1,000m. The search indicated the following:

- There were no records for the site under Section 58 of the CLM Act 1997. There was a record for a property in the report buffer for Crane Enfield Metals located to the immediate south-west of the site (adjoining part of the southern site boundary);
- The site has not been notified with regards to the Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997. There were seven notified properties in the report buffer. One of these was for Crane Enfield Metals (metal industry) located to the immediate south and south-west of the site and another was for Mirvac Industrial Site located to the immediate west of the site. There were two other notified properties within 300m of the site namely Caltex Service Station located to the west and 7-Eleven (former Mobil Service Station) Service Station located to the north-west. The other notified properties were service stations and a petroleum depot and were located more than 500m from the site;
- There were no records for licenced activities at the site under the POEO Act 1997, except for surrendered licence for application of herbicides along waterways. Current and historical licenses were identified for several properties within the report buffer, including the application of herbicides along waterways, ceramic waste generation, glass production (container), recovery of general waste and waste storage of other types of waste, wood preservation, metal processing, metal waste generation, sewage treatment processing by large plants, chemical production waste generation, pharmaceutical and veterinary products production, crushing, grinding or separating, other land based extraction, concrete works, hazardous, industrial or group A waste generation or storage, container reconditioning and non-thermal treatment of hazardous and other waste, and petroleum products and fuel production. Some of these activities are/were undertaken within properties located immediately adjacent of the site or within relatively close proximity of the site and may pose a contamination risk to the site.

4.5.1 Additional NSW EPA Records Information

The Crane Enfield Metals property located to the immediate south and south-west of the site is a remediation site, declared under the Contaminated Land Management Act 1997. The soil and

[7] 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)

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

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groundwater at that property were found to be contaminated with a range of volatile chlorinated hydrocarbons (VHCs) including trichloroethylene (TCE) and its breakdown products. The information indicates that the contaminated groundwater has migrated from the Crane Enfield Metals property onto the adjacent property located to the south of it (Lot 11 DP518287). The contaminant plume is (or was at the time of those investigations) approximately 800m – 1000m in length and discharges through a permeable aquifer into the Nepean River, located to the west, and into a stormwater pipe which intercepts groundwater and discharges into the river.

4.6 Additional Lotsearch Information

EIS have reviewed additional information contained within the Lotsearch report and note the following:

- There were no local or state heritage items at the site. There were a number of local heritage items in the immediate surrounds i.e. Victorian house, Edwardian Cottage, Bennetts Wagons and The Lodge to name a few. There were two state heritage items in the immediate surrounds namely Craithes house and Torin Building;
- The site is within moderate to high salinity potential or risk;
- The site is within the land application of Penrith Local Environmental Plan 2010 (Amendment No. 12, dated 11 August 2017);
- The site is within bushfire prone land; and
- There were no significant ecological constraints at the site.

4.7 Summary of Site History Information

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

Table 4-2: Summary of Historical Land Uses and Activities

Year(s)	Potential Land Use / Activities
Pre-1961	Agricultural (grazing and/or farmland)
1961-Present	Vacant land. Remediation of fill soils had been undertaken in the western end of the site between 1998 and 2000. The contaminated fill in the south-western end had been excavated, treated on-site and then disposed off-site. The remediated area was then reinstated with imported fill and grassed.

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4.8 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. EIS have relied upon the Lotsearch report and have not independently verified any information contained within. However, it is noted that the Lotsearch report is generated based on databases maintained by various government agencies and is expected to be reliable.

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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 Section10.

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. The historical information indicates that the south-western end of the site had been remediated previously and contaminated fill had been present on site. Fill was also imported onto site post remediation.	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.
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 any structures. Irrigation pipes made from asbestos cement may also be associated with this AEC.	Heavy metals, TRH, PAHs, OCPs, PCBs and asbestos EIS note that pesticides 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 around the site.	Heavy metals and OCPs
Hazardous Building Material – Hazardous building materials may be present as a result of fly tipping or importation if impacted fill or any other activities. These materials may also be present in the existing anthropogenic material scattered in the bare area of the western end of	Asbestos, lead and PCBs

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Source / AEC	CoPC
the site. A potential ACM pipe was also observed on the surface in the bare area in the western end of the site.	
Soil Stockpiles –Up to five soil stockpiles (SP1 – SP5) were located in the western section of the site. A concrete pipe was observed within one of these stockpiles. The origin of these soil stockpiles is unknown. These stockpiles may contain contaminated fill and/or waste material.	Heavy metals, TRH, BTEX, PAHs, OCPs, OPPS, PCBs and asbestos
Off-site commercial/industrial and other properties – Various industrial premises are located immediately adjacent to the site i.e. the metal processing business(es) to the south and south-west, wood preservation business to the west and the glass container and bottles production company to the north, to name a few. The groundwater bore information indicates that the groundwater is/was being remediated within the metal processing business(es) located to the immediate south and south-west of the site. The Penrith Sewage Treatment Plant and various other industrial premises were also located within 500m of the site. These are considered to be potential sources of contamination.	Heavy metals, TRH, BTEX, PAHs and volatile organic compounds (VOCs), ammonia

EIS 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);

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	• 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 – 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) within unpaved areas; • Soil stockpiles – 'top-down' and spills (e.g. leaching from the stockpiled material in unpaved areas and placement of potential contaminated material or waste on the ground); • Off-site land uses– 'top-down', spill or sub-surface release. Impacts to the site could occur via migration of contaminated groundwater or surface water.
Affected media	Soil/soil vapour and groundwater have been identified as potentially affected media. The surface water at the site, within the overland drain, has also been identified as potentially affected media.
Receptor identification	Human receptors include site occupants/users (including adults and children), construction workers and intrusive maintenance workers. Off-site human receptors include adjacent land users, and groundwater users. Ecological receptors include terrestrial organisms and plants within unpaved areas (including any proposed landscaped areas), and freshwater ecology in the overland drain on site and the off-site Penrith Lakes and Boundary 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, naphthalene and BTEX). The potential for exposure would typically be associated with the construction and excavation works, and future use of the site (adults in an industrial-type exposure scenario). 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 the warehouse building. The hydrogeological connectivity between the site and the surrounding water bodies is unknown. Surface water from the site has the potential to enter these water bodies via the stormwater system.

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Potential exposure mechanisms	The following have been identified as potential exposure mechanisms for site contamination: • Vapour intrusion into the proposed 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; • Migration of groundwater off-site and into nearby water bodies, including aquatic ecosystems and those being used for recreation; • Migration of groundwater off-site into areas where groundwater is being utilised as a resource (i.e. for irrigation); and • Migration of contaminated surface water to the surrounding water bodies.
Presence of preferential pathways for contaminant movement	The sewer rising main (Refer to Section 2.7) and the associated sewer trench/trench backfill is a potential preferential pathway for contaminant migration. This could occur via groundwater/seepage if present, or via soil/vapour migration through the sewer and/or trench backfill.

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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)[9]. 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 6.1.5.2 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. Investigation data is required to assess the contamination status of 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 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.

From historical information obtained for the site it is understood that the western end of the site had been previously assessed to be contaminated and remediation activities had been undertaken at the south-western end between 1998 and 2000.

The DQOs were developed by the author of this report and checked by the reviewer. Both the author and reviewer were joint decision-makers in relation to Step 2 of the DQO process.

6.1.2 Step 2 - Identify the Decisions of the Study

The objectives of the assessment 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?

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

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- 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;
- Sampling of soil, groundwater and surface water. Soil vapour was not included in the investigation plan as potential vapour risks were initially to be assessed qualitatively based on the soil and groundwater data;
- 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, fibre cement , groundwater and surface water 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 will be confined to the site boundaries as shown in Figure 2 (spatial boundary). The sampling was completed on 26 July 2018 and between 20 August 2018 and 24 August 2018 (temporal boundary). The assessment of potential risk to adjacent land users has been made based on data collected within the site boundary.

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.

For this assessment, the individual results have been assessed as either above or below the SAC. Statistical evaluation of the dataset via calculation of mean values and/or 95% upper confidence limit (UCL) values has not been undertaken.

6.1.5.2 Field and Laboratory QA/QC

Field QA/QC included analysis of inter-laboratory duplicates, intra-laboratory duplicates, 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.

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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, EIS 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 assessment, 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. The null hypothesis has been adopted for this assessment.

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 assessment objectives. Adjustment of the assessment 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.

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6.2 Soil Sampling Plan and Methodology

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

Table 6-1: Soil Sampling Plan and Methodology

Aspect	Input
Sampling Density	Samples were obtained from a combined (Stage 1 and Stage 2 ESAs) 94 locations as shown on the attached Figure 2. This number of locations met the minimum sampling density, as outlined in the NSW EPA Contaminated Sites Sampling Design Guidelines (1995)[10]. The volumes of the stockpiles at the western section of the site were estimated to be as follows: - SP1 approximately 80m^3; - SP2 approximately 800m^3; - SP3 approximately 1,625m^3; - SP4 approximately 375m^3; and - SP5 approximately 540m^3. Two samples were obtained from each of the stockpiles. This did not meet the minimum stockpile sampling density recommended in NEPM 2013, as the samples were collected for a preliminary screening for contamination in the stockpiles.
Sampling Plan	The sampling locations were generally placed on a systematic plan with a grid spacing of approximately 45m between sampling locations. A systematic plan was considered suitable to identify hotspots to a 95% confidence level. One of the sample locations (BH103) was placed within the proposed driveway location in the north-eastern section of the site. Some other boreholes were placed to assess the soils in close proximity of the overland drain and for site coverage within the western end and may not be within the grid spacing. The samples from the stockpiles were obtained from each side of the stockpile for coverage for the preliminary screening purpose.
Set-out and Sampling Equipment	Sampling locations were set out using a hand held GPS unit (with an accuracy of ±2m). In-situ sampling locations were cleared for underground services by an external contractor prior to sampling. Samples were collected using a combination of hand auger, a drill rig equipped with spiral flight augers; soil samples were obtained from a Standard Penetration Test (SPT) split-spoon sampler, or directly from the auger when conditions did not allow use of the SPT sampler and a push tube drill rig; soil samples were obtained from disposable polyethylene push tube samplers. Samples from the stockpiles were collected as grab samples or using hand tools.

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

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Aspect	Input
Sample Collection and Field QA/QC	Soil samples were obtained on 26 July 2018 and between 20 August 2018 and 24 August 2018 in accordance with the standard sampling procedure (SSP) attached in the appendices. 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. A surface sample (SS1) was collected in the south-western section of the site. The stockpile samples were collected from at least 0.1m-0.2m depth into the stockpile. 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.
Field Screening	A portable Photoionisation 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 EIS. Fill/spoil at the sampling locations was visually inspected during the works for the presence of fibre cement fragments.
Decontami-nation and Sample Preservation	Sampling personnel used disposable nitrile gloves during sampling activities. Re-usable sampling equipment was decontaminated as outlined in the SSP. Soil samples were preserved by immediate storage in an insulated sample container with ice in accordance with the SSP. On completion of the fieldwork, the samples were stored temporarily in fridges in the EIS 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 BH137 (MW137), BH166 (MW166) BH170 (MW170) and BH181 (MW181). The wells were positioned to gain a snap-shot of the groundwater conditions. Considering the topography and the location of the nearest down-gradient water body, MW137 and MW166 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 north and north-east. Wells MW170 and MW181 were

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Aspect	Input
	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. These were also positioned close to the overland drain at the site.
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 2.8m to 4.0mBGL. The relatively shallow installation depth was a result of a gravel layer that the drill rig could not penetrate. 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); • 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.
Monitoring Well Development	The monitoring wells were dry upon installation therefore were not able to be developed. The field monitoring records are attached in the appendices.
Groundwater Sampling	The monitoring wells were allowed to recharge for approximately five to seven days after installation. However groundwater samples were not obtained from the wells as they remained dry after five to seven days from installation. The field monitoring record data are attached in the appendices.

6.4 Surface Water Sampling Plan and Methodology

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

Table 6-3: Surface Water Sampling Plan and Methodology

Aspect	Input
Sampling Plan	The surface water sample location (SW1) was within the overland drain at close proximity to the pipe outlet at the southern boundary. This was to assess the quality of the water being discharged onto the site from the southern off-site property. The remaining northern and western parts of the overland drain were generally dry therefore another sample could not be obtained at the western exit point to assess the quality of water leaving the site.

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Aspect	Input
Surface Water Sampling	The sample was obtained using a disposable plastic bailer. During sampling, the following parameters were monitored using calibrated field instruments (see SSP): • pH, temperature, electrical conductivity (EC), dissolved oxygen (DO) and redox potential (Eh) using a YSI Multi-probe water quality meter. The field monitoring record and calibration data are attached in the appendices.
Decontaminant and Sample Preservation	The decontamination procedure adopted during sampling is outlined in the SSP attached in the appendices. The disposable plastic bailer was discarded after the sampling event 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 in accordance with the SSP. On completion of the fieldwork, the samples were temporarily stored in a fridge at the EIS office, before being delivered in the insulated sample container to a NATA registered laboratory for analysis under standard COC procedures.

6.5 Analytical Schedule

The analytical schedule is outlined in the following table. This includes the intra-laboratory and inter-laboratory samples analysed:

Table 6-4: Analytical Schedule

Analyte/CoPC	Fill Samples	Natural Soil Samples	Fibre Cement Material Samples	Surface Water Samples
Heavy Metals (8)	115	54	-	1
Chromium VI	3	-	-	-
TRH/BTEX	115	54	-	1
PAHs	115	54	-	1
OCPs/OPPs	99	4	-	-
PCBs	99	4	-	-
VOCs	-	-	-	1
Asbestos	99	4	1	-
pH/CEC/Clay Content (%)	4	-	-	-

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Analyte/CoPC	Fill Samples	Natural Soil Samples	Fibre Cement Material Samples	Surface Water Samples
pH/EC/hardness	-	-	-	1
Toxicity characteristic leachate procedure (TCLP) Metals and/or PAHs for waste classification purposes	6	1	-	-

6.5.1 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 6-5: Laboratory Details

Samples	Laboratory	Report Reference
All primary samples and field QA/QC samples including (intra-laboratory duplicates, trip blanks, and field rinsate samples)	Envirolab Services Pty Ltd NSW, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	197510, 197510-A, 199517 and 199517-A
Inter-laboratory duplicates	SGS Alexandria Environmental NSW NATA Accreditation Number – 2562(4354) (ISO/IEC 17025 compliance)	SE183280

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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 the soil type and the depth of the sample from the existing ground surface as the proposed building floor level is expected to be constructed approximately at the existing grade;
- Where exceedances of the HSLs were reported for hydrocarbons (TRH/BTEX and naphthalene), the soil health screening levels for direct contact presented in the CRC Care Technical Report No. 10 – Heath screening levels for hydrocarbons in soil and groundwater Part 1: Technical development document (2011)[11]were considered; and
- Asbestos was assessed on the basis of presence/absence. Asbestos HSLs were not adopted as detailed asbestos quantification was not undertaken:

7.1.2 Environment (Ecological – terrestrial ecosystems)

- Ecological Investigation Levels (EILs) and Ecological Screening Levels (ESLs) for a 'commercial/industrial' exposure scenario. These have only been applied to the top 4.1m of soil. The criteria for benzo(a)pyrene has been increased from the value presented in NEPM (2013) based on the information presented in the CRC Care Technical Report No. 39 – Risk-based management and guidance for benzo(a)pyrene (2017)[12];
- ESLs were calculated based on the soil type. EILs for selected metals were calculated using average site specific soil parameters for pH (6.3), cation exchange capacity (8 cmolc/kg) and clay content (18.3 % clay). These data were used to select the added contaminant limit (ACL) values presented in Schedule B(1) of NEPM (2013), and published ambient background concentration (ABC) presented in the document titled Trace Element Concentrations in Soils from Rural and

[11] 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*

[12] CRC Care, (2011). *Technical Report No. 39 - Risk-based management and guidance for benzo(a)pyrene*

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Urban Areas of Australia (1995)[13].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 following evaluation of human health and ecological risks, and risks to groundwater/surface water.

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)[14] as outlined in the following table:

Table 7-1: 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.
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.

[13]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.

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

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7.2 Surface Water

Surface water data was compared to groundwater assessment guidelines for preliminary screening purposes only. It was 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)[15]. Environmental values for this assessment include aquatic ecosystems, human uses, and human-health risks in non-use scenarios.

7.2.1 Human Health

- The NEPM (2013) HSLs were not applicable therefore EIS have undertaken a site specific assessment (SSA) for the Tier 1 screening of human health risks posed by volatile contaminants in the surface water. 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)[16]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)[17] 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 Australian Drinking Water Guidelines (2011)[18] were adopted as screening criteria for other non-volatile contaminants;
- The guidelines for recreational water quality (primary and secondary contact) presented in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)[19] were adopted as screening criteria to assess risks associated with incidental contact with surface water in the overland drain at the site.

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

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

[17] 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)

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

[19] ANZECC, (2000), *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.* (referred to as ANZECC 2000)

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7.2.2 Environment (Ecological - aquatic ecosystems)

- Groundwater Investigation Levels (GILs) for 95% trigger values for protection of freshwater species presented in ANZECC 2000. 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.

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8 RESULTS

8.1 Summary of Data (QA/QC) Evaluation

The data evaluation is presented in the appendices. In summary, EIS 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 table below. Reference should be made to the borehole logs attached in the appendices for further details.

Table 8-1: Summary of Subsurface Conditions

Profile	Description
Fill	Fill was encountered at the surface in all boreholes, except in BH1 to BH5, and extended to depths of approximately 0.2m to 1.1mBGL. Borehole BH189 was terminated in the fill at a depth of approximately 0.9mBGL. The fill typically comprised silt, clayey silt, silty clay and silty sand with inclusions of igneous gravel, ironstone gravel, organic material, roots, root fibres, ash, clay fines and anthropogenic material (concrete and brick fragments). No staining or odours were noted in the fill material. A fibre cement fragment (FCF) (sample MPF1) was observed in the fill material in BH189 at a depth of approximately 0.9mBGL. However, it was analysed at the laboratory and was found not to contain asbestos.
Natural Soil	Natural material was encountered at the surface or below the fill in all boreholes, except in BH189 which was terminated in the fill. The natural material typically comprised silty topsoil, silt, sandy silty gravel, clayey silt, silty sandy gravel, and silty gravel with inclusions of roots, sand, clay, cobbles, ash, ironstone gravel, sandstone gravel and river gravel. No staining or odours were noted in the natural material.
Bedrock	Bedrock was not encountered in any of the boreholes.
Groundwater	Groundwater seepage was not encountered in the boreholes during drilling. All boreholes remained dry on completion of drilling and a short time after.

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8.3 Field Screening

A summary of the field screening results are presented in the table below.

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 0.0ppm to 0.8ppm equivalent isobutylene. These results indicate minor PID detectable VOCs in some soil samples. The PID readings in the groundwater wells were 0.0ppm (MW137, MW166 and MW170) and 0.7ppm (MW181) and indicates that minor PID detectable VOCs were present in groundwater.
Surface Water Depth & Flow	The surface water was encountered as ponded water in a depression of the overland drain at the southern boundary and in some other small depressions along the drain at shallow depths. The surface water was likely to flow in a northern and then a westerly direction along the direction of the overland drain.

8.4 Soil Laboratory Results

The soil laboratory results are compared to the relevant SAC in the attached report tables. A summary of the results assessed against the SAC 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	Results Compared to SAC
Heavy Metals	The concentrations of chromium were encountered above the EILs SAC of 673 mg/kg in the following samples: - BH4 0.0-0.2 (930 mg/kg) - SS1 (1,900 mg/kg) The concentrations of copper were encountered above the EILs SAC of 308 mg/kg in the following samples: - BH4 0.0-0.2 (1,500 mg/kg) - SS1 (7,200 mg/kg) - BH179 0.0-0.2 (1,700 mg/kg) and it's duplicate sample DUPAM7 (1,900 mg/kg) - BH182 0.0-0.1 (760 mg/kg) - BH183 0.0-0.2 (6,800 mg/kg) and it's duplicate sample DUPAM16 (6,600 mg/kg) - BH185 0.0-0.2 (1,700 mg/kg) and it's duplicate sample DUPAM9 (8,400 mg/kg) - BH187 0.0-0.2 (570 mg/kg) and it's duplicate sample DUPAM14 (370 mg/kg) The concentrations of nickel were encountered above the EILs SAC of 295 mg/kg in the following sample:

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Analyte	Results Compared to SAC
	- BH4 0.0-0.2 (660 mg/kg) The concentrations of zinc were encountered above the EILs SAC of 742 mg/kg in the following samples: - SS1 (7,300 mg/kg) - BH179 0.0-0.2 (2,600 mg/kg) and it's duplicate sample DUPAM7 (2,600 mg/kg) - BH182 0.0-0.1 (800 mg/kg) - BH183 0.0-0.2 (17,000 mg/kg) and it's duplicate sample DUPAM16 (12,000 mg/kg) - BH185 0.0-0.2 (1,700 mg/kg) and it's duplicate sample DUPAM9 (7,400 mg/kg) All other heavy metals results were below the SAC.
TRH	The concentrations of TRH F3 were encountered above the EILs SAC of 2500 mg/kg in samples SS1 (7,600 mg/kg) and BH179 0.0-0.2 (2,600 mg/kg). All other TRH results were below the SAC.
BTEX	All BTEX results were below the SAC.
PAHs	All PAH results were below the SAC.
OCPs and OPPs	All OCP and OPP results were below the SAC.
PCBs	All PCB results were below the SAC.
Asbestos - Soils	All asbestos results were below the SAC (i.e. asbestos was absent in the samples analysed for the investigation).
Asbestos - FCF	The FCF (MPF1) was analysed not to contain asbestos. The large piece of fibre cement pipe was not analysed for asbestos.

8.4.2 Management Limits

The concentration of TRH F3 in sample SS1 (7,600 mg/kg) was above the management limits SAC of 5,000 mg/kg. All of the remaining TRH concentrations were below the management limits SAC.

8.4.3 Waste Classification Assessment

The laboratory results were assessed against the criteria presented in Part 1 of the Waste Classification Guidelines, as summarised previously in this report. The results are presented in the report tables attached in the appendices. A summary of the results is presented below.

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

Analyte	No. of Samples Analysed	No. of Results > CT Criteria	No. of Results > SCC Criteria	Comments
Heavy Metals	172	19	0	Chromium concentrations exceeded the CT1 criterion in two fill samples collected from BH179 (0-0.2m) and it's duplicate DUPAM7 and two silty clay samples BH4 (0.0-0.2m) and SS1. The maximum chromium concentration was 1,900mg/kg. Lead concentrations exceeded the CT1 criterion in six fill samples collected from BH179 (0-0.2m) and it's duplicate DUPAM7, BH183 (0.0-0.2m) and it's duplicate DUPAM16, BH185 (0.0-0.2m) and it's duplicate DUPAM9 and one silty clay sample SS1. The maximum lead concentration was 920mg/kg. Nickel concentrations exceeded the CT1 criterion in six fill samples collected from BH102 (0.3-0.4m), BH179 (0-0.2m) and it's duplicate DUPAM7, BH183 (0.0-0.2m) and it's duplicate DUPAM16, and DUPAM9 (duplicate sample of BH185 (0.0-0.2m) and two silty clay samples BH4 (0.0-0.2m) and SS1. The maximum nickel concentration was 660mg/kg.
TRH	170	0	0	-
BTEX	170	0	0	-
Total PAHs	170	0	0	-
Benzo(a)pyrene	170	1	0	Benzo(a)pyrene concentrations exceeded the CT1 criterion in one fill sample collected from BH177 (0.6-0.9m). The maximum benzo(a)pyrene concentration was 1.4mg/kg.

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Analyte	No. of Samples Analysed	No. of Results > CT Criteria	No. of Results > SCC Criteria	Comments
OCPs & OPPs	103	0	0	-
PCBs	103	0	0	-
Asbestos	104	-	-	Asbestos was not detected in the soil samples or the FCF analysed.

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

Analyte	No. of Samples Analysed	No. of Results > TCLP Criteria	Comments
Chromium	2	0	One selected fill and one selected silty clay samples with chromium concentrations above the CT1 criterion were analysed for TCLP chromium. The concentrations were reported below the TCLP1 criteria for chromium.
Lead	4	0	Three selected fill and one selected silty clay samples with lead concentrations above the CT1 criterion were analysed for TCLP lead. The concentrations were reported below the TCLP1 criteria for lead.
Nickel	4	1	Three selected fill and one selected silty clay samples with nickel concentrations above the CT1 criterion were analysed for TCLP nickel. The concentration for the silty clay sample was reported above the TCLP1 criteria for nickel. The concentrations for the fill samples were reported below the TCLP1 criteria for nickel.
Benzo(a)pyrene	1	0	The fill sample with benzo(a)pyrene concentrations above the CT1 criterion was analysed for TCLP PAHs. The concentrations for TCLP benzo(a)pyrene was reported below the TCLP1 criteria for benzo(a)pyrene.

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8.5 Surface Water Laboratory Results

The surface water laboratory results are compared to the relevant SAC in the attached report tables. A summary of the results assessed against the SAC is presented below:

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

Analyte	Results Compared to SAC
Heavy Metals	The concentrations of copper (210µg/L) and zinc (64µg/L) were above the ecological SAC. All other heavy metals results were below the SAC.
TRH	All TRH results were below the SAC.
BTEX	All BTEX results were below the SAC.
Other VOCs	All other VOC results were below the SAC.
PAHs	All PAH results were below the SAC.
Other Parameters	The results for pH, EC and hardness are summarised below: • pH was 7.7; • EC was 660µS/cm; and • Hardness was 130mg$CaCO_3$/L.

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9 WASTE CLASSIFICATION ASSESSMENT

Based on the results of the assessment, a preliminary classification of **General Solid Waste (non-putrescible)** applies to the fill, with the exception of the fill in the vicinity of BH4 that is preliminarily classified as **Restricted Solid Waste (non-putrescible)**.

The underlying natural soil was found to be impacted by metals, PAHs and TRHs and therefore does not meet the definition of VENM.

EIS understand that the client intends to retain the soils on-site as far as practicable which should not trigger a need to finalise the waste classifications. In the event that off-site disposal of soil is required, further waste classification assessment should be undertaken for the specific areas/materials that are to be disposed. Further assessment may be able to reduce the waste classification of the fill in the vicinity of BH4. The waste classification will also need to consider the other recommendations made in the following section of this report.

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10 DISCUSSION AND CONCLUSIONS

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

Some of the soil samples contained concentrations of chromium, copper, nickel, zinc and TRH F3 above the ecological SAC. The elevated concentrations appeared to be associated with the fill and surficial natural material in the south-western section and western end of the site, around the overland drain and the area to the south-west and south-east of the drain.

The overland drain potentially carries water discharged from the outlet at the southern site boundary, from the off-site Crane Enfield Metals property (to the south), across to the outlet at the western site boundary. The elevated concentrations of the heavy metals and TRH F3 may be associated with the migration of the contaminants from off-site sources (particularly the heavy metals) via the water in the overland drain. This has not been confirmed.

Currently, there is a complete SPR linkage for ecological receptors in relation to the heavy metals and TRHs. However, given the proposed development includes the excavation of a basin in the western area of the site and the construction of pavements and a warehouse over the majority of the site, it would be relatively straight forward to manage the excavation works in such a way to relocate the soils impacted by heavy metals to the areas beneath the pavement/hardstand (subject to their geotechnical suitability). This would reduce the potential ecological risks associated with the TRHs and heavy metals in the fill/soil as the pathway for exposure would be eliminated/minimised.

Two borehole locations with elevated metals above the ecological SAC (BH183 and BH187) were located at the edge of the proposed development footprint, within the grassed area at the south-western end of the site that appears not to be undergoing any development works. This area could also be managed similarly to the other impacted fill/soil in order to mitigate the risks associated with the heavy metals.

One sample contained an elevated concentration above the management limit criteria. The management limits are taken from Section 5.3.1 of the *Canada-Wide Standard for Petroleum Hydrocarbons (PHC) in Soil: Scientific Rationale,* Canadian Council of Ministers of the Environment 2008. The management limits are based on the following:

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- Free-phase risk to groundwater – The Canadian guideline states that for ''most petroleum products and soil types, the residual saturation limit occurs with total Petroleum Hydrocarbon (PHC) concentrations of the order of 20,000 mg/kg to 30,000 mg/kg, though it may occur at lower concentrations for light-end products such as gasoline.'';
- Risk to workers in trenches – To derive the guidelines and in the absence of relevant acute toxicity endpoints for PHC fractions, occupational exposure limits for gasoline and jet fuel were respectively applied to represent F1 and F2 for screening purposes, although it is acknowledged that these are not appropriate endpoints for human health risk assessment. The modelling was also based on the assumption that contamination was in direct contact with the trenches. Based on the modelling evaluation, limits of 1,000 mg/kg each for F1 and F2 were deemed protective for both coarse and fine soils; and
- The risk of explosive hazards – Based on the modelling, limits of 1,400 mg/kg and 1,700 mg/kg have been established for F1 in coarse and fine soils, respectively, and a limit of 5,200 mg/kg has been established for F2 in both coarse and fine soils.

EIS consider the sample exceedance above the management limit, is not considered to represent a significant risk based on the following:

- The free phase risk guideline levels are far above the concentrations encountered in the sample; and
- The risk associated with direct contact and explosion are associated with F1 and F2 fractions, whereas the management limit exceedance in SS1 occurred for TRH F3. The F1/F2 concentrations in the sample were very low to negligible.

10.1.2 Groundwater

A number of potential on-site and off-site groundwater sources were identified. Due to the sub-surface conditions, the drill rig refused on natural gravels at relatively shallow depths and groundwater was not intercepted in the wells. On this basis, groundwater has not been sampled/analysed and there is some uncertainty regarding the risks associated with groundwater.

The main potential, human health-related risks on-site would be associated with vapour intrusion from contaminants volatilising from groundwater. Impacts from VOCs associated with the groundwater at the adjacent Crane Enfield Metals (refer to Section 4.5.2) property cannot be ruled out in the absence of on-site groundwater data. However, based on the anticipated groundwater flow direction (towards the south-west) and the remediation that has occurred (and/or is occurring) on that property, EIS are of the opinion that the potential for the VOC contamination to pose a risk on site is relatively low. Further assessment is required to confirm this opinion and better assess the potential risks associated with up-gradient sources.

In terms of the on-site impacts in soil, EIS are of the opinion that the heavy metals and TRHs pose a relatively low risk to groundwater under the proposed development scenario as the majority of the site will be paved which will eliminate the potential transport mechanism (i.e. no leaching via surface

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water infiltration). Additionally, leachate concentrations (TCLPs) were relatively low with the exception of nickel in one sample. This indicated that the potential for leaching of metals from the soils was relatively low (under acidic conditions).

10.1.3 Surface Water

The concentrations of copper and zinc were above the ecological SAC. Some VOC (excluding chlorinated solvents) compounds and TRH F3 were also detected in the surface water but the concentrations were low or below the SAC.

The surface water was collected from the outlet point at the southern site boundary, within the overland drain. The source of the heavy metals and other contaminants in the surface water may be attributed to the off-site metals processing property to the immediate south, from where the water is being discharged onto the overland drain on-site. The concentrations of copper and zinc can also be attributed to the leaching of these metals from pipes and other urban structures and is quite common in an urban setting.

The overland water flow is in contact with the site soils, which is accessible to flora and fauna, and may eventually be discharged into a stream or river. On this basis there may be a complete SPR linkage to the ecological receptors in off-site water bodies. This drainage line will be altered and surface water will be managed as part of the proposed development.

10.2 Asbestos

A pipe that may potentially contain asbestos was observed on the surface in the bare area in the western end of the site. The potential for a bonded ACM (the pipe included bonded fibre cement) to generate asbestos fibres is relatively low. This needs to be assessed and managed so that there is no complete SPR linkage in the event of future disturbance.

10.3 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?*

Yes. The site was historically known to have contained contaminated fill in the western end and the site may have been filled, particularly in the south-western end after the remediation works undertaken between 1998 and 2000. The site has historically been used for agricultural purposes and pesticides may have been used on-site as well. The industrial property to the south was undergoing remediation works and there were other industrial properties and sewage treatment plant and service stations located immediately adjacent or within 500m of the site. Some soil stockpiles were also

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located in the western section, the origin of which are unknown. A potential ACM pipe was observed on the surface in the western end of the site.

Are any results above the SAC?

Yes. Elevated concentrations of chromium, copper, nickel, zinc and TRH F3 above the ecological based SAC were encountered in the fill and surficial natural material in the south-western section and western end of the site. Elevated concentrations of copper and zinc above the ecology based SAC were also encountered in the surface water.

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

Potential risks associated with the CoPC that were identified above the ecological SAC are considered to be relatively minor. The suspected ACM pipe may pose a potential human health risk, however the presence of asbestos in the pipe was not confirmed. This and any additional ACM can be assessed and disposed of in accordance with relevant legislation during the development of the site.

Is remediation required?

EIS are of the opinion that remediation of the site is not required based on the current data set. The proposed earthworks can be used to mitigate the potential ecological risks that have been identified. The recommendations outlined in the subsequent section of this report are also to be implemented.

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

The in-situ soil characterisation is considered to be sufficient to provide adequate confidence in the above decisions. The contamination assessment of the stockpiles on site is limited and further assessment of the groundwater is required.

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

EIS are of the opinion that the site can be made suitable for the proposed development subject to implementation of the recommendations outlined in this report.

10.4 Data Gaps

The assessment has identified the following data gaps:

- The groundwater could not be assessed;
- The potential ACM pipe on site was not assessed for asbestos; and
- There were limited samples collected from the stockpiles on site as only a preliminary contamination screening was undertaken.

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These are not expected to be significant issues and can be addressed prior to the development works. An addendum letter will be issued to address these data gaps.

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11 CONCLUSIONS AND RECOMMENDATIONS

A desktop review of historical information and an intrusive soil sampling, soil stockpile sampling, groundwater assessment and surface water sampling was undertaken for this combined Stage 1 and Stage 2 investigation. However the groundwater assessment could not be completed as the groundwater monitoring wells installed on-site remained dry.

Based on the scope of work undertaken for this assessment, EIS identified the following potential contamination sources/AEC:

- Fill material;
- Historical agricultural use;
- Use of pesticides;
- Hazardous building materials i.e. asbestos present on site. A potential asbestos pipe was observed on site;
- Soil stockpiles; and
- Off-site commercial/industrial premises.

The site potentially had an agricultural (grazing and/or market gardens) land use prior to 1961 and has been a vacant land from 1961 onwards. Remediation of site soils followed by reinstatement of the south-western end of the site had taken place between 1998 and 2000.

The assessment indicated presence of chromium, copper, nickel, zinc and TRH F3 exceeding the ecological SAC in some soil samples and copper and zinc exceeding the ecological guideline in the surface water sample. The impacted soil material was located in the south-western section and the western end of the site, in close proximity to the overland drain in this section of the site.

The site soils from the south-western section and the western end of the site are not suitable to remain within unpaved or grassed areas or to be excavated and reused within grassed, landscaped or unpaved areas of the site. The soils from the south-western section and western end of the site are suitable to be reused under the building (provided they are geotechnically suitable), and any other built or paved areas of the site. The site soils from the remaining areas of the site are suitable to be reused on site, either in landscaped or built areas provided they are geotechnically suitable.

EIS consider that the report objectives outlined in Section 1.2 have been addressed, with the exception that the groundwater was not assessed due to the presence of gravels that resulted in early termination of the boreholes.

EIS are of the opinion that the site can be made suitable for the future development at the site, subject to implementing the following recommendations:

1. The existing stockpiles should be characterised via additional sampling/analysis to meet the minimum sampling density outlined in the NEPM (2013). The results should be utilised to confirm what is to occur with the material (i.e. retain on site or dispose off-site);

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2. The fill in the western section of the site (and the surface soil to a minimum depth of 0.2m in areas where natural soil is present at the surface – see attached borehole logs), including the proposed basin footprint and the area to the south of the basin in the south-western corner of the site, is to be excavated and placed beneath the proposed hardstand provided that it is geotechnically suitable. If this cannot be achieved, the waste classification is to be confirmed and this material is to be disposed off-site to an appropriate facility; and
3. The fibre cement pipe is to be removed from the site and disposed of appropriately. A surface clearance should be undertaken of the disturbed/stockpiled areas in the west section of the site. A contingency plan should be prepared that can be implemented in the event that any additional ACM is encountered across the site.

Under the NSW EPA Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997 (2015)[20], the requirements to notify the NSW EPA regarding site contamination should be assessed once any additional assessment(s) and removal of the fibre cement pipe and a surface clearance certificate is obtained and if a remedial strategy is required and has been selected.

[20] 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)

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12 LIMITATIONS

The report limitations are outlined below:

- EIS 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 EIS proposal; and terms of contract between EIS 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, EIS has not undertaken any verification process, except where specifically stated in the report;
- EIS 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;
- EIS 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;
- EIS 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. EIS 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.

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IMPORTANT INFORMATION ABOUT THIS REPORT

These notes have been prepared by EIS 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 EIS 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.

EIS/J&K will not accept any responsibility whatsoever for situations where one or more of the above factors have changed since completion of the assessment. If the subject site is sold, ownership of the assessment report should be transferred by EIS to the new site owners who will be informed of the conditions and limitations under which the assessment was undertaken. No person should apply an assessment 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 assessment 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 assessments 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 assessment 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.

Assessment Limitations
Although information provided by a site assessment can reduce exposure to the risk of the presence of contamination, no environmental site assessment can eliminate the risk. Even a rigorous professional assessment 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 Assessments by Design Professionals

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Costly problems can occur when other design professionals develop plans based on misinterpretation of an assessment 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 Assessment 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 assessment. 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 assessment. 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 assessment 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.

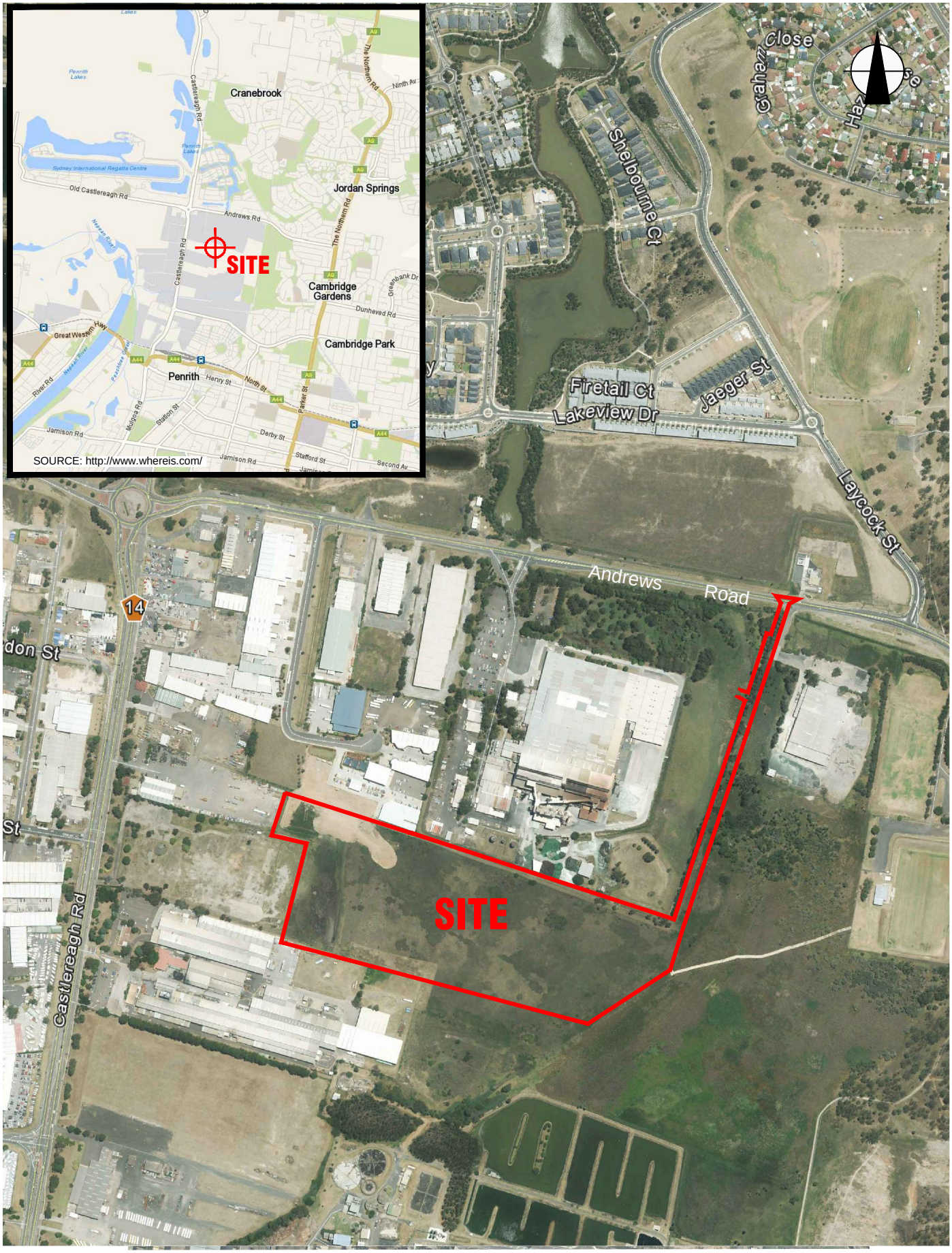
Read Responsibility Clauses Closely

Because an environmental site assessment 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 assessment, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to any questions.

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REPORT FIGURES

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AERIAL IMAGE ©: 2015 GOOGLE INC.

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

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Title: **SITE LOCATION PLAN**

Location: 128 ANDREWS ROAD
PENRITH, NSW

Report No: E31675KR

Figure No: 1

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

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Version: 1, Version Date: 05/11/2018

ANDREWS ROAD

LAMBRIDGE PLACE

OVERLAND DRAIN

SP1

SP2

SP3

SP4

SP5

BH188(0.65)
BH184(0.4)
BH177(1.0)
BH189(>0.9)
BH171(0.7)
BH101(0.85)
BH185(0.5)
BH165(0.5)
BH102(0.5)
BH178(0.8)
BH159(0.55)
BH172(0.45)
BH179(0.5)
BH153(0.4)
MW166(0.25)
BH3(0.0)
BH186(1.1)
BH173(0.4)
BH147(0.6)
BH160(0.45)
BH141(0.7)
BH180(0.5)
BH167(0.5)
BH154(0.3)
BH135(0.6)
BH161(0.4)
BH148(0.4)
BH129(0.4)
BH4(0.0)
BH174(0.4)
BH142(0.3)
MW181(0.4)
BH168(0.3)
BH155(0.6)
BH123(0.35)
BH149(0.4)
BH136(0.35)
BH162(0.4)
BH5(0.0)
BH117(0.6)
BH175(0.4)
BH143(0.3)
BH130(0.45)
BH111(0.5)
BH182(0.7)
BH156(0.4)
BH124(0.3)
BH169(0.2)
MW137(0.5)
BH1(0.0)
BH107(0.45)
BH187(0.6)
BH150(0.3)
BH118(0.5)
BH131(0.35)
BH104(0.4)
BH163(0.35)
BH144(0.4)
BH125(0.5)
BH112(0.4)
BH183(0.5)
BH157(0.3)
BH138(0.4)
BH108(0.4)
BH176(1.0)
BH151(0.3)
BH119(0.5)
MW170(0.5)
BH132(0.4)
BH105(0.2)
SW1
BH145(0.2)
BH113(0.4)
SS1
BH164(0.4)
BH126(0.4)
BH109(0.3)
BH158(0.4)
BH139(0.7)
BH120(0.4)
BH106(0.3)
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BH134(0.35)
BH115(0.4)
BH128(0.25)
BH122(0.4)
BH116(0.65)
BH103(0.4)

AERIAL IMAGE SOURCE: NEARMAP.COM, 08 APR 2018.

LEGEND

- APPROXIMATE SITE BOUNDARY
- BH (Fill Depth) — BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m), (EIS AUGUST 2018)
- BH/MW(Fill Depth) — GROUND WATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m), (EIS AUGUST 2018)
- BH (Fill Depth) — BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m), (JK GEOTECHNICS JULY 2018)
- STOCKPILE (SP)
- SW — SURFACE WATER SAMPLE
- SS — SURFACE SAMPLE

0 30 60 90 120 150
SCALE 1:3000 @A3 METRES

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

Title: **SAMPLE LOCATION PLAN**

Location: 128 ANDREWS ROAD PENRITH, NSW

Report No: E31675KR

Figure No: 2

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

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Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

AERIAL IMAGE SOURCE: NEARMAP.COM, 08 APR 2018.

LAMBRIDGE PLACE

BH185	0.0-0.2
COPPER	1700
ZINC	1700
DUPAM9	
COPPER	8400
ZINC	7400

BH179	0.0-0.2
COPPER	1700
ZINC	2600
TRH F3	2600
DUPAM7	
COPPER	1900
ZINC	2600

BH4	0.0-0.2
CHROMIUM	930
COPPER	1500
NICKEL	660

BH182	0.0-0.1
COPPER	760
ZINC	800

BH187	0.0-0.2
COPPER	570
DUPAM14	
COPPER	370

BH183	0.0-0.2
COPPER	6800
ZINC	17000
DUPAM16	
COPPER	6600
ZINC	12000

SS1	-
CHROMIUM	1900
COPPER	7200
ZINC	7300
TRH F3	7600
TRH F3	7600

BH188(0.65), BH184(0.4), BH177(1.0), BH189(0.9), BH185(0.5), BH171(0.7), BH101(0.85), BH165(0.5), BH102(0.5), BH178(0.8), BH159(0.55), BH172(0.45), BH179(0.5), MW166(0.25), BH153(0.4), BH186(1.1), BH3(0.0), BH147(0.6), BH173(0.4), BH160(0.45), BH141(7.7), BH167(0.5), BH154(0.3), BH180(0.5), BH135(0.6), BH148(0.4), BH161(0.4), BH174(0.4), BH129(0.4), BH4(0.0), BH142(0.3), MW181(0.4), BH155(0.6), BH168(0.3), BH123(0.35), BH149(0.4), BH136(0.35), BH162(0.4), BH5(0.0), BH130(0.45), BH117(0.6), BH175(0.4), BH143(0.3), BH111(0.5), BH182(0.7), BH156(0.4), BH124(0.3), BH169(0.2), MW137(0.5), BH107(0.45), BH150(0.3), BH1(0.0), BH118(0.5), BH187(0.6), BH131(0.35), BH104(0.4), BH163(0.35), BH144(0.4), BH112(0.4), BH183(0.5), BH125(0.5), BH157(0.3), BH176(1.0), BH138(0.4), BH108(0.4), MW170(0.5), BH119(0.5), BH151(0.3), BH132(0.4), BH105(0.2), SW1, SS1, BH164(0.4), BH145(0.2), BH113(0.4), BH126(0.4), BH158(0.4), BH139(0.7), BH109(0.3), BH120(0.4), BH133(0.4), BH106(0.3), BH2(0.0), BH152(0.35), BH114(0.6), BH127(0.3), BH110(0.5), BH146(0.35), BH140(0.4), BH121(0.7), BH134(0.35), BH115(0.4), BH128(0.25), BH122(0.4), BH116(0.65), BH103(0.4)

LEGEND

- APPROXIMATE SITE BOUNDARY
- BH (Fill Depth) — BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m), (EIS AUGUST 2018)
- BH/MW(Fill Depth) — GROUND WATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m), (EIS AUGUST 2018)
- SW — SURFACE WATER SAMPLE
- SS — SURFACE SAMPLE
- BH (Fill Depth) — BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m), (JK GEOTECHNICS JULY 2018)
- STOCKPILE (SP)

SAMPLE ID	DEPTH (metres)
CHEMICAL	CONCENTRATION

- SOIL CONTAMINATION ABOVE SAC FOR MANAGEMENT LIMIT (mg/kg)
- SOIL CONTAMINATION ABOVE SAC FOR ECOLOGICAL RISK (mg/kg)

0 20 40 60 80 100
SCALE 1:2000 @A3 METRES

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

Title: **SOIL CONTAMINATION PLAN**

Location: 128 ANDREWS ROAD, PENRITH, NSW

Report No: E31675KR

Figure No: 3

ENVIRONMENTAL INVESTIGATION SERVICES

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Version: 1, Version Date: 05/11/2018

AERIAL IMAGE SOURCE: NEARMAP.COM, 08 APR 2018.

LAMBRIDGE PLACE

XISTING FACILITY
L 25.05 (T.B.C)

DEPTH RANGE			
No.	FROM DEPTH	TO DEPTH	COLOUR
1	-2.000	-1.500	
2	-1.500	-1.000	
3	-1.000	-0.500	
4	-0.500	0.000	
5	0.000	0.500	
6	0.500	1.000	
7	1.000	1.500	
8	1.500	2.000	
9	2.000	2.500	

BH185	0.0-0.2
COPPER	1700
ZINC	1700
DUPAM9	
COPPER	8400
ZINC	7400

BH179	0.0-0.2
COPPER	1700
ZINC	2600
TRH F3	2600
DUPAM7	
COPPER	1900
ZINC	2600

BH4	0.0-0.2
CHROMIUM	930
COPPER	1500
NICKEL	660

BH182	0.0-0.1
COPPER	760
ZINC	800

BH187	0.0-0.2
COPPER	570
DUPAM14	
COPPER	370

BH183	0.0-0.2
COPPER	6800
ZINC	17000
DUPAM16	
COPPER	6600
ZINC	12000

SS1	-
CHROMIUM	1900
COPPER	7200
ZINC	7300
TRH F3	7600
TRH F3	7600

BH188(0.65) BH184(0.4) BH177(1.0) BH189(0.9) BH171(0.7) BH101(0.85) BH185(0.5) BH165(0.5) BH102(0.5) BH178(0.8) BH159(0.55) BH172(0.45) BH153(0.4) BH179(0.5) MW166(0.25) BH147(0.6) BH186(1.1) BH173(0.4) BH3(0.0) BH160(0.45) BH141(0.7) BH167(0.5) BH154(0.3) BH180(0.5) BH135(0.6) BH148(0.4) BH161(0.4) BH174(0.4) BH129(0.4) BH4(0.0) BH142(0.3) BH155(0.6) BH123(0.35) MW181(0.4) BH168(0.3) BH136(0.35) BH149(0.4) BH5(0.0) BH117(0.6) BH162(0.4) BH130(0.45) BH175(0.4) BH143(0.3) BH111(0.5) BH156(0.4) BH124(0.3) MW137(0.5) BH182(0.7) BH169(0.2) BH107(0.45) BH150(0.3) BH1(0.0) BH187(0.6) BH131(0.35) BH118(0.5) BH163(0.35) BH104(0.4) BH144(0.4) BH112(0.4) BH183(0.5) BH125(0.5) BH157(0.3) BH176(1.0) BH138(0.4) BH108(0.4) MW170(0.5) BH119(0.5) BH151(0.3) BH105(0.2) SW1 SS1 BH164(0.4) BH145(0.2) BH132(0.4) BH113(0.4) BH158(0.4) BH126(0.4) BH139(0.7) BH109(0.3) BH120(0.4) BH133(0.4) BH2(0.0) BH106(0.3) BH114(0.6) BH152(0.35) BH127(0.3) BH146(0.35) BH140(0.4) BH110(0.5) BH121(0.7) BH134(0.35) BH115(0.4) BH128(0.25) BH122(0.4) BH116(0.65) BH103(0.4)

PROPOSED WAREHOUSE BEL 25.62

LEGEND

- APPROXIMATE SITE BOUNDARY
- BH (Fill Depth) — BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m), (EIS AUGUST 2018)
- BH/MW(Fill Depth) — GROUND WATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m), (EIS AUGUST 2018)
- SW — SURFACE WATER SAMPLE
- SS — SURFACE SAMPLE
- BH (Fill Depth) — BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m), (JK GEOTECHNICS JULY 2018)

SAMPLE ID	DEPTH (metres)
CHEMICAL	CONCENTRATION

- SOIL CONTAMINATION ABOVE SAC FOR MANAGEMENT LIMIT (mg/kg)
- SOIL CONTAMINATION ABOVE SAC FOR ECOLOGICAL RISK (mg/kg)

0 20 40 60 80 100
SCALE 1:2000 @A3 METRES

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

Title: **PROPOSED CUT & FILL EARTHWORKS**

Location: 128 ANDREWS ROAD PENRITH, NSW

Report No: E31675KR

Figure No: 4

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

PLOT DATE: 30/10/2018 1:50:47 PM DWG FILE: S:\5 EIS\5C EIS JOBS\3100\SIE31675KR PENRITH\CAD\E31675KR.DWG

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Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

LABORATORY SUMMARY TABLES

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

ABBREVIATIONS AND EXPLANATIONS

Abbreviations used in the Tables:

ABC: Ambient Background Concentration
ACM: Asbestos Containing Material
ADWG: AustralianDrinking Water Guidelines
AF: Asbestos Fines
ANZECC: Australian and New Zealand Environment Conservation Council
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
HILs: Health Investigation Levels
HSLs: Health Screening Levels
HSL-SSA: Health Screening Level-SiteSpecific Assessment
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
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
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 Agen
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.

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TABLE A
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	ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium VI [1]	Chromium VI [2]	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	100
Site Assessment Criteria (SAC)			3000	900	3600		240000	1500	730	6000	400000	4000	40	80	2000	2500	45	530	3600	50	2000	7	Detected/Not Detected
Sample Reference	**Sample Depth**	**Sample Description**																					
BH1	0.0-0.2	Silt	<4	<0.4	9	NA	13	11	<0.1	4	27	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUP1	0.0-0.2	Silt	<4	<0.4	9	NA	13	10	<0.1	5	26	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH2	0.0-0.2	Silt	<4	<0.4	7	NA	13	8	<0.1	3	24	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH3	0.0-0.2	Silt	<4	<0.4	8	NA	16	12	<0.1	5	35	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH4	0.0-0.2	Silty Clay	5	1	930	NA	1500	82	0.1	660	690	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
SS1	0.05-0.1	Silty Clay	13	10	1900	NA	7200	920	0.5	100	7300	1.2	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH101	0.0-0.5	Fill	4	<0.4	12	NA	63	29	<0.1	8	87	0.62	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM18	0.0-0.5	Fill	<4	<0.4	12	NA	36	20	<0.1	8	48	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH102	0.3-0.4	Fill	4	<0.4	24	NA	45	15	<0.1	54	170	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH102	0.9-1.0	Silt	<4	<0.4	13	NA	21	8	<0.1	10	29	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH103	0.0-0.3	Fill	<4	<0.4	10	NA	11	19	0.1	7	35	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH103	1.2-1.3	Clayey Silt	<4	<0.4	7	NA	3	5	<0.1	4	11	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH104	0.0-0.3	Fill	<4	<0.4	12	NA	13	10	<0.1	7	32	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH104	0.7-1.0	Clayey Silt	<4	<0.4	9	NA	5	7	<0.1	5	18	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH105	0.0-0.2	Fill	<4	<0.4	9	NA	11	11	<0.1	6	31	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH106	0.0-0.2	Fill	<4	<0.4	10	NA	13	14	0.1	7	38	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH107	0.0-0.3	Fill	<4	<0.4	9	NA	8	9	<0.1	6	26	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH108	0.0-0.2	Fill	<4	<0.4	9	NA	15	16	0.2	5	38	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH109	0.0-0.3	Fill	<4	<0.4	9	NA	10	11	0.2	5	32	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH109	1.2-1.5	Silt	<4	<0.4	8	NA	3	6	<0.1	4	13	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH110	0.0-0.3	Fill	<4	<0.4	10	NA	11	15	0.1	7	32	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH110	0.5-0.7	Silt	<4	<0.4	10	NA	6	8	<0.1	6	21	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH111	0.0-0.3	Fill	<4	<0.4	9	NA	11	11	<0.1	5	28	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH111	1.2-1.5	Silt	<4	<0.4	8	NA	4	6	<0.1	4	13	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH112	0.0-0.3	Fill	<4	<0.4	9	NA	14	15	0.2	5	39	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH113	0.0-0.3	Fill	<4	<0.4	8	NA	11	10	<0.1	4	25	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH114	0.0-0.3	Fill	<4	<0.4	9	NA	8	9	<0.1	6	24	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH114	1.2-1.5	Silt	<4	<0.4	7	NA	3	4	<0.1	3	11	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH115	0.0-0.3	Fill	<4	<0.4	11	NA	12	35	0.1	8	34	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH115	0.4-0.6	Silt	<4	<0.4	11	NA	7	12	<0.1	7	21	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH116	0.0-0.3	Silty Clay	5	<0.4	15	NA	20	23	0.2	11	56	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH116	0.9-1.1	Silt	<4	<0.4	7	NA	5	5	<0.1	5	8	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH117	0.0-0.3	Fill	<4	<0.4	8	NA	14	13	<0.1	5	38	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected

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TABLE A
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	ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium VI [1]	Chromium VI [2]	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	100
Site Assessment Criteria (SAC)			3000	900	3600		240000	1500	730	6000	400000	4000	40	80	2000	2500	45	530	3600	50	2000	7	Detected/Not Detected
Sample Reference	**Sample Depth**	**Sample Description**																					
BH118	0.0-0.5	Fill	<4	<0.4	8	NA	6	8	<0.1	5	22	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM34	0.0-0.5	Fill	3	<0.3	6.8	NA	5.2	5	<0.05	3.9	17	<0.8	<0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH118	1.2-1.5	Silt	<4	<0.4	8	NA	3	5	<0.1	4	12	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH119	0.0-0.5	Fill	<4	<0.4	7	NA	9	9	<0.1	4	22	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM33	0.0-0.5	Fill	<4	<0.4	9	NA	8	9	<0.1	5	23	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH120	0.0-0.3	Fill	<4	<0.4	8	NA	11	10	<0.1	4	25	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH120	1.2-1.5	Silt	<4	<0.4	7	NA	3	4	<0.1	3	11	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH121	0.0-0.3	Fill	<4	<0.4	9	NA	14	14	<0.1	5	32	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH121	1.2-1.5	Silt	<4	<0.4	8	NA	4	5	<0.1	4	13	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH122	0.0-0.3	Fill	<4	<0.4	10	NA	13	11	<0.1	6	30	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH123	0.0-0.3	Fill	<4	<0.4	8	NA	10	9	<0.1	5	24	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH124	0.0-0.3	Fill	<4	<0.4	7	NA	8	8	<0.1	4	24	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH125	0.0-0.3	Fill	<4	<0.4	7	NA	12	12	<0.1	4	31	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH126	0.0-0.3	Fill	<4	<0.4	7	NA	12	9	<0.1	3	27	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH127	0.0-0.3	Fill	<4	<0.4	8	NA	18	13	<0.1	4	32	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH127	0.3-0.6	Clayey Silt	<4	<0.4	9	NA	4	7	<0.1	5	13	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH128	0.0-0.2	Fill	<4	<0.4	9	NA	12	10	<0.1	5	26	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH129	0.0-0.3	Fill	<4	<0.4	8	NA	11	10	<0.1	6	24	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH129	1.2-1.5	Silt	<4	<0.4	9	NA	4	6	<0.1	4	12	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH130	0.0-0.3	Fill	<4	<0.4	8	NA	7	8	<0.1	5	24	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH131	0.0-0.3	Fill	<4	<0.4	9	NA	13	15	0.3	4	35	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH132	0.0-0.3	Fill	<4	<0.4	8	NA	13	12	<0.1	4	27	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH132	1.2-1.5	Silt	<4	<0.4	9	NA	4	7	<0.1	5	13	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH133	0.0-0.3	Fill	<4	<0.4	9	NA	9	10	<0.1	5	25	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH134	0.0-0.3	Fill	<4	<0.4	8	NA	14	12	<0.1	3	25	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH134	1.2-1.5	Silt	<4	<0.4	8	NA	4	7	<0.1	4	12	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH135	0.0-0.3	Fill	<4	<0.4	10	NA	16	16	<0.1	6	34	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH136	0.0-0.3	Fill	<4	<0.4	10	NA	8	10	0.2	6	22	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH136	1.3-1.5	Clayey Silt	<4	<0.4	9	NA	4	6	<0.1	4	11	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH137	0.0-0.2	Fill	<4	<0.4	8	NA	13	11	<0.1	4	30	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH137	1.5-1.95	Silt	<4	<0.4	9	NA	3	5	<0.1	4	11	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DUPAM2	1.5-1.95	Silt	<4	<0.4	9	NA	3	6	<0.1	4	12	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH138	0.0-0.3	Fill	<4	<0.4	8	NA	19	14	<0.1	3	33	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH139	0.0-0.5	Fill	<4	<0.4	7	NA	7	9	<0.1	4	28	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM31	0.0-0.5	Fill	<4	<0.4	8	NA	8	8	<0.1	5	25	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH140	0.0-0.3	Fill	<4	<0.4	8	NA	16	11	<0.1	4	32	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH141	0.0-0.35	Fill	<4	<0.4	13	NA	23	19	<0.1	9	56	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM27	0.0-0.35	Fill	<4	<0.4	12	NA	17	17	<0.1	9	47	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH142	0.0-0.3	Fill	<4	<0.4	11	NA	17	16	<0.1	7	38	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM29	0.0-0.3	Fill	<4	<0.4	11	NA	21	18	<0.1	7	43	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH142	1.0-1.5	Clayey Silt	<4	<0.4	11	NA	5	6	<0.1	5	11	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DUPAM30	1.0-1.5	Clayey Silt	4	<0.3	9.3	NA	5.1	4	<0.05	3	11	<0.8	<0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH143	0.0-0.2	Fill	<4	<0.4	9	NA	16	13	<0.1	6	39	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH144	0.0-0.3	Fill	<4	<0.4	8	NA	23	14	<0.1	4	44	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH144	1.2-1.5	Silt	<4	<0.4	9	NA	4	6	<0.1	4	13	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH145	0.0-0.2	Fill	<4	<0.4	8	NA	25	14	<0.1	3	37	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH146	0.0-0.3	Fill	<4	<0.4	7	NA	22	11	<0.1	3	36	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH146	1.2-1.5	Silt	<4	<0.4	8	NA	4	6	<0.1	4	12	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH147	0.0-0.3	Fill	<4	<0.4	9	NA	15	13	<0.1	6	39	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH147	1.2-1.5	Silt	<4	<0.4	9	NA	4	7	<0.1	4	12	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE A
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	ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium VI [1]	Chromium VI [2]	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	100
Site Assessment Criteria (SAC)			3000	900	3600		240000	1500	730	6000	400000	4000	40	80	2000	2500	45	530	3600	50	2000	7	Detected/Not Detected
Sample Reference	**Sample Depth**	**Sample Description**																					
BH148	0.0-0.3	Fill	<4	<0.4	9	NA	20	13	<0.1	5	34	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH149	0.0-0.3	Fill	<4	<0.4	9	NA	19	13	<0.1	5	34	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH149	1.2-1.5	Silt	<4	<0.4	9	NA	4	7	<0.1	5	13	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH150	0.0-0.2	Fill	<4	<0.4	8	NA	23	12	<0.1	4	44	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH151	0.0-0.3	Fill	<4	<0.4	7	NA	23	11	<0.1	3	44	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH151	1.2-1.5	Silt	<4	<0.4	8	NA	4	6	<0.1	4	12	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH152	0.0-0.3	Fill	<4	<0.4	7	NA	15	8	<0.1	3	29	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH153	0.0-0.3	Fill	<4	<0.4	9	NA	25	13	<0.1	5	40	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH154	0.0-0.2	Fill	<4	<0.4	8	NA	16	10	<0.1	4	31	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH154	0.8-1.0	Silt	<4	<0.4	10	NA	5	7	<0.1	5	13	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH155	0.0-0.3	Fill	5	<0.4	9	NA	18	19	<0.1	6	46	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH156	0.0-0.3	Fill	6	<0.4	9	NA	29	28	<0.1	5	60	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH156	1.2-1.5	Silt	<4	<0.4	9	NA	4	6	<0.1	4	12	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH157	0.0-0.3	Fill	4	<0.4	8	NA	19	18	<0.1	4	48	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH158	0.0-0.3	Fill	<4	<0.4	8	NA	19	13	<0.1	5	39	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH158	1.2-1.5	Silt	<4	<0.4	9	NA	4	6	<0.1	4	12	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH159	0.0-0.25	Fill	5	<0.4	13	NA	31	22	<0.1	9	59	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH159	1.2-1.5	Silt	<4	<0.4	10	NA	5	6	<0.1	5	11	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH160	0.0-0.45	Fill	5	<0.4	11	NA	38	25	<0.1	7	65	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM25	0.0-0.45	Fill	6	<0.3	8.5	NA	8.6	9	<0.05	7.5	27	<0.8	<0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH161	0.0-0.3	Fill	4	<0.4	10	NA	22	19	<0.1	7	50	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH161	1.3-1.5	Clayey Silt	<4	<0.4	9	NA	5	7	<0.1	5	12	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH162	0.0-0.3	Fill	5	<0.4	9	NA	26	22	<0.1	5	65	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH163	0.0-0.3	Fill	<4	<0.4	9	NA	43	21	<0.1	5	110	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH163	0.5-0.7	Silt	<4	<0.4	10	NA	5	8	<0.1	5	15	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH164	0.0-0.3	Fill	<4	<0.4	7	<1	30	14	0.1	3	65	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH165	0.0-0.3	Fill	<4	<0.4	11	NA	30	15	<0.1	8	48	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM21	0.0-0.3	Fill	<4	<0.4	12	NA	25	14	<0.1	9	44	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH166	0.0-0.1	Fill	<4	<0.4	9	NA	57	19	<0.1	5	74	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH166	4.0-4.1	Silty Sand	<4	<0.4	10	NA	5	8	<0.1	5	16	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH167	0.0-0.3	Fill	<4	<0.4	9	NA	8	9	<0.1	6	31	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH168	0.0-0.3	Fill	<4	<0.4	8	NA	45	15	<0.1	5	89	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH169	0.0-0.2	Fill	<4	<0.4	8	NA	18	9	<0.1	4	100	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH170	0.0-0.1	Fill	<4	0.5	7	NA	78	19	<0.1	3	100	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH170	1.6-1.95	Silt	<4	<0.4	9	NA	3	6	<0.1	4	13	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH171	0.0-0.5	Fill	<4	<0.4	15	NA	50	19	<0.1	14	76	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM19	0.0-0.5	Fill	6	<0.3	17	NA	52	18	<0.05	18	82	<0.8	<0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH172	0.0-0.4	Fill	<4	<0.4	10	NA	19	12	<0.1	7	35	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM23	0.0-0.4	Fill	<4	<0.4	11	NA	21	12	<0.1	7	36	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH173	0.0-0.3	Fill	<4	<0.4	9	NA	74	17	<0.1	6	78	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH174	0.0-0.3	Fill	<4	<0.4	10	NA	48	14	<0.1	6	81	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH174	0.4-0.8	Silt	<4	<0.4	9	NA	12	9	<0.1	6	22	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH175	0.0-0.3	Fill	<4	<0.4	9	NA	9	9	<0.1	6	30	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH176	0.4-0.6	Fill	<4	<0.4	12	NA	22	9	<0.1	7	52	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH176	1.2-1.5	Silt	<4	<0.4	9	NA	7	5	<0.1	5	13	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH177	0.6-0.9	Fill	<4	<0.4	18	NA	27	17	<0.1	16	41	19	2.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH177	1.0-1.2	Clayey Silt	<4	<0.4	11	NA	9	8	<0.1	15	20	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH178	0.0-0.3	Fill	<4	<0.4	26	NA	100	25	<0.1	32	230	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH178	1.0-1.2	Silt	<4	<0.4	9	NA	21	7	<0.1	7	24	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH179	0.0-0.2	Fill	7	4.2	310	<10	1700	240	0.2	280	2600	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected

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TABLE A
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	ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium VI [1]	Chromium VI [2]	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	100
Site Assessment Criteria (SAC)			3000	900	3600		240000	1500	730	6000	400000	4000	40	80	2000	2500	45	530	3600	50	2000	7	Detected/Not Detected
Sample Reference	**Sample Depth**	**Sample Description**																					
DUPAM7	0.0-0.2	Fill	7	4.4	260	NA	1900	260	0.2	270	2600	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH179	0.6-0.9	Clayey Silt	<4	<0.4	11	NA	6	7	<0.1	5	15	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH180	0.0-0.1	Fill	<4	<0.4	36	NA	100	24	<0.1	17	160	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM5	0.0-0.1	Fill	<4	<0.4	19	NA	53	17	<0.1	12	98	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH181	0.0-0.2	Fill	4	0.6	20	<5	170	46	<0.1	25	450	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM3	0.0-0.2	Fill	4	0.6	17	NA	130	31	<0.1	20	340	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH181	0.5-0.95	Clayey Silt	<4	<0.4	14	NA	39	16	<0.1	10	98	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DUPAM4	0.5-0.95	Clayey Silt	2	<0.3	9.9	NA	48	12	<0.05	6	100	<0.8	<0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH182	0.0-0.1	Fill	<4	1	27	NA	760	76	<0.1	25	800	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.6	Not Detected
BH182	0.7-0.95	Silt	<4	<0.4	8	NA	9	6	<0.1	4	24	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH183	0.0-0.2	Fill	5	19	39	NA	6800	920	0.3	81	17000	0.2	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	Not Detected
DUPAM16	0.0-0.2	Fill	7	12	46	NA	6600	760	0.3	110	12000	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH183	0.5-0.95	Clayey Silt	<4	3	11	NA	27	19	<0.1	7	160	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH184	0.0-0.4	Fill	<4	<0.4	11	NA	14	11	<0.1	8	24	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH185	0.0-0.2	Fill	<4	1	24	NA	1700	190	0.1	17	1700	0.4	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM9	0.0-0.2	Fill	6	5	51	NA	8400	780	<0.05	110	7400	<0.8	<0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH185	0.6-0.95	Silt	<4	<0.4	12	NA	7	10	<0.1	7	20	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH186	0.0-0.1	Fill	<4	<0.4	10	NA	150	26	<0.1	8	180	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM11	0.0-0.1	Fill	<4	<0.4	10	NA	110	22	<0.1	8	160	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH186	1.5-1.95	Silt	<4	<0.4	16	NA	8	9	<0.1	8	17	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DUPAM13	1.5-1.95	Silt	5	<0.3	13	NA	8.5	10	<0.05	6.6	18	<0.8	<0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH187	0.0-0.2	Fill	6	0.9	77	NA	570	57	0.1	22	560	2.3	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DUPAM14	0.0-0.2	Fill	<4	0.7	13	NA	370	50	<0.1	19	450	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH187	1.7-1.95	Silt	<4	<0.4	15	NA	7	8	<0.1	6	18	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH188	0.4-0.6	Fill	<4	<0.4	11	NA	6	9	<0.1	7	17	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH188	0.9-1.1	Clayey Silt	<4	<0.4	10	NA	5	8	<0.1	5	14	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH189	0.8-0.9	Fill	<4	<0.4	14	NA	32	38	0.1	7	120	7.7	0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	Not Detected
SP1-1		Fill	<4	<0.4	12	NA	77	21	<0.1	8	77	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
SP1-2		Fill	<4	<0.4	14	NA	31	12	<0.1	8	42	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
SP2-1		Fill	<4	<0.4	12	NA	27	25	<0.1	7	42	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
SP2-2		Fill	<4	<0.4	12	NA	18	25	<0.1	9	42	1.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
SP3-1		Fill	<4	<0.4	16	NA	61	13	<0.1	21	47	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
SP3-2		Fill	<4	<0.4	35	NA	57	19	<0.1	39	95	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
SP4-1		Fill	<4	<0.4	23	NA	31	13	<0.1	24	38	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
SP4-2		Fill	4	<0.4	19	NA	27	17	<0.1	24	39	0.3	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
SP5-1		Fill	<4	0.7	10	NA	100	18	<0.1	5	200	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
SP5-2		Fill	<4	2	42	NA	290	41	<0.1	8	550	0.07	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
MPF1		Fibre Cement Fragment	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
Total Number of Samples			170	170	170	3	170	170	170	170	170	170	170	103	103	103	103	103	103	103	103	103	104
Maximum Value			13	19	1900	<10	8400	920	0.5	660	17000	19	2.1	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	0.6	NC

Explanation:

1 - The results in this column 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.

2 - The results in this column are for soluble Chromium VI.

Concentration above the SAC **VALUE**

Standard deviation exceeds data assessment criteria VALUE

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TABLE B
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**								
BH1	0.0-0.2	Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUP1	0.0-0.2	Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH2	0.0-0.2	Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH3	0.0-0.2	Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH4	0.0-0.2	Silty Clay	0m to < 1m	Clay	<25	<50	<0.2	<0.5	<1	<1	<1	0
SS1	0.05-0.1	Silty Clay	0m to < 1m	Clay	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH101	0.0-0.5	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
DUPAM18	0.0-0.5	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH102	0.3-0.4	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH102	0.9-1.0	Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH103	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH103	1.2-1.3	Clayey Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH104	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH104	0.7-1.0	Clayey Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH105	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH106	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH107	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH108	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH109	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH109	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH110	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH110	0.5-0.7	Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH111	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH111	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH112	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH113	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH114	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH114	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH115	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH115	0.4-0.6	Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH116	0.0-0.3	Silty Clay	0m to < 1m	Clay	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH116	0.9-1.1	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH117	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH118	0.0-0.5	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM34	0.0-0.5	Fill	0m to < 1m	Silt	<25	<25	<0.1	<0.1	<0.1	<0.3	<0.1	NA
BH118	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH119	0.0-0.5	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM33	0.0-0.5	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH120	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH120	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH121	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
BH121	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH122	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH123	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH124	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH125	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH126	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH127	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH127	0.3-0.6	Clayey Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH128	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH129	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH129	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH130	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH131	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
Total Number of Samples					54	54	54	54	54	54	54	50
Maximum Value					<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	0.2

Concentration above the SAC **VALUE**

The guideline corresponding to the elevated value is highlighted in grey in the Site Assessment Criteria Table below

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SITE ASSESSMENT CRITERIA

					C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene
PQL - Envirolab Services					25	50	0.2	0.5	1	1	1
NEPM 2013 HSL Land Use Category					**HSL-D: COMMERCIAL/INDUSTRIAL**						
Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**							
BH1	0.0-0.2	Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUP1	0.0-0.2	Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH2	0.0-0.2	Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH3	0.0-0.2	Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH4	0.0-0.2	Silty Clay	0m to < 1m	Clay	310	NL	4	NL	NL	NL	NL
SS1	0.05-0.1	Silty Clay	0m to < 1m	Clay	310	NL	4	NL	NL	NL	NL
BH101	0.0-0.5	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM18	0.0-0.5	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH102	0.3-0.4	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH102	0.9-1.0	Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH103	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH103	1.2-1.3	Clayey Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH104	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH104	0.7-1.0	Clayey Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH105	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH106	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH107	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH108	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH109	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH109	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH110	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH110	0.5-0.7	Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH111	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH111	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH112	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH113	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH114	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH114	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH115	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH115	0.4-0.6	Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH116	0.0-0.3	Silty Clay	0m to < 1m	Clay	310	NL	4	NL	NL	NL	NL
BH116	0.9-1.1	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH117	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH118	0.0-0.5	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM34	0.0-0.5	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH118	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH119	0.0-0.5	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM33	0.0-0.5	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH120	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH120	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH121	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH121	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH120	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH120	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH121	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH121	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH122	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH123	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH124	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH125	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH126	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH127	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH127	0.3-0.6	Clayey Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH128	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH129	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH129	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH130	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH131	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL

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TABLE B
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**								
BH132	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
BH132	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
BH133	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
BH134	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH134	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH135	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH136	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH136	1.3-1.5	Clayey Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH137	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH137	1.5-1.95	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM2	1.5-1.95	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH138	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH139	0.0-0.5	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM31	0.0-0.5	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH140	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH141	0.0-0.35	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM27	0.0-0.35	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH142	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM29	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH142	1.0-1.5	Clayey Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM30	1.0-1.5	Clayey Silt	1m to <2m	Silt	<25	<25	<0.1	<0.1	<0.1	<0.3	<0.1	NA
BH143	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH144	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH144	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH145	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH146	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH146	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH147	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH147	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH148	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH149	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH149	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH150	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH151	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH151	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH152	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH153	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH154	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH154	0.8-1.0	Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH155	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH156	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH156	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH157	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH158	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH158	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH159	0.0-0.25	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH159	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH160	0.0-0.45	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM25	0.0-0.45	Fill	0m to < 1m	Silt	<25	<25	<0.1	<0.1	<0.1	<0.3	<0.1	NA
BH161	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH161	1.3-1.5	Clayey Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH162	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH163	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH163	0.5-0.7	Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH164	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH165	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM21	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	NA
Total Number of Samples					57	57	57	57	57	57	57	50
Maximum Value					<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	0.2

Concentration above the SAC **VALUE**

The guideline corresponding to the elevated value is highlighted in grey in the Site Assessment Criteria Table below

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SITE ASSESSMENT CRITERIA

					C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene
PQL - Envirolab Services					25	50	0.2	0.5	1	1	1
NEPM 2013 HSL Land Use Category					**HSL-D: COMMERCIAL/INDUSTRIAL**						
Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**							
BH132	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH132	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH133	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH134	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH134	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH135	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH136	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH136	1.3-1.5	Clayey Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH137	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH137	1.5-1.95	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
DUPAM2	1.5-1.95	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH138	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH139	0.0-0.5	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM31	0.0-0.5	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH140	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH141	0.0-0.35	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM27	0.0-0.35	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH142	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM29	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH142	1.0-1.5	Clayey Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
DUPAM30	1.0-1.5	Clayey Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH143	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH144	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH144	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH145	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH146	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH146	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH147	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH147	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH148	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH149	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH149	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH150	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH151	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH151	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH152	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH153	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH154	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH154	0.8-1.0	Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH155	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH156	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH156	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH157	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH158	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH158	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH156	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH157	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH158	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH158	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH159	0.0-0.25	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH159	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH160	0.0-0.45	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM25	0.0-0.45	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH161	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH161	1.3-1.5	Clayey Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH162	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH163	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH163	0.5-0.7	Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH164	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH165	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM21	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL

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TABLE B
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**								
BH166	0.0-0.1	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH166	4.0-4.1	Silty Sand	4m+	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH167	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH168	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH169	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH170	0.0-0.1	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM19	0.0-0.5	Fill	0m to < 1m	Silt	<25	<25	<0.1	<0.1	<0.1	<0.3	<0.1	NA
BH170	1.6-1.95	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH171	0.0-0.5	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH172	0.0-0.4	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM23	0.0-0.4	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH173	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH174	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH174	0.4-0.8	Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH175	0.0-0.3	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH176	0.4-0.6	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH176	1.2-1.5	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH177	0.6-0.9	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH177	1.0-1.2	Clayey Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH178	0.0-0.3	Fill	0m to < 1m	Clay	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH178	1.0-1.2	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH179	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM7	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH179	0.6-0.9	Clayey Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH180	0.0-0.1	Fill	0m to < 1m	Clay	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM5	0.0-0.1	Fill	0m to < 1m	Clay	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH181	0.0-0.2	Fill	0m to < 1m	Clay	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM3	0.0-0.2	Fill	0m to < 1m	Clay	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH181	0.5-0.95	Clayey Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM4	0.5-0.95	Clayey Silt	0m to < 1m	Silt	<25	<25	<0.1	<0.1	<0.1	<0.3	<0.1	NA
BH182	0.0-0.1	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH182	0.7-0.95	Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH183	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.8
DUPAM16	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH183	0.5-0.95	Clayey Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.3
BH184	0.0-0.4	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH185	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM9	0.0-0.2	Fill	0m to < 1m	Silt	<25	<25	<0.1	<0.1	<0.1	<0.3	<0.1	NA
BH185	0.6-0.95	Silt	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH186	0.0-0.1	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM11	0.0-0.1	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH186	1.5-1.95	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM13	1.5-1.95	Silt	1m to <2m	Silt	<25	<25	<0.1	<0.1	<0.1	<0.3	<0.1	NA
BH187	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
DUPAM14	0.0-0.2	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH187	1.7-1.95	Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH188	0.4-0.6	Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH188	0.9-1.1	Clayey Silt	1m to <2m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH189	0.8-0.9	Fill	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
SP1-1		Fill	0m to < 1m	Clay	<25	<50	<0.2	<0.5	<1	<1	<1	0
SP1-2		Fill	0m to < 1m	Clay	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
SP2-1		Fill	0m to < 1m	Clay	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
SP2-2		Fill	0m to < 1m	Clay	<25	<50	<0.2	<0.5	<1	<1	<1	0
SP3-1		Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
SP3-2		Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
SP4-1		Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
SP4-2		Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
SP5-1		Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0
SP5-2		Fill	0m to < 1m	Silt	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
Total Number of Samples					59	59	59	59	59	59	59	48
Maximum Value					<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	0.8

Concentration above the SAC **VALUE**

The guideline corresponding to the elevated value is highlighted in grey in the Site Assessment Criteria Table below

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SITE ASSESSMENT CRITERIA

					C_6-C_{10} (F1)	$>C_{10}$-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene
PQL - Envirolab Services					25	50	0.2	0.5	1	1	1
NEPM 2013 HSL Land Use Category					**HSL-D: COMMERCIAL/INDUSTRIAL**						
Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**							
BH166	0.0-0.1	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH166	4.0-4.1	Silty Sand	4m+	Sand	NL	NL	3	NL	NL	NL	NL
BH167	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH168	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH169	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH170	0.0-0.1	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM19	0.0-0.5	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH170	1.6-1.95	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH171	0.0-0.5	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH172	0.0-0.4	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM23	0.0-0.4	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH173	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH174	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH174	0.4-0.8	Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH175	0.0-0.3	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH176	0.4-0.6	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH176	1.2-1.5	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH177	0.6-0.9	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH177	1.0-1.2	Clayey Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH178	0.0-0.3	Fill	0m to < 1m	Clay	310	NL	4	NL	NL	NL	NL
BH178	1.0-1.2	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH179	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM7	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH179	0.6-0.9	Clayey Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH180	0.0-0.1	Fill	0m to < 1m	Clay	310	NL	4	NL	NL	NL	NL
DUPAM5	0.0-0.1	Fill	0m to < 1m	Clay	310	NL	4	NL	NL	NL	NL
BH181	0.0-0.2	Fill	0m to < 1m	Clay	310	NL	4	NL	NL	NL	NL
DUPAM3	0.0-0.2	Fill	0m to < 1m	Clay	310	NL	4	NL	NL	NL	NL
BH181	0.5-0.95	Clayey Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM4	0.5-0.95	Clayey Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH182	0.0-0.1	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH182	0.7-0.95	Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH183	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM16	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH183	0.5-0.95	Clayey Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH184	0.0-0.4	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH185	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM9	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH185	0.6-0.95	Silt	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH186	0.0-0.1	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM11	0.0-0.1	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH186	1.5-1.95	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
DUPAM13	1.5-1.95	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH187	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
DUPAM14	0.0-0.2	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH187	1.7-1.95	Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH188	0.4-0.6	Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
BH188	0.9-1.1	Clayey Silt	1m to <2m	Silt	360	NL	4	NL	NL	NL	NL
BH189	0.8-0.9	Fill	0m to < 1m	Sand	260	NL	3	NL	NL	230	NL
SP1-1		Fill	0m to < 1m	Clay	310	NL	4	NL	NL	NL	NL
SP1-2		Fill	0m to < 1m	Clay	310	NL	4	NL	NL	NL	NL
SP2-1		Fill	0m to < 1m	Clay	310	NL	4	NL	NL	NL	NL
SP2-2		Fill	0m to < 1m	Clay	310	NL	4	NL	NL	NL	NL
SP3-1		Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
SP3-2		Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
SP4-1		Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
SP4-2		Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
SP5-1		Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL
SP5-2		Fill	0m to < 1m	Silt	250	NL	4	NL	NL	NL	NL

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TABLE C
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 ($cmol_c/kg$)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	>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	0.1	0.1	25	50	100	100	0.2	0.5	1	3	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**																			
BH1	0.0-0.2	Silt	Fine	6.3	8	18.3	<4	9	13	11	4	27	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUP1	0.0-0.2	Silt	Fine	6.3	8	18.3	<4	9	13	10	5	26	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH2	0.0-0.2	Silt	Fine	6.3	8	18.3	<4	7	13	8	3	24	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH3	0.0-0.2	Silt	Fine	6.3	8	18.3	<4	8	16	12	5	35	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH4	0.0-0.2	Silty Clay	Fine	6.3	8	18.3	5	930	1500	82	660	690	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SS1	0.05-0.1	Silty Clay	Fine	6.3	8	18.3	13	1900	7200	920	100	7300	<0.1	NA	<25	<50	7600	1800	<0.2	<0.5	<1	<3	0.2
BH101	0.0-0.5	Fill	Fine	6.3	8	18.3	4	12	63	29	8	87	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM18	0.0-0.5	Fill	Fine	6.3	8	18.3	<4	12	36	20	8	48	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH102	0.3-0.4	Fill	Fine	6.3	8	18.3	4	24	45	15	54	170	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH102	0.9-1.0	Silt	Fine	6.3	8	18.3	<4	13	21	8	10	29	<0.1	NA	<25	<50	200	<100	<0.2	<0.5	<1	<3	<0.05
BH103	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	10	11	19	7	35	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH103	1.2-1.3	Clayey Silt	Fine	6.3	8	18.3	<4	7	3	5	4	11	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH104	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	12	13	10	7	32	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH104	0.7-1.0	Clayey Silt	Fine	6.3	8	18.3	<4	9	5	7	5	18	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH105	0.0-0.2	Fill	Fine	6.3	8	18.3	<4	9	11	11	6	31	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH106	0.0-0.2	Fill	Fine	6.3	8	18.3	<4	10	13	14	7	38	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH107	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	8	9	6	26	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH108	0.0-0.2	Fill	Fine	6.3	8	18.3	<4	9	15	16	5	38	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH109	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	10	11	5	32	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH109	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	8	3	6	4	13	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH110	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	10	11	15	7	32	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH110	0.5-0.7	Silt	Fine	6.3	8	18.3	<4	10	6	8	6	21	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH111	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	11	11	5	28	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH111	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	8	4	6	4	13	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH112	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	14	15	5	39	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH113	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	8	11	10	4	25	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH114	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	8	9	6	24	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH114	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	7	3	4	3	11	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH115	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	11	12	35	8	34	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH115	0.4-0.6	Silt	Fine	6.3	8	18.3	<4	11	7	12	7	21	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH116	0.0-0.3	Silty Clay	Fine	6.3	8	18.3	5	15	20	23	11	56	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH116	0.9-1.1	Silt	Fine	6.3	8	18.3	<4	7	5	5	5	8	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH117	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	8	14	13	5	38	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH118	0.0-0.5	Fill	Fine	6.3	8	18.3	<4	8	6	8	5	22	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM34	0.0-0.5	Fill	Fine	6.3	8	18.3	3	6.8	5.2	5	3.9	17	<0.1	NA	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1
BH118	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	8	3	5	4	12	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH119	0.0-0.5	Fill	Fine	6.3	8	18.3	<4	7	9	9	4	22	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM33	0.0-0.5	Fill	Fine	6.3	8	18.3	<4	9	8	9	5	23	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH120	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	8	11	10	4	25	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH120	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	7	3	4	3	11	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH121	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	14	14	5	32	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH121	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	8	4	5	4	13	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH122	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	10	13	11	6	30	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH123	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	8	10	9	5	24	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH124	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	7	8	8	4	24	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH125	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	7	12	12	4	31	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH126	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	7	12	9	3	27	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH127	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	8	18	13	4	32	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH127	0.3-0.6	Clayey Silt	Fine	6.3	8	18.3	<4	9	4	7	5	13	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH128	0.0-0.2	Fill	Fine	6.3	8	18.3	<4	9	12	10	5	26	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH129	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	8	11	10	6	24	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH129	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	9	4	6	4	12	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH130	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	8	7	8	5	24	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH131	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	13	15	4	35	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
Total Number of Samples				54	54	54	54	54	54	54	54	54	54	35	54	54	54	54	54	54	54	54	54
Maximum Value				6.3	8	18.3	13	1900	7200	920	660	7300	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	0.2

Concentration above the SAC — VALUE — Average Values

The guideline corresponding to the elevated value is highlighted in grey in the EIL and ESL Assessment Criteria Table below

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EIL AND ESL ASSESSMENT CRITERIA

Land Use Category				COMMERCIAL/INDUSTRIAL																		
							AGED HEAVY METALS-EILs						EILs		ESLs							
				pH	CEC ($cmol_c/kg$)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	>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	0.1	0.1	25	50	100	100	0.2	0.5	1	3	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**																			
BH1	0.0-0.2	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUP1	0.0-0.2	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH2	0.0-0.2	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH3	0.0-0.2	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH4	0.0-0.2	Silty Clay	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
SS1	0.05-0.1	Silty Clay	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH101	0.0-0.5	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM18	0.0-0.5	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH102	0.3-0.4	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH102	0.9-1.0	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH103	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH103	1.2-1.3	Clayey Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH104	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH104	0.7-1.0	Clayey Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH105	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH106	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH107	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH108	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH109	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH109	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH110	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH110	0.5-0.7	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH111	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH111	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH112	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH113	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH114	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH114	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH115	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH115	0.4-0.6	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH116	0.0-0.3	Silty Clay	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH116	0.9-1.1	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH117	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH118	0.0-0.5	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM34	0.0-0.5	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH118	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH119	0.0-0.5	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM33	0.0-0.5	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH120	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH120	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH121	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH121	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH122	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH123	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH124	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH125	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH126	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH127	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH127	0.3-0.6	Clayey Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH128	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH129	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH129	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH130	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH131	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172

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TABLE C
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 ($cmol_c/kg$)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	$>C_{10}$-C_{16} (F2)	$>C_{16}$-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	0.1	0.1	25	50	100	100	0.2	0.5	1	3	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**																			
BH132	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	8	13	12	4	27	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH132	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	9	4	7	5	13	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH133	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	9	10	5	25	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH134	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	8	14	12	3	25	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH134	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	8	4	7	4	12	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH135	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	10	16	16	6	34	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH136	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	10	8	10	6	22	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH136	1.3-1.5	Clayey Silt	Fine	6.3	8	18.3	<4	9	4	6	4	11	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH137	0.0-0.2	Fill	Fine	6.3	8	18.3	<4	8	13	11	4	30	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH137	1.5-1.95	Silt	Fine	6.3	8	18.3	<4	9	3	5	4	11	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM2	1.5-1.95	Silt	Fine	6.3	8	18.3	<4	9	3	6	4	12	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH138	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	8	19	14	3	33	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH139	0.0-0.5	Fill	Fine	6.3	8	18.3	<4	7	7	9	4	28	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM31	0.0-0.5	Fill	Fine	6.3	8	18.3	<4	8	8	8	5	25	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH140	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	8	16	11	4	32	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH141	0.0-0.35	Fill	Fine	6.3	8	18.3	<4	13	23	19	9	56	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM27	0.0-0.35	Fill	Fine	6.3	8	18.3	<4	12	17	17	9	47	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH142	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	11	17	16	7	38	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM29	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	11	21	18	7	43	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH142	1.0-1.5	Clayey Silt	Fine	6.3	8	18.3	<4	11	5	6	5	11	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM30	1.0-1.5	Clayey Silt	Fine	6.3	8	18.3	4	9.3	5.1	4	3	11	<0.1	NA	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1
BH143	0.0-0.2	Fill	Fine	6.3	8	18.3	<4	9	16	13	6	39	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH144	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	8	23	14	4	44	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH144	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	9	4	6	4	13	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH145	0.0-0.2	Fill	Fine	6.3	8	18.3	<4	8	25	14	3	37	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH146	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	7	22	11	3	36	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH146	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	8	4	6	4	12	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH147	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	15	13	6	39	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH147	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	9	4	7	4	12	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH148	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	20	13	5	34	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH149	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	19	13	5	34	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH149	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	9	4	7	5	13	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH150	0.0-0.2	Fill	Fine	6.3	8	18.3	<4	8	23	12	4	44	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH151	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	7	23	11	3	44	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH151	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	8	4	6	4	12	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH152	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	7	15	8	3	29	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH153	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	25	13	5	40	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH154	0.0-0.2	Fill	Fine	6.3	8	18.3	<4	8	16	10	4	31	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH154	0.8-1.0	Silt	Fine	6.3	8	18.3	<4	10	5	7	5	13	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH155	0.0-0.3	Fill	Fine	6.3	8	18.3	5	9	18	19	6	46	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH156	0.0-0.3	Fill	Fine	6.3	8	18.3	6	9	29	28	5	60	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH156	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	9	4	6	4	12	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH157	0.0-0.3	Fill	Fine	6.3	8	18.3	4	8	19	18	4	48	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH158	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	8	19	13	5	39	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH158	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	9	4	6	4	12	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH159	0.0-0.25	Fill	Fine	6.3	8	18.3	5	13	31	22	9	59	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH159	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	10	5	6	5	11	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH160	0.0-0.45	Fill	Fine	6.3	8	18.3	5	11	38	25	7	65	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM25	0.0-0.45	Fill	Fine	6.3	8	18.3	6	8.5	8.6	9	7.5	27	<0.1	NA	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1
BH161	0.0-0.3	Fill	Fine	6.3	8	18.3	4	10	22	19	7	50	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH161	1.3-1.5	Clayey Silt	Fine	6.3	8	18.3	<4	9	5	7	5	12	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH162	0.0-0.3	Fill	Fine	6.3	8	18.3	5	9	26	22	5	65	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH163	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	43	21	5	110	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH163	0.5-0.7	Silt	Fine	6.3	8	18.3	<4	10	5	8	5	15	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH164	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	7	30	14	3	65	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH165	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	11	30	15	8	48	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM21	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	12	25	14	9	44	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
Total Number of Samples				57	57	57	57	57	57	57	57	57	57	34	57	57	57	57	57	57	57	57	57
Maximum Value				6.3	8	18.3	6	13	43	28	9	110	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL

Concentration above the SAC — VALUE — Average Values

The guideline corresponding to the elevated value is highlighted in grey in the EIL and ESL Assessment Criteria Table below

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EIL AND ESL ASSESSMENT CRITERIA

Land Use Category				COMMERCIAL/INDUSTRIAL																		
							AGED HEAVY METALS-EILs						EILs		ESLs							
				pH	CEC ($cmol_c/kg$)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	>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	0.1	0.1	25	50	100	100	0.2	0.5	1	3	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**																			
BH132	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH132	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH133	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH134	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH134	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH135	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH136	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH136	1.3-1.5	Clayey Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH137	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH137	1.5-1.95	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
DUPAM2	1.5-1.95	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH138	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH139	0.0-0.5	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM31	0.0-0.5	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH140	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH141	0.0-0.35	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM27	0.0-0.35	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH142	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM29	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH142	1.0-1.5	Clayey Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
DUPAM30	1.0-1.5	Clayey Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH143	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH144	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH144	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH145	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH146	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH146	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH147	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH147	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH148	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH149	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH149	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH150	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH151	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH151	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH152	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH153	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH154	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH154	0.8-1.0	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH155	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH156	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH156	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH157	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH158	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH158	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH159	0.0-0.25	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH159	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH160	0.0-0.45	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM25	0.0-0.45	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH161	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH161	1.3-1.5	Clayey Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH162	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH163	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH163	0.5-0.7	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH164	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH165	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM21	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172

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TABLE C
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 ($cmol_c/kg$)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	$>C_{10}$-C_{16} (F2)	$>C_{16}$-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	0.1	0.1	25	50	100	100	0.2	0.5	1	3	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**																			
BH166	0.0-0.1	Fill	Fine	6.3	8	18.3	<4	9	57	19	5	74	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH166	4.0-4.1	Silty Sand	Coarse	6.3	8	18.3	<4	10	5	8	5	16	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH167	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	8	9	6	31	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH168	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	8	45	15	5	89	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH169	0.0-0.2	Fill	Fine	6.3	8	18.3	<4	8	18	9	4	100	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH170	0.0-0.1	Fill	Fine	6.3	8	18.3	<4	7	78	19	3	100	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH170	1.6-1.95	Silt	Fine	6.3	8	18.3	<4	9	3	6	4	13	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH171	0.0-0.5	Fill	Fine	6.3	8	18.3	<4	15	50	19	14	76	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM19	0.0-0.5	Fill	Fine	6.3	8	18.3	6	17	52	18	18	82	<0.1	NA	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1
BH172	0.0-0.4	Fill	Fine	6.3	8	18.3	<4	10	19	12	7	35	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM23	0.0-0.4	Fill	Fine	6.3	8	18.3	<4	11	21	12	7	36	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH173	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	74	17	6	78	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH174	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	10	48	14	6	81	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH174	0.4-0.8	Silt	Fine	6.3	8	18.3	<4	9	12	9	6	22	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH175	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	9	9	9	6	30	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH176	0.4-0.6	Fill	Fine	6.3	8	18.3	<4	12	22	9	7	52	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH176	1.2-1.5	Silt	Fine	6.3	8	18.3	<4	9	7	5	5	13	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH177	0.6-0.9	Fill	Fine	6.3	8	18.3	<4	18	27	17	16	41	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	1.4
BH177	1.0-1.2	Clayey Silt	Fine	6.3	8	18.3	<4	11	9	8	15	20	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH178	0.0-0.3	Fill	Fine	6.3	8	18.3	<4	26	100	25	32	230	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH178	1.0-1.2	Silt	Fine	6.3	8	18.3	<4	9	21	7	7	24	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH179	0.0-0.2	Fill	Fine	6.3	8	18.3	7	310	1700	240	280	2600	<0.1	<0.1	<25	<50	2600	500	<0.2	<0.5	<1	<3	<0.05
DUPAM7	0.0-0.2	Fill	Fine	6.3	8	18.3	7	260	1900	260	270	2600	<0.1	NA	<25	<50	2500	430	<0.2	<0.5	<1	<3	<0.05
BH179	0.6-0.9	Clayey Silt	Fine	6.3	8	18.3	<4	11	6	7	5	15	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH180	0.0-0.1	Fill	Fine	6.3	8	18.3	<4	36	100	24	17	160	<0.1	<0.1	<25	<50	1100	170	<0.2	<0.5	<1	<3	<0.05
DUPAM5	0.0-0.1	Fill	Fine	6.3	8	18.3	<4	19	53	17	12	98	<0.1	NA	<25	<50	140	<100	<0.2	<0.5	<1	<3	<0.05
BH181	0.0-0.2	Fill	Fine	6.3	8	18.3	4	20	170	46	25	450	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM3	0.0-0.2	Fill	Fine	6.3	8	18.3	4	17	130	31	20	340	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH181	0.5-0.95	Clayey Silt	Fine	6.3	8	18.3	<4	14	39	16	10	98	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM4	0.5-0.95	Clayey Silt	Fine	6.3	8	18.3	2	9.9	48	12	6	100	<0.1	NA	<25	<25	<90	<120	<0.2	<0.5	<1	<3	<0.1
BH182	0.0-0.1	Fill	Fine	6.3	8	18.3	<4	27	760	76	25	800	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH182	0.7-0.95	Silt	Fine	6.3	8	18.3	<4	8	9	6	4	24	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH183	0.0-0.2	Fill	Fine	6.3	8	18.3	5	39	6800	920	81	17000	<0.1	<0.1	<25	<50	1100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM16	0.0-0.2	Fill	Fine	6.3	8	18.3	7	46	6600	760	110	12000	<0.1	NA	<25	<50	1200	110	<0.2	<0.5	<1	<3	<0.05
BH183	0.5-0.95	Clayey Silt	Fine	6.3	8	18.3	<4	11	27	19	7	160	<0.1	NA	<25	<50	2100	<100	<0.2	<0.5	<1	<3	<0.05
BH184	0.0-0.4	Fill	Fine	6.3	8	18.3	<4	11	14	11	8	24	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH185	0.0-0.2	Fill	Fine	6.3	8	18.3	<4	24	1700	190	17	1700	<0.1	<0.1	<25	<50	180	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM9	0.0-0.2	Fill	Fine	6.3	8	18.3	6	51	8400	780	110	7400	<0.1	NA	<25	<25	180	<120	<0.1	<0.1	<0.1	<0.3	<0.05
BH185	0.6-0.95	Silt	Fine	6.3	8	18.3	<4	12	7	10	7	20	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH186	0.0-0.1	Fill	Fine	6.3	8	18.3	<4	10	150	26	8	180	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM11	0.0-0.1	Fill	Fine	6.3	8	18.3	<4	10	110	22	8	160	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH186	1.5-1.95	Silt	Fine	6.3	8	18.3	<4	16	8	9	8	17	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
DUPAM13	1.5-1.95	Silt	Fine	6.3	8	18.3	5	13	8.5	10	6.6	18	<0.1	NA	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1
BH187	0.0-0.2	Fill	Fine	6.3	8	18.3	6	77	570	57	22	560	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.2
DUPAM14	0.0-0.2	Fill	Fine	6.3	8	18.3	<4	13	370	50	19	450	<0.1	NA	<25	<50	100	<100	<0.2	<0.5	<1	<3	<0.05
BH187	1.7-1.95	Silt	Fine	6.3	8	18.3	<4	15	7	8	6	18	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH188	0.4-0.6	Fill	Fine	6.3	8	18.3	<4	11	6	9	7	17	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH188	0.9-1.1	Clayey Silt	Fine	6.3	8	18.3	<4	10	5	8	5	14	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH189	0.8-0.9	Fill	Coarse	6.3	8	18.3	<4	14	32	38	7	120	<0.1	<0.1	<25	<50	120	<100	<0.2	<0.5	<1	<3	0.56
SP1-1		Fill	Fine	6.3	8	18.3	<4	12	77	21	8	77	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SP1-2		Fill	Fine	6.3	8	18.3	<4	14	31	12	8	42	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SP2-1		Fill	Fine	6.3	8	18.3	<4	12	27	25	7	42	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SP2-2		Fill	Fine	6.3	8	18.3	<4	12	18	25	9	42	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.2
SP3-1		Fill	Fine	6.3	8	18.3	<4	16	61	13	21	47	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SP3-2		Fill	Fine	6.3	8	18.3	<4	35	57	19	39	95	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SP4-1		Fill	Fine	6.3	8	18.3	<4	23	31	13	24	38	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SP4-2		Fill	Fine	6.3	8	18.3	4	19	27	17	24	39	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.06
SP5-1		Fill	Fine	6.3	8	18.3	<4	10	100	18	5	200	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SP5-2		Fill	Fine	6.3	8	18.3	<4	42	290	41	8	550	<0.1	<0.1	<25	<50	560	<100	<0.2	<0.5	<1	<3	0.07
Total Number of Samples				59	59	59	59	59	59	59	59	59	59	34	59	59	59	59	59	59	59	59	59
Maximum Value				6.3	8	18.3	7	310	8400	920	280	17000	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	1.4

Concentration above the SAC — VALUE — Average Values

The guideline corresponding to the elevated value is highlighted in grey in the EIL and ESL Assessment Criteria Table below

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EIS

EIL AND ESL ASSESSMENT CRITERIA

Land Use Category				COMMERCIAL/INDUSTRIAL																		
							AGED HEAVY METALS-EILs						EILs		ESLs							
				pH	CEC ($cmol_c/kg$)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	>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	0.1	0.1	25	50	100	100	0.2	0.5	1	3	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**																			
BH166	0.0-0.1	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH166	4.0-4.1	Silty Sand	Coarse	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	1700	3300	75	135	165	180	172
BH167	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH168	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH169	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH170	0.0-0.1	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH170	1.6-1.95	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH171	0.0-0.5	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM19	0.0-0.5	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH172	0.0-0.4	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM23	0.0-0.4	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH173	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH174	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH174	0.4-0.8	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH175	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH176	0.4-0.6	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH176	1.2-1.5	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH177	0.6-0.9	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH177	1.0-1.2	Clayey Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH178	0.0-0.3	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH178	1.0-1.2	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH179	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM7	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH179	0.6-0.9	Clayey Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH180	0.0-0.1	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM5	0.0-0.1	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH181	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM3	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH181	0.5-0.95	Clayey Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
DUPAM4	0.5-0.95	Clayey Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH182	0.0-0.1	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH182	0.7-0.95	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH183	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM16	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH183	0.5-0.95	Clayey Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH184	0.0-0.4	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH185	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM9	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH185	0.6-0.95	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH186	0.0-0.1	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM11	0.0-0.1	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH186	1.5-1.95	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
DUPAM13	1.5-1.95	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH187	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
DUPAM14	0.0-0.2	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH187	1.7-1.95	Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH188	0.4-0.6	Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
BH188	0.9-1.1	Clayey Silt	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	--	215	170	2500	6600	95	135	185	95	172
BH189	0.8-0.9	Fill	Coarse	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	1700	3300	75	135	165	180	172
SP1-1		Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
SP1-2		Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
SP2-1		Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
SP2-2		Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
SP3-1		Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
SP3-2		Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
SP4-1		Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
SP4-2		Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
SP5-1		Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172
SP5-2		Fill	Fine	6.3	8	18.3	160	673	308	1963	295	742	370	640	215	170	2500	6600	95	135	185	95	172

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TABLE D
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	Chromium VI	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	250	0.2	0.5	1	3	100
General Solid Waste CT1			100	20	100	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	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	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	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**																										
BH1	0.0-0.2	Silt	<4	<0.4	9	NA	13	11	<0.1	4	27	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
DUP1	0.0-0.2	Silt	<4	<0.4	9	NA	13	10	<0.1	5	26	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH2	0.0-0.2	Silt	<4	<0.4	7	NA	13	8	<0.1	3	24	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH3	0.0-0.2	Silt	<4	<0.4	8	NA	16	12	<0.1	5	35	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH4	0.0-0.2	Silty Clay	5	1	**930**	NA	1500	82	0.1	**660**	690	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
SS1	0.05-0.1	Silty Clay	13	10	**1900**	NA	7200	**920**	0.5	**100**	7300	1.2	0.2	NA	NA	NA	NA	NA	<25	<50	4300	3700	8000	<0.2	<0.5	<1	<3	NA
BH101	0.0-0.5	Fill	4	<0.4	12	NA	63	29	<0.1	8	87	0.62	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
DUPAM18	0.0-0.5	Fill	<4	<0.4	12	NA	36	20	<0.1	8	48	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH102	0.3-0.4	Fill	4	<0.4	24	NA	45	15	<0.1	**54**	170	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH102	0.9-1.0	Silt	<4	<0.4	13	NA	21	8	<0.1	10	29	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	130	<100	130	<0.2	<0.5	<1	<3	NA
BH103	0.0-0.3	Fill	<4	<0.4	10	NA	11	19	0.1	7	35	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH103	1.2-1.3	Clayey Silt	<4	<0.4	7	NA	3	5	<0.1	4	11	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH104	0.0-0.3	Fill	<4	<0.4	12	NA	13	10	<0.1	7	32	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH104	0.7-1.0	Clayey Silt	<4	<0.4	9	NA	5	7	<0.1	5	18	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH105	0.0-0.2	Fill	<4	<0.4	9	NA	11	11	<0.1	6	31	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH106	0.0-0.2	Fill	<4	<0.4	10	NA	13	14	0.1	7	38	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH107	0.0-0.3	Fill	<4	<0.4	9	NA	8	9	<0.1	6	26	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH108	0.0-0.2	Fill	<4	<0.4	9	NA	15	16	0.2	5	38	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH109	0.0-0.3	Fill	<4	<0.4	9	NA	10	11	0.2	5	32	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH109	1.2-1.5	Silt	<4	<0.4	8	NA	3	6	<0.1	4	13	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH110	0.0-0.3	Fill	<4	<0.4	10	NA	11	15	0.1	7	32	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH110	0.5-0.7	Silt	<4	<0.4	10	NA	6	8	<0.1	6	21	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH111	0.0-0.3	Fill	<4	<0.4	9	NA	11	11	<0.1	5	28	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH111	1.2-1.5	Silt	<4	<0.4	8	NA	4	6	<0.1	4	13	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH112	0.0-0.3	Fill	<4	<0.4	9	NA	14	15	0.2	5	39	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH113	0.0-0.3	Fill	<4	<0.4	8	NA	11	10	<0.1	4	25	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH114	0.0-0.3	Fill	<4	<0.4	9	NA	8	9	<0.1	6	24	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH114	1.2-1.5	Silt	<4	<0.4	7	NA	3	4	<0.1	3	11	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH115	0.0-0.3	Fill	<4	<0.4	11	NA	12	35	0.1	8	34	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH115	0.4-0.6	Silt	<4	<0.4	11	NA	7	12	<0.1	7	21	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA

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TABLE D
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	Chromium VI	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	250	0.2	0.5	1	3	100
General Solid Waste CT1			100	20	100	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	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	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	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**																										
BH116	0.0-0.3	Silty Clay	5	<0.4	15	NA	20	23	0.2	11	56	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH116	0.9-1.1	Silt	<4	<0.4	7	NA	5	5	<0.1	5	8	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH117	0.0-0.3	Fill	<4	<0.4	8	NA	14	13	<0.1	5	38	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH118	0.0-0.5	Fill	<4	<0.4	8	NA	6	8	<0.1	5	22	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
DUPAM34	0.0-0.5	Fill	3	<0.3	6.8	NA	5.2	5	<0.05	3.9	17	<0.8	<0.1	NA	NA	NA	NA	NA	<20	<20	<45	<45	<110	<0.1	<0.1	<0.1	<0.3	NA
BH118	1.2-1.5	Silt	<4	<0.4	8	NA	3	5	<0.1	4	12	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH119	0.0-0.5	Fill	<4	<0.4	7	NA	9	9	<0.1	4	22	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
DUPAM33	0.0-0.5	Fill	<4	<0.4	9	NA	8	9	<0.1	5	23	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH120	0.0-0.3	Fill	<4	<0.4	8	NA	11	10	<0.1	4	25	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH120	1.2-1.5	Silt	<4	<0.4	7	NA	3	4	<0.1	3	11	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH121	0.0-0.3	Fill	<4	<0.4	9	NA	14	14	<0.1	5	32	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH121	1.2-1.5	Silt	<4	<0.4	8	NA	4	5	<0.1	4	13	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH122	0.0-0.3	Fill	<4	<0.4	10	NA	13	11	<0.1	6	30	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH123	0.0-0.3	Fill	<4	<0.4	8	NA	10	9	<0.1	5	24	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH124	0.0-0.3	Fill	<4	<0.4	7	NA	8	8	<0.1	4	24	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH125	0.0-0.3	Fill	<4	<0.4	7	NA	12	12	<0.1	4	31	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH126	0.0-0.3	Fill	<4	<0.4	7	NA	12	9	<0.1	3	27	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH127	0.0-0.3	Fill	<4	<0.4	8	NA	18	13	<0.1	4	32	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH127	0.3-0.6	Clayey Silt	<4	<0.4	9	NA	4	7	<0.1	5	13	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH128	0.0-0.2	Fill	<4	<0.4	9	NA	12	10	<0.1	5	26	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH129	0.0-0.3	Fill	<4	<0.4	8	NA	11	10	<0.1	6	24	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH129	1.2-1.5	Silt	<4	<0.4	9	NA	4	6	<0.1	4	12	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH130	0.0-0.3	Fill	<4	<0.4	8	NA	7	8	<0.1	5	24	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH131	0.0-0.3	Fill	<4	<0.4	9	NA	13	15	0.3	4	35	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH132	0.0-0.3	Fill	<4	<0.4	8	NA	13	12	<0.1	4	27	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH132	1.2-1.5	Silt	<4	<0.4	9	NA	4	7	<0.1	5	13	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH133	0.0-0.3	Fill	<4	<0.4	9	NA	9	10	<0.1	5	25	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH134	0.0-0.3	Fill	<4	<0.4	8	NA	14	12	<0.1	3	25	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH134	1.2-1.5	Silt	<4	<0.4	8	NA	4	7	<0.1	4	12	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH135	0.0-0.3	Fill	<4	<0.4	10	NA	16	16	<0.1	6	34	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH136	0.0-0.3	Fill	<4	<0.4	10	NA	8	10	0.2	6	22	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH136	1.3-1.5	Clayey Silt	<4	<0.4	9	NA	4	6	<0.1	4	11	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH137	0.0-0.2	Fill	<4	<0.4	8	NA	13	11	<0.1	4	30	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH137	1.5-1.95	Silt	<4	<0.4	9	NA	3	5	<0.1	4	11	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
DUPAM2	1.5-1.95	Silt	<4	<0.4	9	NA	3	6	<0.1	4	12	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH138	0.0-0.3	Fill	<4	<0.4	8	NA	19	14	<0.1	3	33	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH139	0.0-0.5	Fill	<4	<0.4	7	NA	7	9	<0.1	4	28	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
DUPAM31	0.0-0.5	Fill	<4	<0.4	8	NA	8	8	<0.1	5	25	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH140	0.0-0.3	Fill	<4	<0.4	8	NA	16	11	<0.1	4	32	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH141	0.0-0.35	Fill	<4	<0.4	13	NA	23	19	<0.1	9	56	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
DUPAM27	0.0-0.35	Fill	<4	<0.4	12	NA	17	17	<0.1	9	47	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH142	0.0-0.3	Fill	<4	<0.4	11	NA	17	16	<0.1	7	38	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
DUPAM29	0.0-0.3	Fill	<4	<0.4	11	NA	21	18	<0.1	7	43	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH142	1.0-1.5	Clayey Silt	<4	<0.4	11	NA	5	6	<0.1	5	11	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
DUPAM30	1.0-1.5	Clayey Silt	4	<0.3	9.3	NA	5.1	4	<0.05	3	11	<0.8	<0.1	NA	NA	NA	NA	NA	<20	<20	<45	<45	<110	<0.1	<0.1	<0.1	<0.3	NA
BH143	0.0-0.2	Fill	<4	<0.4	9	NA	16	13	<0.1	6	39	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH144	0.0-0.3	Fill	<4	<0.4	8	NA	23	14	<0.1	4	44	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH144	1.2-1.5	Silt	<4	<0.4	9	NA	4	6	<0.1	4	13	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH145	0.0-0.2	Fill	<4	<0.4	8	NA	25	14	<0.1	3	37	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH146	0.0-0.3	Fill	<4	<0.4	7	NA	22	11	<0.1	3	36	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected

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TABLE D
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	Chromium VI	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	250	0.2	0.5	1	3	100
General Solid Waste CT1			100	20	100	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	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	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	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**																										
BH146	1.2-1.5	Silt	<4	<0.4	8	NA	4	6	<0.1	4	12	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH147	0.0-0.3	Fill	<4	<0.4	9	NA	15	13	<0.1	6	39	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH147	1.2-1.5	Silt	<4	<0.4	9	NA	4	7	<0.1	4	12	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH148	0.0-0.3	Fill	<4	<0.4	9	NA	20	13	<0.1	5	34	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH149	0.0-0.3	Fill	<4	<0.4	9	NA	19	13	<0.1	5	34	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH149	1.2-1.5	Silt	<4	<0.4	9	NA	4	7	<0.1	5	13	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH150	0.0-0.2	Fill	<4	<0.4	8	NA	23	12	<0.1	4	44	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH151	0.0-0.3	Fill	<4	<0.4	7	NA	23	11	<0.1	3	44	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH151	1.2-1.5	Silt	<4	<0.4	8	NA	4	6	<0.1	4	12	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH152	0.0-0.3	Fill	<4	<0.4	7	NA	15	8	<0.1	3	29	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH153	0.0-0.3	Fill	<4	<0.4	9	NA	25	13	<0.1	5	40	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH154	0.0-0.2	Fill	<4	<0.4	8	NA	16	10	<0.1	4	31	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH154	0.8-1.0	Silt	<4	<0.4	10	NA	5	7	<0.1	5	13	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH155	0.0-0.3	Fill	5	<0.4	9	NA	18	19	<0.1	6	46	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH156	0.0-0.3	Fill	6	<0.4	9	NA	29	28	<0.1	5	60	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH156	1.2-1.5	Silt	<4	<0.4	9	NA	4	6	<0.1	4	12	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH157	0.0-0.3	Fill	4	<0.4	8	NA	19	18	<0.1	4	48	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH158	0.0-0.3	Fill	<4	<0.4	8	NA	19	13	<0.1	5	39	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH158	1.2-1.5	Silt	<4	<0.4	9	NA	4	6	<0.1	4	12	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH159	0.0-0.25	Fill	5	<0.4	13	NA	31	22	<0.1	9	59	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH159	1.2-1.5	Silt	<4	<0.4	10	NA	5	6	<0.1	5	11	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH160	0.0-0.45	Fill	5	<0.4	11	NA	38	25	<0.1	7	65	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
DUPAM25	0.0-0.45	Fill	6	<0.3	8.5	NA	8.6	9	<0.05	7.5	27	<0.8	<0.1	NA	NA	NA	NA	NA	<20	<20	<45	<45	<110	<0.1	<0.1	<0.1	<0.3	NA
BH161	0.0-0.3	Fill	4	<0.4	10	NA	22	19	<0.1	7	50	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH161	1.3-1.5	Clayey Silt	<4	<0.4	9	NA	5	7	<0.1	5	12	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH162	0.0-0.3	Fill	5	<0.4	9	NA	26	22	<0.1	5	65	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH163	0.0-0.3	Fill	<4	<0.4	9	NA	43	21	<0.1	5	110	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH163	0.5-0.7	Silt	<4	<0.4	10	NA	5	8	<0.1	5	15	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH164	0.0-0.3	Fill	<4	<0.4	7	<1	30	14	0.1	3	65	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH165	0.0-0.3	Fill	<4	<0.4	11	NA	30	15	<0.1	8	48	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
DUPAM21	0.0-0.3	Fill	<4	<0.4	12	NA	25	14	<0.1	9	44	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH166	0.0-0.1	Fill	<4	<0.4	9	NA	57	19	<0.1	5	74	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH166	4.0-4.1	Silty Sand	<4	<0.4	10	NA	5	8	<0.1	5	16	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH167	0.0-0.3	Fill	<4	<0.4	9	NA	8	9	<0.1	6	31	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH168	0.0-0.3	Fill	<4	<0.4	8	NA	45	15	<0.1	5	89	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH169	0.0-0.2	Fill	<4	<0.4	8	NA	18	9	<0.1	4	100	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH170	0.0-0.1	Fill	<4	0.5	7	NA	78	19	<0.1	3	100	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH170	1.6-1.95	Silt	<4	<0.4	9	NA	3	6	<0.1	4	13	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH171	0.0-0.5	Fill	<4	<0.4	15	NA	50	19	<0.1	14	76	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
DUPAM19	0.0-0.5	Fill	6	<0.3	17	NA	52	18	<0.05	18	82	<0.8	<0.1	NA	NA	NA	NA	NA	<20	<20	<45	<45	<110	<0.1	<0.1	<0.1	<0.3	NA
BH172	0.0-0.4	Fill	<4	<0.4	10	NA	19	12	<0.1	7	35	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
DUPAM23	0.0-0.4	Fill	<4	<0.4	11	NA	21	12	<0.1	7	36	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH173	0.0-0.3	Fill	<4	<0.4	9	NA	74	17	<0.1	6	78	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH174	0.0-0.3	Fill	<4	<0.4	10	NA	48	14	<0.1	6	81	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH174	0.4-0.8	Silt	<4	<0.4	9	NA	12	9	<0.1	6	22	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH175	0.0-0.3	Fill	<4	<0.4	9	NA	9	9	<0.1	6	30	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH176	0.4-0.6	Fill	<4	<0.4	12	NA	22	9	<0.1	7	52	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH176	1.2-1.5	Silt	<4	<0.4	9	NA	7	5	<0.1	5	13	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH177	0.6-0.9	Fill	<4	<0.4	18	NA	27	17	<0.1	16	41	19	**1.4**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH177	1.0-1.2	Clayey Silt	<4	<0.4	11	NA	9	8	<0.1	15	20	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA

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TABLE D
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	Chromium VI	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	250	0.2	0.5	1	3	100
General Solid Waste CT1			100	20	100	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	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	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	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**																										
BH178	0.0-0.3	Fill	<4	<0.4	26	NA	100	25	<0.1	32	230	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH178	1.0-1.2	Silt	<4	<0.4	9	NA	21	7	<0.1	7	24	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH179	0.0-0.2	Fill	7	4.2	**310**	<10	1700	**240**	0.2	**280**	2600	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	1500	1200	2700	<0.2	<0.5	<1	<3	Not Detected
DUPAM7	0.0-0.2	Fill	7	4.4	**260**	NA	1900	**260**	0.2	**270**	2600	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	1500	1100	2600	<0.2	<0.5	<1	<3	NA
BH179	0.6-0.9	Clayey Silt	<4	<0.4	11	NA	6	7	<0.1	5	15	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH180	0.0-0.1	Fill	<4	<0.4	36	NA	100	24	<0.1	17	160	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	670	470	1140	<0.2	<0.5	<1	<3	Not Detected
DUPAM5	0.0-0.1	Fill	<4	<0.4	19	NA	53	17	<0.1	12	98	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH181	0.0-0.2	Fill	4	0.6	20	<5	170	46	<0.1	25	450	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
DUPAM3	0.0-0.2	Fill	4	0.6	17	NA	130	31	<0.1	20	340	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH181	0.5-0.95	Clayey Silt	<4	<0.4	14	NA	39	16	<0.1	10	98	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
DUPAM4	0.5-0.95	Clayey Silt	2	<0.3	9.9	NA	48	12	<0.05	6	100	<0.8	<0.1	NA	NA	NA	NA	NA	<20	<20	<45	<45	<110	<0.1	<0.1	<0.1	<0.3	NA
BH182	0.0-0.1	Fill	<4	1	27	NA	760	76	<0.1	25	800	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	0.6	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH182	0.7-0.95	Silt	<4	<0.4	8	NA	9	6	<0.1	4	24	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH183	0.0-0.2	Fill	5	19	39	NA	6800	**920**	0.3	**81**	17000	0.2	<0.05	<0.1	<0.1	<0.1	<0.1	0.2	<25	<50	900	240	1140	<0.2	<0.5	<1	<3	Not Detected
DUPAM16	0.0-0.2	Fill	7	12	46	NA	6600	**760**	0.3	**110**	12000	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	930	340	1270	<0.2	<0.5	<1	<3	NA
BH183	0.5-0.95	Clayey Silt	<4	3	11	NA	27	19	<0.1	7	160	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	2200	<100	2200	<0.2	<0.5	<1	<3	NA
BH184	0.0-0.4	Fill	<4	<0.4	11	NA	14	11	<0.1	8	24	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH185	0.0-0.2	Fill	<4	1	24	NA	1700	**190**	0.1	17	1700	0.4	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	110	110	<0.2	<0.5	<1	<3	Not Detected
DUPAM9	0.0-0.2	Fill	6	5	51	NA	8400	**780**	<0.05	**110**	7400	<0.8	<0.1	NA	NA	NA	NA	NA	<20	<20	110	96	206	<0.1	<0.1	<0.1	<0.3	NA
BH185	0.6-0.95	Silt	<4	<0.4	12	NA	7	10	<0.1	7	20	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH186	0.0-0.1	Fill	<4	<0.4	10	NA	150	26	<0.1	8	180	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
DUPAM11	0.0-0.1	Fill	<4	<0.4	10	NA	110	22	<0.1	8	160	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH186	1.5-1.95	Silt	<4	<0.4	16	NA	8	9	<0.1	8	17	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
DUPAM13	1.5-1.95	Silt	5	<0.3	13	NA	8.5	10	<0.05	6.6	18	<0.8	<0.1	NA	NA	NA	NA	NA	<20	<20	<45	<45	<110	<0.1	<0.1	<0.1	<0.3	NA
BH187	0.0-0.2	Fill	6	0.9	77	NA	570	57	0.1	22	560	2.3	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
DUPAM14	0.0-0.2	Fill	<4	0.7	13	NA	370	50	<0.1	19	450	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH187	1.7-1.95	Silt	<4	<0.4	15	NA	7	8	<0.1	6	18	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH188	0.4-0.6	Fill	<4	<0.4	11	NA	6	9	<0.1	7	17	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
BH188	0.9-1.1	Clayey Silt	<4	<0.4	10	NA	5	8	<0.1	5	14	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	NA
BH189	0.8-0.9	Fill	<4	<0.4	14	NA	32	38	0.1	7	120	7.7	0.56	<0.1	<0.1	<0.1	<0.1	<0.2	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
SP1-1		Fill	<4	<0.4	12	NA	77	21	<0.1	8	77	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
SP1-2		Fill	<4	<0.4	14	NA	31	12	<0.1	8	42	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
SP2-1		Fill	<4	<0.4	12	NA	27	25	<0.1	7	42	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
SP2-2		Fill	<4	<0.4	12	NA	18	25	<0.1	9	42	1.5	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
SP3-1		Fill	<4	<0.4	16	NA	61	13	<0.1	21	47	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
SP3-2		Fill	<4	<0.4	35	NA	57	19	<0.1	39	95	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
SP4-1		Fill	<4	<0.4	23	NA	31	13	<0.1	24	38	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
SP4-2		Fill	4	<0.4	19	NA	27	17	<0.1	24	39	0.3	0.06	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
SP5-1		Fill	<4	0.7	10	NA	100	18	<0.1	5	200	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<250	<0.2	<0.5	<1	<3	Not Detected
SP5-2		Fill	<4	2	42	NA	290	41	<0.1	8	550	0.07	0.07	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	260	350	610	<0.2	<0.5	<1	<3	Not Detected
MPF1		Fibre Cement 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	NA	Not Detected
Total Number of samples			170	170	170	3	170	170	170	170	170	170	170	103	103	103	103	103	170	170	170	170	170	170	170	170	170	104
Maximum Value			13	19	1900	<10	8400	920	0.5	660	17000	19	1.4	<PQL	<PQL	<PQL	<PQL	0.6	<PQL	<PQL	4300	3700	8000	<PQL	<PQL	<PQL	<PQL	NC

Concentration above the CT1 **VALUE**
Concentration above SCC1 **VALUE**
Concentration above the SCC2 **VALUE**

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

			Chromium	Lead	Nickel	B(a)P
PQL - Envirolab Services			0.01	0.03	0.02	0.001
TCLP1 - General Solid Waste			5	5	2	0.04
TCLP2 - Restricted Solid Waste			20	20	8	0.16
TCLP3 - Hazardous Waste			>20	>20	>8	>0.16
Sample Reference	**Sample Depth**	**Sample Description**				
BH4	0.0-0.2	Silty Clay	NA	NA	**2.7**	NA
SS1	0.05-0.1	Silty Clay	0.02	0.38	NA	NA
BH102	0.3-0.4	Fill	NA	NA	0.6	NA
BH177	0.6-0.9	Fill	NA	NA	NA	<0.001
BH179	0.0-0.2	Fill	0.02	<0.03	0.1	NA
BH183	0.0-0.2	Fill	NA	<0.03	0.03	NA
BH185	0.0-0.2	Fill	NA	0.3	NA	NA
Total Number of samples			2	4	4	1
Maximum Value			0.02	0.38	2.7	<PQL

General Solid Waste	**VALUE**
Restricted Solid Waste	**VALUE**
Hazardous Waste	**VALUE**

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

			C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	>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**				
BH1	0.0-0.2	Fine	<25	<50	<100	<100
DUP1	0.0-0.2	Fine	<25	<50	<100	<100
BH2	0.0-0.2	Fine	<25	<50	<100	<100
BH3	0.0-0.2	Fine	<25	<50	<100	<100
BH4	0.0-0.2	Fine	<25	<50	<100	<100
SS1	0.05-0.1	Fine	<25	<50	7600	1800
BH101	0.0-0.5	Fine	<25	<50	<100	<100
DUPAM18	0.0-0.5	Fine	<25	<50	<100	<100
BH102	0.3-0.4	Fine	<25	<50	<100	<100
BH102	0.9-1.0	Fine	<25	<50	200	<100
BH103	0.0-0.3	Fine	<25	<50	<100	<100
BH103	1.2-1.3	Fine	<25	<50	<100	<100
BH104	0.0-0.3	Fine	<25	<50	<100	<100
BH104	0.7-1.0	Fine	<25	<50	<100	<100
BH105	0.0-0.2	Fine	<25	<50	<100	<100
BH106	0.0-0.2	Fine	<25	<50	<100	<100
BH107	0.0-0.3	Fine	<25	<50	<100	<100
BH108	0.0-0.2	Fine	<25	<50	<100	<100
BH109	0.0-0.3	Fine	<25	<50	<100	<100
BH109	1.2-1.5	Fine	<25	<50	<100	<100
BH110	0.0-0.3	Fine	<25	<50	<100	<100
BH110	0.5-0.7	Fine	<25	<50	<100	<100
BH111	0.0-0.3	Fine	<25	<50	<100	<100
BH111	1.2-1.5	Fine	<25	<50	<100	<100
BH112	0.0-0.3	Fine	<25	<50	<100	<100
BH113	0.0-0.3	Fine	<25	<50	<100	<100
BH114	0.0-0.3	Fine	<25	<50	<100	<100
BH114	1.2-1.5	Fine	<25	<50	<100	<100
BH115	0.0-0.3	Fine	<25	<50	<100	<100
BH115	0.4-0.6	Fine	<25	<50	<100	<100
BH116	0.0-0.3	Fine	<25	<50	<100	<100
BH116	0.9-1.1	Fine	<25	<50	<100	<100
BH117	0.0-0.3	Fine	<25	<50	<100	<100
BH118	0.0-0.5	Fine	<25	<50	<100	<100
DUPAM34	0.0-0.5	Fine	<25	<25	<90	<120
BH118	1.2-1.5	Fine	<25	<50	<100	<100
BH119	0.0-0.5	Fine	<25	<50	<100	<100
DUPAM33	0.0-0.5	Fine	<25	<50	<100	<100
BH120	0.0-0.3	Fine	<25	<50	<100	<100
BH120	1.2-1.5	Fine	<25	<50	<100	<100
BH121	0.0-0.3	Fine	<25	<50	<100	<100
BH121	1.2-1.5	Fine	<25	<50	<100	<100
BH122	0.0-0.3	Fine	<25	<50	<100	<100
BH123	0.0-0.3	Fine	<25	<50	<100	<100
BH124	0.0-0.3	Fine	<25	<50	<100	<100
BH125	0.0-0.3	Fine	<25	<50	<100	<100
BH126	0.0-0.3	Fine	<25	<50	<100	<100
BH127	0.0-0.3	Fine	<25	<50	<100	<100
BH127	0.3-0.6	Fine	<25	<50	<100	<100
BH128	0.0-0.2	Fine	<25	<50	<100	<100
BH129	0.0-0.3	Fine	<25	<50	<100	<100
BH129	1.2-1.5	Fine	<25	<50	<100	<100
BH130	0.0-0.3	Fine	<25	<50	<100	<100
BH131	0.0-0.3	Fine	<25	<50	<100	<100
Total Number of Samples			54	54	54	54
Maximum Value			<PQL	<PQL	7600	1800

Concentration above the SAC VALUE

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MANAGEMENT LIMIT ASSESSMENT CRITERIA

			C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	>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**				
BH1	0.0-0.2	Fine	800	1000	5000	10000
DUP1	0.0-0.2	Fine	800	1000	5000	10000
BH2	0.0-0.2	Fine	800	1000	5000	10000
BH3	0.0-0.2	Fine	800	1000	5000	10000
BH4	0.0-0.2	Fine	800	1000	5000	10000
SS1	0.05-0.1	Fine	800	1000	5000	10000
BH101	0.0-0.5	Fine	800	1000	5000	10000
DUPAM18	0.0-0.5	Fine	800	1000	5000	10000
BH102	0.3-0.4	Fine	800	1000	5000	10000
BH102	0.9-1.0	Fine	800	1000	5000	10000
BH103	0.0-0.3	Fine	800	1000	5000	10000
BH103	1.2-1.3	Fine	800	1000	5000	10000
BH104	0.0-0.3	Fine	800	1000	5000	10000
BH104	0.7-1.0	Fine	800	1000	5000	10000
BH105	0.0-0.2	Fine	800	1000	5000	10000
BH106	0.0-0.2	Fine	800	1000	5000	10000
BH107	0.0-0.3	Fine	800	1000	5000	10000
BH108	0.0-0.2	Fine	800	1000	5000	10000
BH109	0.0-0.3	Fine	800	1000	5000	10000
BH109	1.2-1.5	Fine	800	1000	5000	10000
BH110	0.0-0.3	Fine	800	1000	5000	10000
BH110	0.5-0.7	Fine	800	1000	5000	10000
BH111	0.0-0.3	Fine	800	1000	5000	10000
BH111	1.2-1.5	Fine	800	1000	5000	10000
BH112	0.0-0.3	Fine	800	1000	5000	10000
BH113	0.0-0.3	Fine	800	1000	5000	10000
BH114	0.0-0.3	Fine	800	1000	5000	10000
BH114	1.2-1.5	Fine	800	1000	5000	10000
BH115	0.0-0.3	Fine	800	1000	5000	10000
BH115	0.4-0.6	Fine	800	1000	5000	10000
BH116	0.0-0.3	Fine	800	1000	5000	10000
BH116	0.9-1.1	Fine	800	1000	5000	10000
BH117	0.0-0.3	Fine	800	1000	5000	10000
BH118	0.0-0.5	Fine	800	1000	5000	10000
DUPAM34	0.0-0.5	Fine	800	1000	5000	10000
BH118	1.2-1.5	Fine	800	1000	5000	10000
BH119	0.0-0.5	Fine	800	1000	5000	10000
DUPAM33	0.0-0.5	Fine	800	1000	5000	10000
BH120	0.0-0.3	Fine	800	1000	5000	10000
BH120	1.2-1.5	Fine	800	1000	5000	10000
BH121	0.0-0.3	Fine	800	1000	5000	10000
BH121	1.2-1.5	Fine	800	1000	5000	10000
BH122	0.0-0.3	Fine	800	1000	5000	10000
BH123	0.0-0.3	Fine	800	1000	5000	10000
BH124	0.0-0.3	Fine	800	1000	5000	10000
BH125	0.0-0.3	Fine	800	1000	5000	10000
BH126	0.0-0.3	Fine	800	1000	5000	10000
BH127	0.0-0.3	Fine	800	1000	5000	10000
BH127	0.3-0.6	Fine	800	1000	5000	10000
BH128	0.0-0.2	Fine	800	1000	5000	10000
BH129	0.0-0.3	Fine	800	1000	5000	10000
BH129	1.2-1.5	Fine	800	1000	5000	10000
BH130	0.0-0.3	Fine	800	1000	5000	10000
BH131	0.0-0.3	Fine	800	1000	5000	10000

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

			C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	>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**				
BH132	0.0-0.3	Fine	<25	<50	<100	<100
BH132	1.2-1.5	Fine	<25	<50	<100	<100
BH133	0.0-0.3	Fine	<25	<50	<100	<100
BH134	0.0-0.3	Fine	<25	<50	<100	<100
BH134	1.2-1.5	Fine	<25	<50	<100	<100
BH135	0.0-0.3	Fine	<25	<50	<100	<100
BH136	0.0-0.3	Fine	<25	<50	<100	<100
BH136	1.3-1.5	Fine	<25	<50	<100	<100
BH137	0.0-0.2	Fine	<25	<50	<100	<100
BH137	1.5-1.95	Fine	<25	<50	<100	<100
DUPAM2	1.5-1.95	Fine	<25	<50	<100	<100
BH138	0.0-0.3	Fine	<25	<50	<100	<100
BH139	0.0-0.5	Fine	<25	<50	<100	<100
DUPAM31	0.0-0.5	Fine	<25	<50	<100	<100
BH140	0.0-0.3	Fine	<25	<50	<100	<100
BH141	0.0-0.35	Fine	<25	<50	<100	<100
DUPAM27	0.0-0.35	Fine	<25	<50	<100	<100
BH142	0.0-0.3	Fine	<25	<50	<100	<100
DUPAM29	0.0-0.3	Fine	<25	<50	<100	<100
BH142	1.0-1.5	Fine	<25	<50	<100	<100
DUPAM30	1.0-1.5	Fine	<25	<25	<90	<120
BH143	0.0-0.2	Fine	<25	<50	<100	<100
BH144	0.0-0.3	Fine	<25	<50	<100	<100
BH144	1.2-1.5	Fine	<25	<50	<100	<100
BH145	0.0-0.2	Fine	<25	<50	<100	<100
BH146	0.0-0.3	Fine	<25	<50	<100	<100
BH146	1.2-1.5	Fine	<25	<50	<100	<100
BH147	0.0-0.3	Fine	<25	<50	<100	<100
BH147	1.2-1.5	Fine	<25	<50	<100	<100
BH148	0.0-0.3	Fine	<25	<50	<100	<100
BH149	0.0-0.3	Fine	<25	<50	<100	<100
BH149	1.2-1.5	Fine	<25	<50	<100	<100
BH150	0.0-0.2	Fine	<25	<50	<100	<100
BH151	0.0-0.3	Fine	<25	<50	<100	<100
BH151	1.2-1.5	Fine	<25	<50	<100	<100
BH152	0.0-0.3	Fine	<25	<50	<100	<100
BH153	0.0-0.3	Fine	<25	<50	<100	<100
BH154	0.0-0.2	Fine	<25	<50	<100	<100
BH154	0.8-1.0	Fine	<25	<50	<100	<100
BH155	0.0-0.3	Fine	<25	<50	<100	<100
BH156	0.0-0.3	Fine	<25	<50	<100	<100
BH156	1.2-1.5	Fine	<25	<50	<100	<100
BH157	0.0-0.3	Fine	<25	<50	<100	<100
BH158	0.0-0.3	Fine	<25	<50	<100	<100
BH158	1.2-1.5	Fine	<25	<50	<100	<100
BH159	0.0-0.25	Fine	<25	<50	<100	<100
BH159	1.2-1.5	Fine	<25	<50	<100	<100
BH160	0.0-0.45	Fine	<25	<50	<100	<100
DUPAM25	0.0-0.45	Fine	<25	<25	<90	<120
BH161	0.0-0.3	Fine	<25	<50	<100	<100
BH161	1.3-1.5	Fine	<25	<50	<100	<100
BH162	0.0-0.3	Fine	<25	<50	<100	<100
BH163	0.0-0.3	Fine	<25	<50	<100	<100
BH163	0.5-0.7	Fine	<25	<50	<100	<100
BH164	0.0-0.3	Fine	<25	<50	<100	<100
BH165	0.0-0.3	Fine	<25	<50	<100	<100
DUPAM21	0.0-0.3	Fine	<25	<50	<100	<100
Total Number of Samples			57	57	57	57
Maximum Value			<PQL	<PQL	<PQL	<PQL

Concentration above the SAC VALUE

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Stage 1/Stage 2 Environmental Site Assessment
128 Andrews Road, Penrith
E31675KR

MANAGEMENT LIMIT ASSESSMENT CRITERIA

			C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	>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**				
BH132	0.0-0.3	Fine	800	1000	5000	10000
BH132	1.2-1.5	Fine	800	1000	5000	10000
BH133	0.0-0.3	Fine	800	1000	5000	10000
BH134	0.0-0.3	Fine	800	1000	5000	10000
BH134	1.2-1.5	Fine	800	1000	5000	10000
BH135	0.0-0.3	Fine	800	1000	5000	10000
BH136	0.0-0.3	Fine	800	1000	5000	10000
BH136	1.3-1.5	Fine	800	1000	5000	10000
BH137	0.0-0.2	Fine	800	1000	5000	10000
BH137	1.5-1.95	Fine	800	1000	5000	10000
DUPAM2	1.5-1.95	Fine	800	1000	5000	10000
BH138	0.0-0.3	Fine	800	1000	5000	10000
BH139	0.0-0.5	Fine	800	1000	5000	10000
DUPAM31	0.0-0.5	Fine	800	1000	5000	10000
BH140	0.0-0.3	Fine	800	1000	5000	10000
BH141	0.0-0.35	Fine	800	1000	5000	10000
DUPAM27	0.0-0.35	Fine	800	1000	5000	10000
BH142	0.0-0.3	Fine	800	1000	5000	10000
DUPAM29	0.0-0.3	Fine	800	1000	5000	10000
BH142	1.0-1.5	Fine	800	1000	5000	10000
DUPAM30	1.0-1.5	Fine	800	1000	5000	10000
BH143	0.0-0.2	Fine	800	1000	5000	10000
BH144	0.0-0.3	Fine	800	1000	5000	10000
BH144	1.2-1.5	Fine	800	1000	5000	10000
BH145	0.0-0.2	Fine	800	1000	5000	10000
BH146	0.0-0.3	Fine	800	1000	5000	10000
BH146	1.2-1.5	Fine	800	1000	5000	10000
BH147	0.0-0.3	Fine	800	1000	5000	10000
BH147	1.2-1.5	Fine	800	1000	5000	10000
BH148	0.0-0.3	Fine	800	1000	5000	10000
BH149	0.0-0.3	Fine	800	1000	5000	10000
BH149	1.2-1.5	Fine	800	1000	5000	10000
BH150	0.0-0.2	Fine	800	1000	5000	10000
BH151	0.0-0.3	Fine	800	1000	5000	10000
BH151	1.2-1.5	Fine	800	1000	5000	10000
BH152	0.0-0.3	Fine	800	1000	5000	10000
BH153	0.0-0.3	Fine	800	1000	5000	10000
BH154	0.0-0.2	Fine	800	1000	5000	10000
BH154	0.8-1.0	Fine	800	1000	5000	10000
BH155	0.0-0.3	Fine	800	1000	5000	10000
BH156	0.0-0.3	Fine	800	1000	5000	10000
BH156	1.2-1.5	Fine	800	1000	5000	10000
BH157	0.0-0.3	Fine	800	1000	5000	10000
BH158	0.0-0.3	Fine	800	1000	5000	10000
BH158	1.2-1.5	Fine	800	1000	5000	10000
BH159	0.0-0.25	Fine	800	1000	5000	10000
BH159	1.2-1.5	Fine	800	1000	5000	10000
BH160	0.0-0.45	Fine	800	1000	5000	10000
DUPAM25	0.0-0.45	Fine	800	1000	5000	10000
BH161	0.0-0.3	Fine	800	1000	5000	10000
BH161	1.3-1.5	Fine	800	1000	5000	10000
BH162	0.0-0.3	Fine	800	1000	5000	10000
BH163	0.0-0.3	Fine	800	1000	5000	10000
BH163	0.5-0.7	Fine	800	1000	5000	10000
BH164	0.0-0.3	Fine	800	1000	5000	10000
BH165	0.0-0.3	Fine	800	1000	5000	10000
DUPAM21	0.0-0.3	Fine	800	1000	5000	10000

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

			C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	>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**				
BH166	0.0-0.1	Fine	<25	<50	<100	<100
BH166	4.0-4.1	Coarse	<25	<50	<100	<100
BH167	0.0-0.3	Fine	<25	<50	<100	<100
BH168	0.0-0.3	Fine	<25	<50	<100	<100
BH169	0.0-0.2	Fine	<25	<50	<100	<100
BH170	0.0-0.1	Fine	<25	<50	<100	<100
BH170	1.6-1.95	Fine	<25	<50	<100	<100
BH171	0.0-0.5	Fine	<25	<50	<100	<100
DUPAM19	0.0-0.5	Fine	<25	<25	<90	<120
BH172	0.0-0.4	Fine	<25	<50	<100	<100
DUPAM23	0.0-0.4	Fine	<25	<50	<100	<100
BH173	0.0-0.3	Fine	<25	<50	<100	<100
BH174	0.0-0.3	Fine	<25	<50	<100	<100
BH174	0.4-0.8	Fine	<25	<50	<100	<100
BH175	0.0-0.3	Fine	<25	<50	<100	<100
BH176	0.4-0.6	Fine	<25	<50	<100	<100
BH176	1.2-1.5	Fine	<25	<50	<100	<100
BH177	0.6-0.9	Fine	<25	<50	<100	<100
BH177	1.0-1.2	Fine	<25	<50	<100	<100
BH178	0.0-0.3	Fine	<25	<50	<100	<100
BH178	1.0-1.2	Fine	<25	<50	<100	<100
BH179	0.0-0.2	Fine	<25	<50	2600	500
DUPAM7	0.0-0.2	Fine	<25	<50	2500	430
BH179	0.6-0.9	Fine	<25	<50	<100	<100
BH180	0.0-0.1	Fine	<25	<50	1100	170
DUPAM5	0.0-0.1	Fine	<25	<50	140	<100
BH181	0.0-0.2	Fine	<25	<50	<100	<100
DUPAM3	0.0-0.2	Fine	<25	<50	<100	<100
BH181	0.5-0.95	Fine	<25	<50	<100	<100
DUPAM4	0.5-0.95	Fine	<25	<25	<90	<120
BH182	0.0-0.1	Fine	<25	<50	<100	<100
BH182	0.7-0.95	Fine	<25	<50	<100	<100
BH183	0.0-0.2	Fine	<25	<50	1100	<100
DUPAM16	0.0-0.2	Fine	<25	<50	1200	110
BH183	0.5-0.95	Fine	<25	<50	2100	<100
BH184	0.0-0.4	Fine	<25	<50	<100	<100
BH185	0.0-0.2	Fine	<25	<50	180	<100
DUPAM9	0.0-0.2	Fine	<25	<25	180	<120
BH185	0.6-0.95	Fine	<25	<50	<100	<100
BH186	0.0-0.1	Fine	<25	<50	<100	<100
DUPAM11	0.0-0.1	Fine	<25	<50	<100	<100
BH186	1.5-1.95	Fine	<25	<50	<100	<100
DUPAM13	1.5-1.95	Fine	<25	<25	<90	<120
BH187	0.0-0.2	Fine	<25	<50	<100	<100
DUPAM14	0.0-0.2	Fine	<25	<50	100	<100
BH187	1.7-1.95	Fine	<25	<50	<100	<100
BH188	0.4-0.6	Fine	<25	<50	<100	<100
BH188	0.9-1.1	Fine	<25	<50	<100	<100
BH189	0.8-0.9	Coarse	<25	<50	120	<100
SP1-1		Fine	<25	<50	<100	<100
SP1-2		Fine	<25	<50	<100	<100
SP2-1		Fine	<25	<50	<100	<100
SP2-2		Fine	<25	<50	<100	<100
SP3-1		Fine	<25	<50	<100	<100
SP3-2		Fine	<25	<50	<100	<100
SP4-1		Fine	<25	<50	<100	<100
SP4-2		Fine	<25	<50	<100	<100
SP5-1		Fine	<25	<50	<100	<100
SP5-2		Fine	<25	<50	560	<100
Total Number of Samples			59	59	59	59
Maximum Value			<PQL	<PQL	2600	500

Concentration above the SAC: VALUE

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Stage 1/Stage 2 Environmental Site Assessment
128 Andrews Road, Penrith
E31675KR

MANAGEMENT LIMIT ASSESSMENT CRITERIA

			C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	>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**				
BH166	0.0-0.1	Fine	800	1000	5000	10000
BH166	4.0-4.1	Coarse	700	1000	3500	10000
BH167	0.0-0.3	Fine	800	1000	5000	10000
BH168	0.0-0.3	Fine	800	1000	5000	10000
BH169	0.0-0.2	Fine	800	1000	5000	10000
BH170	0.0-0.1	Fine	800	1000	5000	10000
BH170	1.6-1.95	Fine	800	1000	5000	10000
BH171	0.0-0.5	Fine	800	1000	5000	10000
DUPAM19	0.0-0.5	Fine	800	1000	5000	10000
BH172	0.0-0.4	Fine	800	1000	5000	10000
DUPAM23	0.0-0.4	Fine	800	1000	5000	10000
BH173	0.0-0.3	Fine	800	1000	5000	10000
BH174	0.0-0.3	Fine	800	1000	5000	10000
BH174	0.4-0.8	Fine	800	1000	5000	10000
BH175	0.0-0.3	Fine	800	1000	5000	10000
BH176	0.4-0.6	Fine	800	1000	5000	10000
BH176	1.2-1.5	Fine	800	1000	5000	10000
BH177	0.6-0.9	Fine	800	1000	5000	10000
BH177	1.0-1.2	Fine	800	1000	5000	10000
BH178	0.0-0.3	Fine	800	1000	5000	10000
BH178	1.0-1.2	Fine	800	1000	5000	10000
BH179	0.0-0.2	Fine	800	1000	5000	10000
DUPAM7	0.0-0.2	Fine	800	1000	5000	10000
BH179	0.6-0.9	Fine	800	1000	5000	10000
BH180	0.0-0.1	Fine	800	1000	5000	10000
DUPAM5	0.0-0.1	Fine	800	1000	5000	10000
BH181	0.0-0.2	Fine	800	1000	5000	10000
DUPAM3	0.0-0.2	Fine	800	1000	5000	10000
BH181	0.5-0.95	Fine	800	1000	5000	10000
DUPAM4	0.5-0.95	Fine	800	1000	5000	10000
BH182	0.0-0.1	Fine	800	1000	5000	10000
BH182	0.7-0.95	Fine	800	1000	5000	10000
BH183	0.0-0.2	Fine	800	1000	5000	10000
DUPAM16	0.0-0.2	Fine	800	1000	5000	10000
BH183	0.5-0.95	Fine	800	1000	5000	10000
BH184	0.0-0.4	Fine	800	1000	5000	10000
BH185	0.0-0.2	Fine	800	1000	5000	10000
DUPAM9	0.0-0.2	Fine	800	1000	5000	10000
BH185	0.6-0.95	Fine	800	1000	5000	10000
BH186	0.0-0.1	Fine	800	1000	5000	10000
DUPAM11	0.0-0.1	Fine	800	1000	5000	10000
BH186	1.5-1.95	Fine	800	1000	5000	10000
DUPAM13	1.5-1.95	Fine	800	1000	5000	10000
BH187	0.0-0.2	Fine	800	1000	5000	10000
DUPAM14	0.0-0.2	Fine	800	1000	5000	10000
BH187	1.7-1.95	Fine	800	1000	5000	10000
BH188	0.4-0.6	Fine	800	1000	5000	10000
BH188	0.9-1.1	Fine	800	1000	5000	10000
BH189	0.8-0.9	Coarse	700	1000	3500	10000
SP1-1		Fine	800	1000	5000	10000
SP1-2		Fine	800	1000	5000	10000
SP2-1		Fine	800	1000	5000	10000
SP2-2		Fine	800	1000	5000	10000
SP3-1		Fine	800	1000	5000	10000
SP3-2		Fine	800	1000	5000	10000
SP4-1		Fine	800	1000	5000	10000
SP4-2		Fine	800	1000	5000	10000
SP5-1		Fine	800	1000	5000	10000
SP5-2		Fine	800	1000	5000	10000

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TABLE G
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	3	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**										
BH1	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUP1	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH2	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH3	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH4	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
SS1	0.05-0.1	<25	<50	7600	1800	<0.2	<0.5	<1	<3	<1	0
BH101	0.0-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
DUPAM18	0.0-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH102	0.3-0.4	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH102	0.9-1.0	<25	<50	200	<100	<0.2	<0.5	<1	<3	<1	0.1
BH103	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH103	1.2-1.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH104	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH104	0.7-1.0	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH105	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH106	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH107	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH108	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH109	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH109	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH110	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH110	0.5-0.7	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH111	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH111	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH112	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH113	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH114	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH114	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH115	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH115	0.4-0.6	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH116	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH116	0.9-1.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH117	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH118	0.0-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0

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TABLE G
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	3	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**										
DUPAM34	0.0-0.5	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	NA
BH118	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH119	0.0-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM33	0.0-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH120	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH120	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH121	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.2
BH121	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH122	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH123	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH124	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH125	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH126	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH127	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH127	0.3-0.6	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH128	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH129	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH129	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH130	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH131	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH132	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.2
BH132	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.2
BH133	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.2
BH134	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH134	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH135	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH136	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH136	1.3-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH137	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH137	1.5-1.95	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM2	1.5-1.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH138	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH139	0.0-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM31	0.0-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH140	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH141	0.0-0.35	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM27	0.0-0.35	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH142	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM29	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH142	1.0-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM30	1.0-1.5	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	NA
BH143	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH144	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH144	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH145	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH146	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH146	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH147	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH147	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH148	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1

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TABLE G
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	3	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**										
BH149	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH149	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH150	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH151	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH151	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH152	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH153	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH154	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH154	0.8-1.0	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH155	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH156	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH156	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH157	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH158	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH158	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH159	0.0-0.25	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH159	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH160	0.0-0.45	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM25	0.0-0.45	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	NA
BH161	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH161	1.3-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH162	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH163	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH163	0.5-0.7	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH164	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH165	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM21	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH166	0.0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH166	4.0-4.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH167	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH168	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH169	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH170	0.0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH170	1.6-1.95	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH171	0.0-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM19	0.0-0.5	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	NA
BH172	0.0-0.4	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM23	0.0-0.4	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH173	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH174	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH174	0.4-0.8	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH175	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
BH176	0.4-0.6	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH176	1.2-1.5	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH177	0.6-0.9	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH177	1.0-1.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH178	0.0-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH178	1.0-1.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH179	0.0-0.2	<25	<50	2600	500	<0.2	<0.5	<1	<3	<1	0
DUPAM7	0.0-0.2	<25	<50	2500	430	<0.2	<0.5	<1	<1	<1	NA

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TABLE G
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	3	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**										
BH179	0.6-0.9	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH180	0.0-0.1	<25	<50	1100	170	<0.2	<0.5	<1	<3	<1	0
DUPAM5	0.0-0.1	<25	<50	140	<100	<0.2	<0.5	<1	<1	<1	NA
BH181	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM3	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH181	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM4	0.5-0.95	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	NA
BH182	0.0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH182	0.7-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH183	0.0-0.2	<25	<50	1100	<100	<0.2	<0.5	<1	<3	<1	0.8
DUPAM16	0.0-0.2	<25	<50	1200	110	<0.2	<0.5	<1	<1	<1	NA
BH183	0.5-0.95	<25	<50	2100	<100	<0.2	<0.5	<1	<3	<1	0.3
BH184	0.0-0.4	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH185	0.0-0.2	<25	<50	180	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM9	0.0-0.2	<25	<25	180	<120	<0.1	<0.1	<0.1	<0.3	<0.1	NA
BH185	0.6-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH186	0.0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM11	0.0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH186	1.5-1.95	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM13	1.5-1.95	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	NA
BH187	0.0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
DUPAM14	0.0-0.2	<25	<50	100	<100	<0.2	<0.5	<1	<1	<1	NA
BH187	1.7-1.95	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH188	0.4-0.6	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH188	0.9-1.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH189	0.8-0.9	<25	<50	120	<100	<0.2	<0.5	<1	<3	<1	0
SP1-1		<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
SP1-2		<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
SP2-1		<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0.1
SP2-2		<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
SP3-1		<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
SP3-2		<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
SP4-1		<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
SP4-2		<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
SP5-1		<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
SP5-2		<25	<50	560	<100	<0.2	<0.5	<1	<3	<1	0.1
Total Number of Samples		170	170	170	170	170	170	170	170	170	
Maximum Value		<PQL	<PQL	2600	500	<PQL	<PQL	<PQL	<PQL	<PQL	

Concentration above the SAC **VALUE**

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TABLE H

SUMMARY OF GROUNDAWATER LABORATORY RESULTS COMPARED TO HUMAN CONTACT GILs

All results in µg/L unless stated otherwise.

	PQL Envirolab Services	ANZECC 2000 Recreational	NHMRC ADWG 2011	SAMPLES SW1
Inorganic Compounds and Parameters				
pH	0.1	6.5 - 8.5	6.5 - 8.5	7.7
Electrical Conductivity (µS/cm)	1	NSL	NSL	660
Hardness (mgCaCo3/L)	3	500	200	130
Non-Metallic Inorganics				
Sulfate (SO_4) (mg/L)	1	400	500	21
Metals and Metalloids				
Arsenic (As III)	1	50	10	2
Cadmium	0.1	5	2	0.2
Chromium (total)	1	50	50	<1
Copper	1	1000	2000	210
Lead	1	50	10	<1
Total Mercury (inorganic)	0.05	1	1	<0.05
Nickel	1	100	20	3
Zinc	1	5000	3000	64
Total Recoverable Hydrocarbons (TRH)				
C_6-C_9 (assessed using F1)	10	NSL	NSL	<10
>C_9-C_{14} (assessed using F2)	50	NSL	NSL	<50
>C_{16}-C_{34} (F3)	100	NSL	NSL	350
>C_{34}-C_{40} (F4)	100	NSL	NSL	<100
Monocyclic Aromatic Hydrocarbons (BTEX Compounds)				
Benzene	1	10	1	<1
Toluene	1	NSL	800	<1
Ethylbenzene	1	NSL	300	<1
m+p-xylene	2	NSL	NSL	<2
o-xylene	1	NSL	NSL	<1
Total xylenes	2	NSL	600	<2
Volatile Organic Compounds (VOCs), including chlorinated VOCs				
Dichlorodifluoromethane	10	NSL	NSL	<10
Chloromethane	10	NSL	NSL	<10
Vinyl Chloride	10	NSL	0.3	<10
Bromomethane	10	NSL	NSL	<10
Chloroethane	10	NSL	NSL	<10
Trichlorofluoromethane	10	NSL	NSL	<10
1,1-Dichloroethene	**1**	0.3	30	<1
Trans-1,2-dichloroethene	1	NSL	NSL	<1
1,1-dichloroethane	1	NSL	NSL	<1
Cis-1,2-dichloroethene	1	NSL	NSL	<1
Bromochloromethane	1	NSL	250	<1
Chloroform	1	NSL		1
2,2-dichloropropane	1	NSL	NSL	<1
1,2-dichloroethane	1	10	3	<1
1,1,1-trichloroethane	1	NSL	NSL	<1
1,1-dichloropropene	1	NSL	NSL	<1
Cyclohexane	1	NSL	NSL	<1
Carbon tetrachloride	1	3	NSL	<1
Benzene	1	NSL	see BTEX	<1
Dibromomethane	1	NSL	NSL	<1
1,2-dichloropropane	1	NSL	NSL	<1
Trichloroethene	1	30	NSL	<1
Bromodichloromethane	1	NSL	NSL	<1
trans-1,3-dichloropropene	1	NSL	NSL	<1
cis-1,3-dichloropropene	1	NSL	NSL	<1
1,1,2-trichloroethane	1	NSL	NSL	<1
Toluene	1	NSL	see BTEX	<1
1,3-dichloropropane	1	NSL	NSL	<1
Dibromochloromethane	1	NSL	NSL	<1
1,2-dibromoethane	1	NSL	NSL	<1
Tetrachloroethene	1	10	NSL	<1
1,1,1,2-tetrachloroethane	1	NSL	NSL	<1
Chlorobenzene	1	NSL	300	<1
Ethylbenzene	1	NSL	see BTEX	<1
Bromoform	1	NSL	NSL	<1
m+p-xylene	2	NSL	see BTEX	<2
Styrene	1	NSL	NSL	<1
1,1,2,2-tetrachloroethane	1	NSL	NSL	<1
o-xylene	1	NSL	see BTEX	<1
1,2,3-trichloropropane	1	NSL	NSL	<1
Isopropylbenzene	1	NSL	NSL	<1
Bromobenzene	1	NSL	NSL	<1
n-propyl benzene	1	NSL	NSL	<1
2-chlorotoluene	1	NSL	NSL	<1
4-chlorotoluene	1	NSL	NSL	<1
1,3,5-trimethyl benzene	1	NSL	NSL	<1
Tert-butyl benzene	1	NSL	NSL	<1
1,2,4-trimethyl benzene	1	NSL	NSL	<1
1,3-dichlorobenzene	1	NSL	300	<1
Sec-butyl benzene	1	NSL	NSL	<1
1,4-dichlorobenzene	1	NSL	40	6
4-isopropyl toluene	1	NSL	NSL	<1
1,2-dichlorobenzene	1	NSL	1500	<1
n-butyl benzene	1	NSL	NSL	<1
1,2-dibromo-3-chloropropane	1	NSL	NSL	<1
1,2,4-trichlorobenzene	1	NSL	NSL	<1
Hexachlorobutadiene	1	NSL	NSL	<1
1,2,3-trichlorobenzene	1	NSL	NSL	<1
Polycyclic Aromatic Hydrocarbons (PAHs)				
Naphthalene	0.2	NSL	NSL	<0.2
Acenaphthylene	0.1	NSL	NSL	<0.1
Acenaphthene	0.1	NSL	NSL	<0.1
Fluorene	0.1	NSL	NSL	<0.1
Phenanthrene	0.1	NSL	NSL	<0.1
Anthracene	0.1	NSL	NSL	<0.1
Fluoranthene	0.1	NSL	NSL	<0.1
Pyrene	0.1	NSL	NSL	<0.1
Benzo(a)anthracene	0.1	NSL	NSL	<0.1
Chrysene	0.1	NSL	NSL	<0.1
Benzo(b,j+k)fluoranthene	0.2	NSL	NSL	<0.2
Benzo(a)pyrene	**0.1**	0.01	0.01	<0.1
Indeno(1,2,3-c,d)pyrene	0.1	NSL	NSL	<0.1
Dibenzo(a,h)anthracene	0.1	NSL	NSL	<0.1
Benzo(g,h,i)perylene	0.1	NSL	NSL	<0.1

Concentration above the GIL — VALUE
PQL exceeds GIL — BOLD/RED

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TABLE I

SUMMARY OF GROUNDAWATER LABORATORY RESULTS COMPARED TO ECOLOGICAL GILs SAC

All results in µg/L unless stated otherwise.

	PQL Envirolab Services	ANZECC 2000 Fresh Waters	SAMPLES SW1
Inorganic Compounds and Parameters			
pH	0.1	6.5 - 8.5	7.7
Electrical Conductivity (µS/cm)	1	NSL	660
Hardness ($mgCaCO_3/L$)	3	NSL	130
Non-Metallic Inorganics			
Sulfate (SO_4) (mg/L)	1	NSL	21
Metals and Metalloids			
Arsenic (As III)	1	24	2
Cadmium	0.1	0.2	0.2
Chromium (VI)	1	1	<1
Copper	1	1.4	210
Lead	1	3.4	<1
Total Mercury (inorganic)	0.05	0.06	<0.05
Nickel	1	11	3
Zinc	1	8	64
Total Recoverable Hydrocarbons (TRH)			
C_6-C_9 (assessed using F1)	10	NSL	<10
>C_9-C_{14} (assessed using F2)	50	NSL	<50
>C_{16}-C_{34} (F3)	100	NSL	350
>C_{34}-C_{40} (F4)	100	NSL	<100
Monocyclic Aromatic Hydrocarbons (BTEX Compounds)			
Benzene	1	950	<1
Toluene	1	180	<1
Ethylbenzene	1	80	<1
m+p-xylene	2	75	<2
o-xylene	1	350	<1
Total xylenes	2	NSL	<2
Volatile Organic Compounds (VOCs), including chlorinated VOCs			
Dichlorodifluoromethane	10	NSL	<10
Chloromethane	10	NSL	<10
Vinyl Chloride	10	100	<10
Bromomethane	10	NSL	<10
Chloroethane	10	NSL	<10
Trichlorofluoromethane	10	NSL	<10
1,1-Dichloroethene	1	700	<1
Trans-1,2-dichloroethene	1	NSL	<1
1,1-dichloroethane	1	90	<1
Cis-1,2-dichloroethene	1	NSL	<1
Bromochloromethane	1	NSL	<1
Chloroform	1	370	1
2,2-dichloropropane	1	NSL	<1
1,2-dichloroethane	1	1900	<1
1,1,1-trichloroethane	1	270	<1
1,1-dichloropropene	1	NSL	<1
Cyclohexane	1	NSL	<1
Carbon tetrachloride	1	240	<1
Benzene	1	see BTEX	<1
Dibromomethane	1	NSL	<1
1,2-dichloropropane	1	900	<1
Trichloroethene	1	NSL	<1
Bromodichloromethane	1	NSL	<1
trans-1,3-dichloropropene	1	NSL	<1
cis-1,3-dichloropropene	1	NSL	<1
1,1,2-trichloroethane	1	6500	<1
Toluene	1	see BTEX	<1
1,3-dichloropropane	1	1100	<1
Dibromochloromethane	1	NSL	<1
1,2-dibromoethane	1	NSL	<1
Tetrachloroethene	1	70	<1
1,1,1,2-tetrachloroethane	1	NSL	<1
Chlorobenzene	1	55	<1
Ethylbenzene	1	see BTEX	<1
Bromoform	1	NSL	<1
m+p-xylene	2	see BTEX	<2
Styrene	1	NSL	<1
1,1,2,2-tetrachloroethane	1	400	<1
o-xylene	1	see BTEX	<1
1,2,3-trichloropropane	1	NSL	<1
Isopropylbenzene	1	30	<1
Bromobenzene	1	NSL	<1
n-propyl benzene	1	NSL	<1
2-chlorotoluene	1	NSL	<1
4-chlorotoluene	1	NSL	<1
1,3,5-trimethyl benzene	1	NSL	<1
Tert-butyl benzene	1	NSL	<1
1,2,4-trimethyl benzene	1	NSL	<1
1,3-dichlorobenzene	1	260	<1
Sec-butyl benzene	1	NSL	<1
1,4-dichlorobenzene	1	60	6
4-isopropyl toluene	1	NSL	<1
1,2-dichlorobenzene	1	160	<1
n-butyl benzene	1	NSL	<1
1,2-dibromo-3-chloropropane	1	NSL	<1
1,2,4-trichlorobenzene	1	85	<1
Hexachlorobutadiene	1	NSL	<1
1,2,3-trichlorobenzene	1	3	<1
Polycyclic Aromatic Hydrocarbons (PAHs)			
Naphthalene	0.2	16	<0.2
Acenaphthylene	0.1	NSL	<0.1
Acenaphthene	0.1	NSL	<0.1
Fluorene	0.1	NSL	<0.1
Phenanthrene	0.1	0.6	<0.1
Anthracene	**0.1**	0.01	<0.1
Fluoranthene	0.1	1	<0.1
Pyrene	0.1	NSL	<0.1
Benzo(a)anthracene	0.1	NSL	<0.1
Chrysene	0.1	NSL	<0.1
Benzo(b,j+k)fluoranthene	0.2	NSL	<0.2
Benzo(a)pyrene	0.1	0.1	<0.1
Indeno(1,2,3-c,d)pyrene	0.1	NSL	<0.1
Dibenzo(a,h)anthracene	0.1	NSL	<0.1
Benzo(g,h,i)perylene	0.1	NSL	<0.1

Concentration above the GIL — VALUE

PQL exceeds GIL — **BOLD/RED**

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TABLE J

GROUNDWATER LABORATORY RESULTS COMPARED TO SITE SPECIFIC HSLs - RISK ASSESSMENT

All results in µg/L unless stated otherwise.

	PQL Envirolab Services	NHMRC ADWG 2011	WHO 2008	USEPA RSL Tapwater 2017	SAMPLES SW1
Total Recoverable Hydrocarbons (TRH)					
C_6-C_9 Aliphatics (assessed using F1)	10	NSL	15000	-	<10
>C_9-C_{14} Aliphatics (assessed using F2)	50	NSL	100	-	<50
Monocyclic Aromatic Hydrocarbons (BTEX Compounds)					
Benzene	1	1	-	-	<1
Toluene	1	800	-	-	<1
Ethylbenzene	1	300	-	-	<1
Total xylenes	2	600	-	-	<2
Polycyclic Aromatic Hydrocarbons (PAHs)					
Naphthalene	0.2	-	-	6.1	<0.2
Volatile Organic Compounds (VOCs), including chlorinated VOCs					
Vinyl Chloride	**10**	0.3	-	-	<10
1,1-Dichloroethene	1	30	-	-	<1
Chloroform	1	250	-	-	1
Bromodichloromethane	1		-	-	
1,2-dichloroethane	1	3	-	-	<1
Chlorobenzene	1	300	-	-	<1
1,3-dichlorobenzene	1	300	-	-	<1
1,4-dichlorobenzene	1	40	-	-	6
1,2-dichlorobenzene	1	1500	-	-	<1

Concentration above the HSL -SSA VALUE

PQL exceeds GIL **BOLD/RED**

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TABLE K
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH1 0.0-0.2	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUP1	Cadmium	0.4	<0.4	<0.4	NC	NC
	Chromium	1	9	9	9.0	0
Envirolab Report: 197510	Copper	1	13	13	13.0	0
	Lead	1	11	10	10.5	10
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	4	5	4.5	22
	Zinc	1	27	26	26.5	4
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C_6-C_{10} (F1)	25	<25	<25	NC	NC
	TRH >C_{10}-C_{16} (F2)	50	<50	<50	NC	NC
	TRH >C_{16}-C_{34} (F3)	100	<100	<100	NC	NC
	TRH >C_{34}-C_{40} (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE L
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH137 1.5-1.95	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUPAM2	Cadmium	0.4	<0.4	<0.4	NC	NC
	Chromium	1	9	9	9.0	0
Envirolab Report: 199517	Copper	1	3	3	3.0	0
	Lead	1	5	6	5.5	18
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	4	4	4.0	0
	Zinc	1	11	12	11.5	9
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	<100	<100	NC	NC
	TRH >C34-C40 (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE M
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH181 0.0-0.2	Arsenic	4	4	4	4.0	0
Dup Ref = DUPAM3	Cadmium	0.4	0.6	0.6	0.6	0
	Chromium	1	20	17	18.5	16
Envirolab Report: 199517	Copper	1	170	130	150.0	27
	Lead	1	46	31	38.5	39
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	25	20	22.5	22
	Zinc	1	450	340	395.0	28
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	<100	<100	NC	NC
	TRH >C34-C40 (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE N
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH180 0.0-0.1	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUPAM5	Cadmium	0.4	<0.4	<0.4	NC	NC
	Chromium	1	36	19	27.5	62
Envirolab Report: 199517	Copper	1	100	53	76.5	61
	Lead	1	24	17	20.5	34
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	17	12	14.5	34
	Zinc	1	160	98	129.0	48
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	1100	140	620.0	155
	TRH >C34-C40 (F4)	100	170	<100	110.0	109
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE O
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH179 0.0-0.2	Arsenic	4	7	7	7.0	0
Dup Ref = DUPAM7	Cadmium	0.4	4.2	4.4	4.3	5
	Chromium	1	310	260	285.0	18
Envirolab Report: 199517	Copper	1	1700	1900	1800.0	11
	Lead	1	240	260	250.0	8
	Mercury	0.1	0.2	0.2	0.2	0
	Nickel	1	280	270	275.0	4
	Zinc	1	2600	2600	2600.0	0
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	2600	2500	2550.0	4
	TRH >C34-C40 (F4)	100	500	430	465.0	15
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE P
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH186 0.0-0.1	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUPAM11	Cadmium	0.4	<0.4	<0.4	NC	NC
	Chromium	1	10	10	10.0	0
Envirolab Report: 199517	Copper	1	150	110	130.0	31
	Lead	1	26	22	24.0	17
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	8	8	8.0	0
	Zinc	1	180	160	170.0	12
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	<100	<100	NC	NC
	TRH >C34-C40 (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE Q
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH187 0.0-0.2	Arsenic	4	6	<4	4.0	100
Dup Ref = DUPAM14	Cadmium	0.4	0.9	0.7	0.8	25
	Chromium	1	77	13	45.0	142
Envirolab Report: 199517	Copper	1	570	370	470.0	43
	Lead	1	57	50	53.5	13
	Mercury	0.1	0.1	<0.1	0.1	67
	Nickel	1	22	19	20.5	15
	Zinc	1	560	450	505.0	22
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	0.3	<0.1	0.2	143
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.4	<0.1	0.2	156
	Pyrene	0.1	0.4	<0.1	0.2	156
	Benzo(a)anthracene	0.1	0.2	<0.1	0.1	120
	Chrysene	0.1	0.2	<0.1	0.1	120
	Benzo(b,j+k)fluoranthene	0.2	0.3	<0.2	0.2	100
	Benzo(a)pyrene	0.05	0.2	<0.05	0.1	156
	Indeno(123-cd)pyrene	0.1	0.1	<0.1	0.1	67
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	0.1	<0.1	0.1	67
	TRH C6-C10 (F1)	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	<100	100	75.0	67
	TRH >C34-C40 (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE R
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH183 0.0-0.2	Arsenic	4	5	7	6.0	33
Dup Ref = DUPAM16	Cadmium	0.4	19	12	15.5	45
	Chromium	1	39	46	42.5	16
Envirolab Report: 199517	Copper	1	6800	6600	6700.0	3
	Lead	1	920	760	840.0	19
	Mercury	0.1	0.3	0.3	0.3	0
	Nickel	1	81	110	95.5	30
	Zinc	1	17000	12000	14500.0	34
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.1	<0.1	0.1	67
	Pyrene	0.1	0.1	<0.1	0.1	67
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	1100	1200	1150.0	9
	TRH >C34-C40 (F4)	100	<100	110	80.0	75
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE S
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH101 0.0-0.5	Arsenic	4	4	<4	3.0	67
Dup Ref = DUPAM18	Cadmium	0.4	<0.4	<0.4	NC	NC
	Chromium	1	12	12	12.0	0
Envirolab Report: 199517	Copper	1	63	36	49.5	55
	Lead	1	29	20	24.5	37
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	8	8	8.0	0
	Zinc	1	87	48	67.5	58
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	0.1	<0.1	0.1	67
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.3	<0.1	0.2	143
	Pyrene	0.1	0.2	<0.1	0.1	120
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	<100	<100	NC	NC
	TRH >C34-C40 (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE T
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH165 0.0-0.3	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUPAM21	Cadmium	0.4	<0.4	<0.4	NC	NC
	Chromium	1	11	12	11.5	9
Envirolab Report: 199517	Copper	1	30	25	27.5	18
	Lead	1	15	14	14.5	7
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	8	9	8.5	12
	Zinc	1	48	44	46.0	9
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	<100	<100	NC	NC
	TRH >C34-C40 (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE U
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH172 0.0-0.4	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUPAM23	Cadmium	0.4	<0.4	<0.4	NC	NC
	Chromium	1	10	11	10.5	10
Envirolab Report: 199517	Copper	1	19	21	20.0	10
	Lead	1	12	12	12.0	0
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	7	7	7.0	0
	Zinc	1	35	36	35.5	3
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	<100	<100	NC	NC
	TRH >C34-C40 (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE V
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH141 0.0-0.35	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUPAM27	Cadmium	0.4	<0.4	<0.4	NC	NC
	Chromium	1	13	12	12.5	8
Envirolab Report: 199517	Copper	1	23	17	20.0	30
	Lead	1	19	17	18.0	11
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	9	9	9.0	0
	Zinc	1	56	47	51.5	17
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	<100	<100	NC	NC
	TRH >C34-C40 (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE W
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH142 0.0-0.3	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUPAM29	Cadmium	0.4	<0.4	<0.4	NC	NC
	Chromium	1	11	11	11.0	0
Envirolab Report: 199517	Copper	1	17	21	19.0	21
	Lead	1	16	18	17.0	12
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	7	7	7.0	0
	Zinc	1	38	43	40.5	12
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	<100	<100	NC	NC
	TRH >C34-C40 (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE X
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH139 0.0-0.5	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUPAM31	Cadmium	0.4	<0.4	<0.4	NC	NC
	Chromium	1	7	8	7.5	13
Envirolab Report: 199517	Copper	1	7	8	7.5	13
	Lead	1	9	8	8.5	12
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	4	5	4.5	22
	Zinc	1	28	25	26.5	11
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	<100	<100	NC	NC
	TRH >C34-C40 (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE Y
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH119 0.0-0.5	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUPAM33	Cadmium	0.4	<0.4	<0.4	NC	NC
	Chromium	1	7	9	8.0	25
Envirolab Report: 199517	Copper	1	9	8	8.5	12
	Lead	1	9	9	9.0	0
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	4	5	4.5	22
	Zinc	1	22	23	22.5	4
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	<100	<100	NC	NC
	TRH >C34-C40 (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE Z
SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	SGS PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH181 0.5-0.95	Arsenic	4	1	<4	2	2.0	0
Dup Ref = DUPAM4	Cadmium	0.4	0.3	<0.4	<0.3	NC	NC
	Chromium	1	0.3	14	9.9	12.0	34
Envirolab Report: 199517	Copper	1	0.5	39	48	43.5	21
SGS Report: SE183280	Lead	1	1	16	12	14.0	29
	Mercury	0.1	0.05	<0.1	<0.05	NC	NC
	Nickel	1	0.5	10	6	8.0	50
	Zinc	1	2	98	100	99.0	2
	Naphthalene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	0.1	<0.05	<0.1	NC	NC
	Indeno(123-cd)pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	25	<50	<25	NC	NC
	TRH >C16-C34 (F3)	100	90	<100	<90	NC	NC
	TRH >C34-C40 (F4)	100	120	<100	<120	NC	NC
	Benzene	0.2	0.1	<0.2	<0.1	NC	NC
	Toluene	0.5	0.1	<0.5	<0.1	NC	NC
	Ethylbenzene	1	0.1	<1	<0.1	NC	NC
	m+p-xylene	2	0.2	<2	<0.2	NC	NC
	o-xylene	1	0.1	<1	<0.1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable
If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE AA
SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	SGS PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH185 0.0-0.2	Arsenic	4	1	<4	6	4.0	100
Dup Ref = DUPAM9	Cadmium	0.4	0.3	1	5	3.0	133
	Chromium	1	0.3	24	51	37.5	72
Envirolab Report: 199517	Copper	1	0.5	1700	8400	5050.0	133
SGS Report: SE183280	Lead	1	1	190	780	485.0	122
	Mercury	0.1	0.05	0.1	<0.05	0.1	120
	Nickel	1	0.5	17	110	63.5	146
	Zinc	1	2	1700	7400	4550.0	125
	Naphthalene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	0.1	0.1	<0.1	0.1	67
	Anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.1	0.1	<0.1	0.1	67
	Pyrene	0.1	0.1	0.1	<0.1	0.1	67
	Benzo(a)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	0.1	<0.05	<0.1	NC	NC
	Indeno(123-cd)pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	25	<50	<25	NC	NC
	TRH >C16-C34 (F3)	100	90	180	180	180.0	0
	TRH >C34-C40 (F4)	100	120	<100	<120	NC	NC
	Benzene	0.2	0.1	<0.2	<0.1	NC	NC
	Toluene	0.5	0.1	<0.5	<0.1	NC	NC
	Ethylbenzene	1	0.1	<1	<0.1	NC	NC
	m+p-xylene	2	0.2	<2	<0.2	NC	NC
	o-xylene	1	0.1	<1	<0.1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable
If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE BB
SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	SGS PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH186 1.5-1.95	Arsenic	4	1	<4	5	3.5	86
Dup Ref = DUPAM13	Cadmium	0.4	0.3	<0.4	<0.3	NC	NC
	Chromium	1	0.3	16	13	14.5	21
Envirolab Report: 199517	Copper	1	0.5	8	8.5	8.3	6
SGS Report: SE183280	Lead	1	1	9	10	9.5	11
	Mercury	0.1	0.05	<0.1	<0.05	NC	NC
	Nickel	1	0.5	8	6.6	7.3	19
	Zinc	1	2	17	18	17.5	6
	Naphthalene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	0.1	<0.05	<0.1	NC	NC
	Indeno(123-cd)pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	25	<50	<25	NC	NC
	TRH >C16-C34 (F3)	100	90	<100	<90	NC	NC
	TRH >C34-C40 (F4)	100	120	<100	<120	NC	NC
	Benzene	0.2	0.1	<0.2	<0.1	NC	NC
	Toluene	0.5	0.1	<0.5	<0.1	NC	NC
	Ethylbenzene	1	0.1	<1	<0.1	NC	NC
	m+p-xylene	2	0.2	<2	<0.2	NC	NC
	o-xylene	1	0.1	<1	<0.1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable
If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE CC
SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	SGS PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH171 0.0-0.5	Arsenic	4	1	<4	6	4.0	100
Dup Ref = DUPAM19	Cadmium	0.4	0.3	<0.4	<0.3	NC	NC
	Chromium	1	0.3	15	17	16.0	13
Envirolab Report: 199517	Copper	1	0.5	50	52	51.0	4
SGS Report: SE183280	Lead	1	1	19	18	18.5	5
	Mercury	0.1	0.05	<0.1	<0.05	NC	NC
	Nickel	1	0.5	14	18	16.0	25
	Zinc	1	2	76	82	79.0	8
	Naphthalene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	0.1	<0.05	<0.1	NC	NC
	Indeno(123-cd)pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	25	<50	<25	NC	NC
	TRH >C16-C34 (F3)	100	90	<100	<90	NC	NC
	TRH >C34-C40 (F4)	100	120	<100	<120	NC	NC
	Benzene	0.2	0.1	<0.2	<0.1	NC	NC
	Toluene	0.5	0.1	<0.5	<0.1	NC	NC
	Ethylbenzene	1	0.1	<1	<0.1	NC	NC
	m+p-xylene	2	0.2	<2	<0.2	NC	NC
	o-xylene	1	0.1	<1	<0.1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable
If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE DD
SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	SGS PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH160 0.0-0.45	Arsenic	4	1	5	6	5.5	18
Dup Ref = DUPAM25	Cadmium	0.4	0.3	<0.4	<0.3	NC	NC
	Chromium	1	0.3	11	8.5	9.8	26
Envirolab Report: 199517	Copper	1	0.5	38	8.6	23.3	126
SGS Report: SE183280	Lead	1	1	25	9	17.0	94
	Mercury	0.1	0.05	<0.1	<0.05	NC	NC
	Nickel	1	0.5	7	7.5	7.3	7
	Zinc	1	2	65	27	46.0	83
	Naphthalene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	0.1	<0.05	<0.1	NC	NC
	Indeno(123-cd)pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	25	<50	<25	NC	NC
	TRH >C16-C34 (F3)	100	90	<100	<90	NC	NC
	TRH >C34-C40 (F4)	100	120	<100	<120	NC	NC
	Benzene	0.2	0.1	<0.2	<0.1	NC	NC
	Toluene	0.5	0.1	<0.5	<0.1	NC	NC
	Ethylbenzene	1	0.1	<1	<0.1	NC	NC
	m+p-xylene	2	0.2	<2	<0.2	NC	NC
	o-xylene	1	0.1	<1	<0.1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable
If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE EE
SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	SGS PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH142 1.0-1.5	Arsenic	4	1	<4	4	3.0	67
Dup Ref = DUPAM30	Cadmium	0.4	0.3	<0.4	<0.3	NC	NC
	Chromium	1	0.3	11	9.3	10.2	17
Envirolab Report: 199517	Copper	1	0.5	5	5.1	5.1	2
SGS Report: SE183280	Lead	1	1	6	4	5.0	40
	Mercury	0.1	0.05	<0.1	<0.05	NC	NC
	Nickel	1	0.5	5	3	4.0	50
	Zinc	1	2	11	11	11.0	0
	Naphthalene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	0.1	<0.05	<0.1	NC	NC
	Indeno(123-cd)pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	25	<50	<25	NC	NC
	TRH >C16-C34 (F3)	100	90	<100	<90	NC	NC
	TRH >C34-C40 (F4)	100	120	<100	<120	NC	NC
	Benzene	0.2	0.1	<0.2	<0.1	NC	NC
	Toluene	0.5	0.1	<0.5	<0.1	NC	NC
	Ethylbenzene	1	0.1	<1	<0.1	NC	NC
	m+p-xylene	2	0.2	<2	<0.2	NC	NC
	o-xylene	1	0.1	<1	<0.1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable
If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE FF
SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	SGS PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH118 0.0-0.5	Arsenic	4	1	<4	3	2.5	40
Dup Ref = DUPAM34	Cadmium	0.4	0.3	<0.4	<0.3	NC	NC
	Chromium	1	0.3	8	6.8	7.4	16
Envirolab Report: 199517	Copper	1	0.5	6	5.2	5.6	14
SGS Report: SE183280	Lead	1	1	8	5	6.5	46
	Mercury	0.1	0.05	<0.1	<0.05	NC	NC
	Nickel	1	0.5	5	3.9	4.5	25
	Zinc	1	2	22	17	19.5	26
	Naphthalene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	0.1	<0.05	<0.1	NC	NC
	Indeno(123-cd)pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	25	<50	<25	NC	NC
	TRH >C16-C34 (F3)	100	90	<100	<90	NC	NC
	TRH >C34-C40 (F4)	100	120	<100	<120	NC	NC
	Benzene	0.2	0.1	<0.2	<0.1	NC	NC
	Toluene	0.5	0.1	<0.5	<0.1	NC	NC
	Ethylbenzene	1	0.1	<1	<0.1	NC	NC
	m+p-xylene	2	0.2	<2	<0.2	NC	NC
	o-xylene	1	0.1	<1	<0.1	NC	NC

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable
Results between 5 & 10 times PQL = RPD value <= 75% are acceptable
Results < 5 times PQL = RPD value <= 100% are acceptable
If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

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TABLE GG
SUMMARY OF FIELD QA/QC RESULTS

ANALYSIS	Envirolab PQL		TBMP[S]	FRMP1[W]
			17/08/2018	22/08/2018
	mg/kg	µg/L	mg/kg	ug/L
Benzene	0.2	1	<0.2	<1
Toluene	0.5	1	<0.5	<1
Ethylbenzene	1	1	<1	<1
m+p-xylene	2	2	<2	<2
o-xylene	1	1	<1	<1

Explanation:

[W] Sample type (water)

[S] Sample type (sand)

BTEX concentrations in trip spikes are presented as % recovery

Values above PQLs/Acceptance criteria **VALUE**

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Appendix A: Preliminary Salinity Assessment Report

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ENVIRONMENTAL INVESTIGATION SERVICES

REPORT

TO

CADENCE PROPERTY GROUP PTY LTD

ON

PRELIMINARY SALINITY ASSESSMENT

FOR

PROPOSED WAREHOUSE DEVELOPMENT

AT

128 ANDREWS ROAD, PENRITH, NSW

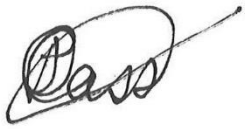
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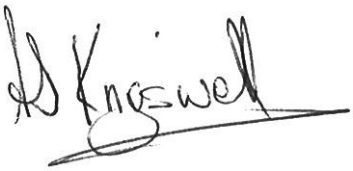
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ABBREVIATIONS

Australian Height Datum	**AHD**
Acid Sulfate Soil	**ASS**
Below Ground Level	**BGL**
Borehole	**BH**
Cation Exchange Capacity	**CEC**
Calcium	**Ca**
Cement, Concrete and Aggregates Australia	**CCAA**
Chain of Custody	**COC**
Damp Proof Course	**DPC**
Department of Land and Water Conservation	**DLWC**
Dissolved Oxygen	**DO**
Environmental Investigation Services	**EIS**
International Organisation of Standardisation	**ISO**
Local Government Authority	**LGA**
Map Grid of Australia	**MGA**
Magnesium	**Mg**
National Association of Testing Authorities	**NATA**
Potassium	**K**
Polyvinyl Chloride	**PVC**
Practical Quantitation Limit	**PQL**
Redox Potential	**Eh**
Site Assessment Criteria	**SAC**
Standard Penetration Test	**SPT**
Standard Sampling Procedure	**SSP**
Standing Water Level	**SWL**
Standard Sampling Procedure	**SSP**
Sodium	**Na**
Virgin Excavated Natural Material	**VENM**
Western Sydney Regional Organisation of Councils	**WSROC**

Units

deci Siemens per Metre	**dS/m**
Electrical Conductivity	**EC**
Exchangeable Sodium Percentage (Sodicity)	**ESP%**
Litres	**L**
Metres	**m**
Metres Below Ground Level	**mBGL**
Millivolts	**mV**
Millilitres	**ml**
Milliequivalents	**meq**
Milligrams per Litre	**mg/L**
Milligrams per Kilogram	**mg/kg**
ohm Centimetres	**ohm.cm**
Parts Per Million	**ppm**
micro Siemens per Centimetre	**µS/cm**

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1 INTRODUCTION

Cadence Property Group Pty Ltd ('the client') commissioned Environmental Investigation Services (EIS)[1] to undertake a preliminary salinity assessment for the proposed warehouse development at 128 Andrews Road, Penrith, NSW. This report forms Appendix A of the EIS report E31675KRrpt (dated 12 October 2018, and referred to herein as 'the main report') and should be read in conjunction with the main report.

We understand that this report will be used to support the lodgement of a Development Application with Penrith City Council.

Background information on salinity is included in the appendices.

1.1 Proposed Development Details

The proposed development includes a 50,000m^2 warehouse to be constructed within the 85,000m^2 site. The warehouse will be accessed by pavements adjacent to the warehouse, and by a driveway constructed off Andrews Road to the east and north-east of the site. It is understood that the development will be constructed at about the existing surface level, with some cut and fill earthworks of approximately 1.5m. The cut and fill levels are shown in Figure 4 attached to the main report.

1.2 Aim and Objectives

The primary aim of the assessment was to assess the broad scale salinity conditions at the site in the context of the proposed development works. The assessment objectives were to:

- Assess the current site conditions via a site walkover inspection;
- Assess the soil salinity conditions via implementation of a preliminary sampling and analysis program; and
- Provide salinity management recommendations (if/where required).

1.3 Scope of Work

The assessment was undertaken generally in accordance with an EIS scope and cost via email of 17 August 2018 and written email acceptance from the client of 21 August 2018. The scope of work included the following:

- Review of site information, including background and site history information from a Lotsearch Pty Ltd *Environmental Risk and Planning Report*;
- A walkover site inspection to identify obvious visual indicators of salinity or potential problem areas;
- Design and implementation of a field sampling and laboratory analysis program;
- Interpretation of the analytical results based on established assessment criteria; and

[1] Environmental consulting division of Jeffery & Katauskas Pty Ltd (J&K)

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- Preparation of a report presenting the results of the assessment.

The assessment was designed and the report was prepared with reference to regulations/guidelines outlined in the table below. Individual guidelines/documents are also referenced within the text of the report.

Table 1-1: Guidelines

Guidelines/Regulations/Documents
Site Investigations for Urban Salinity (2002[2])
Salinity Code of Practice (2004)[3]
Managing Urban Stormwater – Soil and Construction (4th ed.) (2004)[4]
Salinity Potential in Western Sydney Map (2002[5])
Piling – Design and Installation AS2159-2009 (2009)[6]
T56: Guide to Residential Slabs and Footings in Saline Environments (2005[7])

[2]Department of Land and Water Conservation (DLWC), (2002). *Site Investigations for Urban Salinity,* (referred to as DLWC 2002)

[3]Western Sydney Regional Organisation of Councils (WSROC) and Department of Infrastructure, Planning and Natural Resources(DIPNR), (2003amended 2004). *Western Sydney Salinity Code of Practice* (referred to as Salinity Code of Practice)

[4] NSW Government/Landcom, (2004). *Managing Urban Stormwater – Soil and Construction*, (4thed.) (referred to as Blue Book)

[5]DIPNR, (2002). *1:100,000 Map – Salinity Potential in Western Sydney*, (referred to as Salinity Potential Map)

[6]Standards Australia, (2009). *Piling – Design and Installation, AS2159-2009*(referred to as AS2159-2009)

[7]Cement, Concrete and Aggregates Australia (CCAA), (2005). *T56: Guide to Residential Slabs and Footings in Saline Environments* (referred to as CCAA 2005)

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2 SITE INFORMATION

2.1 Site Description

The site is located in a predominantly commercial/industrial area of Penrith, and is bound by industrial properties to the north, west and south and an industrial property and vacant land to the east. The site is located approximately 500m to the south and south-east of Penrith Lakes and approximately 600m north of Boundary Creek, which is a tributary of Nepean River. The Nepean River is located approximately 1km west of the site. A swale/overland drain was located in the western section of the site and was potentially part of a former creek or drainage channel in that section of the site.

The site is located in relatively level alluvial topography associated with the Nepean River floodplain. The site is relatively level.

A walkover inspection of the site was undertaken on 25 July 2018 and during the site works between 20 and 24 August 2018. At the time of the inspection there were no obvious salinity impacts observed within the investigation areas or the immediate surrounds. There were no salt scalds at the surface, and all vegetation appeared to be in a generally reasonable condition. However, the vegetation did appear to be very dry and brown which was most likely a result of the limited rainfall in recent months.

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3 GEOLOGY AND HYDROGEOLOGY

3.1 Regional Geology and Soils

Regional geological information presented in the Lotsearch report (attached in the appendices of the main report) indicated that the site is underlain by Cranebrook Formation, which typically consists of gravel, sand, silt and clay.

The soil landscape information indicated that the site is underlain by alluvial Richmond soils.

3.2 Salinity Hazard Map

The site is located within the area of Western Sydney included in the Salinity Potential Map. Based upon interpretation from the geological formations and soil groups presented on the map, the site is located in a region of known moderate salinity potential.

3.3 Hydrogeology

Hydrogeological information presented in the Lotsearch report (attached in the appendices of the main report) indicated that the regional aquifer on-site and in the areas immediately surrounding the site includes porous, extensive aquifers of high productivity. There were a total of 144 registered bores within the report buffer of 2,000m. The closest bore was 10m from the site.

3.4 Receiving Water Bodies and Surface Water Run-off

The site location and regional topography indicates that excess surface water flows have the potential to enter the swale or overland drain located in the western section of the site. Surface and stormwater flows also enter or migrate via this drain from off-site location to the south and west as pipe outlets were observed at the southern and western site boundaries in the alignment of the drain.

The site is also located to the west of Kingswood Park Wetland. The wetland is an environmentally sensitive area. Other nearby water bodies include the Penrith Lakes located approximately 500m to the north and north-west of the site. Boundary Creek is located approximately 600m to the south of the site. The Boundary Creek is a tributary of Nepean River which is located approximately 1.0km west of the site.

Considering the local topography and surrounding land features, EIS would generally expect surface water to flow towards the south-west.

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4 SAMPLING AND ANALYSIS PLAN

4.1 Soil Sampling Rationale

The investigation included the drilling of 94 boreholes (BH1-BH5 and BH101 to BH189 inclusive). Soil sampling for the salinity assessment was undertaken from a selection of 18 locations (BH102 to BH104, BH106, BH111, BH113, BH116, BH118, BH121, BH137, BH140, BH155, BH157, BH166, BH168, BH170, BH181 and BH188). The sampling was generally spread across the site for coverage, with a larger number of boreholes selected from the eastern and western ends of the site where it is understood to have the main cut and fill works. Borehole BH102 was within the softest soils and most boggy conditions in close vicinity of the overland drain, in the north-western section of the site.

When considering the extent of the development footprint, this density meets the requirements for an 'initial site investigation' recommended in the DLWC 2002 document for 'moderately intensive construction'. The density was considered adequate to identify large areas of salinity impacted soils within the site.

Soil sampling for this assessment was confined to the depth of approximately 4.4m below existing ground level. This was considered adequate as the proposed development is likely to include only minimal excavations.

4.2 Soil Sampling Methods

The soil sampling methods are outlined in the main report.

4.3 Surface Water Sampling Rationale

The assessment included the collection of a surface water sample (SW1) at the southern 'ingress' point of the overland drain at the site as shown on Figure 2. The overland drain was a low lying, depression in the ground with potential constant contact with water and was a potential salinity risk area.

4.4 Surface Water Sampling

The surface water sampling methods are outlined in the main report.

4.5 Laboratory Analysis

Samples were analysed by Envirolab Services Pty Ltd (NATA accreditation number 2901). Reference should be made to the laboratory report (Ref: 199517) attached in the appendices for further details of the analytical methods.

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4.6 Analytical Schedule

The analytical schedule is outlined in the following table:

Table 4-1: Analytical Schedule

Analyte	Fill Samples	Natural Soil Samples	Surface Water Sample
pH	20	26	1
Electrical Conductivity (EC)	20	26	1
Resistivity	20	26	-
Texture (used to determine EC extract – ECe)	20	26	-
Sulphate	20	26	1
Chloride	20	26	1

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5 SITE ASSESSMENT CRITERIA (SAC)

5.1 Soil Salinity and Plant Growth

The electrical conductivity (EC) of a 1:5 soil:water extract is commonly used as an indicator of soil salinity conditions as the reading is directly related to the electrolyte (salt) concentration of the extract. In order to compare the laboratory data with published salinity classes, the results are converted to equivalent saturated paste (ECe) using texture adjustment values presented in DLWC 2002.

The following table provides a summary of plant response with reference to salinity:

Table 5-1: Plant Response to Soil Salinity

ECe (dS/m)	Salinity Class	Plant Response[1]
<2	Non-saline	Salinity effects mostly negligible
2-4	Slightly saline	Yields of very sensitive crops may be affected
4-8	Moderately saline	Yield of many crops affected
8-16	Very saline	Only tolerant crops yield satisfactorily
>16	Highly saline	Only a few very tolerant crops yield satisfactorily

Note:
1- Plant Response to Salinity Class has been adopted from DLWC 2002

5.2 Soil pH and Plant Growth

Soil pH is a measure of the acidity or alkalinity of the soils and values have been assessed as an indicator of soil fertility with respect to plant growth. The optimal pH for plant growth is between 5.5 and 7. Beyond this range, effective revegetation of exposed soil following disturbance is increasingly difficult and the potential for erosion is considered to increase.

Highly alkaline soils are commonly associated with saline and sodic soil conditions and can limit the ability of plants to take up water and nutrients. Highly acidic soils exhibit aluminium toxicity toward plants and can limit the ability of plants to take up other essential nutrients including molybdenum.

Interpretation of soil pH with respect to plant growth is undertaken using the ratings published in Bruce and Rayment (1982[8]) presented below:

[8]Bruce, R.C. and Rayment, G.E., (1982). *Analytical Methods and Interpretations used by the Agricultural Chemistry Branch for Soil and Land Use Surveys,* (referred to as Bruce and Rayment 1982)

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Table 5-2: Plant Response to Soil pH

pH	Rating
<4.5	Extremely acidic
4.5-5.0	Very strongly acidic
5.1-5.5	Strongly acidic
5.6 – 7.3	Optimal plant growth
7.4-7.8	Mildly alkaline
7.9-8.4	Moderately alkaline
8.5-9.0	Strongly alkaline
>9.1	Very strongly alkaline

5.3 Cation Exchange Capacity (CEC) in Soil

The ability of soils to attract, retain and exchange cations (positively charged ions) is estimated by the calculated CEC value. CEC represents the major controlling factor in stability of clay soil structure, nutrient availability for plant growth, soil pH and the reaction of the soil to chemical applications (fertilisers, conditioners etc.).

High CEC soils have a greater capacity to retain nutrients, however, deficient soils require greater applications of nutrients to correct imbalances. Low CEC soils have a reduced capacity to retain nutrients and may result in leaching of nutrients from the soil in the event of excess nutrient applications.

Metson (1961[9]) developed a set of ratings for effective CEC and the most abundant cations. These are summarised below (values are in meq/100g):

Table 5-3: CEC Rating

Rating	eCEC	Exch Na	Exch K	Exch Ca	Exch Mg
Very low	<6	0-0.1	0-0.2	0-2	0-0.3
Low	6-12	0.1-0.3	0.2-0.3	2-5	0.3-1
Moderate	12-25	0.3-0.7	0.3-0.7	5-10	1-3
High	25-40	0.7-2	0.7-2	10-20	3-8

[9]Metson, A.J, (1961). *Methods of Chemical Analysis for Soil Survey Samples* (referred to as Metson 1961)

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Very high	>40	>2	>2	>20	>8

Note:
CEC – Cation Exchange Capacity, Na – Sodium, K – Potassium, Ca – Calcium, Mg – Magnesium

5.3.1 Ratio of Exchangeable Calcium to Magnesium

To maintain soil structure there should be a ratio of around 4:1 to 6:1 calcium to magnesium for a balanced soil (Eckert 1987[10]). At ratios of less than 4:1 calcium is considered to be deficient, whilst at ratios of greater than 6:1 are considered to be magnesium deficient.

5.4 Exchangeable Sodium Percentage or Sodicity (ESP%)

Exchangeable sodium is an important soil stability and salinity parameter. Excessive exchangeable sodium leads to unstable soils, increased runoff, potential salinity, dispersivity and water logging problems.

Normally the sodium content is expressed as a percentage of the CEC as other cations counteract the negative effects of sodium (known as ESP% and termed sodicity). The effect of the exchangeable sodium (exchangeable sodium percentage, ESP) varies with other soil factors such as the type of clay, the relative quantity of magnesium and the quantity of organic matter. However, Charman & Murphy (2000[11]) indicate that a soil is generally considered sodic if the ESP exceeds 6% and extremely sodic if the ESP exceeds 15%.

5.5 Groundwater Salinity

The surface water for this project will be assessed against groundwater salinity assessment values. The EC values in groundwater are dependent on numerous factors and can vary with changes in temperature and pH conditions. Suttar (1990[12]) has classed water into different types based on EC values as outlined in the table below.

Table 5-4: EC Ranges in Water

Water Type	EC (µS/cm)
Deionised Water	0.5 – 3
Pure Rainwater	<15
Freshwater Rivers	0 – 800
Marginal River Water	800 – 1600

[10] Eckert, D.J, (1987).*Soil Test Interpretation: Basic Cation Saturation Ratios and Sufficiency Levels*(referred to as Eckert 1987)
[11]Charman, P.E.V and Murphy, B.W (eds), (2000).*Soils: Their Management and Properties,* (referred to as Charman and Murphy 2000)
[12]Suttar, S., (1990).*Ribbons of Blue Handbook, Scitech*, Victoria (referred to as Suttar 1990)

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Water Type	EC (µS/cm)
Brackish Water	1600 – 4800
Saline Water	>4800
Seawater	51,500
Industrial Waters	100 – 10,000

5.6 Recommendations for Concrete Slabs and Footings in Saline Soils

In the absence of endorsed recommendations for buildings in saline environments, reference is made to the CCAA2005. The guide provides recommendations on the minimum concrete grade/strength required for slabs and footings in saline soils. Reference should be made to the CCAA 2005 publication for further information:

Table 5-5: Minimum Concrete Grade for Slabs and Footings in Saline Soils

ECe (dS/m)	Salinity Class	Concrete Grade[1]
<2	Non-saline	N20
2-4	Slightly saline	N20
4-8	Moderately saline	N25
8-16	Very saline	N32
>16	Highly saline	≥N40

Note:

1 - Concrete Grade for Salinity Class has been adopted from CCAA 2005

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5.7 Recommendations for Durability with Reference to AS2159-2009

In designing for durability, reference should be made to the requirements listed in the AS2159-2009. The exposure classification for concrete and steel piles and foundations is outlined in the following tables:

Table 5-6: Exposure Classification for Concrete Piles

Exposure Conditions				Exposure Classification	
Sulphate (expressed as SO_4)		pH	Chlorides in Groundwater (ppm)	Soil Conditions A[1]	Soil Conditions B[2]
In Soil (ppm)	In Groundwater (ppm)				
<5,000	<1,000	>5.5	<6,000	Mild	Non-aggressive
5,000-10,000	1,000-3,000	4.5-5.5	6,000-12,000	Moderate	Mild
10,000-20,000	3,000-10,000	4-4.5	12,000-30,000	Severe	Moderate
>20,000	>10,000	<4	>30,000	Very severe	Severe

Notes:

1 - High permeability soils (eg sands and gravels) which are in groundwater

2 – Low permeability soils (eg silts and clays) or all soils above groundwater

Table 5-7: Exposure Classification for Steel Piles

Exposure Conditions				Exposure Classifications	
pH	Chlorides		Resistivity (ohm.cm)	Soil Conditions A[1]	Soil Conditions B[2]
	In Soil (ppm)	In Groundwater (ppm)			
>5	<5,000	<1,000	>5,000	Non-aggressive	Non-aggressive
4-5	5,000-20,000	1,000-10,000	2,000-5,000	Mild	Non-aggressive
3-4	20,000-50,000	10,000-20,000	1,000-2,000	Moderate	Mild
<3	>50,000	>20,000	<1,000	Severe	Moderate

Notes:

1 - High permeability soils (eg sands and gravels) which are in groundwater

2 – Low permeability soils (eg silts and clays) or all soils above groundwater

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6 INVESTIGATION RESULTS

6.1 Subsurface Conditions

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

Table 6-1: Summary of Subsurface Conditions

Profile	Description (metres below ground level - mBGL)
Fill	Fill was encountered at the surface in all boreholes, except in BH1 to BH5 and extended to depths of approximately 0.2m to 1.1m bgl. Borehole BH189 was terminated in the fill at a maximum depth of approximately 0.9m bgl. The fill typically comprised silt, clayey silt, silty clay and silty sand with inclusions of igneous gravel, ironstone gravel, organic material, roots, root fibres, ash, clay fines and anthropogenic material (concrete and brick fragments). No staining or odours were noted in the fill material.
Natural Soil	Natural material was encountered at the surface or below the fill in all boreholes, except in BH189 which was terminated in the fill. The natural material was encountered to a maximum depth of approximately 4.9m bgl to the termination depth of BH5. The natural material typically comprised silty topsoil, silt, sandy silty gravel, clayey silt, silty sandy gravel, and silty gravel with inclusions of roots, sand, clay, cobbles, ash, ironstone gravel, sandstone gravel and river gravel. No staining or odours were noted in the natural material.
Bedrock	Bedrock was not encountered in any of the boreholes.
Groundwater	Groundwater seepage was not encountered in the boreholes during drilling up to approximately 4.9m bgl. All boreholes remained dry on completion of drilling and a short time after. Groundwater was not identified in the monitoring wells installed to a maximum depth of 4.0m bgl.

6.2 Laboratory Results

A summary of the results is presented below.

Table 6-2: Summary of Laboratory Results

Analyte	Results
EC &ECe	The EC results ranged from 6µS/m to 61µS/m. All ECe results were less than 2 ds/m.

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Analyte	Results
Resistivity	Resistivity values were calculated based on the raw EC values. The resistivity values for the soil samples ranged from 16,393ohm.cm to 166,667ohm.cm.
pH	The results of the analysis ranged from pH 4.8 to pH 7.9.
CEC	The results of the analysis ranged from: • CEC – 1.9meq/100g to 9.6meq/100g; • Exchangeable Na – all results were 0.1meq/100g; • Exchangeable K – less than the practical quantitation limit (PQL) to 0.5meq/100g; • Exchangeable Ca – 1.3meq/100g to 6.8meq/100g; and • Exchangeable Mg – 0.44meq/100g to 2.50meq/100g.
Sulphate	The results ranged from less than PQL to 64mg/kg.
Chloride	The results ranged from less than PQL to 25mg/kg.
Surface Water	The results of the analysis was: • pH – 7.7; • EC – 660µS/cm; • Chloride - 95mg/L; and • Sulphate - 21mg/L.

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7 RESULTS INTERPRETATION

The soil laboratory results are compared to the relevant SAC in the attached report tables. Interpretation of the results against the SAC is provided below:

Table 7-1: Interpretation of Laboratory Results

Parameter	Notes
Soil Salinity and Plant Growth	The ECe results were all less than 2 ds/m and were classed as non-saline.
Soil pH and Plant Growth	The soil pH results ranged from 4.8 to 7.9 and were classed as very strongly acidic to moderately alkaline in terms of the plant growth pH range. The majority of the surficial soils were generally within the optimum range for plant growth. The acidic conditions generally appeared to be associated with the boggy, water impacted soils in close proximity to the overland drain in the western section of the site. The moderately alkaline conditions appeared to be associated with soils at the south-eastern and north-western ends of the site.
CEC in Soil	The CEC values ranged from 1.9meq/100g to 9.6meq/100g and were in the very low to low range. This is typical of the soil formation encountered at the site and are generally indicative of the low levels of organic matter within the soils.
Ratio of Calcium to Magnesium	The results indicate that the soils have more calcium than magnesium. The CEC of the soil is generally very low to low. Lime and gypsum can be used to stabilise the soil which will improve soil structure for both engineering and fertility purposes.
ESP%	The ESP% values of the samples ranged from 1.0% to 5.3%. The majority of the ESP results were below the 5% threshold and were classed as non-sodic.
Surface Water Salinity	The laboratory results indicate that the surface water is generally non saline and within the 'Freshwater Rivers' water type. This is in-line with expectations for a surface water drainage swale.
Concrete Slabs and Footings in Saline Soils (CCAA 2005)	The proposed earthworks are anticipated to expose soils classed as non-saline across the site. The CCAA 2005 recommended concrete grade for slabs and footings in non-saline soils is N20, however this is a guide only and the concrete grade is to be selected by the project engineer to adequately address the structural requirements for the project Reference should also be made to AS2159-2009 for minimum concrete strengths and reinforcement cover for concrete piles/foundations.
Soil Conditions for Exposure Classification (AS2159-2009)	The boreholes drilled for the investigation have indicated that the subsurface conditions at the site generally comprise of a combination of shallow low permeability soils (i.e. silts and clays) and deeper relatively permeable materials

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Parameter	Notes
	such as sands and gravel. As groundwater was not encountered during the drilling works and the groundwater monitoring wells installed (to a maximum depth of 4.0m bgl) on site remained dry after one week of installation, it is deemed that all soils encountered during the salinity assessment were above the groundwater table. Based on this, the exposure classification outlined under 'Soil Conditions B' has been adopted for the assessment.
Exposure Classification for Concrete Piles/Foundations (AS2159-2009)	The soil pH and sulphate results indicate that the soils are non-aggressive to mildly aggressive towards buried concrete in soils. The surface water pH, sulphate and chloride results indicate that the surface water is non-aggressive towards buried concrete.
Exposure Classification for Steel Piles/Foundations (AS2159-2009)	The soil resistivity, pH and chloride results indicate that the soils are non-aggressive towards buried steel. The surface water pH and chloride results indicate that the surface water is non-aggressive towards buried steel.

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8 DISCUSSION AND RECOMMENDATIONS

Based on the findings of the preliminary assessment, significantly saline and/or aggressive soil conditions are not expected to be encountered during the development works (as described in Section 1.1). The surface water at the site is also assessed not to be significantly saline or aggressive. EIS recommend that the structural engineer review the exposure classification and salinity results within this report and factor these into the design accordingly.

In the event that deeper excavations/piling (beyond the depth of this investigation) are required, further investigation of the salinity conditions at depth is recommended. EIS are of the opinion that a salinity management plan is not required provided that the recommendations above are implemented.

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9 LIMITATIONS

Salinity is a natural phenomenon and can change over time based on site conditions and climatic variations. Changes to existing drainage patters can also impact the salinity at the site. The results outlined in this report are a snap shot of conditions present at the time of the investigation and is bound to change over time.

EIS accepts no responsibility for any unidentified salinity 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.

Reference should also be made to the limitations presented in the main report which also apply to this preliminary salinity assessment report.

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IMPORTANT INFORMATION ABOUT THIS REPORT

These notes have been prepared by EIS 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 EIS 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.

EIS/J&K will not accept any responsibility whatsoever for situations where one or more of the above factors have changed since completion of the assessment. If the subject site is sold, ownership of the assessment report should be transferred by EIS to the new site owners who will be informed of the conditions and limitations under which the assessment was undertaken. No person should apply an assessment 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 salinity concentrations may also vary over time through migration and accumulation of salts, importation of materials, construction and landscaping. The conclusions of an assessment 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 assessments 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 salinity, the likely impact on the proposed development and appropriate management 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 assessment 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.

Assessment Limitations
The assessment is designed to identify major salinity risks at the site. Implementing the management recommends can minimise the risks. No assessment can identify all risks as salinity is a natural phenomenon which can change over time. Even a rigorous professional assessment may not detect all potential salinity impacts on a site. Salinity may be present in areas that were not surveyed or sampled, or may accumulate in areas which showed no signs of salinity when sampled.

Misinterpretation of Site Assessments by Design Professionals
Costly problems can occur when other design professionals develop plans based on misinterpretation of an assessment report. To minimise problems associated with misinterpretations, the environmental

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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 Assessment 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 management 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 assessment. 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 assessment. 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 assessment 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 assessment 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 assessment, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to any questions.

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LABORATORY SUMMARY TABLES

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TABLE S1
SUMMARY OF SOIL LABORATORY RESULTS - EC and ECe

Borehole Number	Sample Depth (m)	Sample Description	EC (µS/cm)	ECe (dS/m)	Salinity Class[1]
Sample Depth Range - 0.0m to 4.4m					
BH102	0.0-0.1	Fil: clayey silt	32	<2	**Non-saline**
BH102	0.3-0.4	Fil: clayey silt	61	<2	**Non-saline**
BH102	0.9-1.0	Silt	13	<2	**Non-saline**
BH103	0.0-0.3	Fil: clayey silt	48	<2	**Non-saline**
BH103	1.2-1.3	Clayey silt	9	<2	**Non-saline**
BH104	0.0-0.3	Fill: silt	42	<2	**Non-saline**
BH104	0.7-1.0	Clayey silt	12	<2	**Non-saline**
BH106	0.0-0.2	Fill: silt	24	<2	**Non-saline**
BH106	1.2-1.3	Silt	17	<2	**Non-saline**
BH111	0.0-0.3	Fill: silt	24	<2	**Non-saline**
BH111	1.2-1.5	Silt	12	<2	**Non-saline**
BH113	0.0-0.3	Fill: silt	15	<2	**Non-saline**
BH113	1.2-1.5	Silt	7	<2	**Non-saline**
BH116	0.0-0.3	Fill: silty clay	34	<2	**Non-saline**
BH116	0.9-1.1	Silt	52	<2	**Non-saline**
BH118	0.0-0.5	Fill: clayey silt	10	<2	**Non-saline**
BH118	1.2-1.5	Silt	8	<2	**Non-saline**
BH121	0.0-0.3	Fill: silt	18	<2	**Non-saline**
BH121	1.2-1.5	Silt	6	<2	**Non-saline**
BH137	0.0-0.2	Fill: silt	12	<2	**Non-saline**
BH137	1.5-1.95	Silt	9	<2	**Non-saline**
BH137	4.3-4.4	Sandy silty gravel	11	<2	**Non-saline**
BH140	0.0-0.3	Fill: silt	16	<2	**Non-saline**
BH140	1.3-1.5	Silt	10	<2	**Non-saline**
BH155	0.0-0.3	Fill: silt	16	<2	**Non-saline**
BH155	1.2-1.5	Silt	13	<2	**Non-saline**
BH157	0.0-0.3	Fill: silt	12	<2	**Non-saline**
BH157	1.2-1.5	Silt	10	<2	**Non-saline**
BH166	0.0-0.1	Fill: silt	53	<2	**Non-saline**
BH166	0.7-0.95	Silt	8	<2	**Non-saline**
BH166	2.9-3.15	Silt	9	<2	**Non-saline**
BH166	4.0-4.1	Silty sandy gravel	11	<2	**Non-saline**
BH168	0.0-0.3	Fill: silt	14	<2	**Non-saline**
BH168	1.2-1.5	Silt	11	<2	**Non-saline**
BH170	0.0-0.1	Fill: silt	37	<2	**Non-saline**
BH170	0.6-0.95	Silt	8	<2	**Non-saline**
BH170	2.9-3.15	Silt	7	<2	**Non-saline**
BH170	3.4-3.5	Silty gravel	10	<2	**Non-saline**
BH181	0.0-0.2	Fill: silty clay	21	<2	**Non-saline**
BH181	0.5-0.95	Clayey silt	25	<2	**Non-saline**
BH181	1.7-1.95	Clayey silt	9	<2	**Non-saline**
BH181	2.7-2.9	Clayey silt	8	<2	**Non-saline**
BH181	3.9-4.0	Sandy silty gravel	14	<2	**Non-saline**
BH188	0.0-0.3	Fill: silt	37	<2	**Non-saline**
BH188	0.4-0.6	Fill: clayey silt	42	<2	**Non-saline**
BH188	0.9-1.1	Clayey silt	34	<2	**Non-saline**
Total Number of Samples			46	0	-
Minimum Value			6	0	-
Maximum Value			61	0	-

Explanation

1 - Salinity Class has been adopted from '*Site Investigations for Urban Salinity*' DLWC 2002.

(dS/m)	Salinity Class
<2	Non-Saline
2 to 4	Slightly Saline
4 to 8	Moderately Saline
8 to 16	Very Saline
>16	Highly Saline

Abbreviations

EC - Electrical Conductivity
ECe - Extract Electrical Conductivity

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TABLE S2
SUMMARY OF RESISTIVITY CALCULATION ON SOIL EC RESULTS

Borehole Number	Sample Depth (m)	Sample Description	EC (µS/cm)	Resistivity[1] (ohm.cm)	Classification[2] Condition B
Sample Depth Range - 0.0m to 4.4m					
BH102	0.0-0.1	Fil: clayey silt	32	31,250	Non-Aggressive
BH102	0.3-0.4	Fil: clayey silt	61	16,393	Non-Aggressive
BH102	0.9-1.0	Silt	13	76,923	Non-Aggressive
BH103	0.0-0.3	Fil: clayey silt	48	20,833	Non-Aggressive
BH103	1.2-1.3	Clayey silt	9	111,111	Non-Aggressive
BH104	0.0-0.3	Fill: silt	42	23,810	Non-Aggressive
BH104	0.7-1.0	Clayey silt	12	83,333	Non-Aggressive
BH106	0.0-0.2	Fill: silt	24	41,667	Non-Aggressive
BH106	1.2-1.3	Silt	17	58,824	Non-Aggressive
BH111	0.0-0.3	Fill: silt	24	41,667	Non-Aggressive
BH111	1.2-1.5	Silt	12	83,333	Non-Aggressive
BH113	0.0-0.3	Fill: silt	15	66,667	Non-Aggressive
BH113	1.2-1.5	Silt	7	142,857	Non-Aggressive
BH116	0.0-0.3	Fill: silty clay	34	29,412	Non-Aggressive
BH116	0.9-1.1	Silt	52	19,231	Non-Aggressive
BH118	0.0-0.5	Fill: clayey silt	10	100,000	Non-Aggressive
BH118	1.2-1.5	Silt	8	125,000	Non-Aggressive
BH121	0.0-0.3	Fill: silt	18	55,556	Non-Aggressive
BH121	1.2-1.5	Silt	6	166,667	Non-Aggressive
BH137	0.0-0.2	Fill: silt	12	83,333	Non-Aggressive
BH137	1.5-1.95	Silt	9	111,111	Non-Aggressive
BH137	4.3-4.4	Sandy silty gravel	11	90,909	Non-Aggressive
BH140	0.0-0.3	Fill: silt	16	62,500	Non-Aggressive
BH140	1.3-1.5	Silt	10	100,000	Non-Aggressive
BH155	0.0-0.3	Fill: silt	16	62,500	Non-Aggressive
BH155	1.2-1.5	Silt	13	76,923	Non-Aggressive
BH157	0.0-0.3	Fill: silt	12	83,333	Non-Aggressive
BH157	1.2-1.5	Silt	10	100,000	Non-Aggressive
BH166	0.0-0.1	Fill: silt	53	18,868	Non-Aggressive
BH166	0.7-0.95	Silt	8	125,000	Non-Aggressive
BH166	2.9-3.15	Silt	9	111,111	Non-Aggressive
BH166	4.0-4.1	Silty sandy gravel	11	90,909	Non-Aggressive
BH168	0.0-0.3	Fill: silt	14	71,429	Non-Aggressive
BH168	1.2-1.5	Silt	11	90,909	Non-Aggressive
BH170	0.0-0.1	Fill: silt	37	27,027	Non-Aggressive
BH170	0.6-0.95	Silt	8	125,000	Non-Aggressive
BH170	2.9-3.15	Silt	7	142,857	Non-Aggressive
BH170	3.4-3.5	Silty gravel	10	100,000	Non-Aggressive
BH181	0.0-0.2	Fill: silty clay	21	47,619	Non-Aggressive
BH181	0.5-0.95	Clayey silt	25	40,000	Non-Aggressive
BH181	1.7-1.95	Clayey silt	9	111,111	Non-Aggressive
BH181	2.7-2.9	Clayey silt	8	125,000	Non-Aggressive
BH181	3.9-4.0	Sandy silty gravel	14	71,429	Non-Aggressive
BH188	0.0-0.3	Fill: silt	37	27,027	Non-Aggressive
BH188	0.4-0.6	Fill: clayey silt	42	23,810	Non-Aggressive
BH188	0.9-1.1	Clayey silt	34	29,412	Non-Aggressive
Total Number of Samples			46	46	-
Minimum Value			6	16,393	-
Maximum Value			61	166,667	-

Explanation

1 - Resistivity values have been calculated on the laboratory EC values presented in Table B

2 - Classification derived from the Australian Standard 2159-2009 Piling Design and Installation (Table 6.5.2 [A] & [C])
Table 6.5.2 [A] recommends using a Moderate Exposure Classification for Steel Piles in Fresh Water - Soft Running Water
Classification is based on Soil condition 'B' - low permeability soils (e.g. silts & clays) or all soils above groundwater.

Resistivity Values (ohm.cm)	Classification for Steel Piles
>5,000	**Non-Aggressive**
2,000 - 5,000	**Non-Aggressive**
1,000 - 2,000	**Mildly Aggressive**
<1,000	**Moderately Aggressive**

Abbreviations

EC - Electrical Conductivity

TABLE S3
SUMMARY OF SOIL LABORATORY RESULTS - pH

Borehole Number	Sample Depth (m)	Sample Description	pH	Classification for Concrete Piles[1] Soil Condition B[2]	Classification for Steel Piles[1] Soil Condition B[2]
Sample Depth Range - 0.0m to 4.4m					
BH102	0.0-0.1	Fil: clayey silt	5.5	**Mildly Aggressive**	**Non-Aggressive**
BH102	0.3-0.4	Fil: clayey silt	4.8	**Mildly Aggressive**	**Non-Aggressive**
BH102	0.9-1.0	Silt	4.9	**Mildly Aggressive**	**Non-Aggressive**
BH103	0.0-0.3	Fil: clayey silt	6.1	**Non-Aggressive**	**Non-Aggressive**
BH103	1.2-1.3	Clayey silt	6.6	**Non-Aggressive**	**Non-Aggressive**
BH104	0.0-0.3	Fill: silt	6.2	**Non-Aggressive**	**Non-Aggressive**
BH104	0.7-1.0	Clayey silt	6.1	**Non-Aggressive**	**Non-Aggressive**
BH106	0.0-0.2	Fill: silt	5.9	**Non-Aggressive**	**Non-Aggressive**
BH106	1.2-1.3	Silt	6.6	**Non-Aggressive**	**Non-Aggressive**
BH111	0.0-0.3	Fill: silt	5.8	**Non-Aggressive**	**Non-Aggressive**
BH111	1.2-1.5	Silt	6.2	**Non-Aggressive**	**Non-Aggressive**
BH113	0.0-0.3	Fill: silt	5.8	**Non-Aggressive**	**Non-Aggressive**
BH113	1.2-1.5	Silt	6.6	**Non-Aggressive**	**Non-Aggressive**
BH116	0.0-0.3	Fill: silty clay	5.7	**Non-Aggressive**	**Non-Aggressive**
BH116	0.9-1.1	Silt	7.9	**Non-Aggressive**	**Non-Aggressive**
BH118	0.0-0.5	Fill: clayey silt	5.8	**Non-Aggressive**	**Non-Aggressive**
BH118	1.2-1.5	Silt	6.4	**Non-Aggressive**	**Non-Aggressive**
BH121	0.0-0.3	Fill: silt	5.8	**Non-Aggressive**	**Non-Aggressive**
BH121	1.2-1.5	Silt	6.7	**Non-Aggressive**	**Non-Aggressive**
BH137	0.0-0.2	Fill: silt	5.8	**Non-Aggressive**	**Non-Aggressive**
BH137	1.5-1.95	Silt	6.5	**Non-Aggressive**	**Non-Aggressive**
BH137	4.3-4.4	Sandy silty gravel	6.8	**Non-Aggressive**	**Non-Aggressive**
BH140	0.0-0.3	Fill: silt	5.6	**Non-Aggressive**	**Non-Aggressive**
BH140	1.3-1.5	Silt	6.5	**Non-Aggressive**	**Non-Aggressive**
BH155	0.0-0.3	Fill: silt	5.8	**Non-Aggressive**	**Non-Aggressive**
BH155	1.2-1.5	Silt	6	**Non-Aggressive**	**Non-Aggressive**
BH157	0.0-0.3	Fill: silt	5.8	**Non-Aggressive**	**Non-Aggressive**
BH157	1.2-1.5	Silt	6.4	**Non-Aggressive**	**Non-Aggressive**
BH166	0.0-0.1	Fill: silt	6	**Non-Aggressive**	**Non-Aggressive**
BH166	0.7-0.95	Silt	6.4	**Non-Aggressive**	**Non-Aggressive**
BH166	2.9-3.15	Silt	6.6	**Non-Aggressive**	**Non-Aggressive**
BH166	4.0-4.1	Silty sandy gravel	6.7	**Non-Aggressive**	**Non-Aggressive**
BH168	0.0-0.3	Fill: silt	5.7	**Non-Aggressive**	**Non-Aggressive**
BH168	1.2-1.5	Silt	6.7	**Non-Aggressive**	**Non-Aggressive**
BH170	0.0-0.1	Fill: silt	5.7	**Non-Aggressive**	**Non-Aggressive**
BH170	0.6-0.95	Silt	6.3	**Non-Aggressive**	**Non-Aggressive**
BH170	2.9-3.15	Silt	6.7	**Non-Aggressive**	**Non-Aggressive**
BH170	3.4-3.5	Silty gravel	6.6	**Non-Aggressive**	**Non-Aggressive**
BH181	0.0-0.2	Fill: silty clay	5.6	**Non-Aggressive**	**Non-Aggressive**
BH181	0.5-0.95	Clayey silt	5.8	**Non-Aggressive**	**Non-Aggressive**
BH181	1.7-1.95	Clayey silt	5.6	**Non-Aggressive**	**Non-Aggressive**
BH181	2.7-2.9	Clayey silt	6.1	**Non-Aggressive**	**Non-Aggressive**
BH181	3.9-4.0	Sandy silty gravel	6.5	**Non-Aggressive**	**Non-Aggressive**
BH188	0.0-0.3	Fill: silt	6.8	**Non-Aggressive**	**Non-Aggressive**
BH188	0.4-0.6	Fill: clayey silt	7	**Non-Aggressive**	**Non-Aggressive**
BH188	0.9-1.1	Clayey silt	7.4	**Non-Aggressive**	**Non-Aggressive**
Total Number of Samples			46	-	-
Minimum Value			4.8	-	-
Maximum Value			7.9	-	-

Explanation

1 - pH Classification derived from the Australian Standard 2159-2009 Piling Design and Installation (Tables 6.4.2 [C] & 6.5.2 [C])
Table 6.5.2 [A] recommends using a Moderate Exposure Classification for Steel Piles in Fresh Water - Soft Running Water

2 - Classification is based on Soil condition 'B' - low permeability soils (e.g. silts & clays) or all soils above groundwater.

pH Value	Classification for Concrete Piles
>5.5	**Non-Aggressive**
4.5 - 5.5	**Mildly Aggressive**
4 - 4.5	**Moderately Aggressive**
<4	**Severely Aggressive**

pH Value	Classification for Steel Piles
>5	**Non-Aggressive**
4.0 - 5.0	**Non-Aggressive**
3.0 - 4.0	**Mildly Aggressive**
<3	**Moderately Aggressive**

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TABLE S4
SUMMARY OF SOIL LABORATORY RESULTS - SULPHATE & CHLORIDES

Borehole Number	Sample Depth (m)	Sample Description	Sulphate (mg/kg)	Chloride (mg/kg)	Classification for Concrete Piles[1] SO4 - Soil Condition B[2]	Classification for Steel Piles[1] Cl - Soil Condition B[2]
Sample Depth Range - 0.0m to 4.4m						
BH102	0.0-0.1	Fil: clayey silt	31	<10	Non-Aggressive	Non-Aggressive
BH102	0.3-0.4	Fil: clayey silt	64	23	Non-Aggressive	Non-Aggressive
BH102	0.9-1.0	Silt	<10	<10	Non-Aggressive	Non-Aggressive
BH103	0.0-0.3	Fil: clayey silt	<10	<10	Non-Aggressive	Non-Aggressive
BH103	1.2-1.3	Clayey silt	<10	<10	Non-Aggressive	Non-Aggressive
BH104	0.0-0.3	Fill: silt	<10	<10	Non-Aggressive	Non-Aggressive
BH104	0.7-1.0	Clayey silt	<10	<10	Non-Aggressive	Non-Aggressive
BH106	0.0-0.2	Fill: silt	<10	<10	Non-Aggressive	Non-Aggressive
BH106	1.2-1.3	Silt	20	<10	Non-Aggressive	Non-Aggressive
BH111	0.0-0.3	Fill: silt	<10	<10	Non-Aggressive	Non-Aggressive
BH111	1.2-1.5	Silt	10	<10	Non-Aggressive	Non-Aggressive
BH113	0.0-0.3	Fill: silt	<10	<10	Non-Aggressive	Non-Aggressive
BH113	1.2-1.5	Silt	<10	<10	Non-Aggressive	Non-Aggressive
BH116	0.0-0.3	Fill: silty clay	<10	10	Non-Aggressive	Non-Aggressive
BH116	0.9-1.1	Silt	40	25	Non-Aggressive	Non-Aggressive
BH118	0.0-0.5	Fill: clayey silt	<10	<10	Non-Aggressive	Non-Aggressive
BH118	1.2-1.5	Silt	<10	<10	Non-Aggressive	Non-Aggressive
BH121	0.0-0.3	Fill: silt	<10	<10	Non-Aggressive	Non-Aggressive
BH121	1.2-1.5	Silt	<10	<10	Non-Aggressive	Non-Aggressive
BH137	0.0-0.2	Fill: silt	<10	<10	Non-Aggressive	Non-Aggressive
BH137	1.5-1.95	Silt	<10	<10	Non-Aggressive	Non-Aggressive
BH137	4.3-4.4	Sandy silty gravel	<10	<10	Non-Aggressive	Non-Aggressive
BH140	0.0-0.3	Fill: silt	<10	<10	Non-Aggressive	Non-Aggressive
BH140	1.3-1.5	Silt	<10	<10	Non-Aggressive	Non-Aggressive
BH155	0.0-0.3	Fill: silt	<10	<10	Non-Aggressive	Non-Aggressive
BH155	1.2-1.5	Silt	10	<10	Non-Aggressive	Non-Aggressive
BH157	0.0-0.3	Fill: silt	<10	<10	Non-Aggressive	Non-Aggressive
BH157	1.2-1.5	Silt	10	<10	Non-Aggressive	Non-Aggressive
BH166	0.0-0.1	Fill: silt	10	20	Non-Aggressive	Non-Aggressive
BH166	0.7-0.95	Silt	<10	<10	Non-Aggressive	Non-Aggressive
BH166	2.9-3.15	Silt	<10	<10	Non-Aggressive	Non-Aggressive
BH166	4.0-4.1	Silty sandy gravel	<10	<10	Non-Aggressive	Non-Aggressive
BH168	0.0-0.3	Fill: silt	<10	<10	Non-Aggressive	Non-Aggressive
BH168	1.2-1.5	Silt	<10	<10	Non-Aggressive	Non-Aggressive
BH170	0.0-0.1	Fill: silt	<10	<10	Non-Aggressive	Non-Aggressive
BH170	0.6-0.95	Silt	<10	<10	Non-Aggressive	Non-Aggressive
BH170	2.9-3.15	Silt	<10	<10	Non-Aggressive	Non-Aggressive
BH170	3.4-3.5	Silty gravel	<10	<10	Non-Aggressive	Non-Aggressive
BH181	0.0-0.2	Fill: silty clay	20	<10	Non-Aggressive	Non-Aggressive
BH181	0.5-0.95	Clayey silt	31	<10	Non-Aggressive	Non-Aggressive
BH181	1.7-1.95	Clayey silt	<10	<10	Non-Aggressive	Non-Aggressive
BH181	2.7-2.9	Clayey silt	<10	<10	Non-Aggressive	Non-Aggressive
BH181	3.9-4.0	Sandy silty gravel	10	<10	Non-Aggressive	Non-Aggressive
BH188	0.0-0.3	Fill: silt	<10	<10	Non-Aggressive	Non-Aggressive
BH188	0.4-0.6	Fill: clayey silt	37	<10	Non-Aggressive	Non-Aggressive
BH188	0.9-1.1	Clayey silt	26	<10	Non-Aggressive	Non-Aggressive
Total Number of Samples			13	4	-	-
Minimum Value			10	10	-	-
Maximum Value			64	25	-	-

Explanation

1 - Classification derived from the Australian Standard 2159-2009 Piling Design and Installation (Tables 6.4.2 [C] & 6.5.2 [C])
Table 6.5.2 [A] recommends using a Moderate Exposure Classification for Steel Piles in Fresh Water - Soft Running Water

2 - Classification is based on Soil condition 'B' - low permeability soils (e.g. silts & clays) or all soils above groundwater.

Sulphate (SO4) Values	Classification for Concrete Piles	Chloride (Cl) Values	Classification for Steel Piles
<5,000	**Non-Aggressive**	<5,000	**Non-Aggressive**
5,000 - 10,000	**Mildly Aggressive**	5,000 - 20,000	**Non-Aggressive**
10,000 - 20,000	**Moderately Aggressive**	20,000 - 50,000	**Mildly Aggressive**
>20,000	**Severely Aggressive**	>50,000	**Moderately Aggressive**

TABLE S5
SUMMARY OF SOIL LABORATORY RESULTS - CEC & ESP

Borehole Number	Sample Depth (m)	Sample Description	Total CEC	Ca	K	Mg	Na	ESP[1]
			(meq/100g)					%
BH102	0.0-0.1	Fill: clayey silt	3.3	2.5	0.2	0.49	0.1	3.0
BH103	0.0-0.3	Fill: clayey silt	4.2	3	0.3	0.89	0.1	2.4
BH104	0.0-0.3	Fill: silt	3.3	1.9	0.5	0.9	0.1	3.0
BH106	0.0-0.2	Fill: silt	3.9	2.8	0.2	0.9	0.1	2.6
BH111	0.0-0.3	Fill: silt	3.8	2.6	0.3	0.88	0.1	2.6
BH113	0.0-0.3	Fill: silt	2.7	1.9	0.2	0.59	0.1	3.7
BH116	0.0-0.3	Fill: silty clay	9.6	6.8	0.3	2.5	0.1	1.0
BH118	0.0-0.5	Fill: clayey silt	2.7	2	0.1	0.55	0.1	3.7
BH121	0.0-0.3	Fill: silt	3.4	2.6	0.2	0.59	0.1	2.9
BH137	0.0-0.2	Fill: silt	2	1.4	0.2	0.44	0.1	5.0
BH140	0.0-0.3	Fill: silt	1.9	1.3	0.1	0.45	0.1	**5.3**
BH155	0.0-0.3	Fill: silt	3.6	2.7	0.2	0.7	0.1	2.8
BH157	0.0-0.3	Fill: silt	2.9	2.3	<0.1	0.51	0.1	3.4
BH166	0.0-0.1	Fill: silt	5.3	3.5	0.5	1.2	0.1	1.9
BH168	0.0-0.3	Fill: silt	2.6	1.8	0.2	0.51	0.1	3.8
BH170	0.0-0.1	Fill: silt	2.4	1.5	0.4	0.56	0.1	4.2
BH181	0.0-0.2	Fill: silty clay	4.1	3.1	0.3	0.76	0.1	2.4
BH188	0.0-0.3	Fill: silt	5.1	4.1	0.2	0.85	0.1	2.0
Total Number of Samples			18	18	18	18	18	18
Minimum Value			1.90	1.30	0.10	0.44	0.10	1.04
Maximum Value			9.60	6.80	0.50	2.50	0.10	5.26

Explanation

1 - Sodicity rating has been adopted from the publication *'Site Investigations for Urban Salinity' DLWC* 2002.

ESP Value	Sodicity Rating
< 5%	**Non-Sodic**
5% to 15%	**Sodic**
> 15%	**Highly Sodic**

Abbreviation

CEC: Cation Exchange Capacity
ESP: Exchangeable Sodium Percentage (Each Na/CEC)
Mg: Exchangeable Magnesium
Na: Exchangeable Sodium
K: Exchangeable Potassium
Ca: Exchangeable Calcium

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TABLE S6
SUMMARY OF GROUNDWATER LABORATORY RESULTS

Sample Reference	pH	EC (µS/cm)	Temp (°C)	Eh (mV)	DO (mg/L)	Laboratory Results pH	EC (µS/cm)	SO4 (mg/L)	Cl (mg/L)	Classification for Concrete Piles [2] Soil Condition B [3]	Classification for Steel Piles [2] Soil Condition B [3]
SW1	NA	NA	NA	NA	NA	7.7	660	21	95	Non-Aggressive	Non-Aggressive
Total Number of Samples	1	1	1	1	1	1	1	1	1	-	-
Minimum Value	-	-	-	-	-	7.7	660	21	95	-	-
Maximum Value	-	-	-	-	-	7.7	660	21	95	-	-

Exposure Classification for Concrete Piles

2 - Classification derived from the Australian Standard 2159-2009 Piling Design and Installation (Tables 6.4.2 [A] & [C])
Table 6.4.2 [A] recommends using a Mild Exposure Classification for Concrete Piles in Fresh Water - Treat as in Soil Condition 'A'

3 - Classification is based on Soil condition 'B' - low permeability soils (e.g. silts and clays) or all soils above groundwater.

pH	Sulphate (mg/L)	Chloride (mg/L)	Classification
> 5.5	<1,000	<6,000	**Non-Aggressive**
4.5 - 5.5	1,000 - 3,000	6,000 - 12,000	**Mildly Aggressive**
4.0 - 4.5	3,000 - 10,000	12,000 - 30,000	**Moderately Aggressive**
< 4	>10,000	>30,000	**Severely Aggressive**

Exposure Classification for Steel Piles

2 - Classification derived from the Australian Standard 2159-2009 Piling Design and Installation (Tables 6.5.2 [A] & [C])
Table 6.5.2 [A] recommends using a Moderate Exposure Classification for Steel Piles in Fresh Water - Soft Running Water

3 - Classification is based on Soil condition 'B' - low permeability soils (e.g. silts and clays) or all soils above groundwater.

pH	Chloride (mg/L)	Classification
> 5	<1,000	**Non-Aggressive**
4.0 - 5.0	1,000 - 10,000	**Non-Aggressive**
3.0 - 4.0	10,000 - 20,000	**Mildly Aggressive**
<3	>20,000	**Moderately Aggressive**

Abbreviation

SWL - Standing Water Level
EC - Electrical Conductivity
Eh - Redox Potential
SO4 - Sulphate
Cl - Chloride
DO - Dissolved Oxygen

Appendix A: Background on Salinity

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BACKGROUND ON SALINITY

General Information on Salinity

Salinity is the accumulation and concentration of salt at or near the ground surface or within surface water bodies. Salt is naturally present in the landscape through deposition of salt from the ocean in coastal areas and through weathering of bedrock that contains salt, accumulated during deposition of original sediments in a prehistoric marine environment. The salts are commonly soluble chlorides, sulphates or carbonates of sodium and magnesium.

In Sydney, salinity issues are typically associated with the Wianamatta Group shales and their derived soil landscapes. The natural vegetation of western Sydney is dominated by large isolated trees with deep root systems that remove subsurface moisture. Slow rates of percolation through the relatively impermeable clay soil and uptake of a large proportion of rainfall by the trees results in limited recharge of the groundwater system by rainfall. The depth to groundwater has developed a natural equilibrium and there is little tendency for salt contained in the groundwater or subsoils to rise to the surface.

Salinity and Urban Development

Salinity becomes a problem in urban areas when changes in the land use result in changes to the way water moves through the environment. This can result in vegetation die-back, decrease in water quality and damage to urban infrastructure.

Removal of deep rooted tree species during development and replacement with urban infrastructure, houses and industrial developments reduces the mechanism for the removal of subsurface moisture.

The development of urban salinity is commonly associated with changes in the hydrological cycle through the environment (rainfall, surface run-off, water infiltration and groundwater system). An increase in the quantity of water reaching the groundwater table as a result of vegetation clearance, irrigation of parklands, leaking water infrastructure and changes in drainage patterns, can cause a relatively rapid rise in the groundwater table. Earthworks that include excavation of natural soil profiles and exposure of more saline subsurface soils or shale bedrock may also result in an increase in salt concentrations at the ground surface.

Construction of roads, pipelines and buildings commonly results in removal of topsoil leading to exposure of the subsoils and interception of surficial and shallow subsurface drainage. In addition, over-irrigation of urban gardens, leaking water infrastructure and concentrated drainage patterns can result in increased water movement through the subsoil to the groundwater system leading to a relatively rapid rise in the groundwater table.

A rise in groundwater levels and impediments to subsurface drainage patterns can transport salt formerly stored in the bedrock to the surficial soil profile. This may result in salt encrustation of exposed soils, building foundations, roads, drainage infrastructure and corrosion of metal, concrete and other building materials. Increasing salt concentrations in surficial soils (and consequently in

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surface waters) may also result in die-off of the existing vegetation, further reducing the hydrological load on the groundwater system and resulting in further groundwater table rises.

Potential Salinity Impacts on Urban Development

Some of the adverse impacts that can arise from saline conditions include:

- Salt scalds caused by a rise in the subsoil moisture content that mobilises salt to the ground surface;
- Salt scalds caused by modification of former drainage patterns which leads to the day lighting of subsurface seepage (either perched water or groundwater) in areas lower in the catchment, either at breaks in the slope or within drainage lines;
- A rise in groundwater table or accumulation of salt rich seepage leading to corrosion of subsurface facilities including concrete structures, metal pipework, cables, foundations, underground services, etc;
- Rising damp, where salt rich moisture is drawn into building and pavement materials by capillary action leading to deterioration of brick, mortar and concrete;
- Structural cracking, damage or building collapse which may occur as a result of shifting and or sinking foundations;
- Plant die-back associated with a rise in groundwater table level that mobilises excess salt to the plant root zone; and
- Subsurface water discharge and subsequent pollution of streams and drainage channels.

Soils and Groundwater Planning Strategy in Western Sydney

The aim of the DLWC 2002 document is to provide a framework for the sustainable development and management of new developments in the western region of Sydney. In relation to salinity management, the development should be designed and constructed such that there is no significant increase in the water table level and no adverse salinity impacts.

The proposed development controls that relate to soils and groundwater issues are summarised below:

1. A water management strategy should be prepared to address the following:
    - Reduction of potable water usage onsite;
    - Development of best practice measures for stormwater reuse for open space irrigation;
    - Reduction of potable water demand;
    - Reduction of adverse impacts on local groundwater regimes;
    - Reduction of change in local flow regimes; and
    - Preparation of water maintenance and a monitoring management system.
2. A salinity management plan should be prepared that includes a groundwater management strategy related to:
    - Adoption of small landscaped areas to reduce irrigation requirements;
    - Use of native and other low water requirement plants;
    - Use of mulch cover (not in drainage lines);
    - Use of low flow watering facilities for landscaped areas;

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- Implementation of a tree planting program, especially in high recharge areas, of native, deep rooted, large growing species to assist retention of the groundwater at existing levels;
- Retention of existing native tree cover where possible; and
- Not permitting infiltration pits or tanks to disperse surface water.

3. An assessment of soil and rock conditions at the site, including erosion, expansive and dispersive soil conditions, and plant growth potential should be undertaken.
4. Use of the Blue Book (2004) as a guide to prepare soil and water management plans. The approved plan and subsequent works are to be supervised by appropriately qualified experienced personnel.

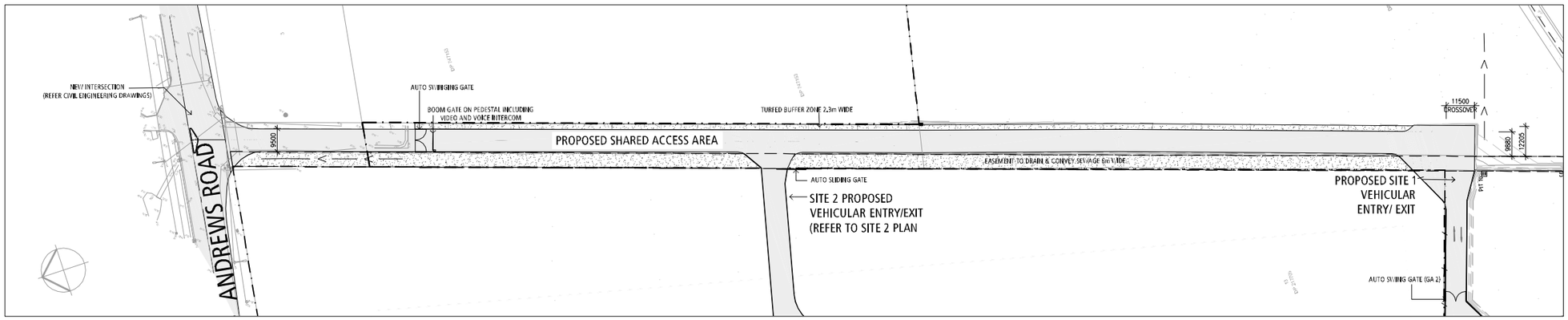
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Appendix B: Site Information including Site History

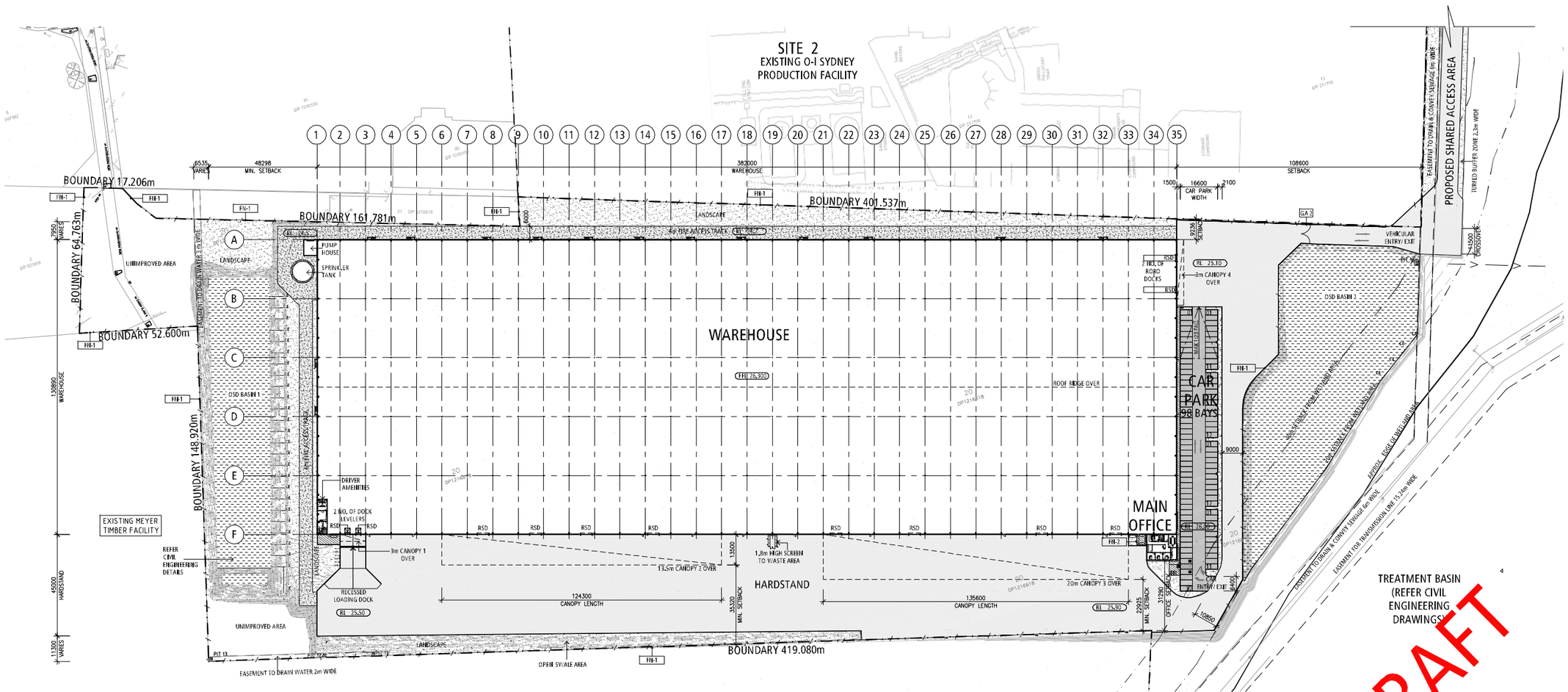
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Proposed Development Plan

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PROPOSED SHARED ACCESS ROAD
SCALE: 1:1000



SITE PLAN-SITE 01
SCALE: 1:1000

LEGEND

- INDICATES EXTENT OF HEAVY DUTY HARDSTAND TO CIVIL ENGINEERS DETAILS
- INDICATES EXTENT OF LIGHT DUTY PAVEMENT TO CIVIL ENGINEERS DETAILS
- CONCRETE PAVING WITH EXPOSED AGGREGATE FINISH OR SIMILAR
- CRUSHED ROCK OR REINFORCED TURF TO FIRE TRUCK ACCESS TRACK
- AREA OF GRASS / LANDSCAPING, REFER TO LANDSCAPE ARCHITECTS DRAWINGS FOR LANDSCAPE LAYOUT AND DETAILS
- WETLANDS DRAINAGE BASIN. REFER CIVIL ENGINEERING & LANDSCAPE PLANS
- FH-1 SECURITY FENCING 2100-HIGH PLAIN CHAIN WIRE MESH
- FH-2 2100-HIGH SCREEN TO OUT DOOR AREA
- GA 1 SLIDING GATES - FIRE ACCESS + LOCKS TO SUIT FIRE AUTHORITY REQ.
- GA 2 AUTO SWING GATE

NOTES

ALL NEW CROSSOVERS IN ACCORDANCE WITH COUNCIL REQUIREMENTS

ALL DISABLED PARKING SPACES IN ACCORDANCE WITH AUSTRALIAN STANDARD A-2890.1 (5.4m X 2.4m)

ALL PARKING BAYS TO LOCAL AUTHORITY REQUIREMENTS (5.4mX2.4m)

REFER TO TRAFFIC ENGINEERS DOCUMENTATION FOR ALL INTERNAL SITE AND EXTERNAL ROAD WORKS AND TRAFFIC MANAGEMENT DETAILS.

LEVELS SHOWN ARE TO AUSTRALIAN HEIGHT DATUM (A.H.D.)

DEVELOPMENT ANALYSIS

BUILDING (G.L.A.)	
MAIN OFFICE	150m²
WAREHOUSE (Incl. Driver Amenity)	50,000m²
TOTAL	50,150m²

CAR PARK 1	
CAR BAYS PROVIDED	98 BAYS
PARKING RATE (per 100m² G.L.A.)	0.195

EXTERNAL ITEMS (APPROX.)	
CANOPIES TOTAL	4,509m²
HARDSTANDS TOTAL(Incl. 4462m² ACCESS RD)	25,156m²
CRUSHED ROCK TOTAL	3,555m²
LIGHT DUTY TOTAL	2,018m²
CONCRETE PAVING TOTAL	83m²

SITE COVERAGE	
PROPOSED WAREHOUSE SITE AREA	102,277m²
PROPOSED SHARED ACCESS ROAD AREA(INCL. EASEMENT)	8,159m²
RESERVED AREA	159,964m²
TOTAL SITE 1 AREA	270,400m²
BUILDING FOOTPRINT	50,150m²
COVERAGE PROPORTION	18.54%

*NOTE: OFFICE IN G.L.A METHOD OF MEASUREMENT IN ACCORDANCE WITH PROPERTY COUNCIL OF AUSTRALIA; MEASURED TO:
- INTERNAL FACE OF WALLS
- CENTRELINE OF GLAZING
- EXCLUDES STAIRS, TOILETS, TEA AREA, CUPBOARDS, AIRLOCK, ACCESSWAYS etc

DRAFT

NO.	DATE:	REVISION:	BY	CHK
P1	12.10.2018	PRELIMINARY ISSUE	UW	SA
P2	16.10.2018	ISSUE TO CONSULTANTS	UW	SA
P3	23.10.2018	ISSUE TO CONSULTANTS	UW	SA
P4	24.10.2018	ISSUE TO CONSULTANTS	UW	SA

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PROJECT:
Proposed Warehouse Development
128 Andrews Road, Penrith NSW

TITLE:
SITE PLAN- SITE 1 AND
SHARED ACCESS ROAD

CLIENT: texco

DATE: October,2018
DRAWN BY: UW
SCALE: 1:1000@ A1
SCALE: 1:2000@ A3

JOB NO: 18161
DRAWING NO: TP 1.1
REVISION: P4

watson young

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

Selected Site Photos

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

Project Ref: E31675KR
Site Address: 128 Andrews Road, Penrith
Selected Site Photos Dated: 25 July 2018 and 20 to 24 August 2018



Photograph 1: The view of part of the site as seen from the northern boundary. Note the overgrown weeds and vegetation that also appear to be brown and dry.



Photograph 2: The view of the off-site metals processing business to the south as seen from the north of the site.



Photograph 3: View of the other industrial properties located to the west of the site.

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Photograph 4: The drainage located to the immediate north of the northern boundary of the site.



Photograph 5: The glass bottles and containers manufacturing business located to the immediate north of the site.



Photograph 6: The pipe outlet at the southern site boundary at the overland drain in the western section of the site. This is the location of the surface water sample SW1.

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	**Photograph 7:** The bare area in the western end of the site.
	**Photograph 8:** The potential asbestos containing piece of pipe as observed in the western end of the site, within the bare area.
	**Photograph 9:** View of one of the stockpiles (SP5) located in the western section of the site. Note the concrete pipe within the stockpile.

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	**Photograph 10:** View of the overland drain located in the western section of the site. Note Stockpile SP5 located adjacent to the east of it.
	**Photograph 11:** View of some of the stockpiles located in the north-western section of the site.

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Lotsearch Environmental Risk and Planning Report

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018



LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 20 Jul 2018 14:05:34

Reference: LS003889

Address: 128 Andrews Road, Penrith, NSW 2750

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.

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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 confidence is given under the field heading “LocConf” or “Location Confidence”.

Location Confidence	Description
Premise Match	Georeferenced to the site location / premise or part of site
Area 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
Buffered Point	Feature is a buffered point
Network of Features	Georeferenced to a network of features

Dataset Listing

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

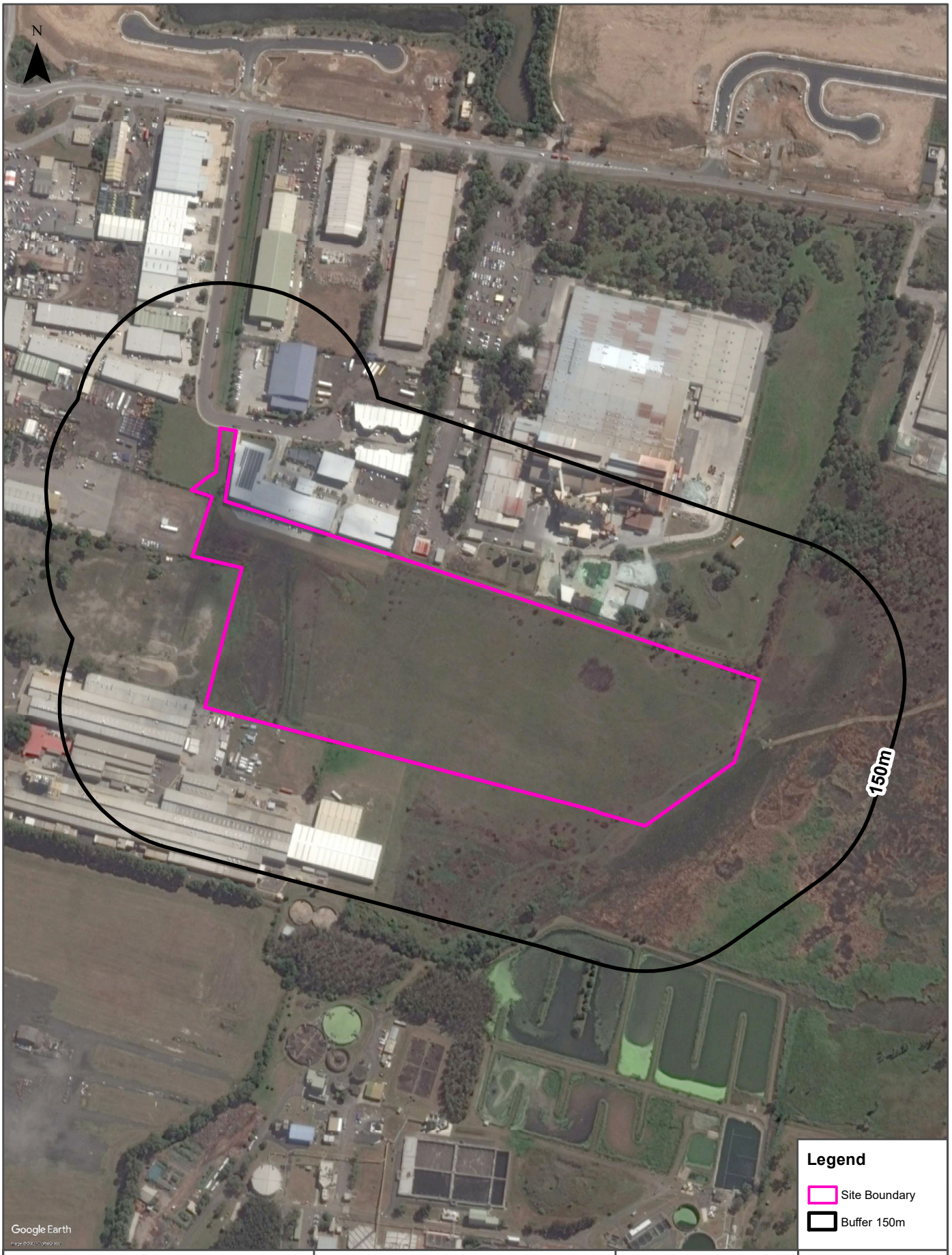
Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	Dept. Finance, Services & Innovation	20/07/2018	20/07/2018	Daily	-	-	-	-
Topographic Data	Dept. Finance, Services & Innovation	09/04/2018	09/04/2018	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	06/07/2018	02/07/2018	Monthly	1000	0	2	7
Contaminated Land Records of Notice	Environment Protection Authority	06/07/2018	06/07/2018	Monthly	1000	0	1	1
Former Gasworks	Environment Protection Authority	04/07/2018	11/10/2017	Monthly	1000	0	0	0
National Waste Management Site Database	Geoscience Australia	04/07/2018	07/03/2017	Quarterly	1000	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	04/07/2018	04/07/2018	Monthly	2000	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	11/01/2018	11/01/2018	Quarterly	1000	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	13/07/2018	13/07/2018	Monthly	1000	3	8	14
Delicensed POEO Activities still Regulated by the EPA	Environment Protection Authority	13/07/2018	13/07/2018	Monthly	1000	0	0	1
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	13/07/2018	13/07/2018	Monthly	1000	3	4	8
UPSS Environmentally Sensitive Zones	Environment Protection Authority	14/04/2015	12/01/2010	As required	1000	1	1	1
UBD Business to Business Directory 1991 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business to Business Directory 1991 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business to Business Directory 1986 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business to Business Directory 1986 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1982 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1982 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1978 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1978 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1975 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1975 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1970 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1970 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1965 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1965 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1961 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1961 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1950 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1950 (Road & Area Matches)	Hardie Grant			Not required	150	-	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
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500	0	0	0
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500	-	0	1
Points of Interest	Dept. Finance, Services & Innovation	09/04/2018	09/04/2018	Quarterly	1000	0	0	16
Tanks (Areas)	Dept. Finance, Services & Innovation	09/04/2018	09/04/2018	Quarterly	1000	0	0	0
Tanks (Points)	Dept. Finance, Services & Innovation	09/04/2018	09/04/2018	Quarterly	1000	0	0	0
Major Easements	Dept. Finance, Services & Innovation	09/04/2018	09/04/2018	As required	1000	1	1	6
State Forest	Dept. Finance, Services & Innovation	18/01/2018	18/01/2018	As required	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	18/01/2018	30/09/2017	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
Botany Groundwater Management Zones	NSW Department of Primary Industries	15/03/2018	01/10/2005	As required	1000	0	0	0
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	21/03/2016	01/12/2015	Annually	2000	0	18	145
Geological Units 1:100,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	1	-	2
Geological Structures 1:100,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	0	-	1
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000	0	0	0
Soil Landscapes	NSW Office of Environment & Heritage	12/08/2014		None planned	1000	1	-	3
Atlas of Australian Soils	CSIRO	19/05/2017	17/02/2011	As required	1000	2	2	3
Standard Local Environmental Plan Acid Sulfate Soils	NSW Planning and Environment	07/10/2016	07/10/2016	As required	500	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000	1	1	3
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000	1	1	1
Dryland Salinity Potential of Western Sydney	NSW Office of Environment & Heritage	12/05/2017	01/01/2002	None planned	1000	1	1	5
Mining Subsidence Districts	Dept. Finance, Services & Innovation	13/07/2017	01/07/2017	As required	1000	0	0	0
SEPP 14 - Coastal Wetlands	NSW Planning and Environment	17/12/2015	24/10/2008	Annually	1000	0	0	0
SEPP 26 - Littoral Rainforest	NSW Planning and Environment	17/12/2015	05/02/1988	Annually	1000	0	0	0
SEPP 71 - Coastal Protection	NSW Planning and Environment	17/12/2015	01/08/2003	Annually	1000	0	0	0
SEPP Major Developments 2005	NSW Planning and Environment	09/03/2013	25/05/2005	Under Review	1000	0	0	1
SEPP Strategic Land Use Areas	NSW Planning and Environment	01/08/2017	28/01/2014	Annually	1000	0	0	0
LEP - Land Zoning	NSW Planning and Environment	11/04/2018	16/03/2018	Quarterly	1000	1	1	28
LEP - Minimum Subdivision Lot Size	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	1	-	-
LEP - Height of Building	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	1	-	-
LEP - Floor Space Ratio	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	0	-	-
LEP - Land Application	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	1	-	-
LEP - Land Reservation Acquisition	NSW Planning and Environment	04/04/2018	09/03/2018	Quarterly	0	0	-	-
State Heritage Items	NSW Office of Environment & Heritage	04/04/2018	30/09/2016	Quarterly	1000	0	0	2

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Local Heritage Items	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	1000	0	1	9
Bush Fire Prone Land	NSW Rural Fire Service	10/05/2018	23/01/2018	Quarterly	1000	2	2	3
Remnant Vegetation of the Cumberland Plain	NSW Office of Environment & Heritage	07/10/2014	04/08/2011	Unknown	1000	0	0	6
RAMSAR Wetlands	Commonwealth of Australia Department of 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	1
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	0	2
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	19/07/2018	19/07/2018	Daily	10000	-	-	-

Aerial Imagery 2017

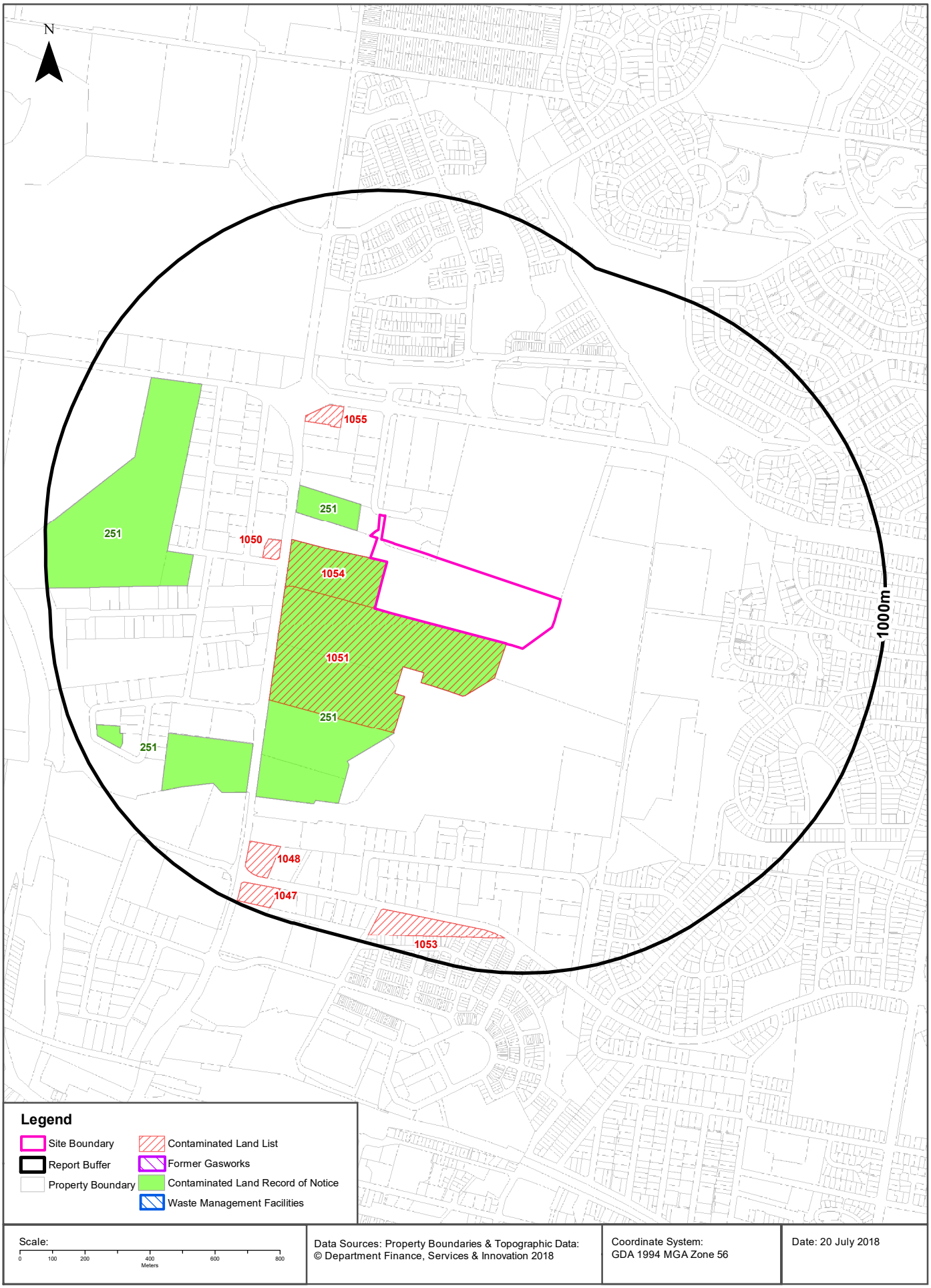
128 Andrews Road, Penrith, NSW 2750



Scale:	Data Source Aerial Imagery: © 2018 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.	Coordinate System: GDA 1994 MGA Zone 56	Date: 18 July 2018

Contaminated Land & Waste Management Facilities

128 Andrews Road, Penrith, NSW 2750



Contaminated Land & Waste Management Facilities

128 Andrews Road, Penrith, NSW 2750

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
1051	Crane Enfield Metals	Castlereagh Road	Penrith	Metal Industry	Contamination currently regulated under CLM Act	Current EPA List	Premise Match	0m	South West
1054	Mirvac Industrial Site	2101 Castlereagh Road	Penrith	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	0m	West
1050	Caltex Service Station	Castlereagh Rd Cnr Lugard Street	Penrith	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	273m	West
1055	7-Eleven (former Mobil) Service Station	212-222 Andrews Road	Penrith	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	294m	North West
1048	Caltex Penrith Service Station	153 Coreen Avenue	Penrith	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	788m	South West
1053	Lowes Petroleum (Former Mobil) Depot Penrith	174 Coreen Avenue	Penrith	Other Petroleum	Regulation under CLM Act not required	Current EPA List	Premise Match	870m	South
1047	BP Express Service Station	Corner Coreen Avenue and Castlereagh Road	Penrith	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	909m	South 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).

EPA site management class	Explanation
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 & Waste Management Facilities

128 Andrews Road, Penrith, NSW 2750

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
251	Crane Enfield Metals	Castlereagh Road	Penrith	4 current and 3 former	3147	Premise Match	0m	South West

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

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
N/A	No records in buffer											

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

EPA PFAS Investigation Program

128 Andrews Road, Penrith, NSW 2750

EPA PFAS Investigation Program

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

Id	Site	Address	Location Confidence	Distance	Direction
N/A	No records in buffer				

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

EPA Other Sites with Contamination Issues

128 Andrews Road, Penrith, NSW 2750

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

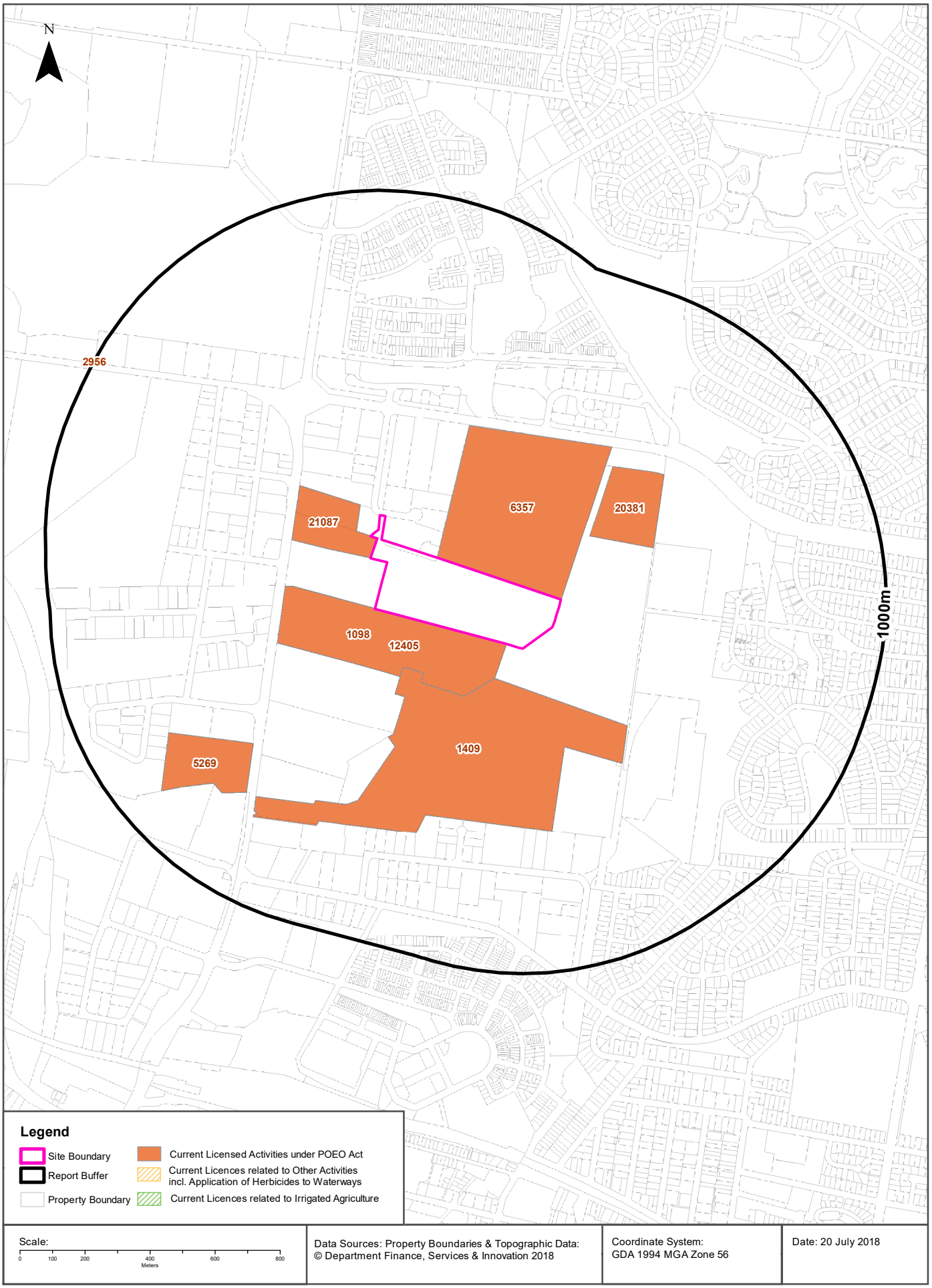
Sites within the dataset buffer:

Site Id	Site Name	Site Address	Dataset	Comments	Location Confidence	Distance	Direction
N/A	No records in buffer						

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

Current EPA Licensed Activities

128 Andrews Road, Penrith, NSW 2750



EPA Activities

128 Andrews Road, Penrith, NSW 2750

Licensed Activities under the POEO Act 1997

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

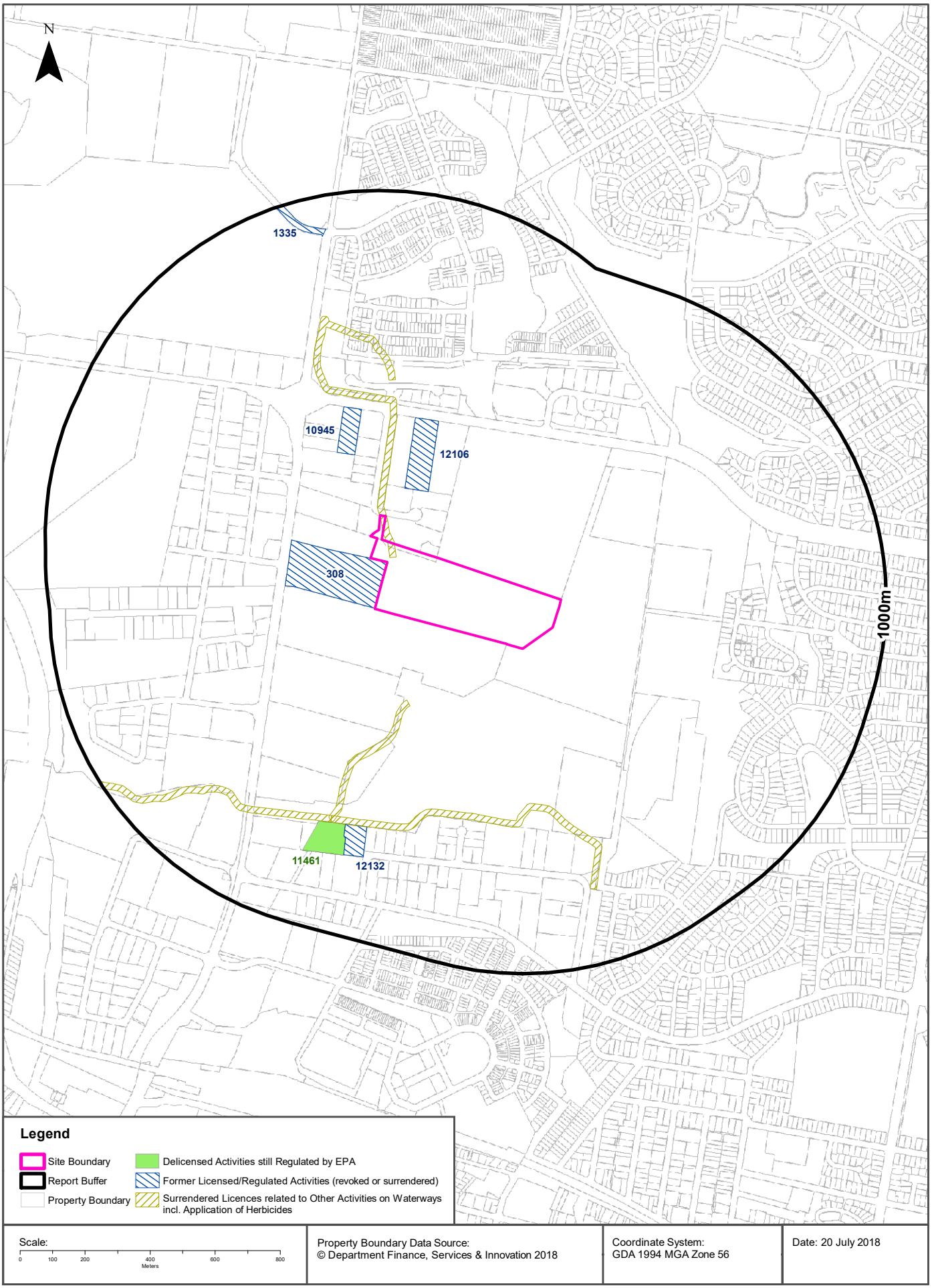
EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
6357	ACI OPERATIONS PTY. LTD.	ACI GLASS PACKAGING	130-172 ANDREW ROAD	PENRITH	Ceramic waste generation	Premise Match	0m	Onsite
6357	ACI OPERATIONS PTY. LTD.	ACI GLASS PACKAGING	130-172 ANDREW ROAD	PENRITH	Glass production (container)	Premise Match	0m	Onsite
6357	ACI OPERATIONS PTY. LTD.	ACI GLASS PACKAGING	130-172 ANDREW ROAD	PENRITH	Recovery of general waste	Premise Match	0m	Onsite
21087	MEYER TIMBER N.S.W. PTY LTD		2101-2113 Castlereagh Road, PENRITH, NSW 2750		Wood preservation	Premise Match	0m	North West
12405	CAPRAL LIMITED	ALUMINIUM EXTRUSION AND DISTRIBUTION PTY LIMITED	2115 CASTLEREAGH ROAD	PENRITH	Metal processing	Premise Match	0m	South West
12405	CAPRAL LIMITED	ALUMINIUM EXTRUSION AND DISTRIBUTION PTY LIMITED	2115 CASTLEREAGH ROAD	PENRITH	Metal waste generation	Premise Match	0m	South West
1098	CRANE ENFIELD METALS PTY. LIMITED	CRANE ENFIELD METALS	2115 CASTLEREAGH ROAD	PENRITH	Metal processing	Premise Match	0m	South West
1098	CRANE ENFIELD METALS PTY. LIMITED	CRANE ENFIELD METALS	2115 CASTLEREAGH ROAD	PENRITH	Metal waste generation	Premise Match	0m	South West
1409	SYDNEY WATER CORPORATION	PENRITH SEWAGE TREATMENT SYSTEM including the STP at	CASTLEREAGH ROAD	PENRITH	Sewage treatment processing by large plants	Premise Match	111m	South
20381	Glass Recovery Services Pty Ltd		126 Andrews Road, PENRITH, NSW 2740		Recovery of general waste; Waste storage - other types of waste	Premise Match	215m	North East
5269	VIRBAC (AUSTRALIA) PTY LTD	VIRBAC	2152 CASTLEREAGH ROAD	PENRITH	Chemical production waste generation	Premise Match	559m	South West
5269	VIRBAC (AUSTRALIA) PTY LTD	VIRBAC	2152 CASTLEREAGH ROAD	PENRITH	Pharmaceutical and veterinary products production	Premise Match	559m	South West
2956	PENRITH LAKES DEVELOPMENT CORPORATION LTD	PENRITH LAKES SCHEME	89-151 OLD CASTLEREAGH ROAD	CRANEBROOK	Crushing, grinding or separating	Premise Match	994m	North West
2956	PENRITH LAKES DEVELOPMENT CORPORATION LTD	PENRITH LAKES SCHEME	89-151 OLD CASTLEREAGH ROAD	CRANEBROOK	Other Land-Based Extraction	Premise Match	994m	North West

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

128 Andrews Road, Penrith, NSW 2750



EPA Activities

128 Andrews Road, Penrith, NSW 2750

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
11461	TOTAL CONCRETE SOLUTIONS PTY LIMITED	TOTAL CONCRETE SOLUTIONS PTY LTD	261 COOMBES DRIVE	PENRITH	Concrete works	Premise Match	663m	South 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

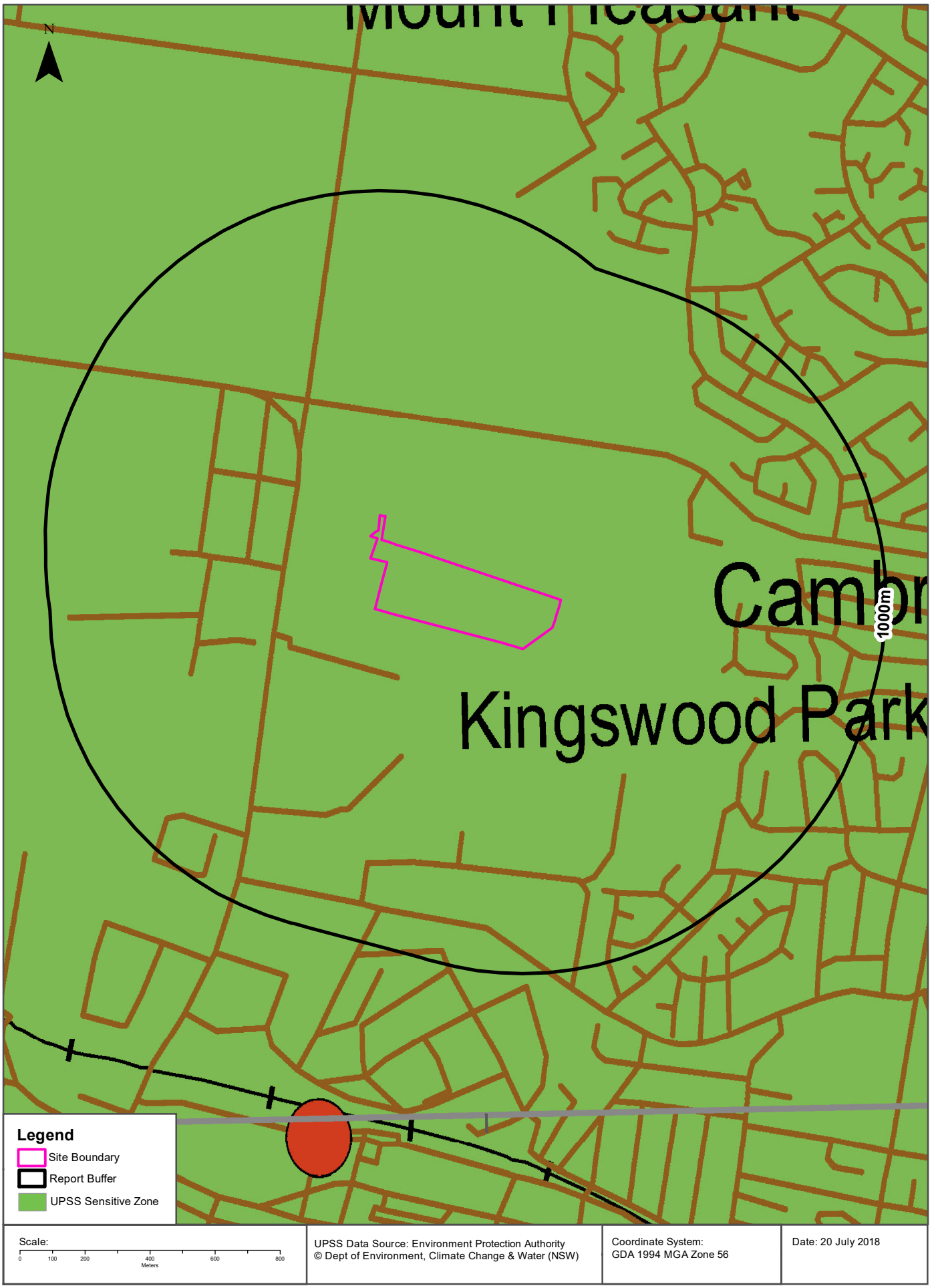
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	Onsite
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	Onsite
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	Onsite
308	DORF CLARK INDUSTRIES LIMITED	2101 CASTLEREAGH ROAD, PENRITH, NSW 2750	Surrendered	17/01/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	0m	West
12106	VIP STEEL PACKAGING PTY LTD	182-184 Andrews Road, PENRITH, NSW 2750	Surrendered	28/04/2004	Container reconditioning; Non-thermal treatment of hazardous and other waste	Premise Match	105m	North
10945	CUMMINS SOUTH PACIFIC PTY. LTD.	7 Andrews Road, PENRITH, NSW 2750	Surrendered	19/06/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	201m	North West
12132	GULF WESTERN PREMIUM QUALITY LUBRICATING OILS (MANUFACTURING) PTY LIMITED	GULF WESTERN OIL, 1 COOMBES DRIVE, PENRITH	Surrendered	01/10/2004	Petroleum products and fuel production	Premise Match	654m	South West
1335	HANSON CONSTRUCTION MATERIALS PTY LTD	MC CARTHYS LANE, CRANEBROOK, NSW 2749	Surrendered	24/05/2000	Concrete works	Road Match	877m	North West

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

UPSS Sensitive Zones

128 Andrews Road, Penrith, NSW 2750



Historical Business Directories

128 Andrews Road, Penrith, NSW 2750

1991 Business to Business Directory Records Premise or Road Intersection Matches

Records from the 1991 UBD Business to Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1991 Business to Business Directory Records Road or Area Matches

Records from the 1991 UBD Business to Business Directory, 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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

128 Andrews Road, Penrith, NSW 2750

1986 Business to Business Directory Records Premise or Road Intersection Matches

Records from the 1986 UBD Business to Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1986 Business to Business Directory Records Road or Area Matches

Records from the 1986 UBD Business to Business Directory, 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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

128 Andrews Road, Penrith, NSW 2750

1982 Business Directory Records
Premise or Road Intersection Matches

Records from the 1982 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1982 Business Directory Records
Road or Area Matches

Records from the 1982 UBD Business Directory, 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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

128 Andrews Road, Penrith, NSW 2750

1978 Business Directory Records
Premise or Road Intersection Matches

Records from the 1978 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1978 Business Directory Records
Road or Area Matches

Records from the 1978 UBD Business Directory, 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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

128 Andrews Road, Penrith, NSW 2750

1975 Business Directory Records
Premise or Road Intersection Matches

Records from the 1975 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1975 Business Directory Records
Road or Area Matches

Records from the 1975 UBD Business Directory, 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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

128 Andrews Road, Penrith, NSW 2750

1970 Business Directory Records
Premise or Road Intersection Matches

Records from the 1970 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1970 Business Directory Records
Road or Area Matches

Records from the 1970 UBD Business Directory, 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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

128 Andrews Road, Penrith, NSW 2750

1965 Business Directory Records
Premise or Road Intersection Matches

Records from the 1965 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1965 Business Directory Records
Road or Area Matches

Records from the 1965 UBD Business Directory, 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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

128 Andrews Road, Penrith, NSW 2750

1961 Business Directory Records
Premise or Road Intersection Matches

Records from the 1961 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1961 Business Directory Records
Road or Area Matches

Records from the 1961 UBD Business Directory, 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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

128 Andrews Road, Penrith, NSW 2750

1950 Business Directory Records
Premise or Road Intersection Matches

Records from the 1950 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1950 Business Directory Records
Road or Area Matches

Records from the 1950 UBD Business Directory, 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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

128 Andrews Road, Penrith, NSW 2750

Dry Cleaners, Motor Garages & Service Stations 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:

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer					

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

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

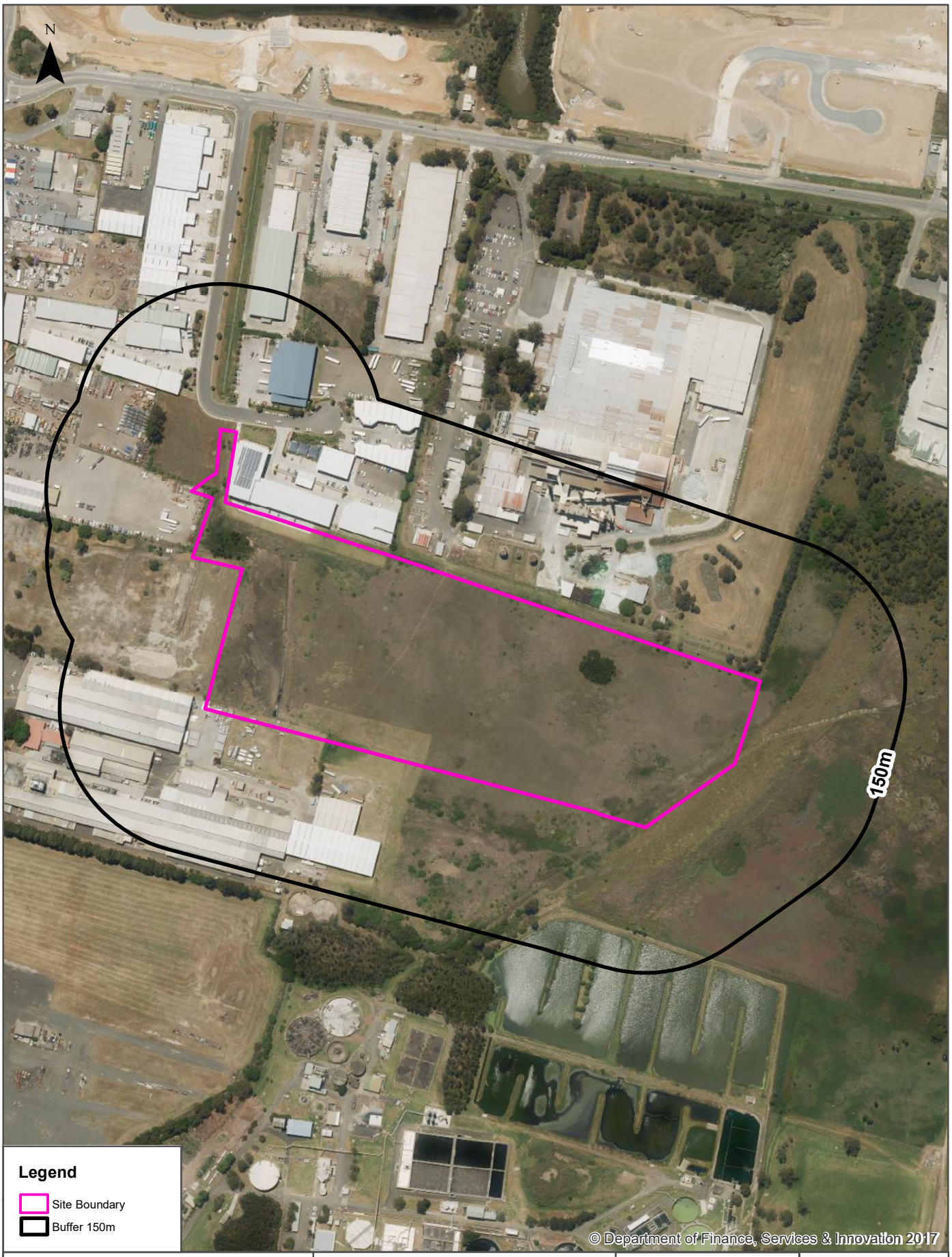
Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
Motor Garages & Service Stations	Doherty, P & M Transport 122 Castlereagh Rd, Castlereagh 2749	53687	1991	Road Match	472m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Aerial Imagery 2016

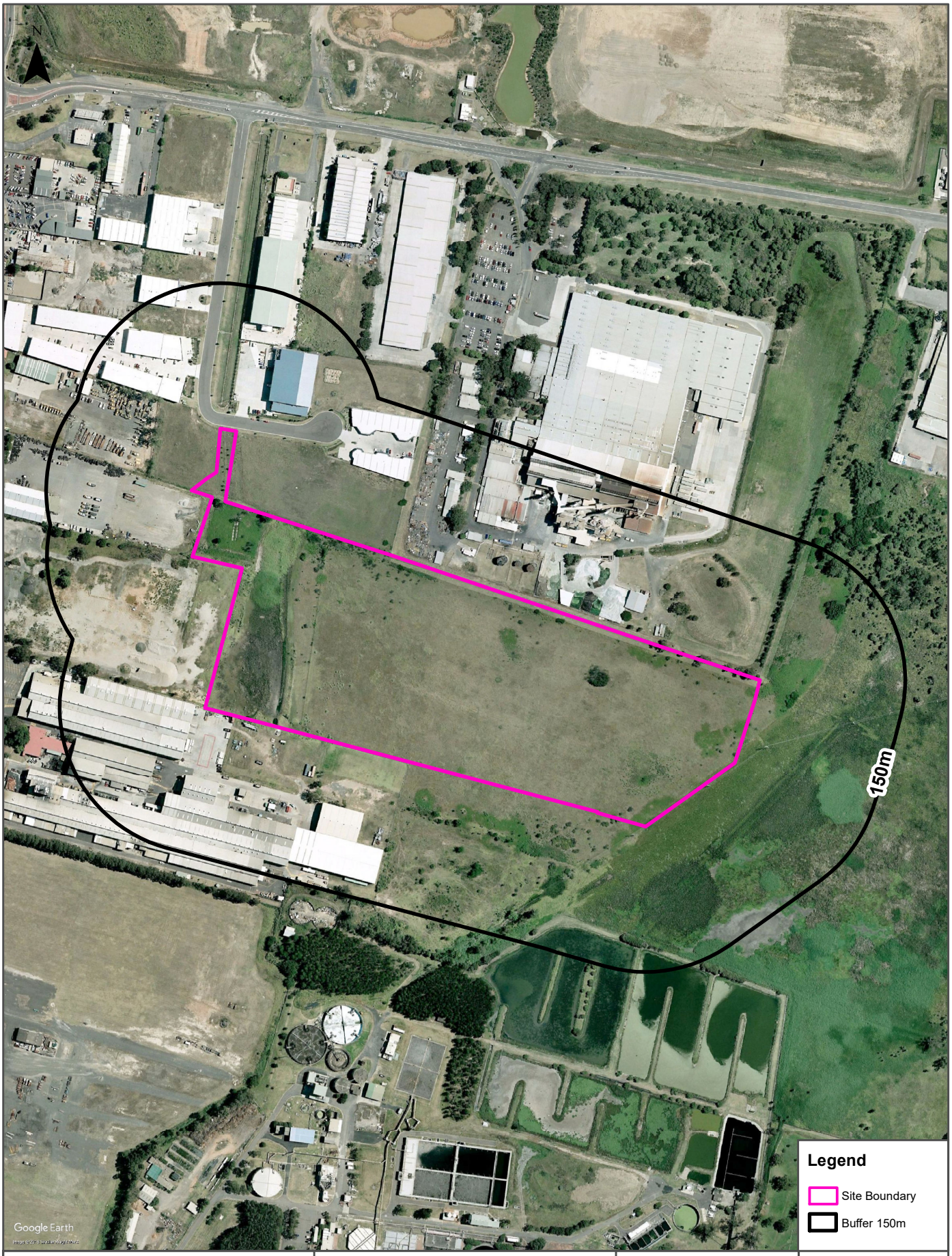
128 Andrews Road, Penrith, NSW 2750



Scale: 0 50 100 200 Meters	Data Sources: Aerial Imagery © Department Finance, Services & Innovation	Coordinate System: GDA 1994 MGA Zone 56	Date: 19 July 2018

Aerial Imagery 2009

128 Andrews Road, Penrith, NSW 2750



Scale: 0 50 100 200 Meters

Data Source Aerial Imagery: © 2018 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System: GDA 1994 MGA Zone 56

Date: 18 July 2018

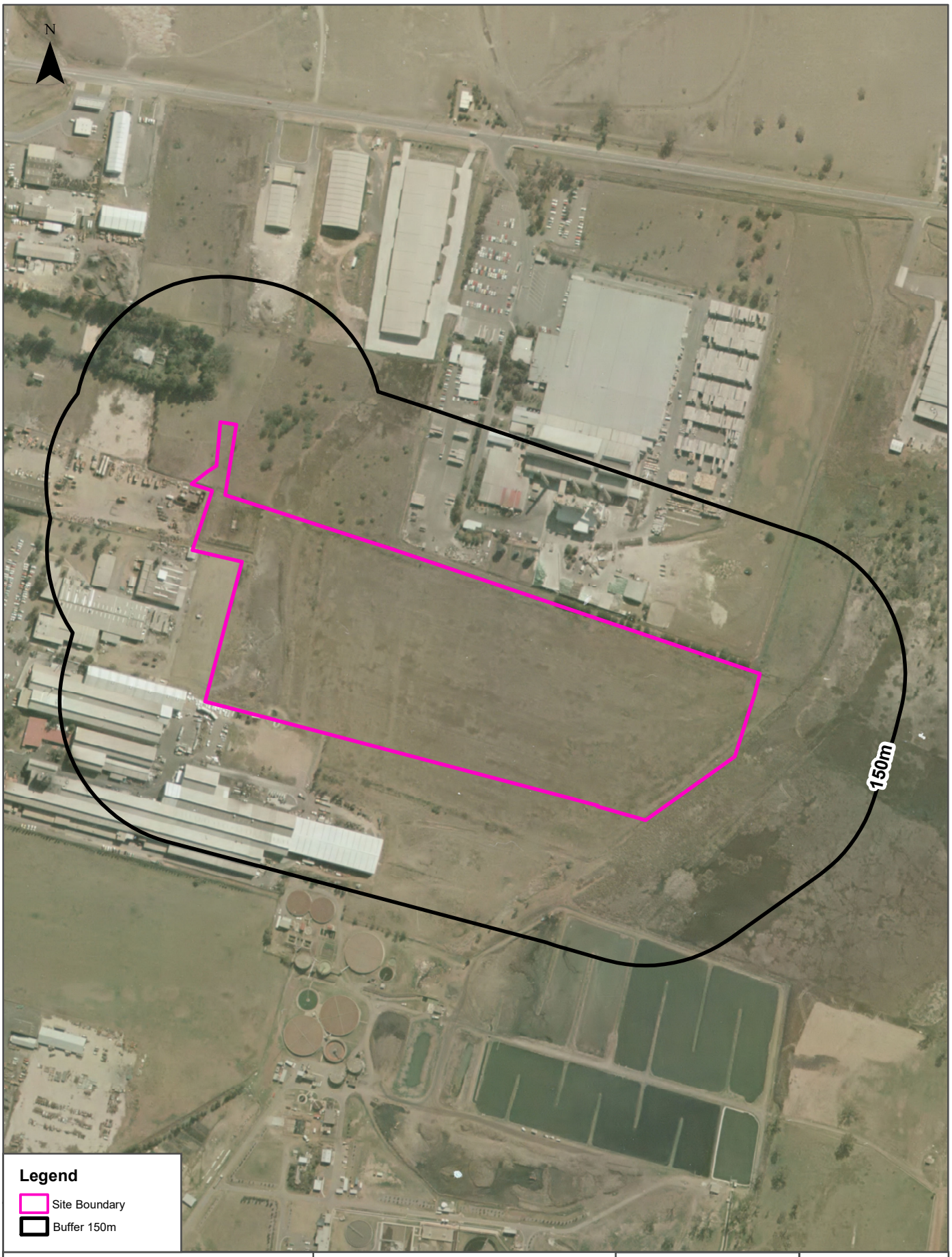
Aerial Imagery 2002

128 Andrews Road, Penrith, NSW 2750



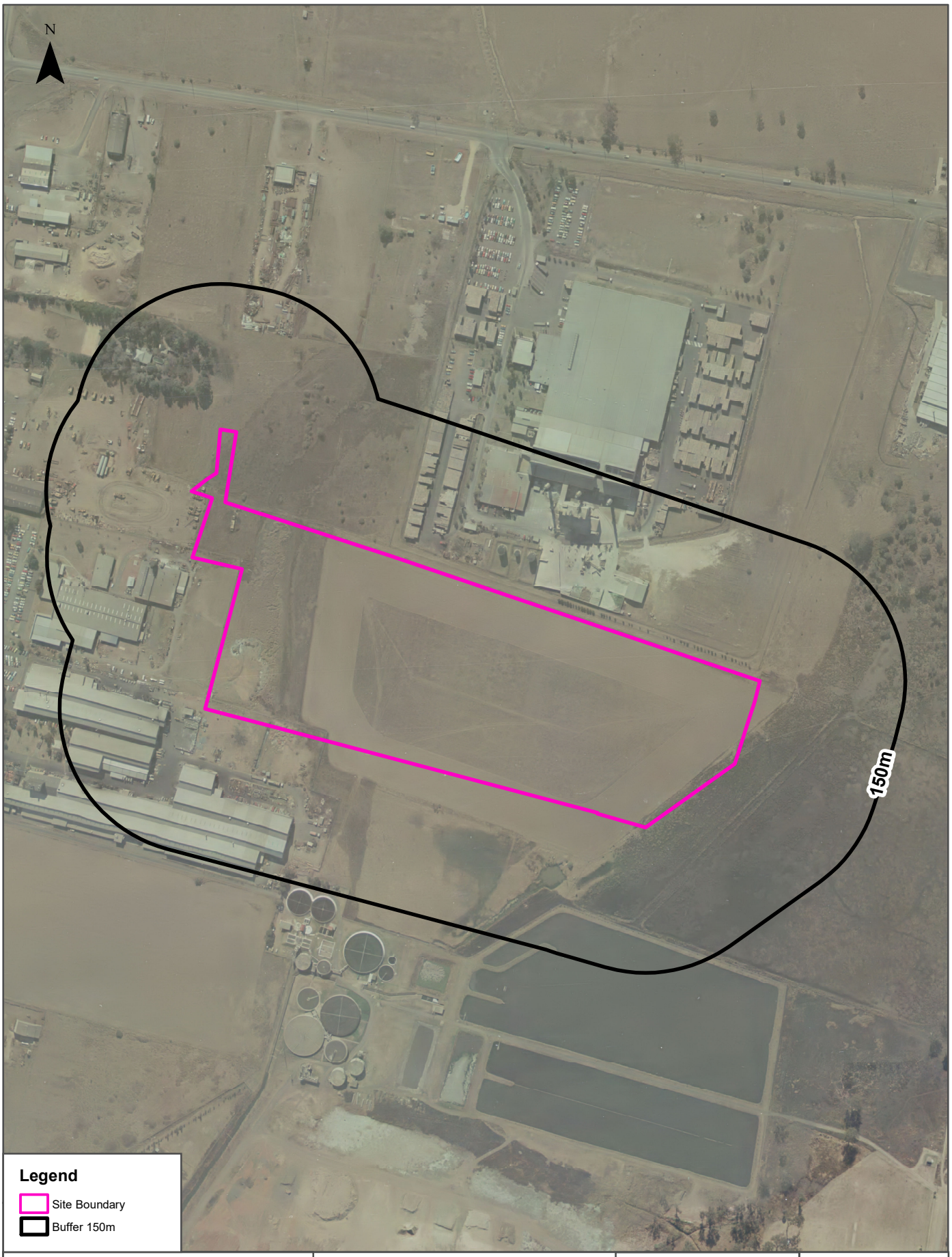
Aerial Imagery 1991

128 Andrews Road, Penrith, NSW 2750



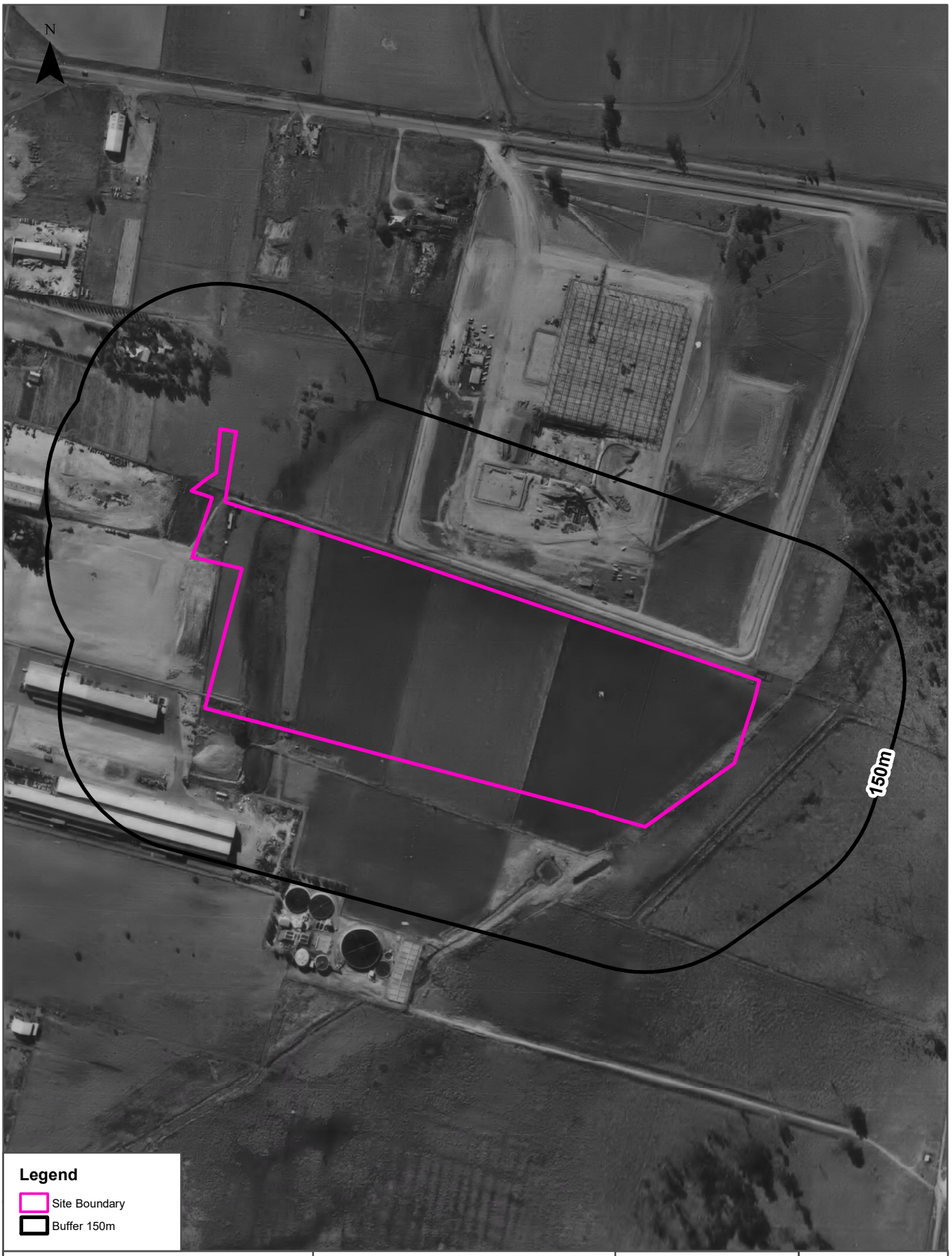
Aerial Imagery 1982

128 Andrews Road, Penrith, NSW 2750



Aerial Imagery 1970

128 Andrews Road, Penrith, NSW 2750



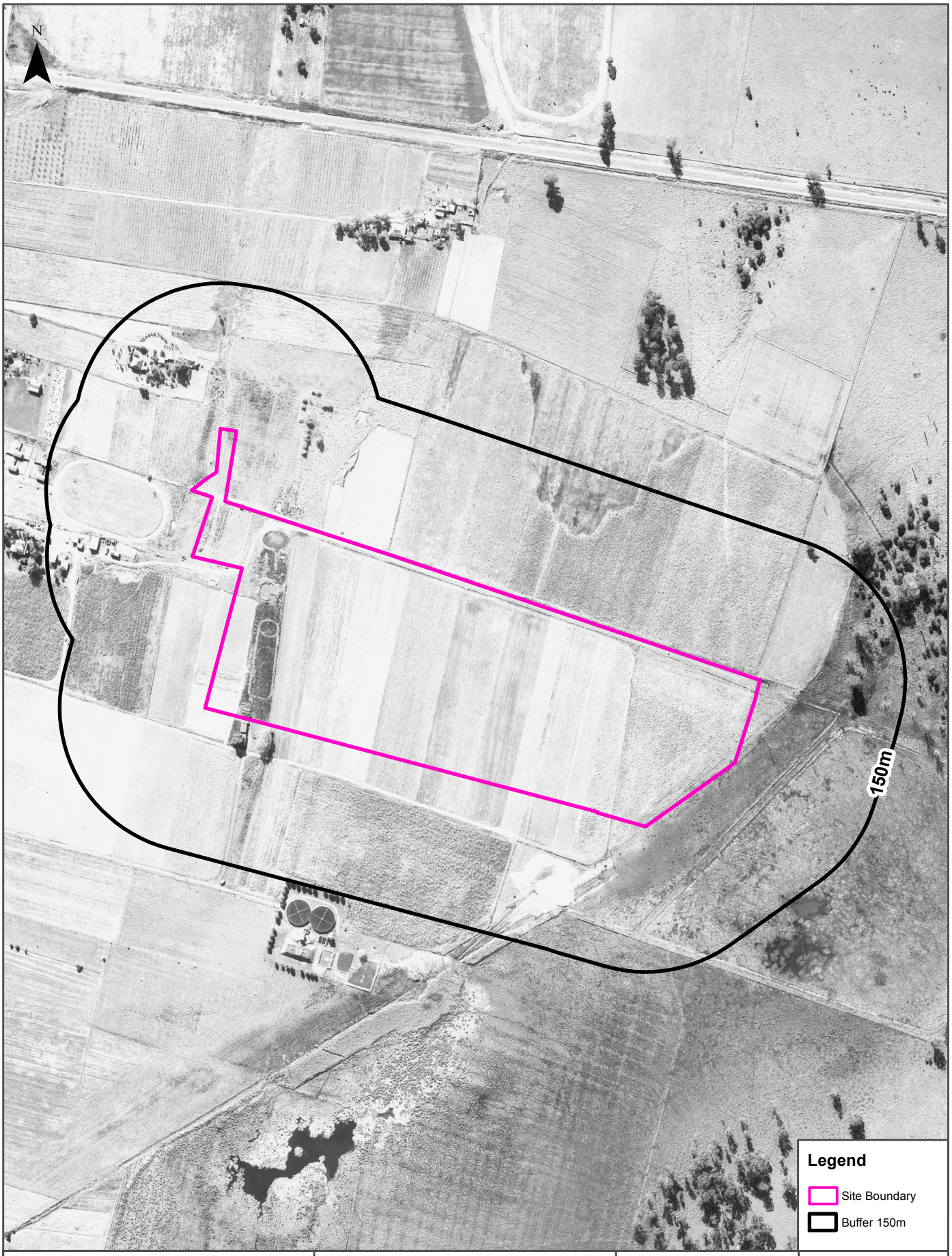
Aerial Imagery 1965

128 Andrews Road, Penrith, NSW 2750



Aerial Imagery 1961

128 Andrews Road, Penrith, NSW 2750



Aerial Imagery 1956

128 Andrews Road, Penrith, NSW 2750



Aerial Imagery 1943

128 Andrews Road, Penrith, NSW 2750



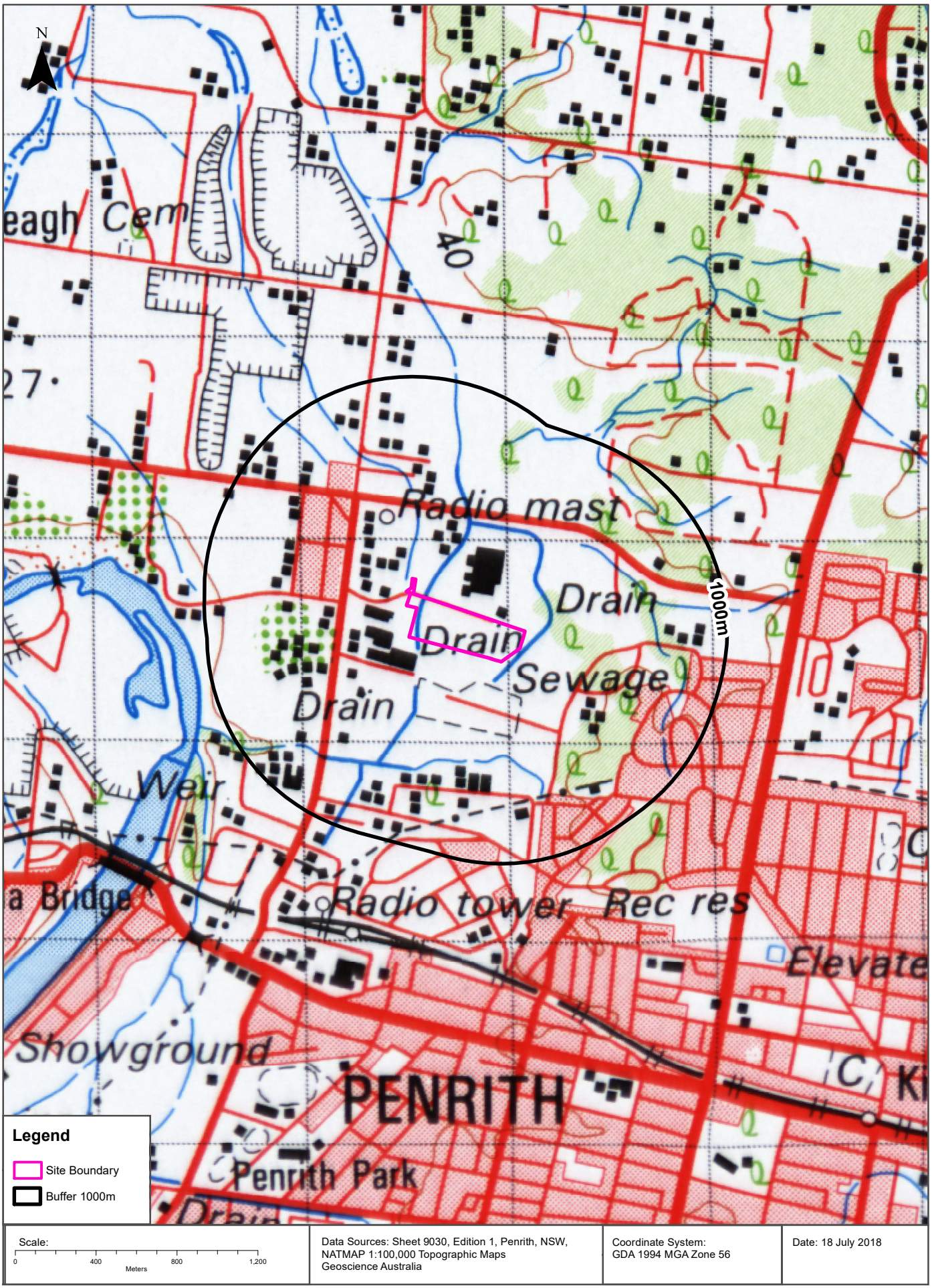
Topographic Map 2015

128 Andrews Road, Penrith, NSW 2750



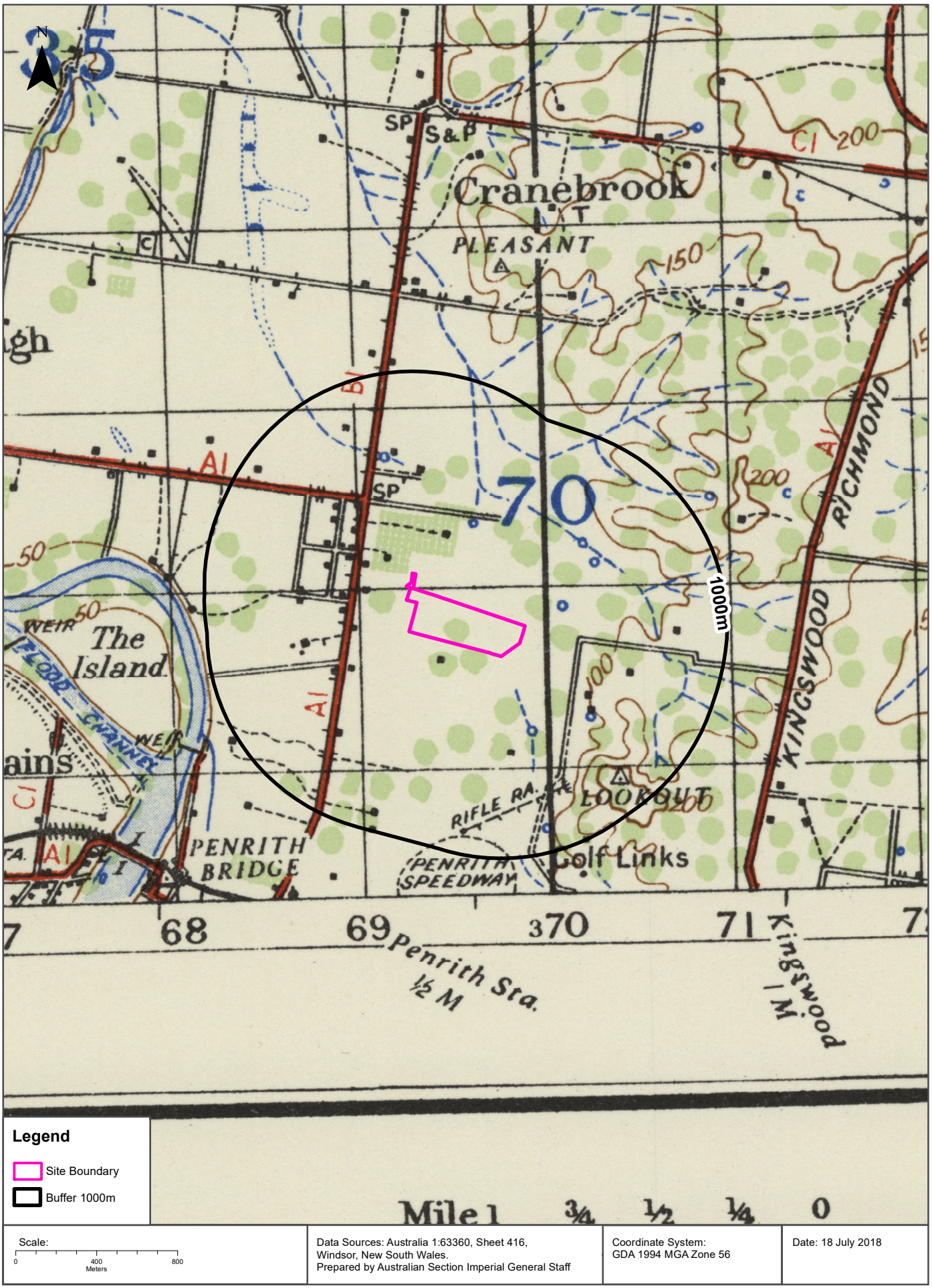
Historical Map 1975

128 Andrews Road, Penrith, NSW 2750



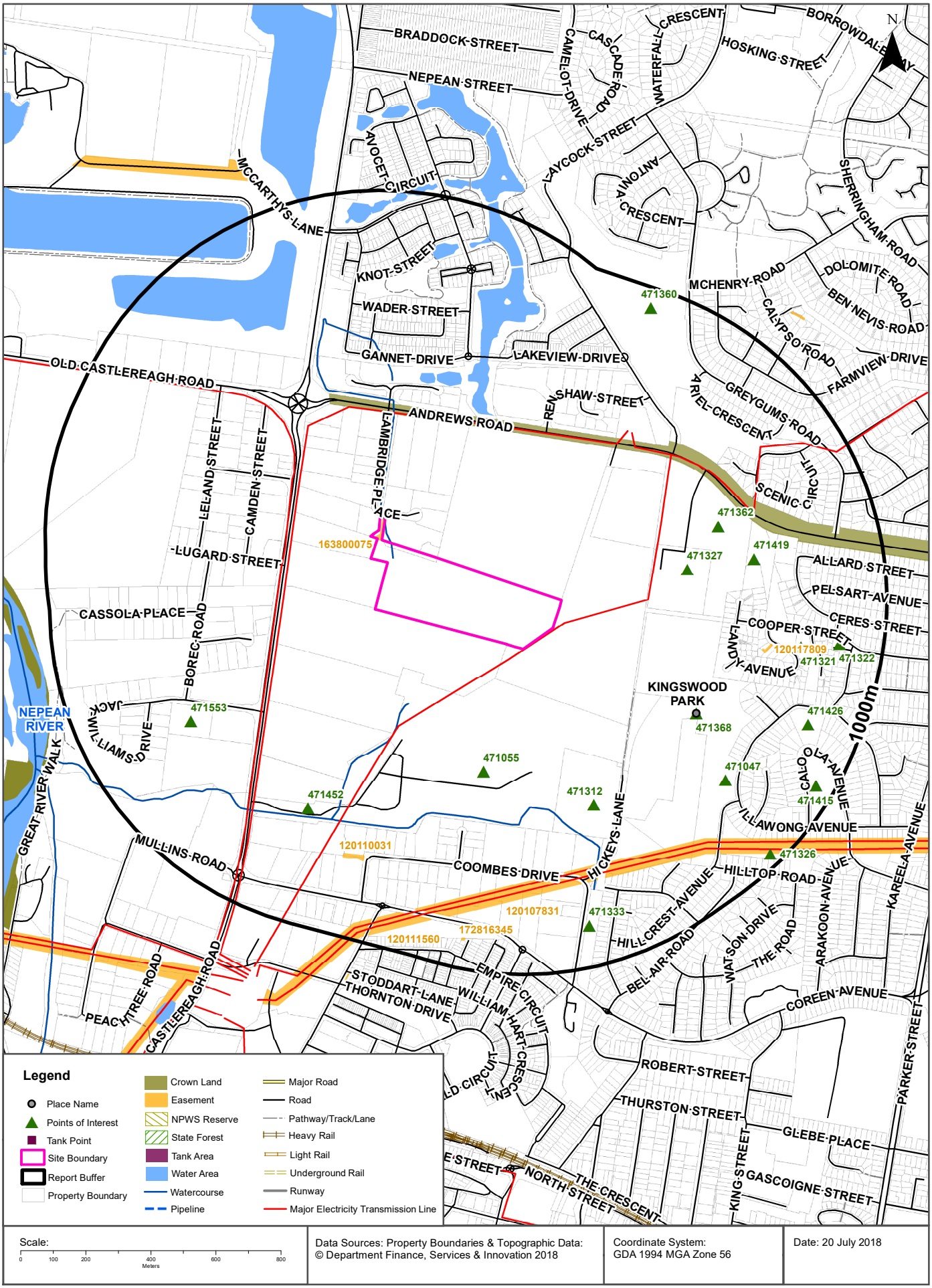
Historical Map c.1942

128 Andrews Road, Penrith, NSW 2750



Topographic Features

128 Andrews Road, Penrith, NSW 2750



Topographic Features

128 Andrews Road, Penrith, NSW 2750

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
471055	Sewage Works	Sewage Works	395m	South
471327	Park	NEPEAN RUGBY PARK	397m	East
471368	Locality	KINGSWOOD PARK	512m	South East
471312	Park	HICKEYS PARK	525m	South East
471362	Sports Field	BASEBALL FIELD	531m	East
471419	Sports Field	ANDREWS ROAD BASEBALL COMPLEX	604m	East
471452	Sewage Works	Sewage Works	645m	South West
471553	Post Office	NEPEAN POST BUSINESS CENTRE	662m	South West
471047	Community Facility	NORTH PENRITH COMMUNITY CENTRE	706m	South East
471321	Park	Park	749m	East
471426	Park	Park	837m	East
471322	Park	Park	864m	East
471333	Park	Park	874m	South
471360	Sports Field	GREYGUMS OVAL	938m	North East
471415	Preschool	KINGSWOOD PARK PUBLIC SCHOOL PRESCHOOL	941m	South East
471326	Park	CALOOLA PARK	963m	South East

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

128 Andrews Road, Penrith, NSW 2750

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
163800075	Primary	Right of way	7 metres & var	0m	Onsite
120117809	Primary	Undefined		636m	East
120107831	Primary	Undefined		698m	East
120110031	Primary	Undefined		741m	South
120111560	Primary	Undefined		876m	South
172816345	Primary	Right of way	4.15m	907m	South

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

128 Andrews Road, Penrith, NSW 2750

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: © Land and Property Information (2015)
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National Parks and Wildlife Service Reserves

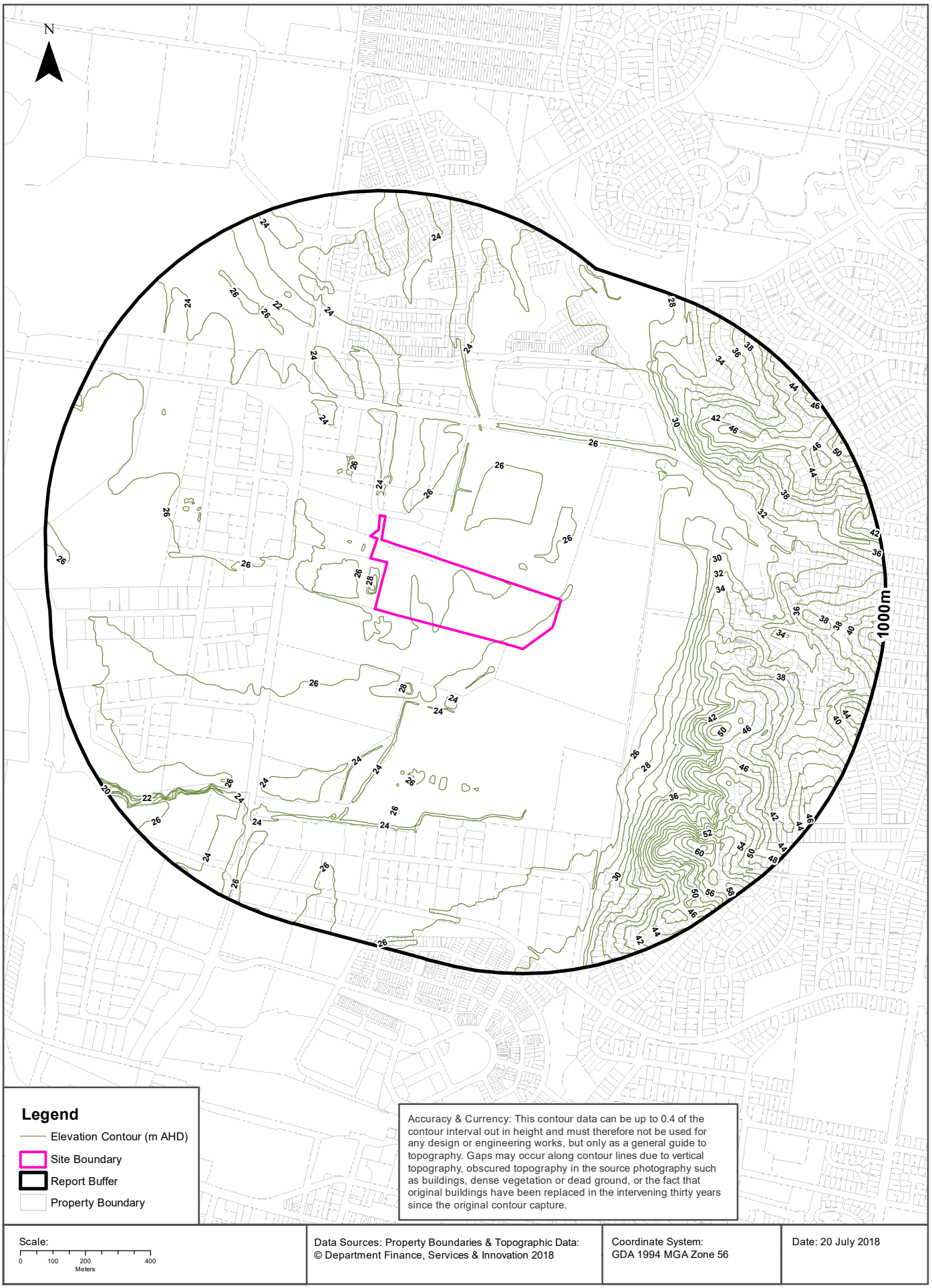
What NPWS Reserves exist within the dataset buffer?

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

NPWS Data Source: © Land and Property Information (2015)
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Elevation Contours (m AHD)

128 Andrews Road, Penrith, NSW 2750



Hydrogeology & Groundwater

128 Andrews Road, Penrith, NSW 2750

Hydrogeology

Description of aquifers on-site:

Description
Porous, extensive highly productive aquifers

Description of aquifers within the dataset buffer:

Description
Porous, extensive highly productive aquifers

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)
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Botany Groundwater Management Zones

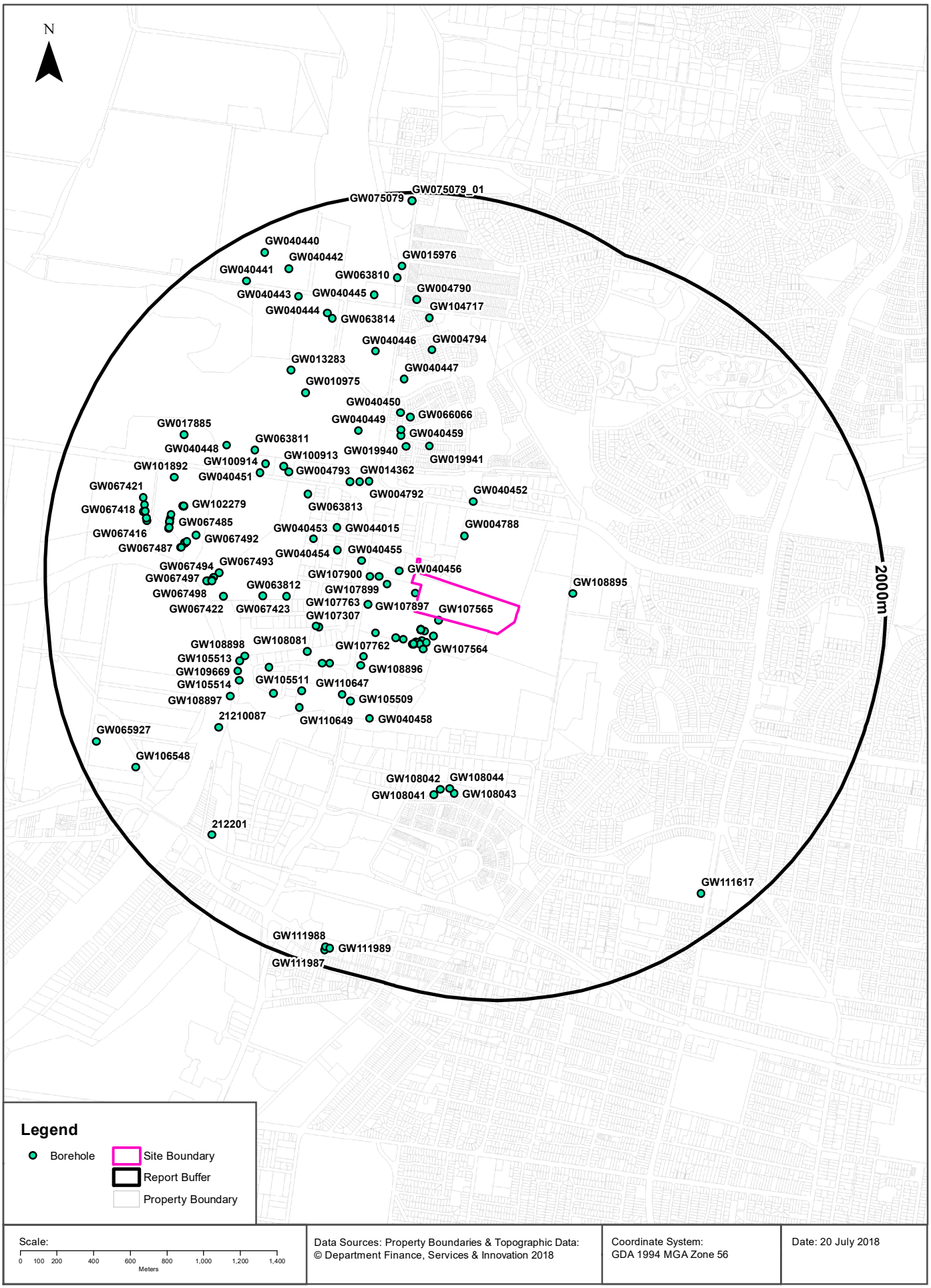
Groundwater management zones relating to the Botany Sand Beds aquifer within the dataset buffer:

Management Zone No.	Restriction	Distance	Direction
N/A	No records in buffer		

Botany Groundwater Management Zones Data Source : NSW Department of Primary Industries

Groundwater Boreholes

128 Andrews Road, Penrith, NSW 2750



Hydrogeology & Groundwater

128 Andrews Road, Penrith, NSW 2750

Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW107565	10BL165402	Bore		Monitoring	Intertec Drilling Services	22/11/2005	13.80	13.80					12m	South West
GW107897	10BL164997	Bore		Monitoring	Intertec Drilling Services	14/02/2005	10.10	10.10		7.00	0.010		17m	West
GW040456		Well	Private				8.40					54.41	66m	North West
GW102207	10BL158921	Bore	Private	Monitoring		27/08/1998	9.50			6.85			87m	South West
GW102183	10BL158921	Bore	Private	Monitoring		02/09/1998	10.50	10.50		7.05			87m	South West
GW102181	10BL158921	Bore	Private	Monitoring	Intertec Drilling Services	16/12/1998	9.30	9.30	350	6.50	0.100		87m	South West
GW102202	10BL158921	Bore	Private	Monitoring		04/09/1998	9.00			6.21			87m	South West
GW102213	10BL158921	Bore	Private	Monitoring	Engineering Explorations Pty Ltd	26/11/1993	12.80	13.60		8.47			87m	South West
GW102182	10BL158921	Bore	Private	Monitoring		03/09/1998	9.10			6.82			87m	South West
GW102206	10BL158921	Bore	Private	Monitoring		10/09/1998	12.00	12.00		7.07			87m	South West
GW102211	10BL158921	Bore	Private	Monitoring	Engineering Explorations Pty Ltd	30/11/1993	10.60	10.60		8.45			87m	South West
GW102209	10BL158921	Bore	Private	Monitoring		10/09/1998	13.35	13.70		6.71			87m	South West
GW102239	10BL158921	Bore	Private	Monitoring		31/08/1998	9.40			6.78			87m	South West
GW102212	10BL158921	Bore	Private	Monitoring	Engineering Explorations Pty Ltd	02/12/1993	11.60	11.60		8.20			87m	South West
GW102208	10BL158921	Bore	Private	Monitoring		27/08/1998	14.85	14.85		6.49			87m	South West
GW102180	10BL158921	Bore	Private	Monitoring	Intertec Drilling Services	16/12/1998	9.20	9.20	400	6.60	0.200		87m	South West
GW102210	10BL158921	Bore	Private	Monitoring	Engineering Explorations Pty Ltd	01/12/1993	11.40	11.40		8.25			87m	South West
GW114760	10BL604345	Bore	Private	Monitoring bore		30/11/2010	13.80	13.80					91m	South West
GW107564	10BL165402	Bore		Monitoring	Intertec Drilling Services	24/11/2005	13.90	13.90					103m	South West
GW107898	10BL164997	Bore		Monitoring	Intertec Drilling Services	15/05/2005	10.10	10.10		7.00	0.010		133m	West
GW108072	10BL600035	Bore		Monitoring	Intertec Drilling Services	05/05/2006	14.20	14.20		6.00			145m	South West
GW107563	10BL165402	Bore		Monitoring	Intertec Drilling Services	23/11/2005	13.90	13.90					148m	South West

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW114758	10BL604345	Bore	Private	Monitoring bore		08/12/2010	14.20	14.20					160m	South West
GW114759	10BL604345	Bore	Private	Monitoring bore		17/12/2010	13.70	13.70					160m	South West
GW107560	10BL165402	Bore		Monitoring	Intertec Drilling Services	02/08/2005	14.20	14.20		7.50	0.300		164m	South West
GW107562	10BL165402	Bore		Monitoring	Intertec Drilling Services	04/08/2005	14.60	14.60		7.50	0.200		165m	South West
GW108071	10BL600035	Bore		Monitoring	Intertec Drilling Services	08/03/2006	14.10	14.10					173m	South West
GW107761	10BL165871, 10WA112779	Bore		GW Remediation	Intertec Drilling Services	28/11/2005	13.90	13.90	170	7.80	0.500		173m	South West
GW107561	10BL165402	Bore		Monitoring	Intertec Drilling Services	03/08/2005	14.30	14.30		7.50	0.200		176m	South West
GW107559	10BL165402	Bore		Monitoring	Intertec Drilling Services	02/08/2005	13.60	13.60		7.50	0.100		176m	South West
GW107899	10BL164997	Bore		Monitoring	Intertec Drilling Services	16/02/2005	10.00	10.00		7.00	0.010		181m	West
GW108899	10BL165862	Bore	Private	Monitoring	Intertec Drilling Services	05/06/2008	14.60	14.60		7.00			187m	South West
GW107900	10BL164997	Bore		Monitoring	Intertec Drilling Services	17/02/2005	10.00	10.00		7.00	0.010		230m	West
GW107762	10BL165871, 10WA112779	Bore		GW Remediation	Intertec Drilling Services	25/11/2005	11.60	11.60		7.00	0.700		241m	West
GW107763	10BL165871, 10WA112779	Bore		GW Remediation	Intertec Drilling Services	13/06/2006	13.80	13.80		7.20	0.700		254m	West
GW004788	10BL007303	Well	Private	General Use			9.70						268m	North
GW040455		Well	Private	Irrigation			8.90					54.65	278m	North West
GW108895	10BL165832	Bore	Other Govt	Test Bore	Intertec Drilling Services	04/06/2008	14.70	14.70	9.3	6.30	1.100		303m	East
GW040457		Well	Private				10.20					55.93	370m	South West
GW108896	10BL165837	Battery Spears, Filter Pac	Private	Monitoring	Intertec Drilling Services	05/06/2008	13.70	13.70		6.50			416m	South West
GW040454		Well	Private				12.80					55.08	418m	North West
GW040452		Well	Private	Irrigation			8.30					55.32	427m	North
GW044015	10BL102457, 10WA112618	Well	Private	Domestic			9.80						468m	North West
GW004792	10BL007211	Well	Private				7.30		Good				495m	North West
GW014362	10BL005561	Well	Private	Irrigation		01/01/1960	6.30	6.40	Domestic				523m	North West
GW107307	10BL165460	Bore		Monitoring	Intertec Drilling Services	05/08/2005	13.20	13.20		7.50	0.100		524m	West
GW109667	10BL602668	Well	Private	Monitoring	Intertec Drilling Services	02/10/2008	13.70	13.70		13.40	0.100		540m	South West
GW110057	10BL600022	Well	Private	Monitoring	Intertec Drilling Services	20/04/2009	13.20	13.20		7.50	0.100		541m	West
GW004793	10BL007314	Well	Private	Irrigation		01/01/1958	7.90	7.90				53.89	555m	North West

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW040453		Well	Private				9.00					55.29	560m	North West
GW105510	10BL162624	Bore		Monitoring	Intertec Drilling Services	15/05/2003	14.50	14.50		7.00			575m	South West
GW110647	10BL603493	Bore	Private	Monitoring	Terratest Pty Ltd	26/11/2009	10.00	10.00		8.10			599m	South West
GW105509	10BL162624	Bore		Monitoring	Intertec Drilling Services	27/08/2003	14.10	14.10		7.00			600m	South West
GW019940	10BL012451	Well	Private	Domestic		01/01/1939	8.70	8.80	Good			54.20	613m	North
GW019941	10BL012450	Well	Private	Irrigation		01/01/1937	10.40					53.98	617m	North
GW108081	10BL165831	Bore		Monitoring	Intertec Drilling Services	02/05/2006	14.35	14.35		7.50			624m	West
GW040458		Well	Private	Irrigation			11.00					54.86	634m	South West
GW040459		Well	Private	Domestic, Irrigation, Stock		01/06/1961						54.68	676m	North
GW063812	10BL137762	(Unknown)	Private	Monitoring		01/03/1988	14.60	14.60				25.93	686m	West
GW063813	10BL137763	(Unknown)	Private	Monitoring		01/03/1988	12.60	12.60				24.13	691m	North West
GW019496	10BL012540	Well	Private	Domestic		01/04/1961	8.50	8.50				54.23	707m	North
GW110648	10BL603493	Bore	Private	Monitoring	Terratest Pty Ltd	26/11/2009	9.70	9.70		8.20			750m	South West
GW040449		Well	Private				7.80					54.19	766m	North West
GW066066	10BL143361, 10WA112632	Bore	Private	Domestic, Stock	Watermin Drillers Pty Ltd	19/08/1991	12.00	12.00				23.00	772m	North
GW040450		Well	Private				7.50					53.19	799m	North
GW067423	10BL142746	Bore	Private	GW Exploration		17/07/1990	15.40	15.40					816m	West
GW110649	10BL603493	Bore	Private	Monitoring	Terratest Pty Ltd	25/11/2009	10.00	10.00		8.70			816m	South West
GW011581	10BL004698	Well	Private	Irrigation		01/12/1955	7.30	7.30	Good			53.74	845m	North West
GW105511	10BL162624	Bore		Monitoring	Intertec Drilling Services	14/05/2003	14.10	14.50		8.30			848m	West
GW108044	10BL600263	Bore		Monitoring		22/04/2006	9.50	9.50		6.60			884m	South
GW100913	10BL156864, 10WA112657	Bore			Self Drilled	01/01/1950	14.02			1.22	0.005		884m	North West
GW105512	10BL162624	Bore		Monitoring	Intertec Drilling Services	12/05/2003	15.00	15.00		9.60			889m	South West
GW108043	10BL600263	Bore		Monitoring		22/04/2006	9.00	9.00		6.80			902m	South
GW108042	10BL600263	Bore		Monitoring		22/04/2006	8.00	8.00		6.40			905m	South
GW108041	10BL600263	Bore		Monitoring		12/04/2006	7.50	7.50		6.70			939m	South
GW108898	10BL165844	Bore	Private	Monitoring	Intertec Drilling Services	05/06/2008	14.60	14.60		9.50			955m	West
GW100914	10BL156865, 10WA112658	Bore			Self Drilled	01/01/1950	14.00			1.50	6.660		973m	North West
GW040451		Well	Private				9.00					55.32	975m	North West
GW040447		Well	Private				7.70					53.28	982m	North
GW105513	10BL162624	Bore		Monitoring	Intertec Drilling Services	28/08/2003	15.90	16.00		6.10			990m	West

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW109669	10BL602677	Well	Private	Monitoring	Intertec Drilling Services	01/10/2008	15.60	15.60			0.020		1015 m	West
GW105514	10BL162624	Bore		Monitoring	Intertec Drilling Services	29/08/2003	15.65	15.65		5.80			1027 m	West
GW067422	10BL142746	Bore	Private	GW Exploration		17/07/1990	16.20	16.20					1029 m	West
GW067493	10BL142748	Bore	Private	GW Exploration		17/07/1990	11.80	11.80					1051 m	West
GW063811	10BL137761	Bore	Private	Monitoring		01/03/1989	14.40	14.40				25.39	1063 m	North West
GW067494	10BL142748	Bore	Private	GW Exploration		17/07/1990	16.30	16.30					1081 m	West
GW067495	10BL142748	Bore	Private	GW Exploration		17/07/1990	7.90	7.90					1090 m	West
GW010975		Well	Private	Monitoring		01/10/1954	8.50	8.50					1090 m	North West
GW067496	10BL142748	Bore	Private	GW Exploration		17/07/1990	16.50	16.50					1090 m	West
GW108897	10BL165844	Bore	Private	Monitoring	Intertec Drilling Services	05/06/2008	15.50	15.50		11.00			1106 m	West
GW067497	10BL142748	Bore	Private	GW Exploration		17/07/1990	8.90	8.90					1114 m	West
GW067498	10BL142748	Bore	Private	GW Exploration		17/07/1990	16.80	16.80					1119 m	West
GW004794	10BL007316	Well	Private	Irrigation		01/02/1955	7.30		Fair			52.02	1140 m	North
GW040446		Well	Private				8.10					53.80	1152 m	North
GW067492	10BL142749	Bore	Private	GW Exploration		17/07/1990	12.50	12.50					1191 m	West
GW040448		Well	Private	Irrigation			8.50					54.41	1209 m	North West
GW013283	10BL004990	Well	Private	Irrigation		01/10/1957	8.80	8.80					1236 m	North West
GW067491	10BL142749	Bore	Private	GW Exploration		17/07/1990	17.70	17.70					1236 m	West
21210087				UNK								20.00	1240 m	South West
GW067490	10BL142749	Bore	Private	GW Exploration		17/07/1990	9.20	9.20					1245 m	West
GW067489	10BL142749	Bore	Private	GW Exploration		17/07/1990	17.30	17.30					1249 m	West
GW067488	10BL142749	Bore	Private	GW Exploration		17/07/1990	8.50	8.50					1261 m	West
GW067487	10BL142749	Bore	Private	GW Exploration		17/07/1990	16.90	16.90					1267 m	West
GW102278	10BL141618	Piezo meter	Private	Monitoring	McDermott Drilling Pty Ltd	30/04/1990	15.80	15.80					1291 m	West
GW102280	10BL141618	Piezo meter	Private	Monitoring	McDermott Drilling Pty Ltd	01/05/1990	16.40	16.40					1291 m	West
GW102279	10BL141618	Piezo meter	Private	Monitoring	McDermott Drilling Pty Ltd	07/05/1990	15.50	15.50					1291 m	West
GW102276	10BL141618	Piezo meter	Private	Monitoring	McDermott Drilling Pty Ltd	14/05/1999		17.30					1292 m	West
GW102275	10BL141618	Piezo meter	Private	Monitoring	McDermott Drilling Pty Ltd	04/04/1990	16.90	16.90					1292 m	West
GW102277	10BL141618	Piezo meter	Private	Monitoring	McDermott Drilling Pty Ltd	04/04/1990	16.90	16.90					1293 m	West
GW102274	10BL141618	Piezo meter	Private	Test Bore	McDermott Drilling Pty Ltd	30/04/1990	16.50	16.50					1293 m	West

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW102273	10BL141618	Piezometer	Private	Monitoring	McDermott Drilling Pty Ltd	04/04/1990	16.80	16.80					1296 m	West
GW104717	10BL159454	Bore	Private	Test Bore	Watermin Drillers Pty Ltd	22/05/2000	45.00	45.00	Good		2.190		1315 m	North
GW067482	10BL142747	Bore	Private	GW Exploration		17/07/1990	10.10	10.10					1344 m	West
GW067483	10BL142747	Bore	Private	GW Exploration		17/07/1990	15.80	15.80					1345 m	West
GW067481	10BL142747	Bore	Private	GW Exploration		17/07/1990	16.90	16.90					1346 m	West
GW067485	10BL142747	Bore	Private	GW Exploration		17/07/1990	16.20	16.20					1346 m	West
GW067486	10BL142747	Bore	Private	GW Exploration		17/07/1990	13.30	13.30					1347 m	West
GW067484	10BL142747	Bore	Private	GW Exploration		17/07/1990	8.20	8.20					1348 m	West
GW063814	10BL137764	(Unknown)	Private	Monitoring		01/03/1989	0.00	12.60				23.49	1389 m	North West
GW101892	10BL158978	Bore		Domestic		01/01/1950	14.33			6.70			1391 m	North West
GW004790	10BL007304	Well	Private	Domestic			7.60		501-1000 ppm			52.40	1413 m	North
GW040444		Well	Private				7.70					53.92	1426 m	North West
GW017885	10BL009134	Well	Private	General Use			9.60					55.66	1440 m	North West
GW040445		Well	Private				7.00					52.73	1457 m	North
GW067416	10BL142746	Bore	Private	GW Exploration		17/07/1990	15.50	15.50					1471 m	West
GW067417	10BL142746	Bore	Private	GW Exploration		17/07/1990	8.50	8.50					1475 m	West
GW067419	10BL142746	Bore	Private	GW Exploration		17/07/1990	4.30	4.30					1490 m	West
GW067418	10BL142746	Bore	Private	GW Exploration		17/07/1990	16.40	16.40					1498 m	West
GW067420	10BL142746	Bore	Private	GW Exploration		17/07/1990	13.90	13.90					1500 m	West
GW067421	10BL142746	Bore	Private	GW Exploration		17/07/1990	11.20	11.20					1516 m	West
GW063810	10BL137760	Bore	Private	Monitoring		01/03/1988	15.60	15.60				22.84	1537 m	North
GW040443		Well	Private				7.60					52.97	1568 m	North West
GW015976	10BL009283	Well	Private	Irrigation		01/05/1958	10.30	10.40				53.13	1598 m	North
212201				UNK								24.71	1646 m	South West
GW040442		Well	Private	Irrigation			6.70					52.70	1730 m	North West
GW106548	10BL157560, 10BL157701, 10WA112757	Bore		Recreation	Intertec Drilling Services	02/04/1996	15.40	15.40	190	6.00	2.000		1741 m	South West
GW040441		Well	Private				8.00					54.10	1778 m	North West
GW111617	10BL604801, 10BL604802, 10WA117803	Bore	Local Govt	Recreation	INTERTECH	20/10/2011	210.00	210.00	2600	69.00	1.120		1800 m	South East
GW040440		Well	Private	Irrigation			6.10					50.90	1866 m	North West
GW065927	10BL142951, 10WA112757	Bore	Private	Recreation		29/01/1991	15.60		Excellent				1873 m	West
GW111988	10BL603225	Well	Private	Monitoring		24/03/2010	9.00	9.00					1894 m	South
GW111989	10BL603225	Well	Private	Monitoring		24/03/2010	9.00	9.00					1895 m	South

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW111987	10BL603225	Well	Private	Monitoring		24/03/2010	9.00	9.00					1911 m	South
GW075079_01												21.86	1954 m	North
GW075079		Bore	NSW Office of Water	Monitoring	Intertec Drilling Services	02/09/1998	14.50	14.50	3046			21.86	1954 m	North

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

128 Andrews Road, Penrith, NSW 2750

Driller's Logs

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

Groundwater No	Drillers Log	Distance	Direction
GW107565	0.00m-0.30m BITUMEN 0.30m-5.50m SANDY CLAY 5.50m-13.60m GRAVELS 13.60m-13.80m SHALE	12m	South West
GW107897	0.00m-4.10m BROWN CLAY 4.10m-10.10m GRAVELS	17m	West
GW102180	0.00m-6.30m SAND AND SILT 6.30m-9.20m GRAVEL	87m	South West
GW102181	0.00m-6.40m SAND, SILT AND CLAY 6.40m-9.30m GRAVEL	87m	South West
GW102183	0.00m-1.00m FILL, SILTY SAND 1.00m-1.10m CONCRETE 1.10m-1.30m FILL, SILTY SAND 1.30m-1.80m SAND, SILTY, CLAYEY 1.80m-3.50m SAND, CLAYEY, ORANGE 3.50m-5.80m SAND,SILTY, CLAYEY 5.80m-6.20m GRAVELS AND COBBLES 6.20m-6.50m BOULDERS, BASALT 6.50m-9.50m GRAVELS AND COBBLES 9.50m-9.70m BOULDER, GRANITE 9.70m-10.50m GRAVELS AND COBBLES	87m	South West
GW102206	0.00m-1.00m FILL.SAND,SILTY,GRAVELLY 1.00m-3.00m SAND, SILTY fine to medium grained trace of clay 3.00m-4.50m SAND, CLAYEY,SILTY fine grained 4.50m-5.50m SAND, SILTY fine to medium grained 5.50m-7.00m GRAVEL AND COBBLES 7.00m-7.40m LARGE COBBLE, BOULDER, GRANITE 7.40m-12.00m GRAVEL AND COBBLES	87m	South West
GW102208	0.00m-0.30m SAND, SILTY 0.30m-1.50m SAND, SILTY, CLAYEY 1.50m-3.10m SAND, SILTY fine grained 3.10m-4.00m SAND, SILTY, CLAYEY,fine grained 4.00m-5.50m PED like structure banded 5-10%clay 5.50m-5.75m SAND, medium grained 5.75m-9.70m GRAVEL AND COBBLES 9.70m-14.40m GRAVEL AND SAND 14.40m-14.50m GRAVEL AND CLAY 14.50m-14.70m GRAVEL, SANDY 14.70m-14.85m GRAVEL AND SHALE	87m	South West
GW102209	0.00m-0.50m SAND,SILTY fine, to medium gained 0.50m-1.50m SAND, SILTY, CLAYEY fine grained 1.50m-3.60m SAND, CLAYEY fine grained 3.60m-4.80m SAND, SILTY, CLAYEY light orange 4.80m-9.80m SAND. GRAVEL AND COBBLES within with possible large granite boulders 9.80m-11.10m POSSIBLE GRANITE BOULDER, fractured granite 11.10m-13.00m Sand and Gravel, Cobbles 13.00m-13.70m Sand, cobbles, Gravel and Shale	87m	South West
GW102210	0.00m-0.23m Concrete 0.23m-11.40m SAND, SILTY loose<dark medium grained possible cobbles and boulders	87m	South West
GW102211	0.00m-10.60m SAND,SILTY, loose dark red?brown med grained with some clay possible cobbles and boulders	87m	South West
GW102212	0.00m-0.05m Bitumen 0.05m-11.60m SAND,SILTY loose<dark red?brown medgrained with some clay possibly cobbles to boulders	87m	South West
GW102213	0.00m-1.50m SAND, SILTY 1.50m-2.00m SAND,CLAYEYloose< red?brown medium grained 2.00m-3.80m SAND,loose< orange/red,fine to medium grain 3.80m-4.40m GRAVEL,loose,light grey 4.40m-13.60m SAND, loose orange/red,fine to medium grained	87m	South West

Groundwater No	Drillers Log	Distance	Direction
GW114760	0.00m-0.10m CONCRETE 0.10m-1.50m NON DESTRUCTIVE DRILLING PERFOMED 1.50m-2.30m SAND POORLY GRADED WITH GRAVEL 2.30m-2.90m SAND WELL GRADED 2.90m-4.70m SAND WELL GRADED WITH SILT,GRAVEL AND CLAY 4.70m-7.70m SAND POORLY GRADED AND CLAY WITH COBBLE AND GRAVEL 7.70m-8.90m SAND WELL GRADED WITH GRAVEL 8.90m-9.10m GRANODIORITE COBBLE HARD 9.10m-13.20m SAND POORLY GRADED WITH SILT 13.20m-13.80m SHALE,WEATHERED, FINE GRAINED,HARD	91m	South West
GW107564	0.00m-0.30m ROAD BASE 0.30m-5.30m RED BROWN SILTY CLAY 5.30m-5.80m RED BROWN SILTY CLAY/GRAVELS 5.80m-13.60m GRAVELS 13.60m-13.90m GREY SHALE	103m	South West
GW107898	0.00m-5.30m SANDY CLAY,DRY, HARD 5.30m-10.10m GRAVELS	133m	West
GW108072	0.00m-0.20m CONCRETE 0.20m-4.50m SANDY CLAY 4.50m-13.90m GRAVELS 13.90m-14.20m SHALE	145m	South West
GW107563	0.00m-0.20m FILL,ROAD BASE 0.20m-4.60m BROWN/RED/SILTY CLAY 4.60m-5.20m LITE BROWN CLAY/GRAVEL 5.20m-13.70m GRAVELS 13.70m-13.90m GREYSHALE	148m	South West
GW114758	0.00m-0.20m CONCRETE 0.20m-1.50m NON DESTRUCTIVE DRILLING PERFOMED WITH AIR KNIFE AND VACUUM TRUCK 1.50m-5.50m SAND WELL GRADED WITH CLAY 5.50m-7.00m GRAVEL POORLY GRADED WITH SAND 7.00m-7.50m SAND WELL GRADED WITH SILT 7.50m-13.50m SAND POORLY GRADED WITH GRAVEL 13.50m-14.20m SHALE HIGHLY WEATHERED	160m	South West
GW114759	0.00m-0.20m CONCRETE 0.20m-1.50m NON DESTRUCTIVE DRILLING PERFOMED WITH AIR KNIFE AND VACUUM TRUCK 1.50m-3.60m SAND WELL GRADED WITH SILT 3.60m-3.80m GRAVEL POORLY GRADED 3.80m-5.10m SAND WELL GRADED WITH SILT 5.10m-13.70m SAND POORLY GRADED WITH GRAVEL	160m	South West
GW107560	0.00m-0.50m FILL,ROCKS 0.50m-5.70m CLAY 5.70m-14.10m GRAVELS 14.10m-14.20m SHALE	164m	South West
GW107562	0.00m-0.20m BITUMEN 0.20m-3.60m CLAY 3.60m-14.50m GRAVELS 14.50m-14.60m SHALE	165m	South West
GW107761	0.00m-1.00m FILL AND ROCKS 1.00m-5.00m SANDY CLAY 5.00m-7.00m CLAY AND GRAVELS 7.00m-13.60m GRAVELS 13.60m-13.90m SHALE	173m	South West
GW108071	0.00m-0.30m BITUMEN/ROAD BASE 0.30m-5.50m LOAMY CLAY 5.50m-13.80m GRAVELS AND SAND 13.80m-14.10m SHALE	173m	South West
GW107559	0.00m-0.50m FILL/ROCKS 0.50m-6.80m CLAY 6.80m-13.50m GRAVELS 13.50m-13.60m SHALE	176m	South West
GW107561	0.00m-1.00m FILL 1.00m-4.00m CLAY 4.00m-4.50m GRAVELS 4.50m-6.00m SANDY CLAY 6.00m-14.20m GRAVELS 14.20m-14.30m SHALE	176m	South West
GW107899	0.00m-2.90m SANDY CLAY 2.90m-4.20m CLAY BANDS AND GRAVELS 4.20m-10.00m GRAVELS	181m	West
GW108899	0.00m-4.50m SANDY CLAY 4.50m-14.30m GRAVELS 14.30m-14.60m SHALE	187m	South West

Groundwater No	Drillers Log	Distance	Direction
GW107900	0.00m-5.90m BROWN CLAY 5.90m-10.00m GRAVELS	230m	West
GW107762	0.00m-0.40m ROAD BASE,FILL 0.40m-5.60m RED,BROWN, SILTY CLAY 5.60m-11.60m GRAVELS	241m	West
GW107763	0.00m-5.30m SANDY CLAY 5.30m-13.30m GAVELS 13.30m-13.80m SHALE	254m	West
GW108895	0.00m-6.50m CLAY BROWN 6.50m-11.30m CLAY GREY 11.30m-11.80m SANDY CLAY 11.80m-12.10m SAND 12.10m-13.60m GRAVELS 13.60m-14.40m SANDSTONE GREY 14.40m-14.60m SANDSTONE D/GREY 14.60m-14.70m SHALE,HARD,BLACK	303m	East
GW108896	0.00m-7.60m SANDY CLAY 7.60m-13.40m GRAVELS 13.40m-13.70m SHALE	416m	South West
GW014362	0.00m-0.61m Loam 0.61m-6.38m Sand Gravel Water Supply	523m	North West
GW107307	0.00m-5.80m CLAY 5.80m-13.10m GRAVELS 13.10m-13.20m SHALE	524m	West
GW109667	0.00m-4.00m CLAY BROWN 4.00m-5.50m SANDY CLAY 5.50m-13.40m GRAVELS 13.40m-13.70m SHALE GREY	540m	South West
GW110057	0.00m-5.80m CLAY 5.80m-13.10m GRAVELS 13.10m-13.20m SHALE	541m	West
GW004793	0.00m-1.83m Clay Red Sand 1.83m-7.92m Sand Stones Water Supply 1.83m-7.92m Gravel	555m	North West
GW105510	0.00m-0.30m TOPSOIL 0.30m-2.70m SANDY CLAY 2.70m-4.50m STIFF CLAY 4.50m-5.70m SMALL GRAVELS 5.70m-14.00m LARGE GRAVELS 14.00m-14.50m SOFT SHALE	575m	South West
GW110647	0.00m-0.60m SILT,SANDY BROWN MINOR GRAVEL 0.60m-2.50m SILT,BROWN,DRY,FINE GRAINED SAND 2.50m-3.30m SILTY CLAY 3.30m-5.60m CLAY BROWN GREY,MOIST 5.60m-8.80m SILTY CLAY ORANGE BROWN,FINE GRAINED SAND 8.80m-10.00m CLAYEY SILTY SAND, PALE BROWN	599m	South West
GW105509	0.00m-3.00m BROWN CLAY 3.00m-5.50m GREY CLAY ,STIFF 5.50m-8.00m L/BROWN CLAY 8.00m-9.80m SANDY CLAY 9.80m-10.40m FINE GRAVELS 10.40m-13.90m GRAVELS 13.90m-14.10m SHALE	600m	South West
GW019940	0.00m-3.04m Driller 3.04m-8.77m Gravel Water Supply	613m	North
GW108081	0.00m-1.00m FILL 1.00m-9.60m SANDY CLAY 9.60m-14.00m GRAVELS 14.00m-14.35m SHALE	624m	West
GW063812	0.00m-4.20m Topsoil Sandy 4.20m-12.60m Gravel 12.60m-14.60m Shale	686m	West
GW063813	0.00m-3.20m Topsoil Sandy 3.20m-12.30m Gravel 12.30m-12.60m Shale	691m	North West
GW019496	0.00m-8.53m Gravel Water Supply	707m	North

Groundwater No	Drillers Log	Distance	Direction
GW110648	0.00m-0.70m LOAMY SILT,SAND AND CLAY 0.70m-1.50m SILT BROWN, MOIST,NO ODOUR 1.50m-4.40m CLAYEY SILT,DARK BROWN 4.40m-5.50m CLAY PLALE BROWN,FINE SAND 5.50m-8.40m SILTY CLAY,BROWN,FINE SANDS,MOIST 8.40m-9.70m CLAYEY SILTY SAND,BROWN, M/G	750m	South West
GW066066	0.00m-2.00m topsoil 2.00m-8.00m gravel 8.00m-12.00m gravel big coarse river	772m	North
GW067423	0.00m-2.80m Sandy Silts, Clayey Silts, Alluvium	816m	West
GW110649	0.00m-0.20m SILTY LOAM 0.20m-1.70m SILT BROWN 1.70m-4.30m SANDY SILT BROWN LOOSE 4.30m-7.50m CLAYEY SILT DARK BROWN 7.50m-8.80m SILTY CLAY PALE BROWN 8.80m-10.00m CLAYEY SAND,BROWN FINE TO MED GRAINED	816m	South West
GW011581	0.00m-2.43m Topsoil 2.43m-4.87m Soil Clay 2.43m-4.87m Gravel 4.87m-7.31m Gravel Sand Water Supply	845m	North West
GW105511	0.00m-0.50m TOPSOIL 0.50m-2.60m SANDY CLAY 2.60m-9.70m STIFF CLAY 9.70m-10.00m SMALL GRAVELS 10.00m-13.90m LARGE GRAVELS 13.90m-14.50m SOFT SHALE	848m	West
GW108044	0.00m-0.20m CONCRETE 0.20m-0.30m FILL,CLAY,GREY 0.30m-6.40m SILTY CLAYEY SAND,ORANGE,BROWN 6.40m-9.50m GRAVELS,WET,MODERATE	884m	South
GW105512	0.00m-0.50m topsoil 0.50m-4.70m sandy clay 4.70m-11.00m stiff clay 11.00m-14.50m large gravels 14.50m-15.00m soft shale	889m	South West
GW108043	0.00m-4.80m CLAYEY SAND 4.80m-5.40m SAND,BROWN, LOOSE,DDRY 5.40m-9.00m GRAVEL	902m	South
GW108042	0.00m-0.20m CONCRETE 0.20m-0.30m FILL,CLAY,GREY/BROWN 0.30m-2.50m CLAY,RED/BROWN 2.50m-7.50m GRAVELS,WELL GRADED 7.50m-8.00m COARSE GRAINED SAND BANDS	905m	South
GW108041	0.00m-0.20m CONCRETE 0.20m-0.40m CLAY L/BROWN 0.40m-3.30m CLAY BECOMING ORANGE,BROWN 3.30m-7.50m GRAVEL,BROWN,WELL GRADED	939m	South
GW108898	0.00m-11.00m SANDY CLAY 11.00m-14.30m GRAVELS 14.30m-14.60m SHALE	955m	West
GW105513	0.00m-3.50m CLAY DARK BROWN 3.50m-4.20m SILT HARD 4.20m-5.30m CLAY L/BROWN 5.30m-7.00m SILT HARD 7.00m-8.80m CLAY L/BROWN 8.80m-9.80m SILT HARD 9.80m-15.70m GRAVELS 15.70m-16.00m SHALE	990m	West
GW109669	0.00m-3.00m CLAY AND ROCKS 3.00m-10.00m SILTY CLAY 10.00m-15.30m GRAVELS 15.30m-15.60m SHALE	1015m	West
GW105514	0.00m-1.00m CLAY D/BROWN 1.00m-2.50m SAND LOAMY 2.50m-3.50m SILT M/HARD 3.50m-4.50m SANDY CLAY 4.50m-7.50m L/B CLAY 7.50m-10.40m SILT HARD 10.40m-10.70m SANDY CLAY 10.70m-15.40m GRAVELS 15.40m-15.65m SHALE	1027m	West

Groundwater No	Drillers Log	Distance	Direction
GW067422	0.00m-3.50m Sandy Silts & Clayey Silts, Alluvium 3.50m-6.00m High Plasticity, Light Brown 6.00m-7.30m Clayey Sand. Fine To Medium Grained, Red-brown. Alluvium.	1029m	West
GW067493	0.00m-11.50m Sandy Clay Low Plasticity, Red-brown W/ Some .5m Zones Of Sandy Clay, Brown	1051m	West
GW063811	0.00m-5.60m Topsoil Sandy 5.60m-14.20m Gravel 14.20m-14.40m Shale	1063m	North West
GW067494	0.00m-5.00m Sandy Clay. Low Plasticity, Red-brown Sand Is Fine To Coarse Grained. Fill 5.00m-9.00m Clayey Sand, Fine To Coarse Grained, Red-brown, Moist. Fill 9.00m-15.95m Clayey Sand, Fine To Coarse Grained Brown. Wet. Fill	1081m	West
GW010975	0.00m-8.53m Gravel Coarse Water Supply	1090m	North West
GW067495	0.00m-4.00m Clayey Silts & Sandy Silts, Alluvium 4.00m-7.90m High Plasticity, Light Grey-brown	1090m	West
GW067496	0.00m-4.00m Clayey Silts & Sandy Silts. Alluvium 4.00m-8.40m High Plasticity, Light Grey-brown	1090m	West
GW108897	0.00m-5.00m CLAY BROWN 5.00m-12.00m SANDY CLAY 12.00m-15.20m GRAVELS 15.20m-15.50m SHALE	1106m	West
GW067497	0.00m-4.75m Clayey Silts & Sandy Silts, Alluvium 4.75m-8.90m High Plasticity, Grey-brown, Alluvium	1114m	West
GW067498	0.00m-4.75m Clayey Silts & Sandy Silts, Alluvium 4.75m-9.30m High Plasticity, Grey-brown, Alluvium	1119m	West
GW067492	0.00m-4.50m Silty Clay 4.50m-12.10m Clayey Sand Fine To Coarse Grained, Red-brown. Moist Becoming Wet	1191m	West
GW013283	0.00m-0.30m Topsoil 0.30m-2.74m Subsoil 2.74m-8.83m Gravel Water Supply	1236m	North West
GW067491	0.00m-17.00m Silty Clay, & Sandy Clay, Medium To High Plasticity, Brown & Red-brown.	1236m	West
GW067490	0.00m-4.00m Clayey Silts & Sandy Silts, Alluvium 4.00m-9.20m High Plasticity, Grey Brown	1245m	West
GW067489	0.00m-4.00m Clayey Silts & Sandy Silts, Alluvium 4.00m-9.70m High Plasticity, Grey Brown	1249m	West
GW067488	0.00m-4.00m Clayey Silts & Sandy Silts, Alluvium 4.00m-8.50m High Plasticity, Light Brown	1261m	West
GW067487	0.00m-4.00m Clayey Silts & Sandy Silts, Alluvium 4.00m-8.95m High Plasticity, Light Brown	1267m	West
GW102278	0.00m-7.20m Sandy Silts and Silty Sands, with some Clay bands, alluvium 7.20m-8.70m Clay and some Gravel 8.70m-15.30m Gravel 15.30m-15.80m Shale	1291m	West
GW102279	0.00m-9.00m Silty Sands and Sandy Silts, alluvium 9.00m-15.00m Gravel 15.00m-15.50m Shale	1291m	West
GW102280	0.00m-4.80m Sandy Silts an Silty Sands, alluvium 4.80m-7.75m Gravel with Clay zones 7.75m-9.55m Clay with Gravel zones 9.55m-15.90m Gravel with Clay zones 15.90m-16.40m Shale	1291m	West
GW102275	0.00m-4.00m Clayey Silts and Sandy Silts, alluvium 4.00m-8.95m Light brown Clay, high plasticity 8.95m-16.40m Gravel 16.40m-16.90m Shale	1292m	West
GW102276	0.00m-4.00m Clayey Silts and Sandy Silts, alluvium 4.00m-9.70m Grey-brown Clay, high plasticity 9.70m-16.80m Gravel 16.80m-17.30m Shale	1292m	West
GW102274	0.00m-4.00m Clayey Silts and Sandy Silts, alluvium 4.00m-8.40m Light grey-brown Clay, high plasticity. 8.40m-16.00m Gravel 16.00m-16.50m Shale	1293m	West

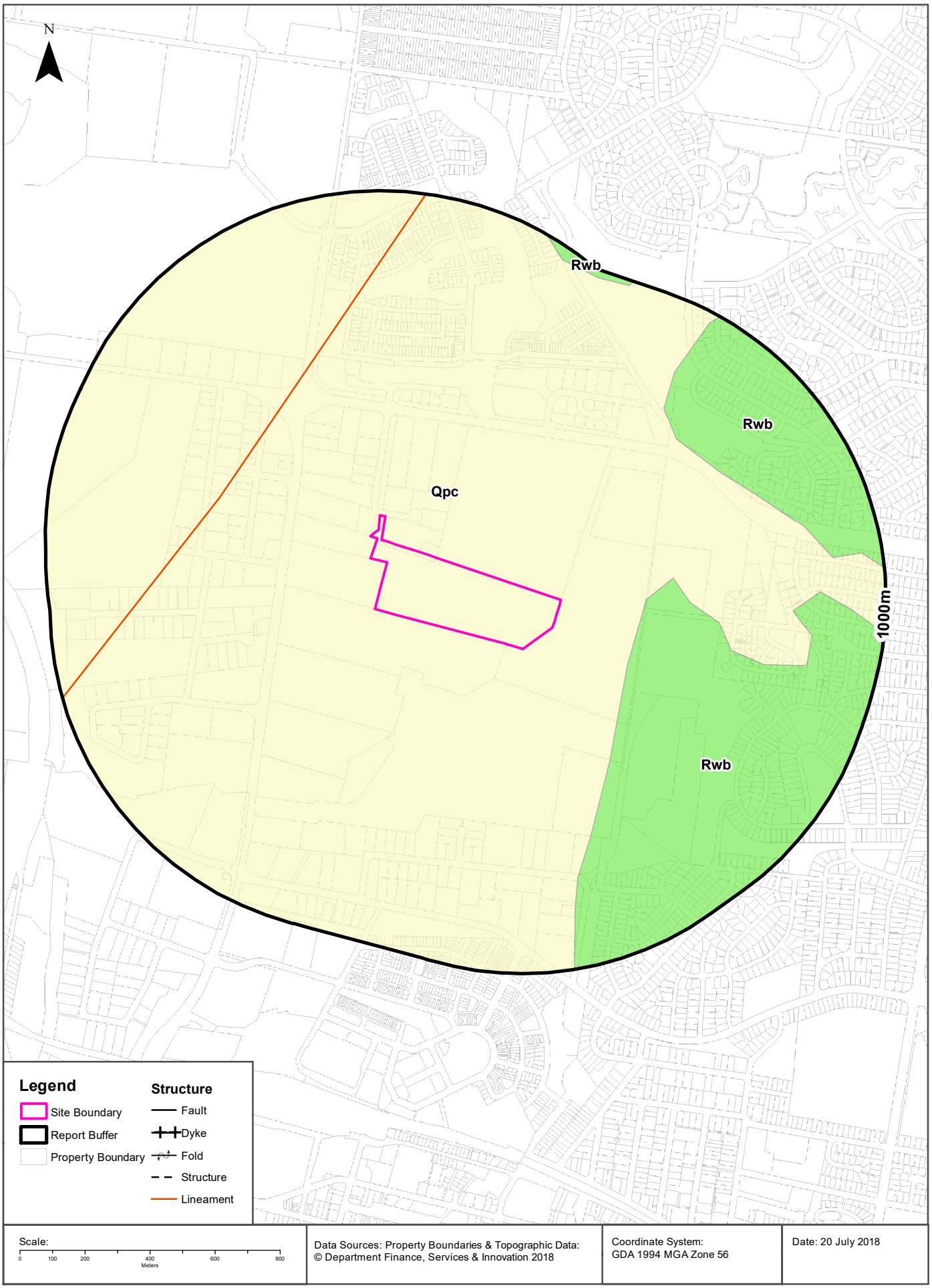
Groundwater No	Drillers Log	Distance	Direction
GW102277	0.00m-7.50m Clayey Silts and Sandy Silts with some Clay bands 7.50m-9.50m Light brown Clay 9.50m-10.55m Silty Sand, fine to medium 10.55m-16.40m Gravel 16.40m-16.90m Shale	1293m	West
GW102273	0.00m-4.75m Clayey silts and Sandy Silts, alluvium 4.75m-9.30m Grey-brown Clay, high plasticity, alluvium 9.30m-16.30m Gravel 16.30m-16.80m Shale	1296m	West
GW104717	0.00m-3.00m CLAY 3.00m-12.50m SAND AND GRAVEL 12.50m-45.00m FRACTURED GREY SHALE	1315m	North
GW067482	0.00m-7.50m Clayey Silts & Sand Silts With Some Clay Bands 7.50m-7.50m Light Brown Clay 7.50m-10.10m Silty Sand	1344m	West
GW067483	0.00m-7.20m Sandy Silts & Silty Sands With Some Clay Bands, Alluvium 7.20m-8.70m Clay And Some Gravel	1345m	West
GW067481	0.00m-7.50m Clayey Silts & Sandy Silts, With Some Clay Bands. 7.50m-9.50m Light Brown Clay 9.50m-10.55m Silty Sand	1346m	West
GW067485	0.00m-10.00m Silty Clay Medium To High Plasticity, Red-brown. Fill 10.00m-15.35m Sandy Clay	1346m	West
GW067486	0.00m-12.90m Silty Clay & Sandy Clay Medium To High Plasticity, Brown. Fill	1347m	West
GW067484	0.00m-7.20m Sandy Silts & Silty Sands With Some Clay Bands, Alluvium 7.20m-8.20m Clay And Gravel	1348m	West
GW063814	0.00m-5.00m Soil Sandy 5.00m-12.30m Gravel 12.30m-12.60m Shale	1389m	North West
GW067416	0.00m-9.00m Silty Sands & Sandy Silts Alluvium	1471m	West
GW067417	0.00m-8.50m Silty Sands & Sandy Silts Alluvium	1475m	West
GW067419	0.00m-4.30m Sand Silts & Silty Sands Alluvium	1490m	West
GW067418	0.00m-4.80m Sandy Silts & Silty Sands Alluvium 4.80m-7.75m Gravel With Clay Zones 7.75m-9.55m Clay With Gravel Zones 9.55m-15.90m Gravel With Clay Zones	1498m	West
GW067420		1500m	West
GW067421	0.00m-8.00m Silty Clay & Sandy Clays 8.00m-11.20m Clayey Sand Fine To Coarse Grained, Red-brown. Wet Fill.	1516m	West
GW063810	0.00m-4.50m Topsoil Sandy 4.50m-14.60m Gravel 14.60m-15.60m Shale	1537m	North
GW015976	0.00m-0.60m Loam 0.60m-0.91m Clay 0.91m-6.09m Clay Sandy Water Supply 6.09m-8.53m Sand 8.53m-10.36m Gravel	1598m	North
GW106548	0.00m-9.20m SANDY LOAM 9.20m-15.10m ALLUVIAL GRANELS 15.10m-15.40m DARK GREY SILTSTONE	1741m	South West

Groundwater No	Drillers Log	Distance	Direction
GW111617	0.00m-0.50m CLAY BROWN 0.50m-1.00m SHALE BROWN 1.00m-113.00m SHALE GREY 113.00m-130.00m SANDSTONE GREY 130.00m-130.20m SANDSTONE GREY QUARTZ 130.20m-141.00m SANDSTONE GREY 141.00m-142.00m SANDSTONE GREY QUARTZ 142.00m-145.00m SANDSTONE GREY 145.00m-149.00m SANDSTONE GREY QUARTZ 149.00m-154.00m SANDSTONE GREY 154.00m-155.00m SANDSTONE GREY ,SILTSTONE BANDS 155.00m-158.50m SANDSTONE GREY 158.50m-160.00m SANDSTONE GREY QUARTZ 160.00m-161.00m SANDSTONE GREY 161.00m-162.00m SANDSTONE GREY ,SILTSTONE BANDS 162.00m-190.00m SANDSTONE GREY 190.00m-192.00m SANDSTONE GREY ,SILTSTONE BANDS 192.00m-198.50m SANDSTONE GREY 198.50m-200.00m SANDSTONE GREY QUARTZ 200.00m-203.00m SANDSTONE GREY 203.00m-209.00m SANDSTONE GREY QUARTZ 209.00m-210.00m SANDSTONE GREY	1800m	South East
GW111988	0.00m-3.00m CLAY MINOR SAND RED BROWN 3.00m-9.00m GRAVEL WITH MINOR SAND	1894m	South
GW111989	0.00m-3.00m CLAY MINOR SAND RED BROWN 3.00m-9.00m GRAVEL WITH MINOR SAND	1895m	South
GW111987	0.00m-3.00m CLAY MINOR SAND RED BROWN 3.00m-9.00m GRAVEL WITH MINOR SAND	1911m	South
GW075079	0.00m-2.50m CLAY, LIGHT BROWN 2.50m-2.70m IRONSTONE & GRAVEL 2.70m-4.00m CLAY, LIGHT BROWN 4.00m-7.00m CLAY, DARK GREY 7.00m-7.50m SAND 7.50m-11.50m SANDY CLAY, MOIST 11.50m-14.00m GRAVEL, COURSE 14.00m-14.50m SHALE	1954m	North

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

128 Andrews Road, Penrith, NSW 2750



Geology

128 Andrews Road, Penrith, NSW 2750

Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Qpc	Gravel, sand, silt, clay	Cranebrook Formation			Quaternary		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
Qpc	Gravel, sand, silt, clay	Cranebrook Formation			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
Lineament		Kooree Creek Lineament	Penrith	1:100,000

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

128 Andrews Road, Penrith, NSW 2750

Naturally Occurring Asbestos Potential

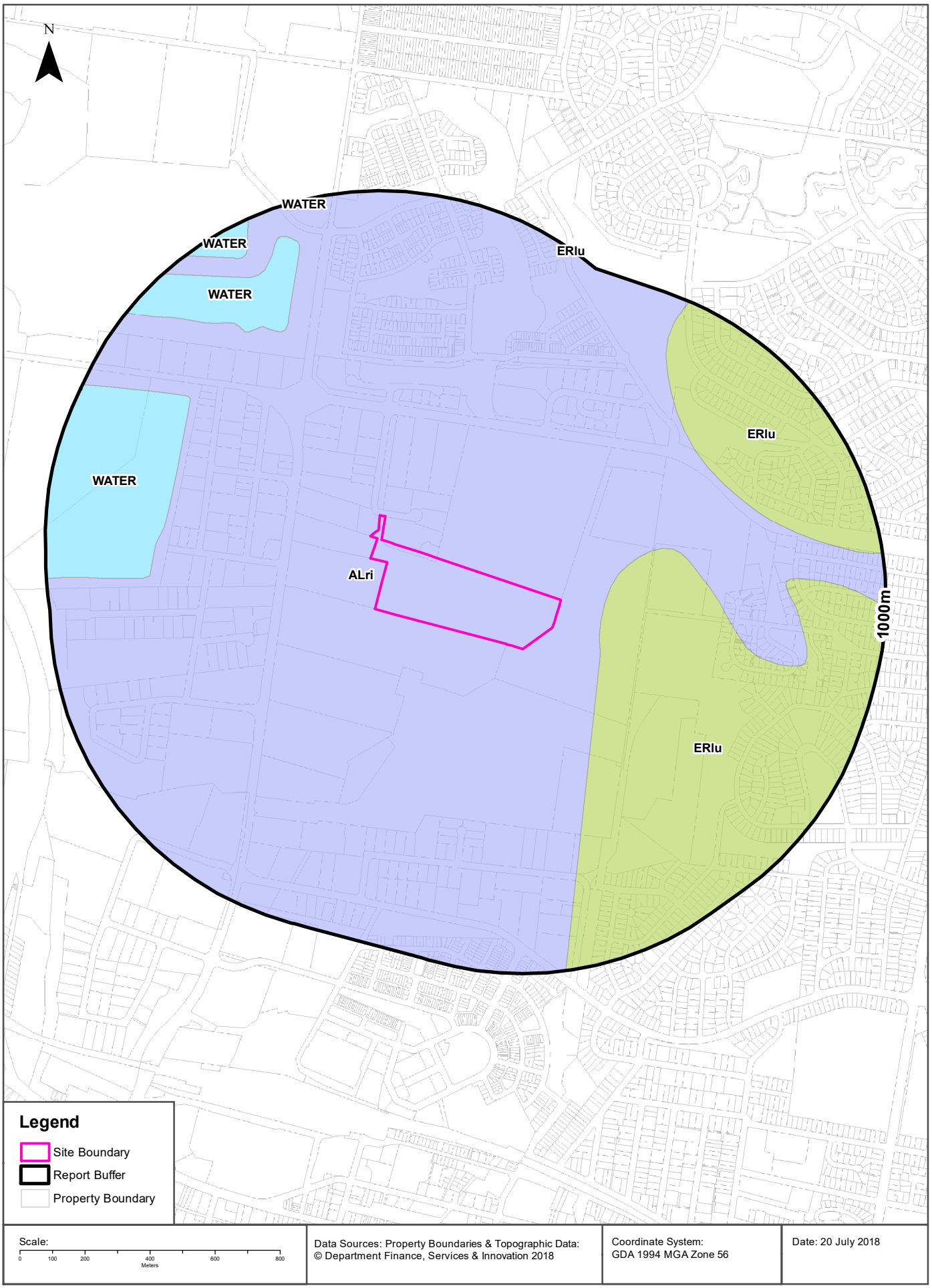
Naturally Occurring Asbestos Potential within the dataset buffer:

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

Mining Subsidence District Data Source: © State of New South Wales through NSW Department of Industry, Resources & Energy

Soil Landscapes

128 Andrews Road, Penrith, NSW 2750



Soils

128 Andrews Road, Penrith, NSW 2750

Soil Landscapes

What are the onsite Soil Landscapes?

Soil Code	Name	Group	Process	Map Sheet	Scale
ALri	RICHMOND		ALLUVIAL	Penrith	1:100,000

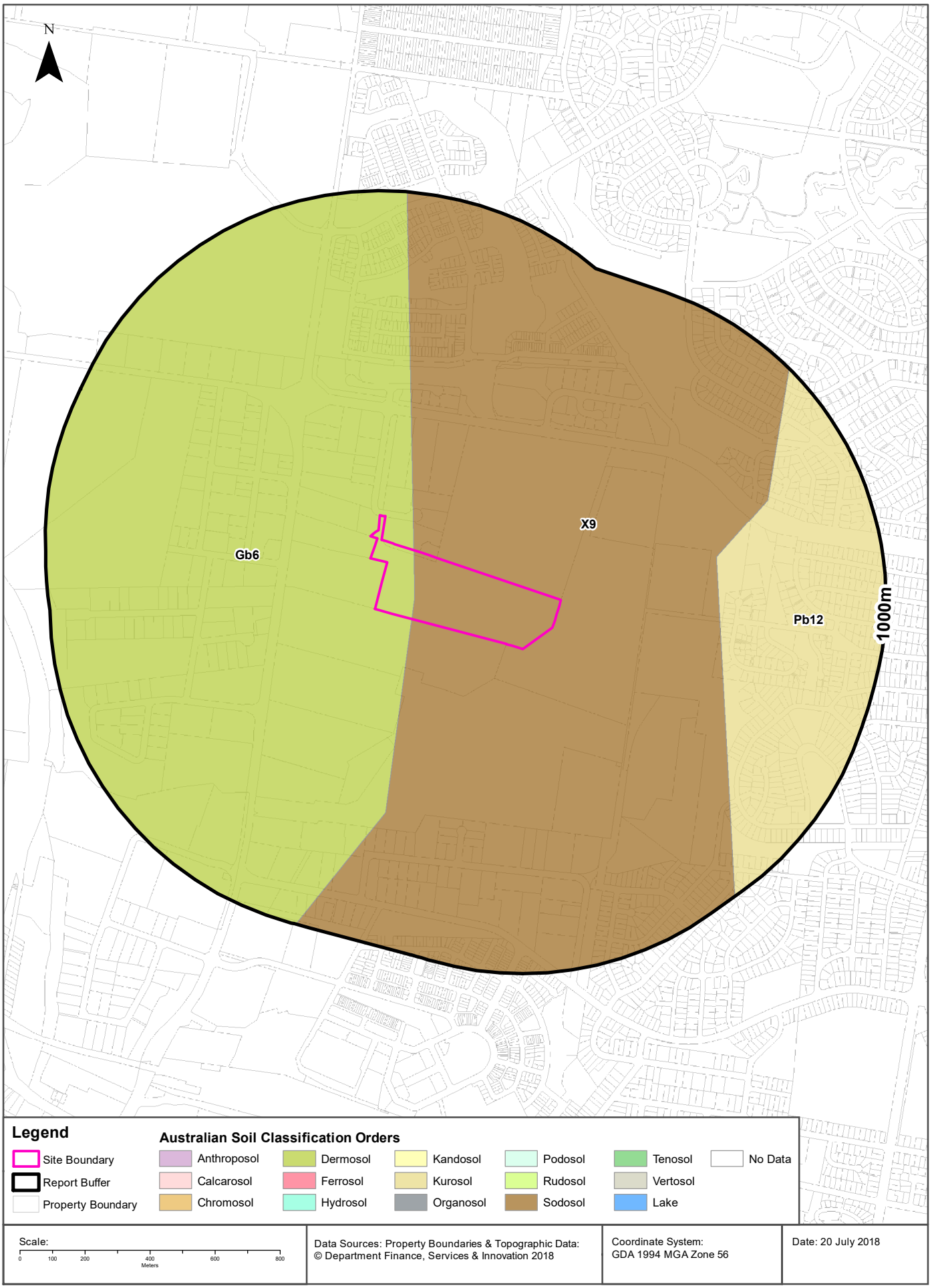
What are the Soil Landscapes within the dataset buffer?

Soil Code	Name	Group	Process	Map Sheet	Scale
ALri	RICHMOND		ALLUVIAL	Penrith	1:100,000
ERlu	LUDDENHAM		EROSIONAL	Penrith	1:100,000
WATER	WATER		WATER	Penrith	1:100,000

Soils Landscapes Data Source : NSW Office of Environment and Heritage
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Atlas of Australian Soils

128 Andrews Road, Penrith, NSW 2750



Soils

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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
Gb6	Dermosol	Younger river terraces, present flood-plain, and swamps: chief soils are dark friable loamy soils (Um6.11), possibly with some (Gn2.8) soils on the terraces. Associated are various (Um) and (Uc) soils on the flood-plains and swamps. Area is subject to periodic inundation. As mapped, areas of units X9, Mb2, and Sp1 are included.	0m
X9	Sodosol	Plains--former river terraces and levees: chief soils are sandy neutral yellow mottled soils (Dy5.42) with leached sands (Uc2.3) on the broader plains. Associated are (Dy3.41, Dy3.42, and Dy3.43) soils, some containing ironstone gravels, in relatively low-lying areas and depressions, and (Dr2.2), (Gn2.15), and (Gn2.18) soils on levees. Areas of other soils, possibly including (Um4.31), occur throughout what is a complex unit. As mapped, areas of units Gb6 and Sp1 are included.	0m
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.	484m

Atlas of Australian Soils Data Source: CSIRO
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Acid Sulfate Soils

128 Andrews Road, Penrith, NSW 2750

Standard Local Environmental Plan Acid Sulfate Soils

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

Soil Class	Description	LEP
N/A		

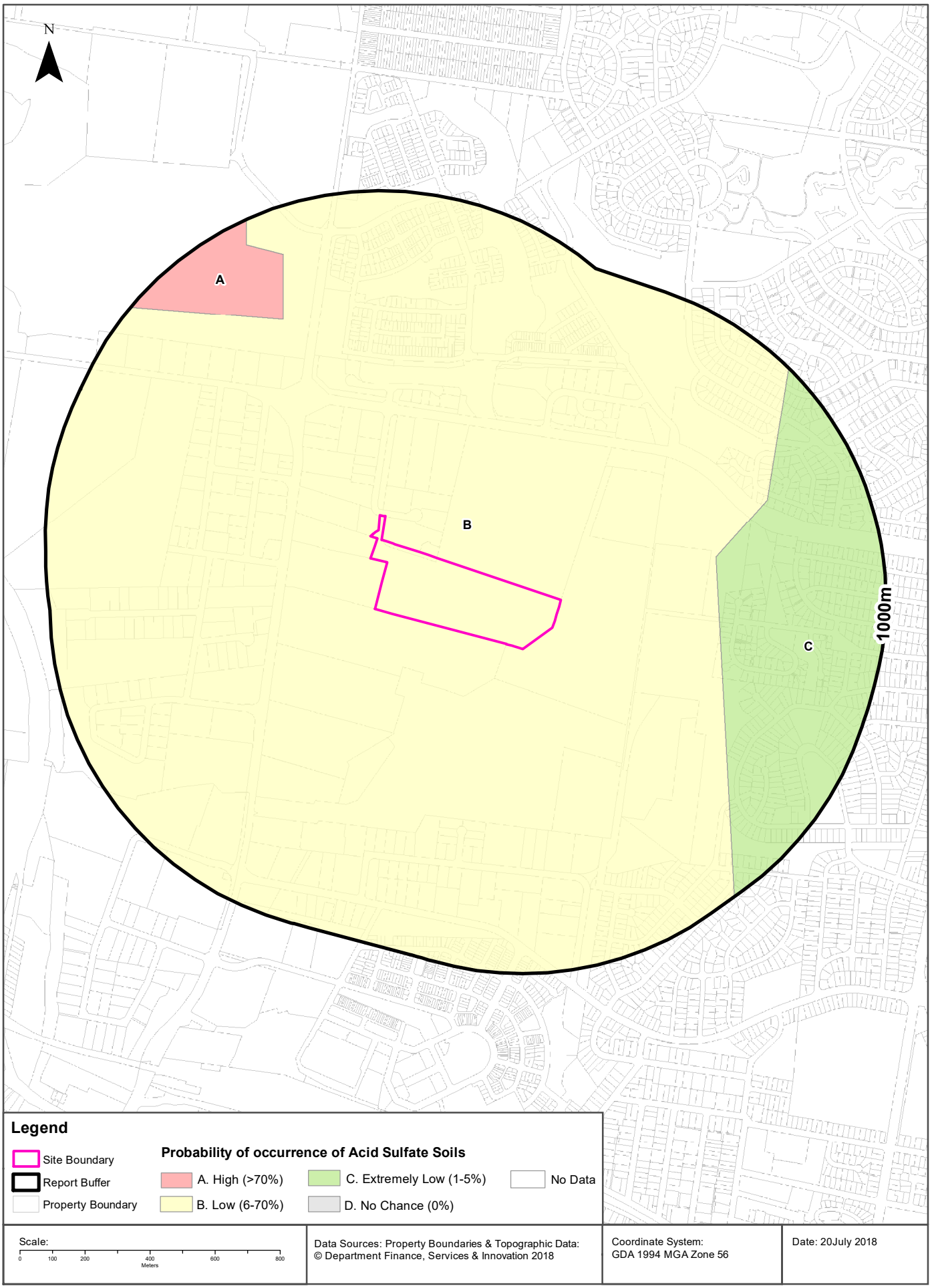
If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	LEP	Distance	Direction
N/A				

Acid Sulfate Data Source Accessed 07/10/2016: NSW Crown Copyright - Planning and Environment
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Atlas of Australian Acid Sulfate Soils

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Acid Sulfate Soils

128 Andrews Road, Penrith, NSW 2750

Atlas of Australian Acid Sulfate Soils

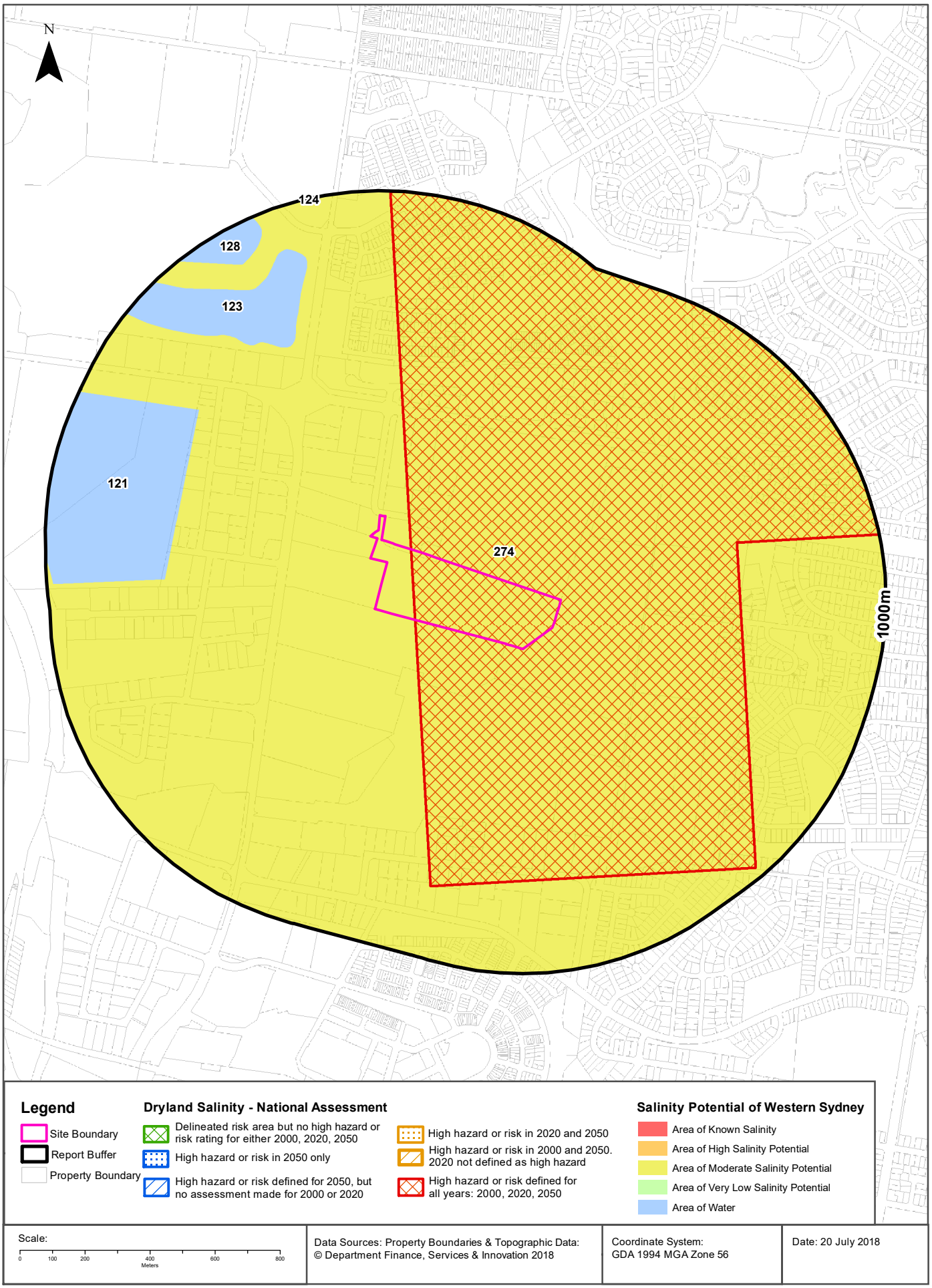
Atlas of Australian Acid Sulfate Soil categories within the dataset buffer:

Class	Description	Distance
B	Low Probability of occurrence. 6-70% chance of occurrence.	0m
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	483m
A	High Probability of occurrence. >70% chance of occurrence.	673m

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

128 Andrews Road, Penrith, NSW 2750



Dryland Salinity

128 Andrews Road, Penrith, NSW 2750

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

Yes

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	0m	Onsite

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
123	WATER	Area of Water	589m	North West
121	WATER	Area of Water	595m	West
128	WATER	Area of Water	882m	North West
124	WATER	Area of Water	996m	North

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

128 Andrews Road, Penrith, NSW 2750

Mining Subsidence Districts

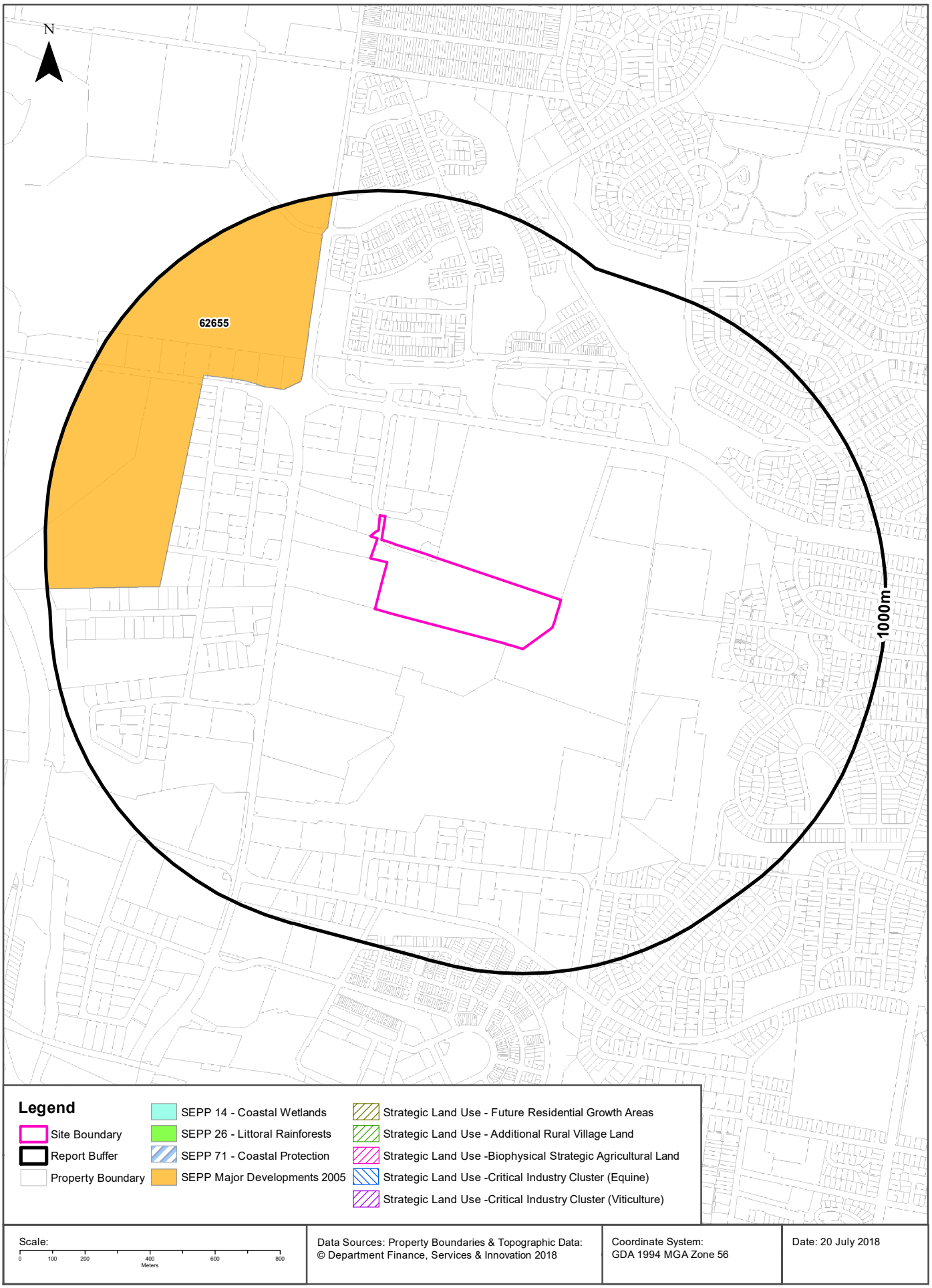
Mining Subsidence Districts within the dataset buffer:

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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State Environmental Planning Policy

128 Andrews Road, Penrith, NSW 2750



Environmental Zoning

128 Andrews Road, Penrith, NSW 2750

State Environmental Planning Policy Protected Areas

Are there any State Environmental Planning Policy Protected Areas onsite or within the dataset buffer?

Dataset	Onsite	Within Site Buffer	Distance
SEPP14 - Coastal Wetlands	No	No	N/A
SEPP26 - Littoral Rainforests	No	No	N/A
SEPP71 - Coastal Protection Zone	No	No	N/A

SEPP Protected Areas Data Source: NSW Department of Planning & Environment
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State Environmental Planning Policy Major Developments (2005)

State Environmental Planning Policy Major Developments within the dataset buffer:

Map Id	Feature	Effective Date	Distance	Direction
62655	Penrith Lakes	25/05/2005	481m	North West

SEPP Major Development Data Source: NSW Department of Planning & Environment
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State Environmental Planning Policy Strategic Land Use Areas

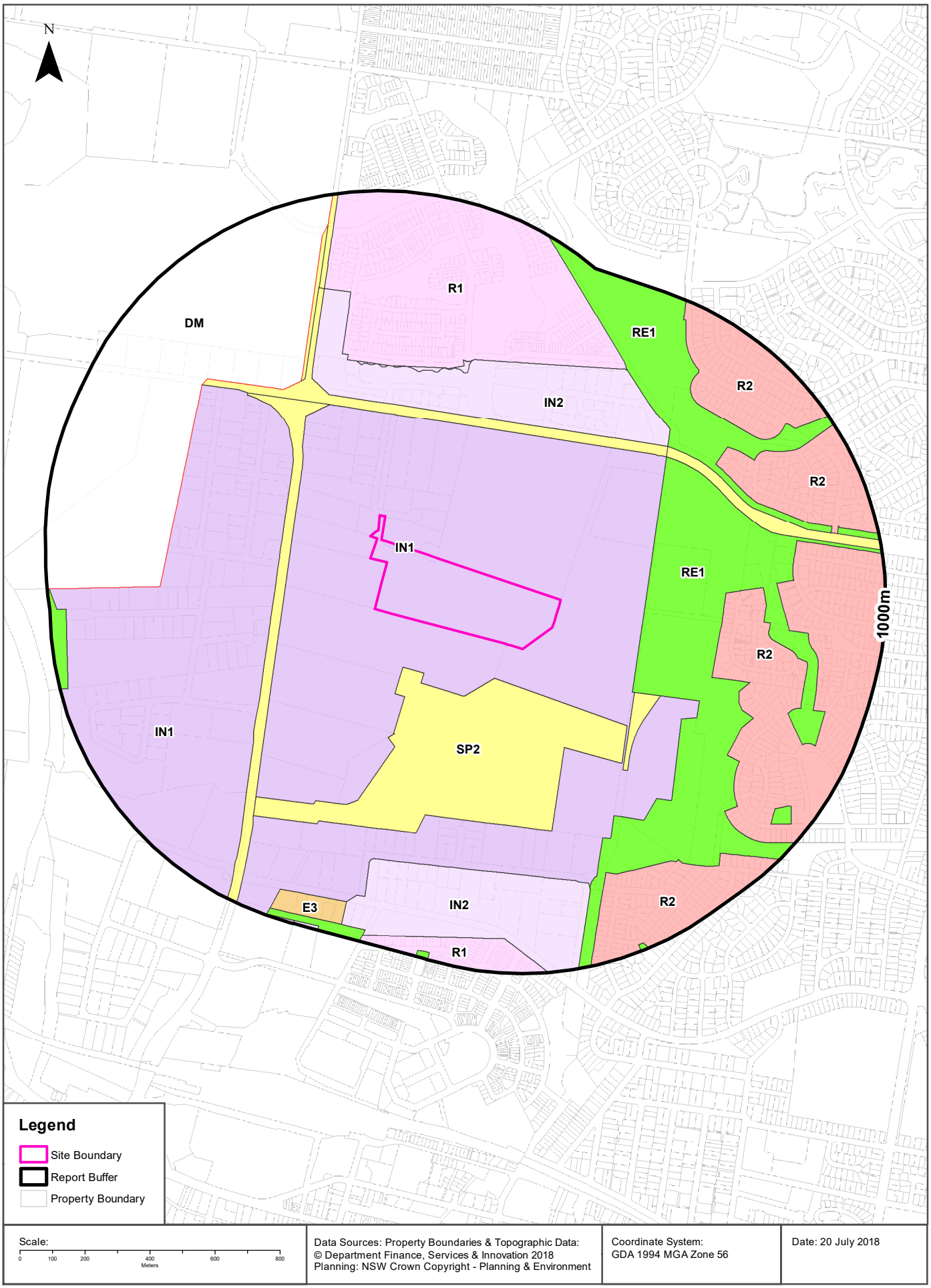
State Environmental Planning Policy Strategic Land Use Areas onsite or within the dataset buffer:

Strategic Land Use	SEPPNo	Effective Date	Amendment	Amendment Year	Distance	Direction
No records within buffer						

SEPP Strategic Land Use Data Source: NSW Department of Planning & Environment
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LEP Planning Zones

128 Andrews Road, Penrith, NSW 2750



Local Environmental Plan

128 Andrews Road, Penrith, NSW 2750

Land Zoning

What Local Environmental Plan Land Zones exist within the dataset buffer?

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
IN1	General Industrial		Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017		0m	Onsite
SP2	Infrastructure	Sewerage System	Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017		111m	South
SP2	Infrastructure	Classified Road	Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017		238m	South West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	259m	East
IN1	General Industrial		Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017		268m	South West
SP2	Infrastructure	Classified Road	Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017		315m	North
SP2	Infrastructure	Classified Road	Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017		321m	South East
IN2	Light Industrial		Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017		345m	North
IN2	Light Industrial		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	457m	North
R1	General Residential		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	462m	North
SP2	Infrastructure	Classified Road	Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	480m	North West
DM	Deferred Matter		Penrith Local Environmental Plan 2010	14/10/2016	14/10/2016	11/08/2017	Amendment No 11	481m	North West
R2	Low Density Residential		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	500m	South East
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	545m	North East
SP2	Infrastructure	Classified Road	Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	547m	South
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	576m	North East
R2	Low Density Residential		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	634m	North East
IN2	Light Industrial		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	692m	South
SP2	Infrastructure	Classified Road	Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	721m	North
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	875m	East
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	884m	South East
E3	Environmental Management		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	892m	South West
R1	General Residential		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	894m	South
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	950m	South West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	961m	South
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	977m	South East
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	978m	South
IN2	Light Industrial		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	Amendment No 4	986m	South West

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Local Environmental Plan

128 Andrews Road, Penrith, NSW 2750

Minimum Subdivision Lot Size

What are the onsite Local Environmental Plan Minimum Subdivision Lot Sizes?

Symbol	Minimum Lot Size	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
V	2000 m²	Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017		99.23

Maximum Height of Building

What are the onsite Local Environmental Plan Maximum Height of Buildings?

Symbol	Maximum Height of Building	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
13	12.00 m	Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017		100

Floor Space Ratio

What are the onsite Local Environmental Plan Floor Space Ratios?

Symbol	Floor Space Ratio	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
No Data							

Land Application

What are the onsite Local Environmental Plan Land Applications?

Application Type	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
Included	Penrith Local Environmental Plan 2010	11/08/2017	11/08/2017	11/08/2017	Amendment No 12	100

Land Reservation Acquisition

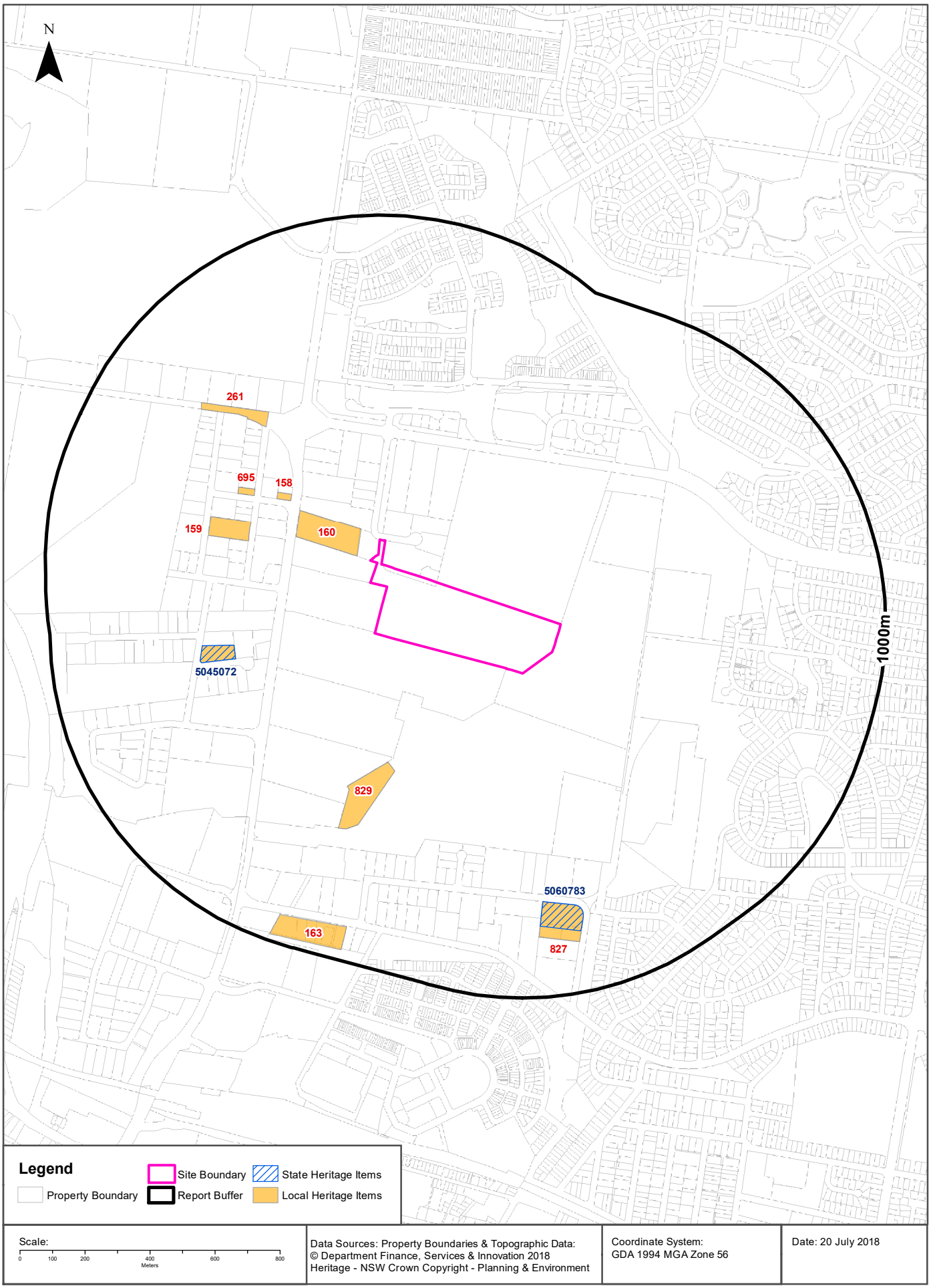
What are the onsite Local Environmental Plan Land Reservation Acquisitions?

Reservation	LEP	Published Date	Commenced Date	Currency Date	Amendment	Comments	Percentage of Site Area
No Data							

Local Environment Plan Data Source: NSW Crown Copyright - Planning & Environment
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Heritage Items

128 Andrews Road, Penrith, NSW 2750



Heritage

128 Andrews Road, Penrith, NSW 2750

State Heritage Items

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

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
5045072	Craithes House	34-40 Borec Road Penrith	Penrith	02/04/1999	378	886	435m	West
5060783	Torin Building	26 Coombes Drive Penrith	Penrith	15/05/2009	1796	2269	705m	South

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

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

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
160	Victorian house	Item - General	Local	Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017	43m	North West
158	Edwardian cottage	Item - General	Local	Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017	301m	North West
829	Bennetts Wagons	Item - General	Local	Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	372m	South West
159	The Lodge	Item - General	Local	Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017	380m	West
695	Cottage	Item - General	Local	Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017	410m	North West
161	Craithes - dwelling, trees, outbuildings and carriage loop	Item - General	Local	Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017	435m	West
261	Castlereagh Road Alignment	Item - General	Local	Penrith Local Environmental Plan 2010	10/08/2012	10/08/2012	11/08/2017	493m	North West
827	Marcel Breuer Torin factory building	Item - General	State	Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	11/08/2017	705m	South
163	Combewood - house, garden and original entrance drive	Item - General	State	Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	11/08/2017	895m	South West

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Natural Hazards - Bush Fire Prone Land

128 Andrews Road, Penrith, NSW 2750



Data Sources: Bush Fire Prone Land: © NSW Rural Fire Service 2018. Property Boundaries: © Department Finance, Services & Innovation 2018

Coordinate System: GDA 1994 MGA Zone 56

Date: 20 July 2018

Natural Hazards

128 Andrews Road, Penrith, NSW 2750

Bush Fire Prone Land

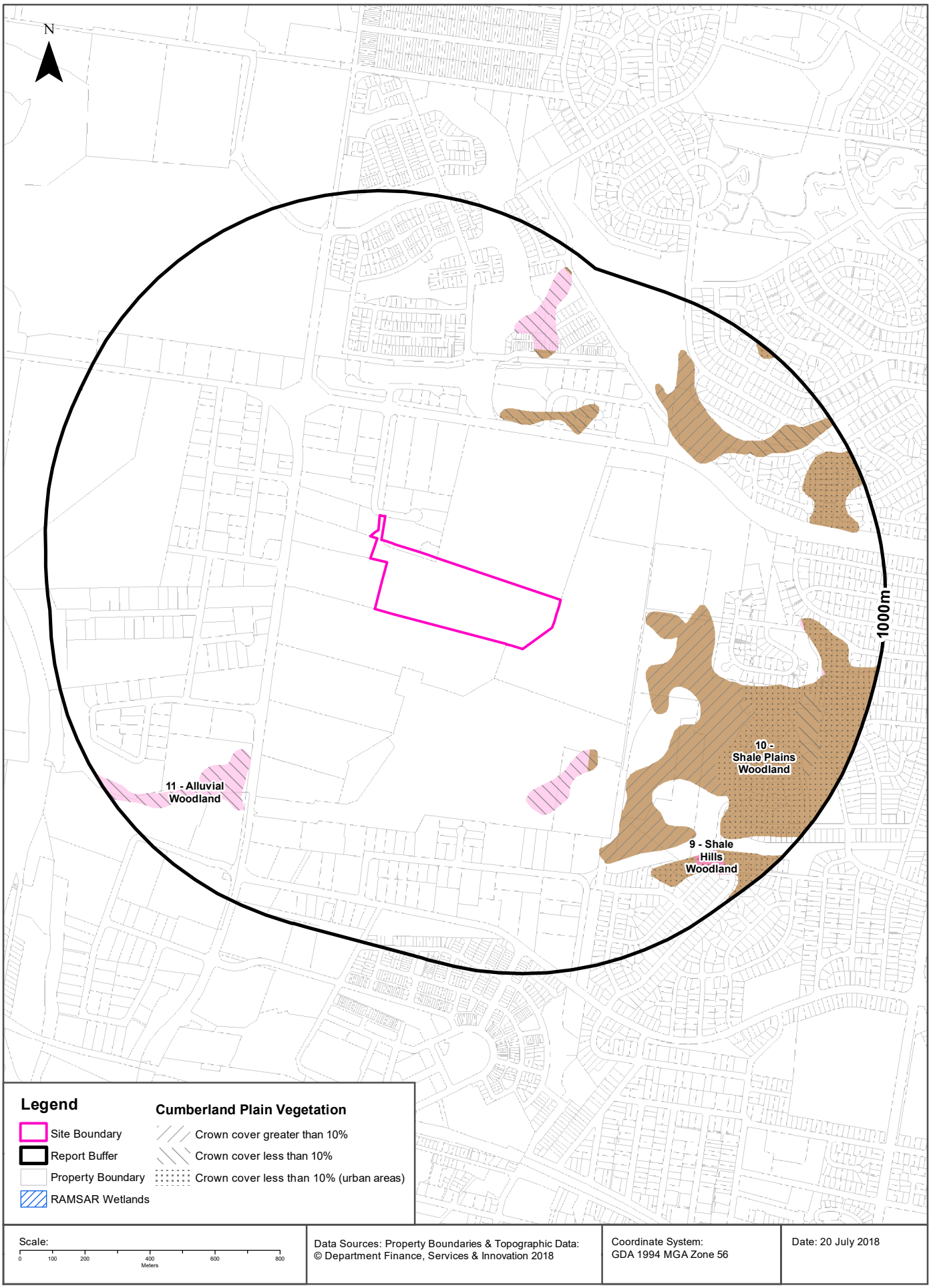
What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
Vegetation Buffer	0m	Onsite
Vegetation Category 2	0m	Onsite
Vegetation Category 1	130m	East

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

Ecological Constraints - Remnant Vegetation of the Cumberland Plain

128 Andrews Road, Penrith, NSW 2750



Ecological Constraints

128 Andrews Road, Penrith, NSW 2750

Remnant Vegetation of the Cumberland Plain

What remnant vegetation of the Cumberland Plain exists within the dataset buffer?

Description	Crown Cover	Distance	Direction
10 - Shale Plains Woodland	Crown cover greater than 10%	265m	East
11 - Alluvial Woodland	Crown cover less than 10%	363m	South East
10 - Shale Plains Woodland	Crown cover less than 10%	371m	South East
10 - Shale Plains Woodland	Crown cover less than 10% (urban areas)	606m	South East
11 - Alluvial Woodland	Crown cover less than 10% (urban areas)	737m	East
9 - Shale Hills Woodland	Crown cover less than 10% (urban areas)	826m	South East

Remnant Vegetation of the Cumberland Plain : NSW Office of Environment and Heritage
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RAMSAR Wetlands

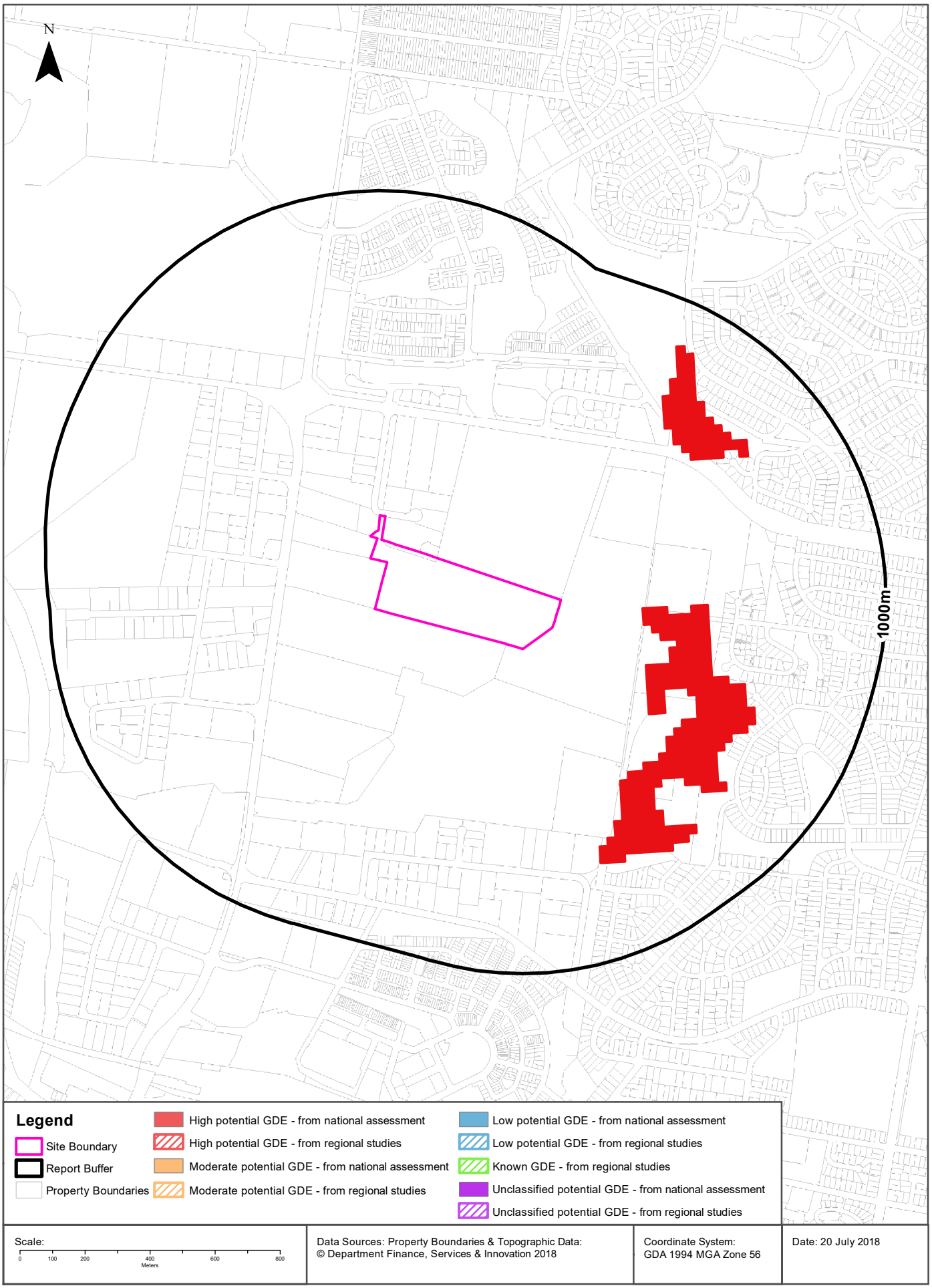
What RAMSAR Wetland areas exist within the dataset buffer?

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

128 Andrews Road, Penrith, NSW 2750



Ecological Constraints

128 Andrews Road, Penrith, NSW 2750

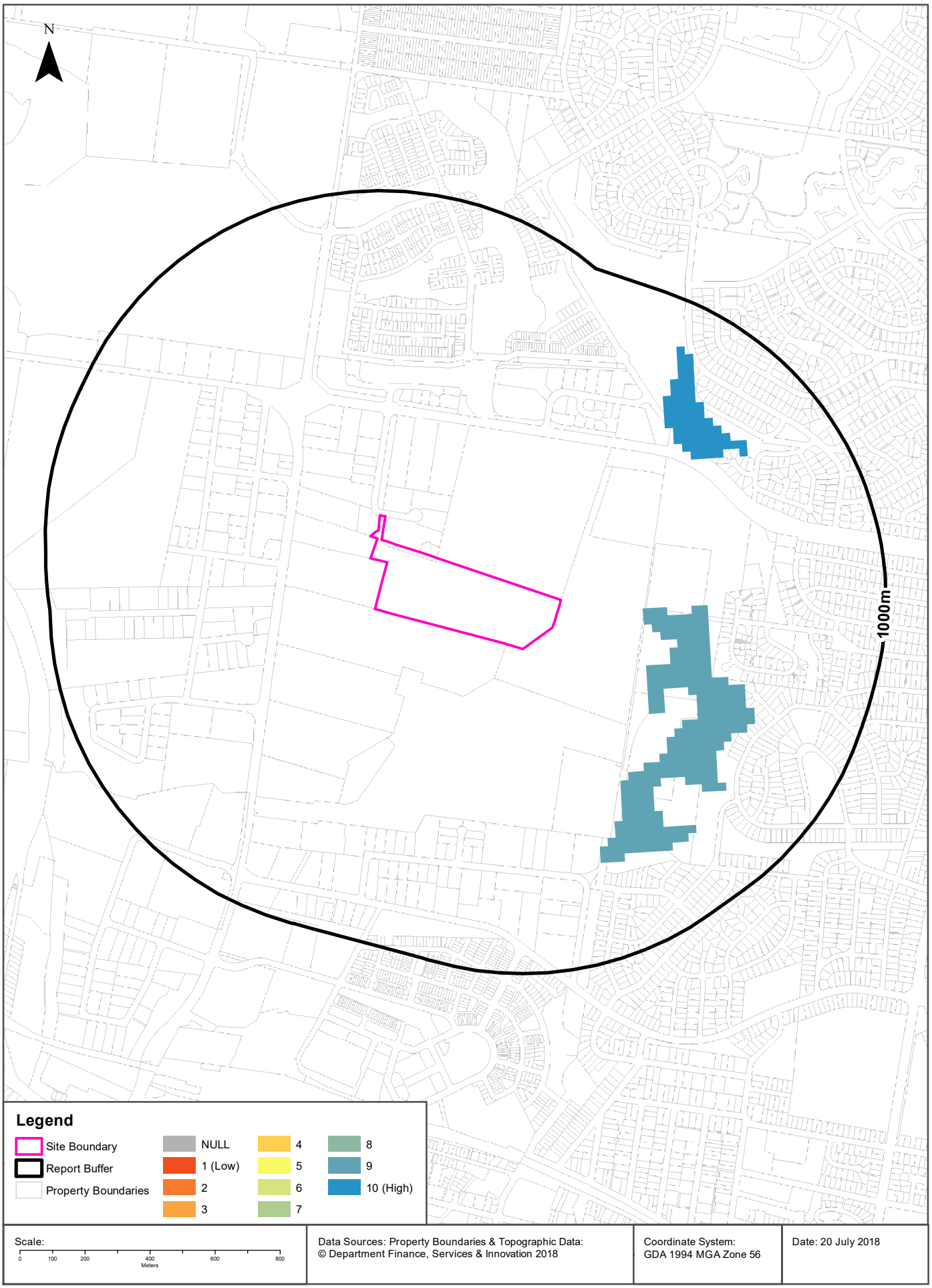
Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial	High potential GDE - from national assessment	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	252m

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

128 Andrews Road, Penrith, NSW 2750



Ecological Constraints

128 Andrews Road, Penrith, NSW 2750

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	252m
Terrestrial	10	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	588m

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

128 Andrews Road, Penrith, NSW 2750

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	Heleioporus australiacus	Giant Burrowing Frog	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
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	Ardea ibis	Cattle Egret	Not Listed	Not Sensitive	Not Listed	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	Burhinus grallarius	Bush Stone-curlew	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	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	Ephippiorhynchus asiaticus	Black-necked Stork	Endangered	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;CAMBA; JAMBA
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Grantiella picta	Painted Honeyeater	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
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	Merops ornatus	Rainbow Bee-eater	Not Listed	Not Sensitive	Not Listed	JAMBA
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	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica rodinogaster	Pink Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Plegadis falcinellus	Glossy Ibis	Not Listed	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Rostratula australis	Australian Painted Snipe	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Tringa glareola	Wood Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tyto longimembris	Eastern Grass Owl	Vulnerable	Category 3	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 Woodland Snail	Endangered	Not Sensitive	Endangered	
Animalia	Insecta	Petalura gigantea	Giant Dragonfly	Endangered	Not Sensitive	Not Listed	
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	Miniopterus australis	Little Bentwing-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Mormopterus norfolkensis	Eastern Freetail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petauroides volans	Greater Glider	Not Listed	Not Sensitive	Vulnerable	
Animalia	Mammalia	Petaurus australis	Yellow-bellied Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	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	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Hoplocephalus bungaroides	Broad-headed Snake	Endangered	Category 2	Vulnerable	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Allocasuarina glareicola		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Dillwynia tenuifolia		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus benthamii	Camden White Gum	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus leucoxylon subsp. pruinosa	Yellow Gum	Vulnerable	Not Sensitive	Not Listed	
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 puberula		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Isotoma fluviatilis subsp. fluviatilis		Not Listed	Not Sensitive	Extinct	
Plantae	Flora	Leucopogon fletcheri subsp. fletcheri		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Macadamia tetraphylla	Rough-shelled Bush Nut	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Marsdenia viridiflora subsp. viridiflora	Native Pear	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Melaleuca deanei	Deane's Paperbark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Micromyrtus minutiflora		Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Persoonia hirsuta	Hairy Geebung	Endangered	Category 3	Endangered	
Plantae	Flora	Persoonia nutans	Nodding Geebung	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Pimelea spicata	Spiked Rice-flower	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Pterostylis saxicola	Sydney Plains Greenhood	Endangered	Category 2	Endangered	
Plantae	Flora	Pultenaea parviflora		Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Pultenaea villifera		Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Senna acclinis	Rainforest Cassia	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	

Data does not include NSW category 1 sensitive species.
NSW BioNet: © State of NSW and Office of Environment and Heritage
Data obtained 20/07/2018

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Land Title Records

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

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20th July 2018

ENVIRONMENTAL INVESTIGATION SERVICES
PO BOX 976,
NORTH RYDE BC NSW 1670

Attention: Priya Dass,

RE: **128 Andrews Road & 13– 15 Lambridge Place, Penrith**
Reference E31675KR

Note 1:	**Lot 20**	**DP 1216618**	(page 1)
Note 2:	**Lot 21**	**DP 1216618**	(page 4)
Note 3:	**Lot 8**	**DP 1087962**	(page 6)

Note 1:

Current Search

Folio Identifier 20/1216618 (title attached)
DP 1216618 (plan attached)
Dated 18th July 2018
Registered Proprietor:
TRADELINK PTY LIMITED

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

Title Tree
Lot 20 DP 1216618

Folio Identifier 20/1216618

Folio Identifier 2/747153

Certificate of Title Volume 12505 Folio 65

Certificate of Title Volume 11187 Folio 152

Certificate of Title Volume 9294 Folio 86

Certificate of Title Volume 8232 Folio 27

PA 40565

Conveyance Book 1553 No. 812

Conveyance Book 1254 No. 268

Conveyance Book 493 No 732

****

Summary of proprietor(s)
Lot 20 DP 1216618

Year	Proprietor(s)
	(Lot 20 DP 1216618)
2017 – todate	Tradelink Pty Limited *(previously known as Crane Distribution Limited)*
	(Lot 2 DP 747153)
2017 – 2017	Tradelink Pty Limited *(previously known as Crane Distribution Limited)*
2008 – 2017	Crane Distribution Limited *(previously known as G.E.Crane and Sons Limited)*
1987 – 2008	G.E.Crane and Sons Limited
	(Lot 122 DP 568713 – CTVol 12505 Fol 65)
1974 – 1987	G.E.Crane and Sons Limited
	(Lot 12 DP 538576 – CTVol 11187 Fol 152)
1969 – 1974	G.E.Crane and Sons Limited
	(Lot 2 DP 213446 – CTVol 9294 Fol 86)
1962 – 1969	G.E.Crane and Sons Limited
	(Lot X DP 164075 – Area 112 Acres 1 Rood 23 ½ Perches – CTVol 8232 Fol 27)
1961 – 1962	G.E.Crane and Sons Limited
1961 – 1961	Hector Peter Joseph Smart, retired timber merchant
1961 – 1961	Arthur Lindsay Stanton, farmer
	(Part Portion 89 Parish Castlereagh – Area 98 Acres – Conv Bk 1553 No. 812)
1929 – 1961	Wilfred Joseph Stanton, farmer
	(Part Portion 89 Parish Castlereagh – Area 98 Acres – Conv Bk 1254 No. 268)
1921 – 1929	Albert Victor Rose, farmer
1912 – 1921	John Reginald Hamilton, farmer / executor and trustee Robert Hamilton, estate
	(Part Portion 89 Parish Castlereagh – Conv Bk 1254 No. 268)
1889 – 1912	Robert Hamilton, farmer

****

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

Note 2:

Current Search

Folio Identifier 21/1216618 (title attached)
DP 1216618 (plan attached)
Dated 20th July 2018
Registered Proprietor:
VICARY PTY LIMITED

Title Tree
Lot 21 DP 1216618

Folio Identifier 21/1216618

Folio Identifier 2/747153

Certificate of Title Volume 12505 Folio 65

Certificate of Title Volume 11187 Folio 152

Certificate of Title Volume 9294 Folio 86

Certificate of Title Volume 8232 Folio 27

PA 40565

Conveyance Book 1553 No. 812

Conveyance Book 1254 No. 268

Conveyance Book 493 No 732

****

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

Summary of proprietor(s)
Lot 21 DP 1216618

Year	Proprietor(s)
	(Lot 21 DP 1216618)
2017 – todate	Vicary Pty Limited
2017 – 2017	Tradelink Pty Limited *(previously known as Crane Distribution Limited)*
	(Lot 2 DP 747153)
2017 – 2017	Tradelink Pty Limited *(previously known as Crane Distribution Limited)*
2008 – 2017	Crane Distribution Limited *(previously known as G.E.Crane and Sons Limited)*
1987 – 2008	G.E.Crane and Sons Limited
	(Lot 122 DP 568713 – CTVol 12505 Fol 65)
1974 – 1987	G.E.Crane and Sons Limited
	(Lot 12 DP 538576 – CTVol 11187 Fol 152)
1969 – 1974	G.E.Crane and Sons Limited
	(Lot 2 DP 213446 – CTVol 9294 Fol 86)
1962 – 1969	G.E.Crane and Sons Limited
	(Lot X DP 164075 – Area 112 Acres 1 Rood 23 ½ Perches – CTVol 8232 Fol 27)
1961 – 1962	G.E.Crane and Sons Limited
1961 – 1961	Hector Peter Joseph Smart, retired timber merchant
1961 – 1961	Arthur Lindsay Stanton, farmer
	(Part Portion 89 Parish Castlereagh – Area 98 Acres – Conv Bk 1553 No. 812)
1929 – 1961	Wilfred Joseph Stanton, farmer
	(Part Portion 89 Parish Castlereagh – Area 98 Acres – Conv Bk 1254 No. 268)
1921 – 1929	Albert Victor Rose, farmer
1912 – 1921	John Reginald Hamilton, farmer / executor and trustee Robert Hamilton, estate
	(Part Portion 89 Parish Castlereagh – Conv Bk 1254 No. 268)
1889 – 1912	Robert Hamilton, farmer

****

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

Note 3:

Current Search

Folio Identifier 8/1087962 (title attached)
DP 1087962 (plan attached)
Dated 18th July 2018
Registered Proprietor:
SHARSAY PTY LIMITED
TERAVARN PTY LIMITED

Title Tree
Lot 8 DP 1087962

Folio Identifier 8/1087962

Folio Identifier 2/1059939

PA 81395

Conveyance Book 2968 No. 979

Conveyance Book 2345 No. 438

Conveyance Book 2213 No. 182

Conveyance Book 2213 No 181

Conveyance Book 2037 No. 194

Conveyance Book 1197 No 690

****

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Summary of proprietor(s)
Lot 8 DP 1087962

Year	Proprietor(s)
	(Lot 8 DP 1087962)
2006 – todate	Sharsay Pty Limited Teravarn Pty Limited
2006 – 2006	Ostaday Pty Limited Sharsay Pty Limited Teravarn Pty Limited
2006 – 2006	Penamatta Pty Limited
	(Lot 2 DP 1059939)
2004 – 2006	Penamatta Pty Limited
2004 – 2004	Peter Murphy Campbell Mark, medical practitioner Upland Trust Limited
	(Part Portion 89 Parish Castlereagh – Area 44 Acres 2 Roods 4 Perches – Conv Book 2968 No. 979)
1970 – 2004	Peter Murphy Campbell Mark, medical practitioner Upland Trust Limited
1956 – 1970	Richard Evelyn Dunn, medical practitioner / executor Evelyn Caroline Letitia Dunn, widow / executor William Alexander Dunn, estate
	(Part Portion 89 Parish Castlereagh – Area 44 Acres 2 Roods 4 Perches – Conv Book 2345 No. 438)
1955 – 1956	William Alexander Dunn, medical practitioner
	(Part Portion 89 Parish Castlereagh and other land – Conv Book 2213 No. 182)
1952 – 1955	Gilbert Rivett, farmer
	(Part Portion 89 Parish Castlereagh and other land – Conv Book 2213 No. 181)
1952 – 1952	Charles Dunston, farmer
	(Part Portion 89 Parish Castlereagh and other land – Conv Book 2037 No. 194)
1947 – 1952	Michael Omeros, farmer
	(Part Portion 89 Parish Castlereagh and other land – Conv Book 1197 No. 690)
1920 – 1947	Frederick Powell, farmer

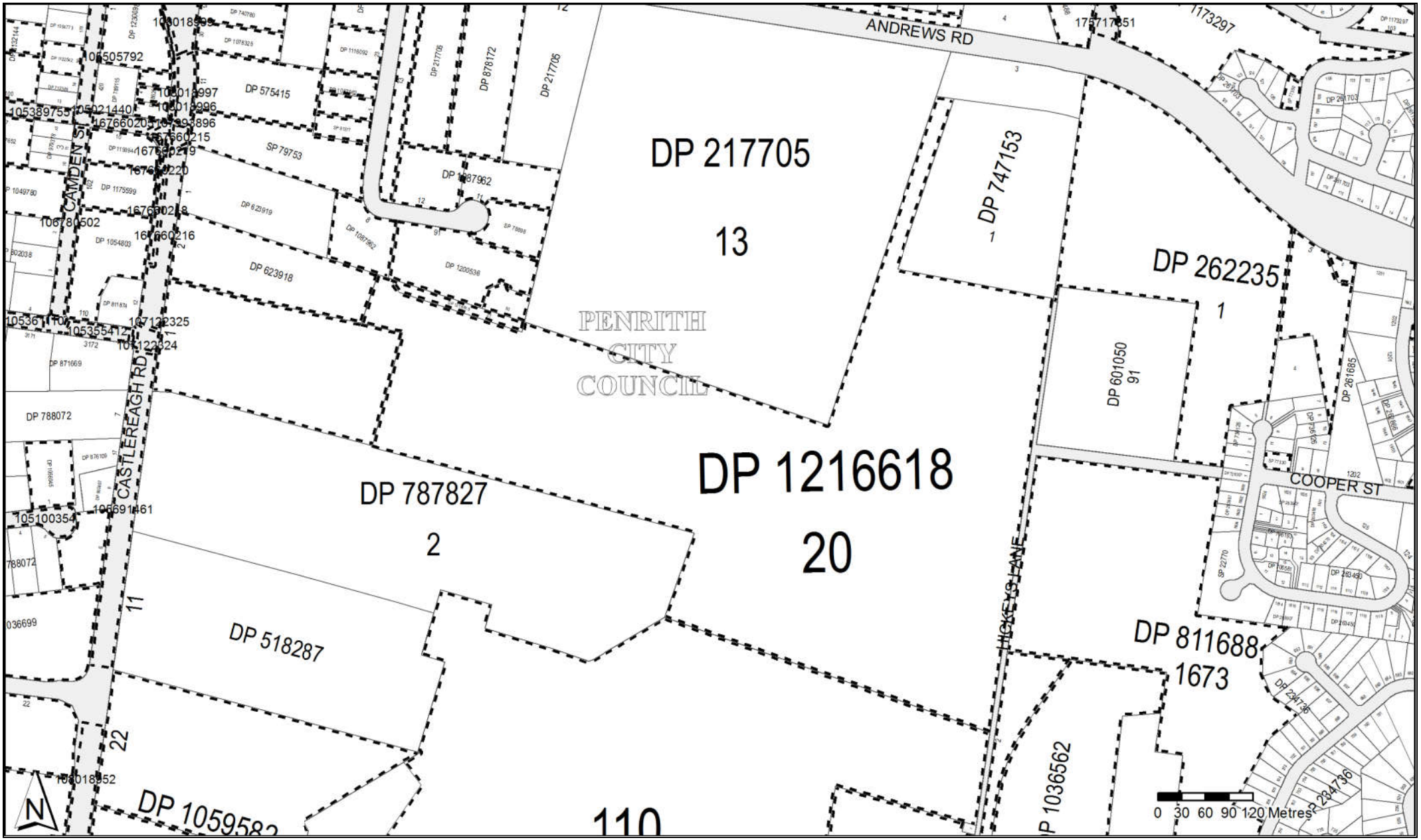
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Cadastral Records Enquiry Report : Lot 20 DP 1216618

Ref : NOUSER

Locality : PENRITH
Parish : CASTLEREAGH
LGA : PENRITH
County : CUMBERLAND



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Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

	Status	Surv/Comp	Purpose
DP217705			
Lot(s): 9			
DP1071052	REGISTERED	COMPILATION	EASEMENT
DP262235			
Lot(s): 1, 5, 6			
DP1151893	REGISTERED	SURVEY	EASEMENT
DP270488			
Lot(s): 58			
DP223423	HISTORICAL	SURVEY	SUBDIVISION
DP224880	HISTORICAL	SURVEY	SUBDIVISION
DP270488	HISTORICAL	SURVEY	COMMUNITY SUBDIVISION PLAN
DP270488	HISTORICAL	SURVEY	COMMUNITY PLAN
DP345997	HISTORICAL	COMPILATION	UNRESEARCHED
DP384263	HISTORICAL	SURVEY	UNRESEARCHED
DP558752	HISTORICAL	SURVEY	OLD SYSTEM CONVERSION
DP607526	HISTORICAL	COMPILATION	SUBDIVISION
DP652365	HISTORICAL	COMPILATION	DEPARTMENTAL
DP700376	HISTORICAL	SURVEY	SUBDIVISION
DP828400	HISTORICAL	SURVEY	SUBDIVISION
DP855766	HISTORICAL	SURVEY	PRIMARY APPLN NON SUBDIVISION
DP859890	HISTORICAL	SURVEY	RESUMPTION OR ACQUISITION
DP863848	HISTORICAL	SURVEY	DELIMITATION
DP865145	HISTORICAL	SURVEY	REDEFINITION
DP878783	HISTORICAL	SURVEY	SUBDIVISION
DP1007117	HISTORICAL	SURVEY	SUBDIVISION
DP1008929	HISTORICAL	SURVEY	SUBDIVISION
DP1054495	HISTORICAL	SURVEY	SUBDIVISION
DP1063926	HISTORICAL	SURVEY	SUBDIVISION
DP1077823	HISTORICAL	SURVEY	CONSOLIDATION
DP1082423	HISTORICAL	SURVEY	SUBDIVISION
DP1091493	HISTORICAL	SURVEY	SUBDIVISION
DP286568			
Lot(s): 1, 3			
DP223423	HISTORICAL	SURVEY	SUBDIVISION
DP224880	HISTORICAL	SURVEY	SUBDIVISION
DP270488	HISTORICAL	SURVEY	COMMUNITY SUBDIVISION PLAN
DP270488	HISTORICAL	SURVEY	COMMUNITY PLAN
DP345997	HISTORICAL	COMPILATION	UNRESEARCHED
DP384263	HISTORICAL	SURVEY	UNRESEARCHED
DP558752	HISTORICAL	SURVEY	OLD SYSTEM CONVERSION
DP607526	HISTORICAL	COMPILATION	SUBDIVISION
DP652365	HISTORICAL	COMPILATION	DEPARTMENTAL
DP700376	HISTORICAL	SURVEY	SUBDIVISION
DP828400	HISTORICAL	SURVEY	SUBDIVISION
DP855766	HISTORICAL	SURVEY	PRIMARY APPLN NON SUBDIVISION
DP859890	HISTORICAL	SURVEY	RESUMPTION OR ACQUISITION
DP863848	HISTORICAL	SURVEY	DELIMITATION
DP865145	HISTORICAL	SURVEY	REDEFINITION
DP878783	HISTORICAL	SURVEY	SUBDIVISION
DP1007117	HISTORICAL	SURVEY	SUBDIVISION
DP1008929	HISTORICAL	SURVEY	SUBDIVISION
DP1054495	HISTORICAL	SURVEY	SUBDIVISION
DP1063926	HISTORICAL	SURVEY	SUBDIVISION
DP1077823	HISTORICAL	SURVEY	CONSOLIDATION
DP1082423	HISTORICAL	SURVEY	SUBDIVISION
DP1091493	HISTORICAL	SURVEY	SUBDIVISION

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	Status	Surv/Comp	Purpose
DP575415			
Lot(s): 11			
DP1078325	REGISTERED	SURVEY	REDEFINITION
DP623918			
Lot(s): 2			
DP1148504	REGISTERED	SURVEY	EASEMENT
DP735733			
Lot(s): 1			
DP1036699	REGISTERED	SURVEY	SUBDIVISION
DP1061146	REGISTERED	SURVEY	EASEMENT
DP740780			
Lot(s): 14			
DP1078328	REGISTERED	SURVEY	EASEMENT
DP774782			
Lot(s): 110			
DP1092625	REGISTERED	SURVEY	EASEMENT
DP1151893	REGISTERED	SURVEY	EASEMENT
DP785029			
Lot(s): 2			
DP1151893	REGISTERED	SURVEY	EASEMENT
DP787827			
Lot(s): 1			
DP1122705	REGISTERED	SURVEY	EASEMENT
DP1236071	REGISTERED	SURVEY	EASEMENT
DP1237893	REGISTERED	SURVEY	EASEMENT
DP788072			
Lot(s): 6			
DP1054804	REGISTERED	SURVEY	LEASE
DP811688			
Lot(s): 1673			
DP1151893	REGISTERED	SURVEY	EASEMENT
DP862636			
Lot(s): 3, 4, 5			
DP1067633	REGISTERED	COMPILATION	EASEMENT
DP878172			
Lot(s): 1011			
DP1064123	REGISTERED	SURVEY	EASEMENT
DP1009248			
Lot(s): 11, 12, 13			
DP612217	HISTORICAL	COMPILATION	SUBDIVISION
DP1036562			
Lot(s): 1			
DP1237888	PRE-ALLOCATED	UNAVAILABLE	SUBDIVISION
Lot(s): 2			
DP1151893	REGISTERED	SURVEY	EASEMENT
DP1036699			
Lot(s): 21			
DP1133431	REGISTERED	COMPILATION	EASEMENT
Lot(s): 22			
DP1057814	REGISTERED	SURVEY	EASEMENT
DP1057815	REGISTERED	SURVEY	LEASE
Lot(s): 21, 22			
DP735733	HISTORICAL	SURVEY	SUBDIVISION
DP1049780			
Lot(s): 5			
DP160477	HISTORICAL	SURVEY	UNRESEARCHED
DP979378	HISTORICAL	COMPILATION	UNRESEARCHED
DP1216494	REGISTERED	COMPILATION	EASEMENT
PA81214 - LOT 5 DP1049780			

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	Status	Surv/Comp	Purpose
DP1054803			
Lot(s): 110			
DP811874	HISTORICAL	SURVEY	SUBDIVISION
DP996358	HISTORICAL	COMPILATION	DEPARTMENTAL
DP1042745	HISTORICAL	SURVEY	DELIMITATION
DP1056045			
Lot(s): 1			
DP802407	HISTORICAL	SURVEY	SUBDIVISION
DP876109	HISTORICAL	SURVEY	SUBDIVISION
DP1059582			
Lot(s): 21, 22			
DP747116	HISTORICAL	SURVEY	OLD SYSTEM CONVERSION
Lot(s): 22			
DP220503	HISTORICAL	SURVEY	SUBDIVISION
DP1077652			
Lot(s): 567			
DP979378	HISTORICAL	COMPILATION	UNRESEARCHED
PA81761 - LOT 567 DP1077652			
DP1078325			
Lot(s): 30			
DP1040817	HISTORICAL	COMPILATION	LIMITED FOLIO CREATION
DP1078328	REGISTERED	SURVEY	EASEMENT
DP1087962			
Lot(s): 1			
DP1186149	REGISTERED	COMPILATION	EASEMENT
Lot(s): 8			
DP1148504	REGISTERED	SURVEY	EASEMENT
DP1236071	REGISTERED	SURVEY	EASEMENT
Lot(s): 12			
DP1134079	REGISTERED	COMPILATION	EASEMENT
Lot(s): 5			
DP1122157	REGISTERED	COMPILATION	EASEMENT
Lot(s): 1, 4, 5, 8, 11, 12, 13			
DP1059939	HISTORICAL	SURVEY	OLD SYSTEM CONVERSION
DP1116092			
Lot(s): 23			
DP1059939	HISTORICAL	SURVEY	OLD SYSTEM CONVERSION
DP1087962	HISTORICAL	SURVEY	SUBDIVISION
DP1122542			
Lot(s): 56			
DP979378	HISTORICAL	COMPILATION	UNRESEARCHED
DP1132144	REGISTERED	SURVEY	SUBDIVISION
DP1226912	REGISTERED	COMPILATION	EASEMENT
DP1226913	REGISTERED	COMPILATION	EASEMENT
DP1132144			
Lot(s): 100, 101			
DP979378	HISTORICAL	COMPILATION	UNRESEARCHED
DP1173297			
Lot(s): 103			
DP261489	HISTORICAL	SURVEY	SUBDIVISION
DP261703	HISTORICAL	SURVEY	SUBDIVISION
DP261705	HISTORICAL	SURVEY	SUBDIVISION
DP262126	HISTORICAL	SURVEY	SUBDIVISION
DP262762	HISTORICAL	SURVEY	SUBDIVISION
DP700376	HISTORICAL	SURVEY	SUBDIVISION
DP1173296	HISTORICAL	SURVEY	SUBDIVISION

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Document Set ID: 8449097
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	Status	Surv/Comp	Purpose
DP1175599			
Lot(s): 102			
DP999581	HISTORICAL	COMPILATION	DEPARTMENTAL
DP1183248	REGISTERED	COMPILATION	EASEMENT
DP1193944			
Lot(s): 10			
DP862636	HISTORICAL	SURVEY	ROADS ACT, 1993
DP999581	HISTORICAL	COMPILATION	DEPARTMENTAL
DP1175599	HISTORICAL	SURVEY	SUBDIVISION
DP1200536			
Lot(s): 91			
DP1202795	WITHDRAWN	UNAVAILABLE	SUBDIVISION
DP1245002	UNREGISTERED	COMPILATION	CONSOLIDATION
Lot(s): 90, 91			
DP1059939	HISTORICAL	SURVEY	OLD SYSTEM CONVERSION
DP1087962	HISTORICAL	SURVEY	SUBDIVISION
DP1216618			
Lot(s): 21			
DP1245002	UNREGISTERED	COMPILATION	CONSOLIDATION
Lot(s): 20, 21			
DP747153	HISTORICAL	SURVEY	SUBDIVISION
DP1236071	REGISTERED	SURVEY	EASEMENT
DP1230098			
Lot(s): 1			
DP616419	HISTORICAL	SURVEY	OLD SYSTEM CONVERSION
DP1034518	HISTORICAL	SURVEY	CONSOLIDATION
Road			
Polygon Id(s): 175717851			
DP1122133	REGISTERED	SURVEY	SURVEY INFORMATION ONLY
SP71874			
DP262866	HISTORICAL	SURVEY	SUBDIVISION
DP1062982	HISTORICAL	SURVEY	REDEFINITION
SP77330			
DP736126	HISTORICAL	SURVEY	SUBDIVISION
DP1099586	HISTORICAL	SURVEY	REDEFINITION
SP77350			
DP261703	HISTORICAL	SURVEY	SUBDIVISION
DP1100344	HISTORICAL	SURVEY	REDEFINITION
SP78898			
DP1059939	HISTORICAL	SURVEY	OLD SYSTEM CONVERSION
DP1087962	HISTORICAL	SURVEY	SUBDIVISION
SP79753			
DP1059939	HISTORICAL	SURVEY	OLD SYSTEM CONVERSION
DP1087962	HISTORICAL	SURVEY	SUBDIVISION
SP91377			
DP1059939	HISTORICAL	SURVEY	OLD SYSTEM CONVERSION
DP1087962	HISTORICAL	SURVEY	SUBDIVISION
Road			
Polygon Id(s): 108018952			
DP1064593	REGISTERED	SURVEY	SURVEY INFORMATION ONLY
EX-SUR 89/57 DP122889			
Polygon Id(s): 105100354, 105355412, 105361110, 105571276, 105691461, 107122324, 167660216			
EX-SUR 98/23 DP133202			
Polygon Id(s): 105021440, 105355412, 105361110, 105389755, 105505792, 105571276, 105691461, 106780502, 107122324, 107122325, 107993896, 108018996, 108018997, 108018998, 108018999, 167660205, 167660215, 167660216, 167660218, 167660219, 167660220			
EX-SUR 84/02 DP450869			

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Plan	Surv/Comp	Purpose
DP217705	SURVEY	SUBDIVISION
DP219157	SURVEY	RESUMPTION OR ACQUISITION
DP221442	SURVEY	SUBDIVISION
DP234736	SURVEY	SUBDIVISION
DP261489	SURVEY	SUBDIVISION
DP261685	SURVEY	SUBDIVISION
DP261703	SURVEY	SUBDIVISION
DP261705	SURVEY	SUBDIVISION
DP261811	SURVEY	SUBDIVISION
DP262235	SURVEY	SUBDIVISION
DP262866	SURVEY	SUBDIVISION
DP263450	SURVEY	SUBDIVISION
DP263907	SURVEY	SUBDIVISION
DP270488	SURVEY	COMMUNITY PLAN
DP270488	SURVEY	COMMUNITY REPLACEMENT SHEET
DP270488	SURVEY	COMMUNITY ADDITIONAL SHEET
DP270488	SURVEY	COMMUNITY BOUNDARY ADJUSTMENT PLAN
DP270488	SURVEY	COMMUNITY SUBDIVISION PLAN
DP286568	SURVEY	NEIGHBOURHOOD PLAN
DP286568	UNRESEARCHED	NEIGHBOURHOOD PLAN
DP518287	SURVEY	SUBDIVISION
DP573215	SURVEY	SUBDIVISION
DP575415	SURVEY	OLD SYSTEM CONVERSION
DP595931	COMPILATION	CONSOLIDATION
DP601050	SURVEY	SUBDIVISION
DP623918	SURVEY	OLD SYSTEM CONVERSION
DP623919	SURVEY	OLD SYSTEM CONVERSION
DP703448	SURVEY	SUBDIVISION
DP706193	SURVEY	SUBDIVISION
DP706581	SURVEY	SUBDIVISION
DP712385	COMPILATION	DEPARTMENTAL
DP729357	COMPILATION	CROWN FOLIO CREATION
DP733582	SURVEY	OLD SYSTEM CONVERSION
DP735733	SURVEY	SUBDIVISION
DP736126	SURVEY	SUBDIVISION
DP740780	SURVEY	SUBDIVISION
DP747153	SURVEY	SUBDIVISION
DP774782	SURVEY	SUBDIVISION
DP785029	SURVEY	RESUMPTION OR ACQUISITION
DP787827	SURVEY	SUBDIVISION
DP788072	SURVEY	SUBDIVISION
DP789115	SURVEY	OLD SYSTEM CONVERSION
DP802038	SURVEY	SUBDIVISION
DP802406	SURVEY	SUBDIVISION
DP802407	SURVEY	SUBDIVISION
DP811688	SURVEY	SUBDIVISION
DP811874	SURVEY	SUBDIVISION
DP854270	SURVEY	SUBDIVISION
DP862636	SURVEY	ROADS ACT, 1993
DP871669	SURVEY	SUBDIVISION
DP876109	SURVEY	SUBDIVISION
DP878172	SURVEY	CONSOLIDATION
DP979378	COMPILATION	UNRESEARCHED
DP1004773	SURVEY	CONSOLIDATION
DP1009248	SURVEY	SUBDIVISION
DP1036562	SURVEY	ROADS ACT, 1993
DP1036699	SURVEY	SUBDIVISION
DP1049780	SURVEY	OLD SYSTEM CONVERSION
DP1054803	SURVEY	CONSOLIDATION
DP1056045	SURVEY	CONSOLIDATION
DP1059582	SURVEY	SUBDIVISION
DP1077652	SURVEY	OLD SYSTEM CONVERSION
DP1078325	SURVEY	REDEFINITION
DP1087962	SURVEY	SUBDIVISION

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Plan	Surv/Comp	Purpose
DP1116092	COMPILATION	CONSOLIDATION
DP1122542	SURVEY	CONSOLIDATION
DP1132144	SURVEY	SUBDIVISION
DP1132144	UNRESEARCHED	SUBDIVISION
DP1173297	SURVEY	SUBDIVISION
DP1173297	UNRESEARCHED	SUBDIVISION
DP1175599	SURVEY	SUBDIVISION
DP1193944	SURVEY	SUBDIVISION
DP1200536	SURVEY	LEASE
DP1216618	SURVEY	SUBDIVISION
DP1216618	UNRESEARCHED	SUBDIVISION
DP1230098	SURVEY	CONSOLIDATION
SP22770	COMPILATION	STRATA PLAN
SP71874	COMPILATION	STRATA PLAN
SP77330	COMPILATION	STRATA PLAN
SP77350	COMPILATION	STRATA PLAN
SP78898	COMPILATION	STRATA PLAN
SP79753	COMPILATION	STRATA PLAN
SP91377	COMPILATION	STRATA PLAN

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Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

Req:R489812 /Doc:CT 09294-086 CT /Rev:19-Jun-2008 /Sts:SC.OK /Prt:19-Jul-2011 18:28 /Pgs:ALL /Seq:1 of 2
Ref:ALS /Src:T

M

NEW SOUTH WALES

(For Grant and title reference prior to first edition see Deposited Plan.)

[redacted]TIFICATE OF TITLE

[redacted]PERTY ACT, 1900, as amended.

Vol. 9294 Fol. 86

CANCELLED

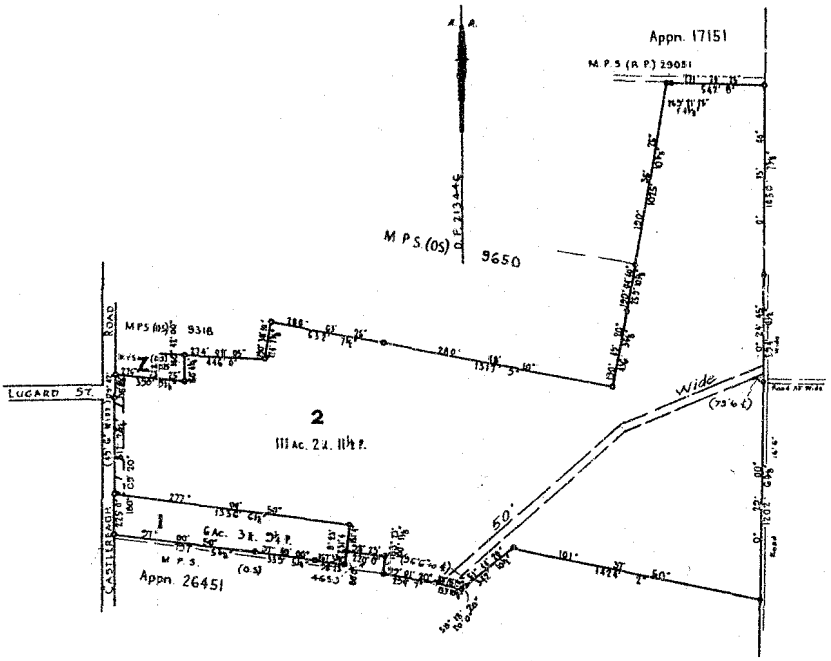
1st Edition issued 19-10-1962.

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness R. Brown

Registrar-General.

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO.

Estate in Fee Simple in Lot 2 in Deposited Plan 213446 at Penrith in the City of Penrith Parish of Castlereagh and County of Cumberland.

FIRST SCHEDULE (Continued overleaf)

G. E. CRANE & SONS LIMITED.

Registrar General.

SECOND SCHEDULE (Continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant(s) referred to in the said Deposited Plan.

Registrar General.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.

Fol. 86 9294 (Page 1) Vol.

Document Set ID: 8449097
Version: 1, Version Date: [redacted]

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED.

70929 1 62 ST 160F V. C. N. BLIGHT, GOVERNMENT PRINTER

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
This deed is cancelled as to the whole New Certificates of Title have issued on 19-11-1968 for lots in Deposited Plan No 538576 as follows:- Lots 11 & 12 Vol. 11187 Fols 151 & 152 respectively. REGISTRAR GENERAL					

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION
Transfer	J303766	28-2-1963	Easement for electricity transmission (as more fully set out in the said instrument) affecting the piece of land 50 feet wide shown in the plan hereon.	7-5-1963		
Resumption	K897671		the land shown hatched black in the plan hereon is public road vested in The Council of the City of Penrith.	17-1-1968		

FORM 9087 184A

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED

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Req:R489812 /Doc:CT 09294-086 CT /Rev:19-Jun-2008 /Sts:SC.OK /Prt:19-Jul-2011 18:28 /Pgs:ALL /Seq:2 of 2
ALS /Src:T
Page 2 of 2 pages)
Document Set ID: 4
Version: 1, Version Date: 05/11/2018

Req:R489810 /Doc:CT 11187-152 CT /Rev:19-Jun-2008 /Sts:SC.OK /Prt:19-Jul-2011 18:27 /Pgs:ALL /Seq:1 of 2
Ref:ALS /Src:T

NEW SOUTH WALES

CERTIFICATE OF TITLE

REAL PROPERTY ACT, 1900, as amended.

Application No. 40565
Prior Title Volume 9294 Folio 86

Vol. 11187 Fol. 152

CANCELLED

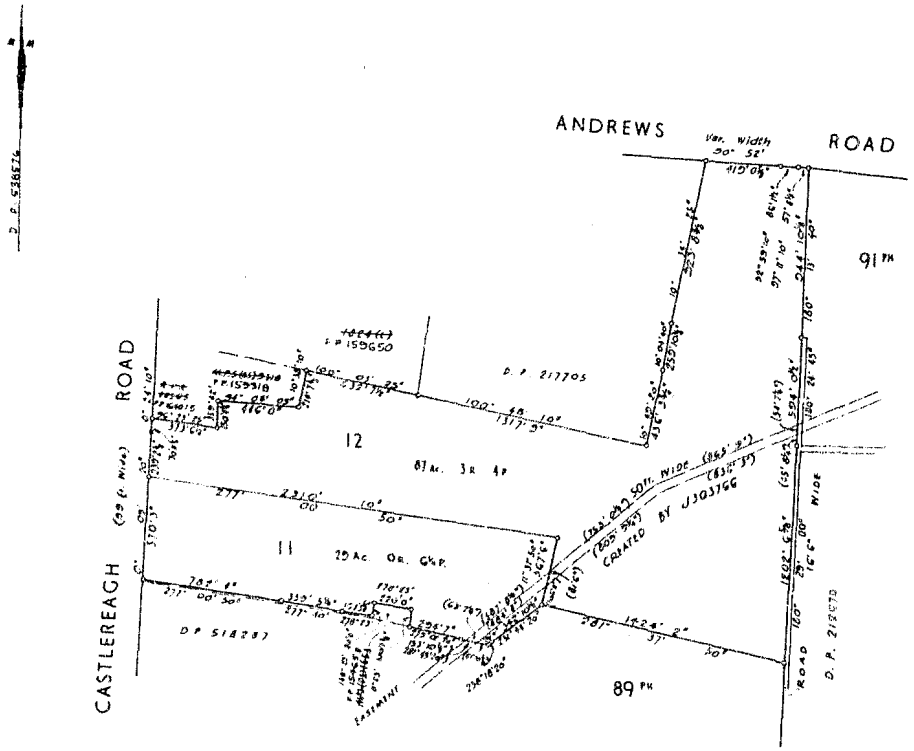
Edition issued 19-11-1969

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness

Registrar General.

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 12 in Deposited Plan 538576 at Cranebrook in the City of Penrith Parish of Castlereagh and County of Cumberland being part of Portion 49 granted to William Neal Chapman on 10-2-1804.

FIRST SCHEDULE

G. E. CRANE & SONS LIMITED.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. Easement for Transmission Line created by Transfer No. J303766 affecting the piece of land 50 feet wide shown in the plan hereon.

Registrar General

(Page 1) Vol. 11187 Fol. 152

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED.

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
Corporation of DP568713 Municipality of Hornsby					

This deed is cancelled as to the whole

New Certificates of Title have issued on 29.7.1974

for lots in Deposited Plan No. 568713 as follows:-

Lots 121 & 122 Vol. 12505 Fol. 64 & 65 respectively.

REGISTRAR GENERAL

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION
			Interests created pursuant to Section 88B Conveyancing Act, 1919 by registration of Deposited Plan 568713			

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

9 29 67

CT 28-1-74

DP568713
J 19/7/74
N807684 Te
Sot 121 DP568713

Req:R489810 /Doc:CT 11187-152 CT /Rev:19-Jun-2008 /Sts:SC.OK /Prt:19-Jul-2011 18:27 /Pgs:ALL /Seq:2 of 2
Ref:ALS /Src:TE 4 of 4 pages)
Vol. 11187 Fol. 152
Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

Req:R939959 /Doc:CT 12505-065 CT /Rev:18-Jun-2008 /Sts:SC.OK /Pgs:ALL /Prt:18-Jul-2018 15:45 /Seq:1 of 2
Ref:advlegs /Src:P

CERTIFICATE OF TITLE

NEW SOUTH WALES

PROPERTY ACT, 1900

Vol. 12505 Fol. 65

Appln No.40565

Prior Title Vol.11187 Fol.152

Edition 1 issued 29-7-1974.

CANCELLED

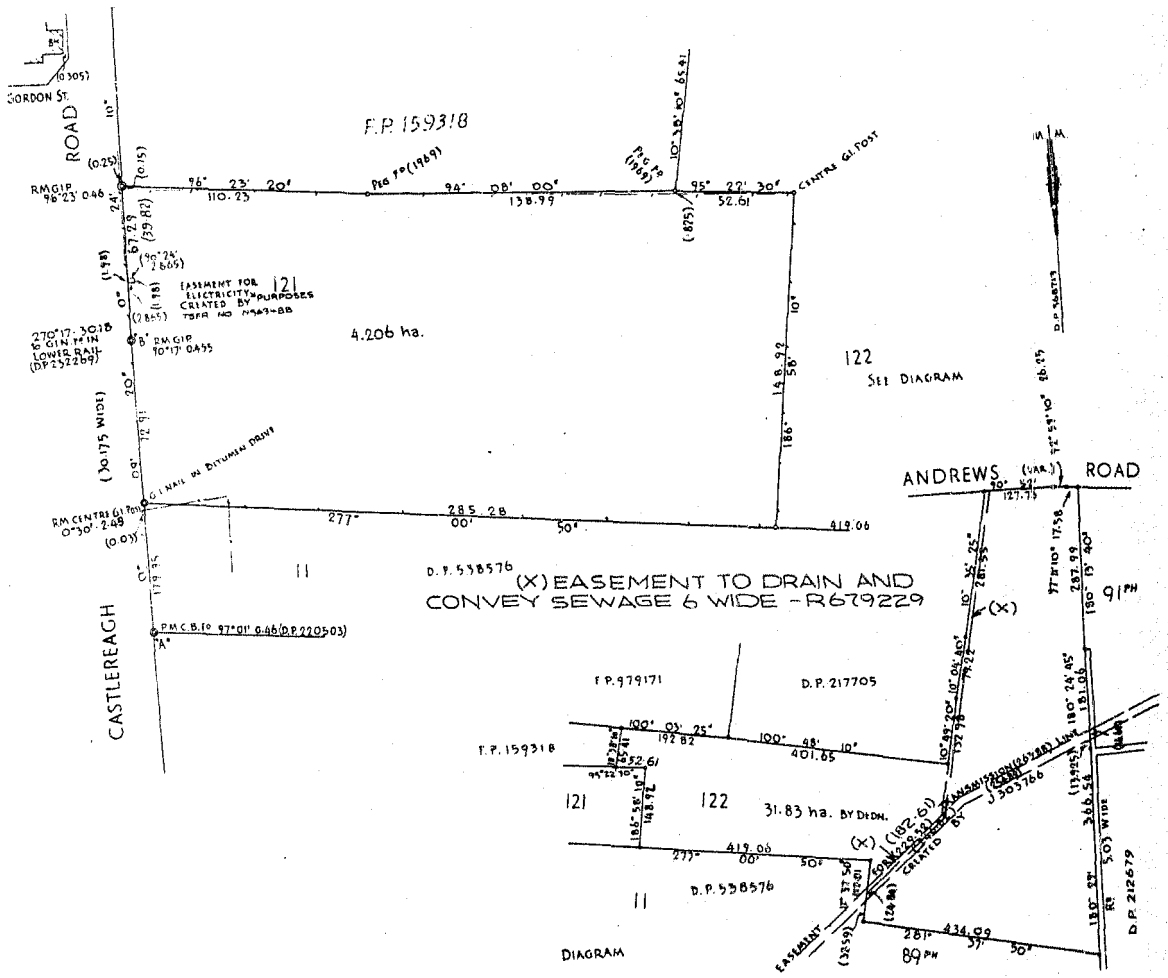
(Page 1) Vol. 12505 Fol. 65

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Registrar General.

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 122 in Deposited Plan 568713 at Cranebrook in the City of Penrith Parish of Castlereagh and County of Cumberland being part of Portion 89 granted to William Neale Chapman on 10-2-1804.

FIRST SCHEDULE

G.E. CRANE & SONS LIMITED.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. Easement for Transmission Line created by Transfer No.J303766 affecting the part of the land above described shown as "Easement for Transmission Line created by J303766" in the plan hereon.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED.

Req:R939959 /Doc:CT 12505-065 CT /Rev:18-Jun-2008 /Sts:SC.OK /Pgs:ALL /Prt:18-Jul-2018 15:45 /Seq:2 of 2
Ref:advlegs /Src:P 2 pages)

Vol. 12505 Fol. 065

CT 19/7/79
~~DP 747153~~
R679229 to G.
CT 29.5.80
S248333M
V776583 to HR
W460868 R.
DP747153R

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
DP/~~SP~~ 747153 Registered -1 JUL 1987 This folio is cancelled as to whole/~~part~~ upon creation of computer folios for lots 1-3 in the abovementioned plan.					

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
Transfer	R679229	———	Easement to drain and convey sewage affecting the land shown so burdened in the plan hereon	1-9-1980				
~~Mortgage~~	~~S248333~~	———	~~to Bank of New South W~~	~~15-1-1981~~		Discharged	V776583	
W460868 Caveat by Containers Limited.			Registered 13-8-1985.					
			Interests created pursuant to Section 88B Conveyancing Act, 1919 by the registration of DP 747153 Registered 30-6-1987					

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

Form: 01T
Licence: 01-05-025
Licensee: Burston Cole & Mulock

TRANSFER

New South Wales
Real Property Act 1900

AC119931K

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises th
required by this form for the establishment and maintenance of the Real Property
Register is made available to any person for search upon payment of a fee, if any.

STAMP DUTY Office of State Revenue use only

NSW Treasury
Client No: 3059859 657
Duty: $2— Trans No: 32749138
Asst details:

(A) TORRENS TITLE If appropriate, specify the part transferred
8/1087962 D

(B) LODGED BY

Delivery Box	Name, Address or DX and Telephone	CODES
256L	LLPN 123167 X CITY AGENTS DX 12[illegible] SYDNEY 02 9232 2077 Reference (optional): BCM 178	T TW (Sheriff)

(C) TRANSFEROR PENAMATTA PTY LIMITED ACN 105 178 452

(D) CONSIDERATION The transferor acknowledges receipt of the consideration of $1,658,800.00 and as regards
(E) ESTATE the land specified above transfers to the transferee an estate in fee simple.
(F) SHARE TRANSFERRED

(G) Encumbrances (if applicable):

(H) TRANSFEREE Ostaday Pty Limited ACN 003 607 770 as to 50% share, Sharsay Pty Limited ACN082 640 079 as to 25% share and Teravarn Pty Limited ACN082 657 298 as to 25% share

(I) **TENANCY:** Tenants in Common

DATE

(J) Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the corporation named below by the authorised person(s) whose signature(s) appears(s) below pursuant to the authority specified.
Corporation: Penamatta Pty Limited ACN 105 178 452
Authority: section 127 of the Corporations Act 2001

Signature of authorised person:

Name of authorised person: Mark Griese
Office held: Sole Director/Secretary

Signature of authorised person: M Griese

Name of authorised person: MARK JULIAN GRIESE
Office held: SOLE DIRECTOR/SECRETARY

Certified correct for the purposes of the Real Property Act 1900 by the person whose signature appears below.

Signature: M L

Signatory's name: Mary Leis
Signatory's capacity: Licensed Conveyancer for the Transferee

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

Form: 10CN
Release: 2.3
www.lands.nsw.gov.au

CHANGE OF NAME

New South Wales
Real Property Act 1900

AE157840X

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

(A) **FOLIO OF THE REGISTER**: 2/747153

(B) **REGISTERED DEALING**

Number	Folio of the Register

(C) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and LLPN if any	CODE
1W	Landpartners Limited DX 8278 PARRAMATTA Reference:	CN

(D) **REGISTERED PROPRIETOR**: Whose name is to be changed; show the name as it currently appears on the folio of the Register
G.E.Crane and Sons Limited ϕ

(E) **NEW NAME**: Of the above registered proprietor in full
Crane Distribution Limited ϕ

(F) The registered proprietor of the above folio of the Register applies to have our new name recorded in the Register in respect of that folio of the Register

(G) **STATUTORY DECLARATION BY THE APPLICANT** *

I. GREGORY KEITH OXLEY
solemnly and sincerely declare that—

1. I am the consulting surveyor for the registered proprietor
2. The registered proprietor has registered a change of name with the Australian Securities Commission on twenty third day of December, 2007

I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act 1900, and

I certify this application to be correct for the purposes of the Real Property Act 1900.

Made and subscribed at Blacktown in the State of New South Wales
on 15th August 2008. in the presence of—

Signature of witness: D Hayward

Signature of applicant:

Name of witness: DANIELLE HAYWARD
Address of witness: 62 FLUSHCOMBE RD
BLACKTOWN 2148 JP 121157

Qualification of witness: ☑ Justice of the Peace ☐ Practising Solicitor ☐ Other qualified witness *[specify]*

* As the Department of Lands may not be able to provide the services of a justice of the peace or other qualified witness, the statutory declaration should be signed and witnessed prior to lodgment of the form at Land and Property Information Division.

ALL HANDWRITING MUST BE IN BLOCK CAPITALS.
0711

DEPARTMENT OF LANDS
LAND AND PROPERTY INFORMATION DIVISION

ϕASIC Search checked - ACN 000 003 832 20/8/08

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

PLAN FORM 2

PLAN DRAWING ONLY TO APPEAR IN THIS SPACE

*OFFICE USE ONLY

SIGNATURE AND SEALS ONLY.

Signed for and on behalf of Penrith City Limited in accordance with its Constitution and the Corporations Act by: (ACN 125 178 452)

M. Grieve
M.J. Grieve
Sole Director/Secretary

Signed on behalf of Sakkara Capital Investments Pty Ltd ACN 100 427 085

Director / Director/Secretary

EXECUTED for and on behalf of R.M.B. AUSTRALIA HOLDINGS LIMITED by: GREG GAY & ANDREW HARJU its attorney under power of attorney dated 12/9/2003 Registered 15/9/2003 (Book 4401. Registered No: 745)

EXECUTED for and on behalf of P3M PTY LIMITED ACN 105 145 720 by: ANDREW HARJU its attorney under power of attorney dated 3/11/04 Book 4442. Registered No. 305

WITNESSED BY GREG GAY LEVEL 13, 60 CASTLEREAGH ST SYDNEY.

Department of Lands Approval

I,..... (Authorised Officer) in approving this plan certify that all necessary approvals in regard to the allocation of the land shown hereon have been given.

Signature:.....

Date:.....

File Number:.....

Office:.....

Subdivison Certificate

I hereby certify that the provisions of s.109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to the proposed

SUBDIVISION * (insert "subdivision" or "new road") set out herein

David Lee
* Authorised Person/~~General Manager/Accredited Certifier~~

Consent Authority: Penrith City Council

Date of endorsement: 20/12/05

Accreditation no :

Subdivision Certificate no : 102/05

File no. DA04/0773

Note: When the plan is to be lodged electronically in the land Titles Office it should include a signature in an electronic or digital format approved by the Registrar-General.

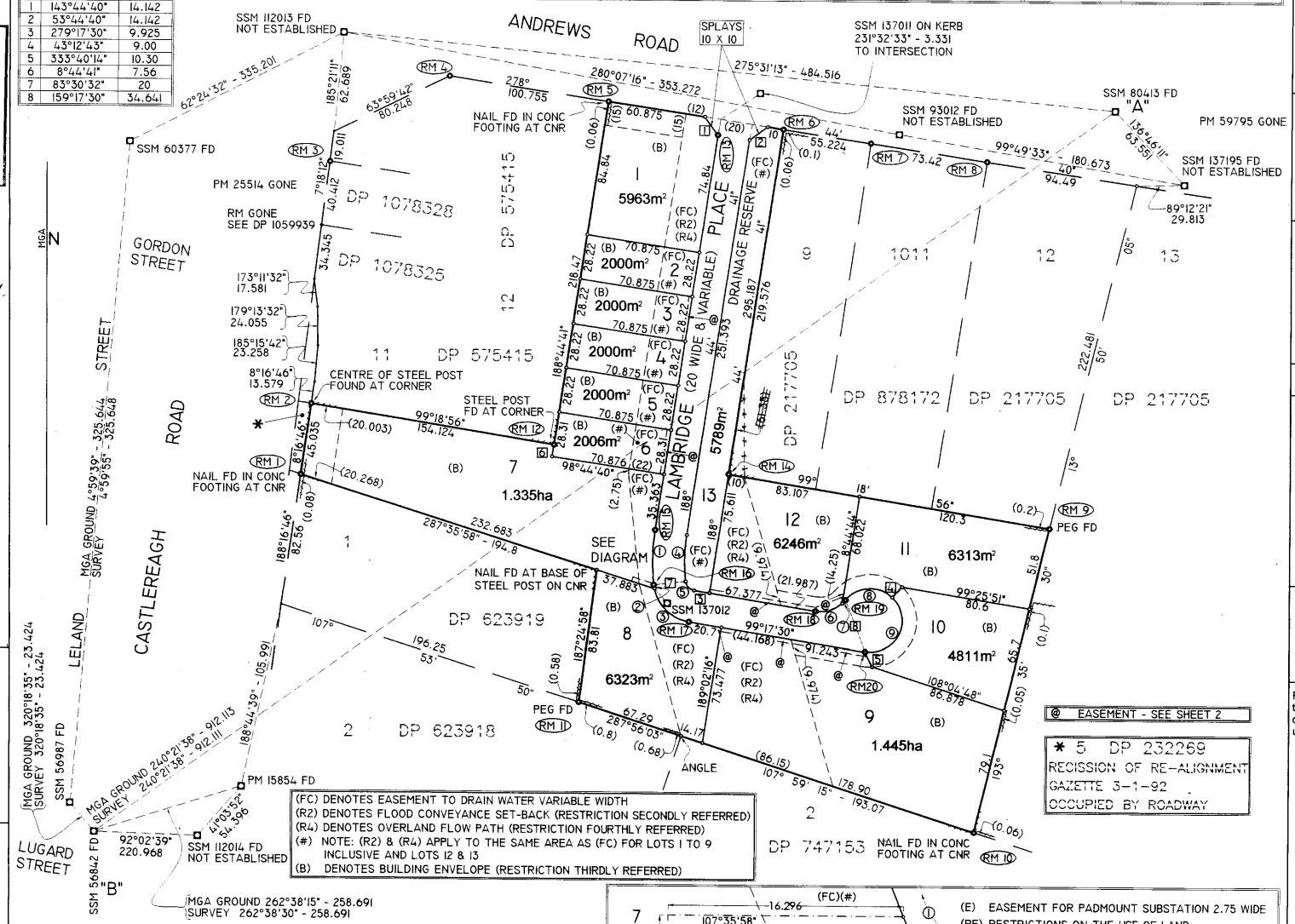
* Delete whichever is inapplicable

Document Set ID: 6449393
Version: 1, Version Date: 05/11/2018

TABLE OF CURVED LINES					
1	CHD	1°07'36"	34.467	R 130	A 34.569
2	CHD	350°58'38"	2.341	R 26.5	A 2.342
3	CHD	313°52'07"	30.078	R 26.5	A 31.985
4	CHD	181°07'36"	29.165	R 110	A 29.251
5	CHD	136°24'01"	7.843	R 6.5	A 8.42
6	CHD	73°31'57"	17.384	R 20	A 17.983
7	CHD	43°31'57"	2.958	R 20	A 2.961
8	CHD	86°15'07"	29.235	R 20	A 32.784
9	CHD	206°15'06"	38.26	R 20	A 50.991

TABLE OF SHORT LINES		
1	143°44'40"	14.142
2	53°44'40"	14.142
3	279°17'30"	9.925
4	43°12'43"	9.00
5	333°40'14"	10.30
6	8°44'41"	7.56
7	83°30'32"	20
8	159°17'30"	34.641

SCHEDULE OF REFERENCE MARKS												
RM 1	RM DH&W FD	DP 1059939	97°43'	3.59	RM 8	RM DH&W FD	DP 878172	191°04'	7.88	RM 15	RM DH&W	278°45' 3.365 & 16.575
"	RM GIP GONE				"	RM GIP FD	DP 700142	186°23'	0.46	RM 16	RM DH&W	263°30'30" 3.43 & 16.565
"	DH&W FD	ORIGIN UNKNOWN	90°02'	3.695	RM 9	RM DH&W FD	DP 1059939	187°34'	15.475	RM 17	RM DH&W	189°17'30" 3.46 & 16.555
RM 2	RM DH&W FD	DP 1059939	71°28'	4.5	"	RM DH&W FD	DP 1059939	120°01'	3.66	RM 18	RM DH&W	9°17'30" 3.375 & 16.645
RM 3	RM DH&W FD	DP 1078328	179°39'	13.095	RM 10	RM GIP FD	DP 1059939	186°42'	8.495	RM 19	RM DH&W	339°17'30" 3.795 & 30.725
RM 4	RM DH&W FD	DP 1059939	275°46'	5.245	RM 11	RM GIP		195°15'	1.815	RM 20	RM DH&W	206°15' 3.53 & 34.615
RM 5	RM DH&W FD	DP 1059939	89°44'	7.68	RM 12	RM GIP		9°30'	1.525			
RM 6	RM DH&W FD	DP 1059939	329°59'	2.055	RM 13	RM DH&W		278°45'	3.365 & 16.615			
RM 7	RM DH&W FD	DP 1059939	190°28'	7.89	RM 14	RM GIP		2°29'	1.37			
"	RM GIP FD	DP 700142	188°45'	0.465	"	RM DH&W		98°05'	23.375			



(FC) DENOTES EASEMENT TO DRAIN WATER VARIABLE WIDTH
(R2) DENOTES FLOOD CONVEYANCE SET-BACK (RESTRICTION SECONDLY REFERRED)
(R4) DENOTES OVERLAND FLOW PATH (RESTRICTION FOURTHLY REFERRED)
(#) NOTE: (R2) & (R4) APPLY TO THE SAME AREA AS (FC) FOR LOTS 1 TO 9 INCLUSIVE AND LOTS 12 & 13
(B) DENOTES BUILDING ENVELOPE (RESTRICTION THIRDLY REFERRED)

MGA CO-ORDINATES ZONE 56 SOURCE SCIMS 08/03/2005								
MARK	EASTING	NORTHING	CLASS	ORDER	CSF	AHD	CLASS	ORDER
PM 15854	286 357.204	6264 928.814	B	2	1.000 159	25.141	LB	L2
SSM 56842	286 100.605	6264 895.658	B	2	1.000 160	24.926	LB	L2
SSM 56987	286 085.639	6264 913.683	B	2	1.000 160	25.068	LB	L2
SSM 60377	286 113.992	6265 238.143	B	2	1.000 160	24.699	LB	L2
SSM 80413	286 893.497	6265 346.807	C	U	1.000 156	25.447	B	2

SSM 137012 TO SSM 137011 6°25'43" - 308.386
SSM 137011 TO SSM 80413 88°54'33" - 243.795

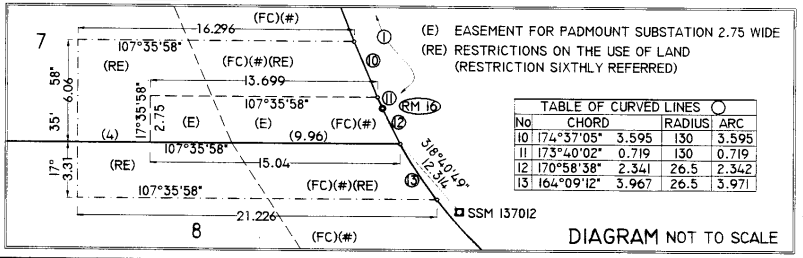


TABLE OF CURVED LINES				
No	CHORD		RADIUS	ARC
10	174°37'05"	3.595	130	3.595
11	173°40'02"	0.719	130	0.719
12	170°58'38"	2.341	26.5	2.342
13	164°09'12"	3.967	26.5	3.971

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

AMENDED ON SURVEYORS ADVICE WITH COUNCIL CONSENT TP 5/1/06

DP1087962

Registered 06.01.2006*

Title System: TORRENS

Purpose: SUBDIVISION

Ref. Map: U 6460 - 34

Last Plan: DP 1059939

PLAN OF SUBDIVISION OF LOTS 1 & 2 IN DP 1059939

Lengths are in metres. Reduction Ratio 1:2000

LGA: PENRITH

SUBURB/LOCALITY: PENRITH

PARISH: CASTLEREAGH

COUNTY: CUMBERLAND

This is sheet 1 of my plan in 2 sheets. (Delete if inapplicable)

Surveying Regulation 2001

I, MATTHEW CHARLES FREEBURN
OF 2 CASTLEREAGH STREET PENRITH 2750

a surveyor registered under the Surveying Act, 2002, hereby certify that the survey represented in this plan is accurate, has been made in accordance with the Surveying Regulation 2001 and was completed on 04/08/2005

The survey relates to subdivision of lots 1 & 2 in DP 1059939

(here specify the land actually surveyed, or specify any land shown in the plan that is not the subject of the survey)

(Signature) M. Freeburn Dated: 16/12/2005
Surveyor registered under the Surveying Act 2002

Datum Line: A-B
Type: Urban

Plans used in preparation of survey/compilation.

DP 1059939

PANEL FOR USE ONLY for statements of intention to dedicate public roads, to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.

PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919 - 1964 IT IS INTENDED TO CREATE:-

1 EASEMENT TO DRAIN WATER VARIABLE WIDTH
2 RESTRICTIONS ON THE USE OF LAND
3 RESTRICTIONS ON THE USE OF LAND
4 RESTRICTIONS ON THE USE OF LAND
5 EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE
6 RESTRICTIONS ON THE USE OF LAND
7 RESTRICTIONS ON THE USE OF LAND
8 EASEMENT TO DRAIN WATER 2.5 WIDE & VARIABLE
9 EASEMENT TO DRAIN WATER 2.5 WIDE
10 EASEMENT TO DRAIN WATER 2.5 WIDE
11 EASEMENT TO DRAIN WATER 2 WIDE

CONTINUED SHEET 2

Req:R939853 /Doc:DP 1087962 P /Rev:06-Jan-2006 /Sts:SC.OK /Pgs:ALL /Prt:18-Jul-2018 15:37 /Seq:1 of 2
/Src:P
/Ref:advlegs

PLAN FORM 3 TO BE USED IN CONJUNCTION WITH PLAN FORM 2 WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

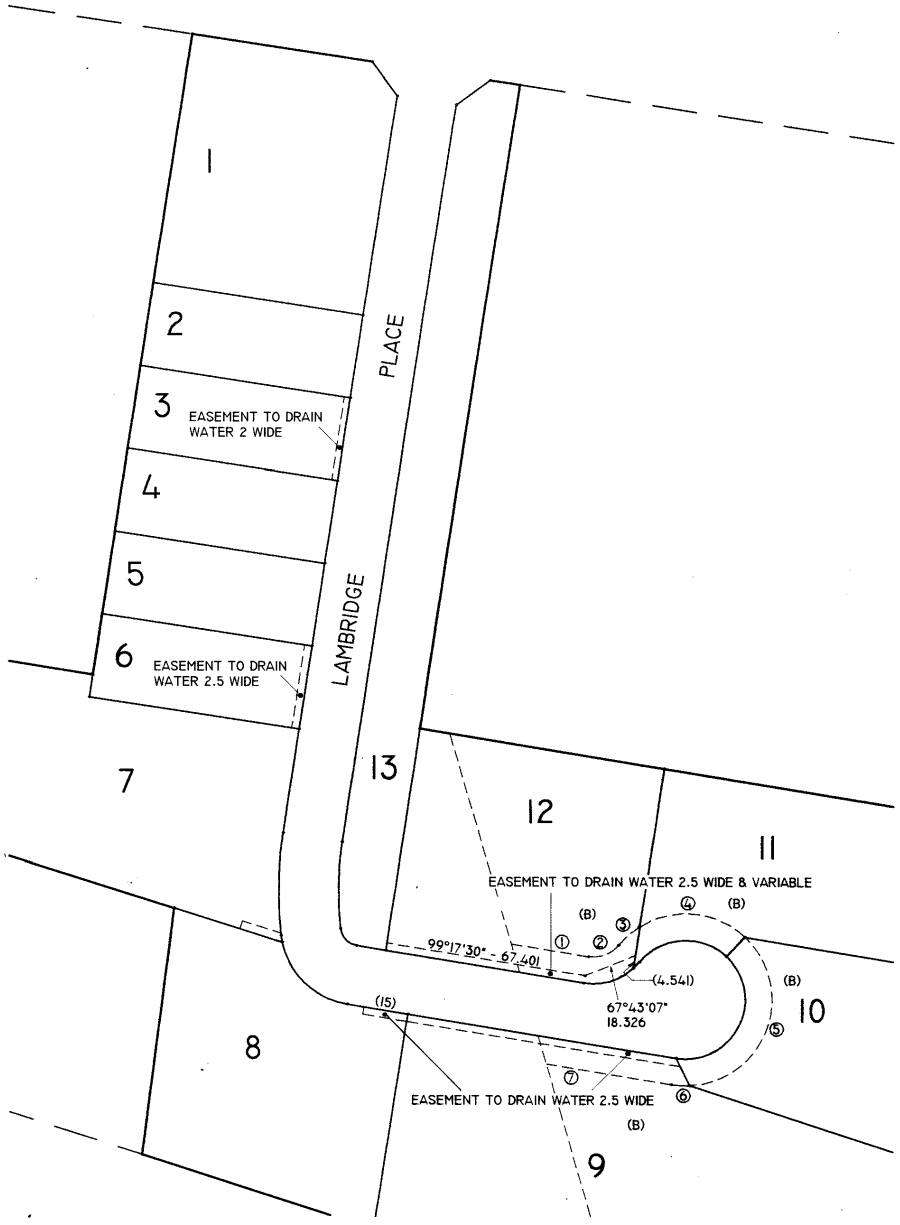


TABLE OF SHORT LINES					
1		99°17'30"	26.286		
2	CHD	69°17'30"	11.000	R 11	A 11.519
3	CHD	48°40'01"	9.448	R 29	A 9.491
4	CHD	95°37'38"	35.376	R 29	A 38.047
5	CHD	200°16'57"	53.417	R 29	A 67.895
6	CHD	273°19'20"	6.032	R 29	A 6.043
7		279°17'30"	42.776		

DP1087962

Registered AW 06.01.2006

This is sheet 2 of my plan in 2 sheets dated

M. Freeman
Surveyor registered under Surveying Act 2002

This is sheet 2 of the plan in 2 sheets covered by Subdivision Certificate No. 102/06

David Lee
Authorised Person/~~General Manager/Accredited Certifier~~

For use where space is insufficient in any panel on Plan Form 2.

IT IS INTENDED TO DEDICATE THE ROAD SHOWN AS LAMBRIDGE PLACE 20 WIDE & VARIABLE TO THE PUBLIC AS ROAD

IT IS INTENDED TO CREATE LOT 13 AS DRAINAGE RESERVE

SUNCORP METWAY Ltd A.C.N. 010 831 722 BY ITS ATTORNEY. DEBBIE OGBORNE WHO CERTIFIES THAT THEY ARE A LEVEL II ATTORNEY PURSUANT TO POWER OF ATTORNEY BOOK 3959 NO. 372 OF WHICH THEY HAVE RECEIVED NO NOTICE OF REVOCATION SIGNED IN MY PRESENCE BY THE SAID ATTORNEY WHO IS PERSONALLY KNOWN TO ME

WITNESS
Paula Allred
Level 2, 88 Pitt Street, SYDNEY NSW

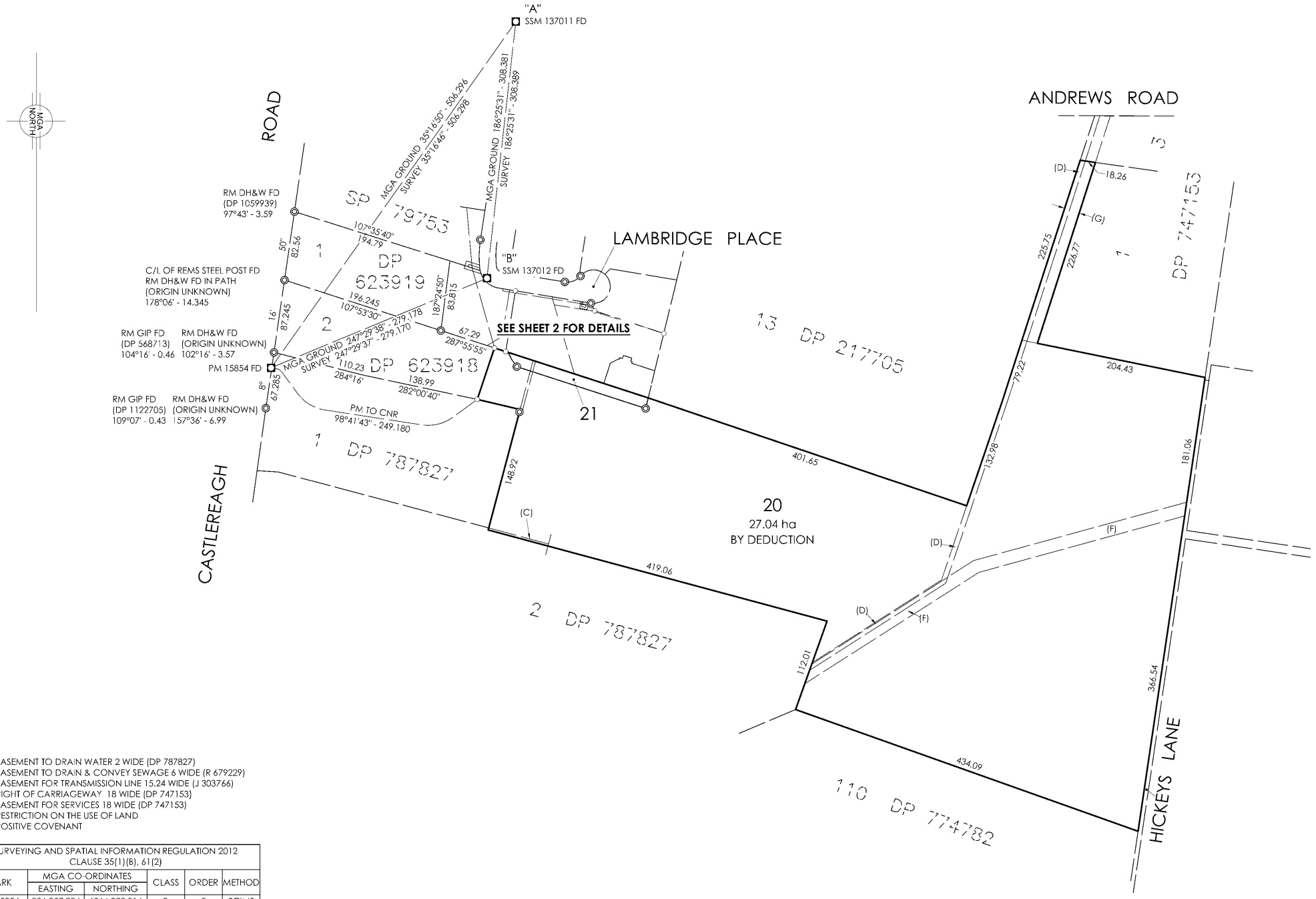
Reduction Ratio 1:1250

PLAN DRAWING ONLY TO APPEAR IN THIS SPACE

SURVEYOR'S REFERENCE: 29 325 SUR

OFFICE USE ONLY

Req:R939853 /Doc:DP 1087962 P /Rev:06-Jan-2006 /Sts:SC.OK /Pgs:ALL /Prt:18-Jul-2018 15:37 /Seq:2 of 2
/Src:P /Ref:advlegs
Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

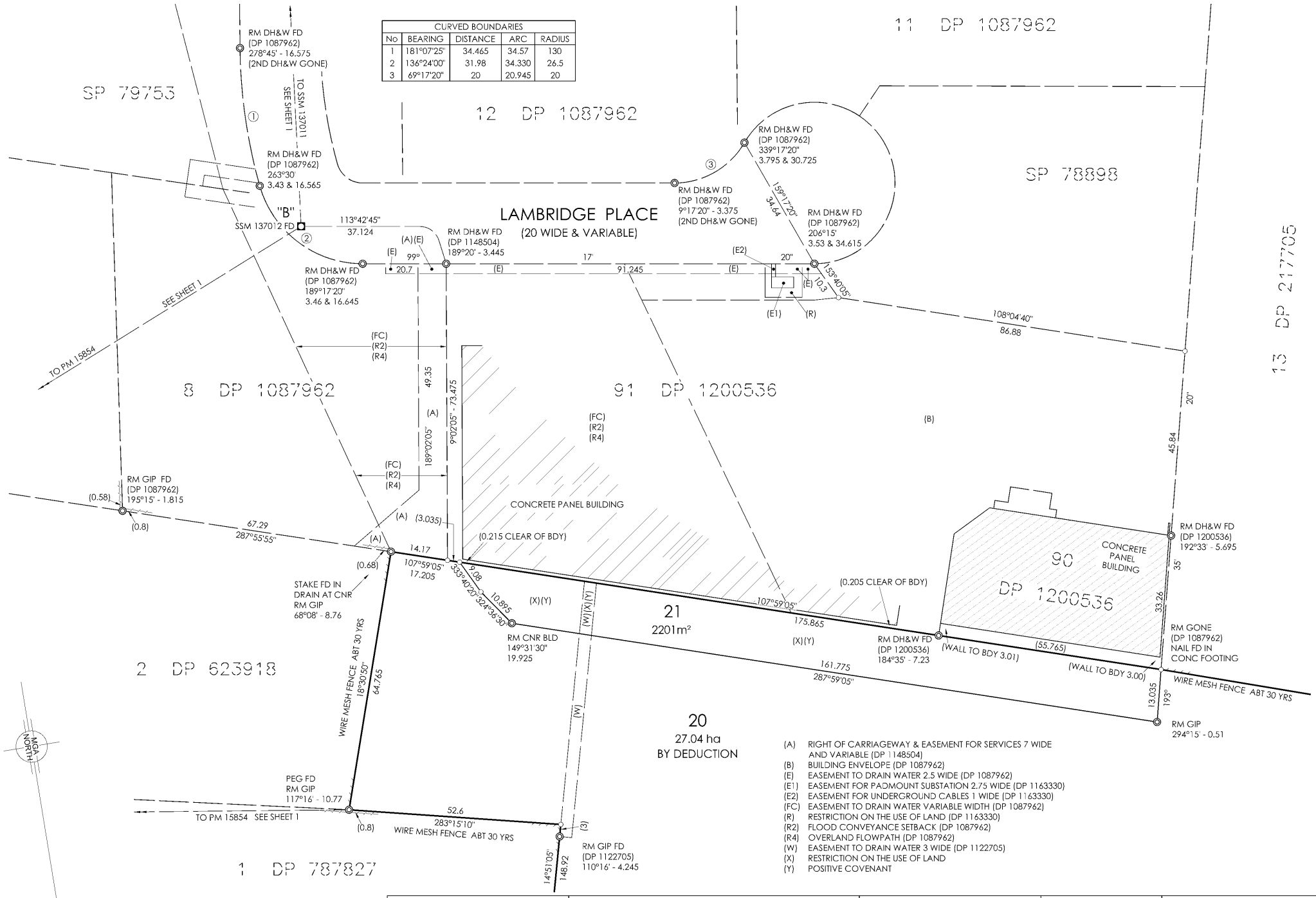


(C) EASEMENT TO DRAIN WATER 2 WIDE (DP 787827)
(D) EASEMENT TO DRAIN & CONVEY SEWAGE 6 WIDE (R 679229)
(F) EASEMENT FOR TRANSMISSION LINE 15.24 WIDE (J 303766)
(G) RIGHT OF CARRIAGEWAY 18 WIDE (DP 747153)
(G) EASEMENT FOR SERVICES 18 WIDE (DP 747153)
(X) RESTRICTION ON THE USE OF LAND
(Y) POSITIVE COVENANT

SURVEYING AND SPATIAL INFORMATION REGULATION 2012 CLAUSE 35(1)(B), 61(2)					
MARK	MGA CO-ORDINATES		CLASS	ORDER	METHOD
	EASTING	NORTHING			
PM 15854	286 357.204	6264 928.814	B	2	SCIMS
SSM 137011	286 649.675	6265 342.185	C	4	SCIMS
SSM 137012	286 615.159	6265 035.694	C	4	SCIMS
COMBINED SEA LEVEL SCALE FACTOR 1.000 154 ZONE 56					
SOURCE: MGA CO-ORDS ADOPTED FROM SCIMS 15-12-2014					

Surveyor : Matthew Charles Freeburn Date of Survey : 18-12-2014 Surveyor's Ref : 23 031 PLAN 1	PLAN OF SUBDIVISION OF LOT 2 IN DP 747153	LGA: PENRITH Locality : PENRITH Subdivision No: **038/17** Lengths are in metres. Reduction Ratio 1:3000	Registered **24.07.2017**	DP1216618

Req:R939854 /Doc:DP 1216618 P /Rev:25-Jul-2017 /Sts:SC.OK /Pgs:ALL /Prt:18-Jul-2018 15:37 /Seq:1 of 5
Ref:Advlegs /Src:P
Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018



Surveyor : Matthew Charles Freeburn Date of Survey : 18-12-2014 Surveyor's Ref : 23 031 PLAN 1	PLAN OF SUBDIVISION OF LOT 2 IN DP 747153	LGA: PENRITH Locality : PENRITH Subdivision No: **038/17** Lengths are in metres. Reduction Ratio 1:800	Registered **24.07.2017**	**DP1216618**

Req:R939854 /Doc:DP 1216618 P /Rev:25-Jul-2017 /Sts:SC.OK /Pgs:ALL /Prt:18-Jul-2018 15:37 /Seq:2 of 5
Ref:Advlegs /Src:P
Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

PLAN FORM 6 (2012) WARNING: Creasing or folding will lead to rejection

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 1 of 3 sheet(s)

Office Use Only

Registered: 24.07.2017

Title System: TORRENS

Purpose: SUBDIVISION

Only

DP1216618 S

PLAN OF SUBDIVISION OF LOT 2 IN DP747153

LGA: PENRITH

Locality: PENRITH

Parish: CASTLEREAGH

County: CUMBERLAND

Crown Lands NSW / Western Lands Office Approval

I, ... (Authorised Officer) in approving this plan, certify that all necessary approvals in regard to the allocation of the land shown herein have been given.

Signature: .....

Date: .....

File №: .....

Office: .....

Subdivision Certificate

SC 17/0035

I, Gavin Cherry

Authorised Person / ~~General Manager / Accredited Certifier~~

certify that the provisions of s.109J of the *Environmental Planning and Assessment Act 1979* have been satisfied in relation to the proposed subdivision, new road, or reserve set out herein.

Signature: .....

Accreditation №: .....

Consent Authority: PENRITH CITY COUNCIL

Date of Endorsement: 1/6/17

Subdivision Certificate №: 038/17

File №: DA 13/1378

* *Strike through if not applicable.*

Survey Certificate

I, MATTHEW CHARLES FREEBURN
First Floor, Suite 2 "SURVEYOR HOUSE"
2 CASTLEREAGH STREET
PENRITH NSW 2750
Phone: (02) 4721-2289

a surveyor registered under the *Surveying and Spatial Information Act 2002*, certify that:

*(a) ~~The land shown in the plan was surveyed in accordance with the *Surveying and Spatial Information Regulation 2012*, is accurate and the survey was completed on .....~~

*(b) The part of the land shown in the plan (being LOT 21) was surveyed in accordance with the *Surveying and Spatial Information Regulation 2012*, is accurate and the survey was completed on **18TH DECEMBER 2014**. The part not surveyed was compiled in accordance with that Regulation.

*(c) ~~The land shown in this plan was compiled in accordance with the *Surveying and Spatial Information Regulation 2012*.~~

Signature: M. Freeburn Date: 18/12/14

Surveyor ID: **№ 1063**

Datum Line: **A - B**

Type: **URBAN**

Terrain: **LEVEL-UNDULATING**

**Strike through if not applicable.*

^Specify the land actually surveyed, or specify any land shown in the plan that is not the subject of the survey.

Statements of intention to dedicate public roads, public reserves, and drainage reserves.

Plans used in the preparation of survey

DP747153
DP217705
DP632918
DP623919
DP774782
DP787827
DP1200536
STRATA PLAN 79753

If space is insufficient continue on PLAN FORM 6A

See PLAN FORM 6A for Signatures and Section 88B statements

SURVEYOR'S REFERENCE: 23031 PLAN 1

PLAN FORM 6A Annexure (2012) WARNING: Creasing or folding will lead to rejection

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 2 of 3 sheet(s)

Office Use Only

Registered: 24.07.2017

Office Use Only

DP1216618

PLAN OF SUBDIVISION OF LOT 2 IN DP747153

THIS SHEET IS FOR THE PROVISION OF THE FOLLOWING INFORMATION AS REQUIRED:

- A schedule of lots and addresses – See 60© *SSI Regulation 2012.*
- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919.*
- Signatures and seals – see 195D *Conveyancing Act 1919.*
- Any information which cannot fit in the appropriate panel on sheet 1 of the administration sheets.

Subdivision Certificate №: 038/17

Date of Endorsement: 1/6/17

NOTE:
STREET ADDRESSES OF ALL LOTS ARE NOT AVAILABLE.

PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919, IT IS INTENDED TO CREATE:

1. RESTRICTION/S ON THE USE OF LAND (X).
2. POSITIVE COVENANT (Y).

Executed by
TRADELINK PTY
~~CRANE DISTRIBUTION~~ LIMITED

ACN 000 003 832

in accordance with s127 of the Corporations Act 2001, on the 16TH day of MAY 2017

in accordance with its constitution in the presence of:

TIMOTHY BROXHAM
DIRECTOR (print name)

DIRECTOR (signature)

WENDY KONG
~~TIMOTHY BROXHAM~~
~~DIRECTOR~~/SECRETARY (print name)

~~DIRECTOR~~/SECRETARY (signature)

If space is insufficient use additional Annexure Sheet

SURVEYOR'S REFERENCE: 23031 PLAN 1

PLAN FORM 6A Annexure (2012) WARNING: Creasing or folding will lead to rejection

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 3 of 3 sheet(s)

Office Use Only

Registered: 24.07.2017

Office Use Only

DP1216618

PLAN OF SUBDIVISION OF LOT 2 IN DP747153

Subdivision Certificate №: 038/17

Date of Endorsement: 1/6/17

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses – See 60© *SSI Regulation 2012.*
- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919.*
- Signatures and seals - see 195D *Conveyancing Act 1919.*
- Any information which cannot fit in the appropriate panel on sheet 1 of the administration sheets.

Additional STATEMENTS OF INTENTION and/or SIGNATURES
(If not required, strike through sheet and put "NOT USED")

If space is insufficient use additional Annexure Sheet

SURVEYOR'S REFERENCE: 23031 PLAN 1

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
18/7/2018 3:40PM

FOLIO: 2/747153

First Title(s): OLD SYSTEM
Prior Title(s): VOL 12505 FOL 65

Recorded	Number	Type of Instrument	C.T. Issue
6/7/1987	DP747153	DEPOSITED PLAN	FOLIO CREATED EDITION 1
17/7/1987	W995428	DEPARTMENTAL DEALING	EDITION 2
15/9/1987	DP748870	DEPOSITED PLAN	
7/12/1987	X98138	WITHDRAWAL OF CAVEAT	
13/4/1989	DP787827	DEPOSITED PLAN	EDITION 3
19/11/1991	E10619	MORTGAGE	EDITION 4
17/7/1992	E386304	TRANSFER GRANTING EASEMENT	
8/5/1996	2132481	DISCHARGE OF MORTGAGE	EDITION 5
9/8/1999	5983648	REQUEST	
7/11/2008	AE157840	CHANGE OF NAME	
18/11/2008	DP1122705	DEPOSITED PLAN	EDITION 6
6/1/2016	DP1202795	WITHDRAWN - PROPOSED PLAN	
30/6/2017	AM514872	CHANGE OF NAME	
24/7/2017	DP1216618	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

advlegs PRINTED ON 18/7/2018

Obtained from NSW LRS on 18 July 2018 03:40 PM AEST

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Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
18/7/2018 3:45PM

FOLIO: 2/1059939

First Title(s): OLD SYSTEM
Prior Title(s): BK 2968 NO 979

Recorded	Number	Type of Instrument	C.T. Issue
7/4/2004	DP1059939	DEPOSITED PLAN	FOLIO CREATED EDITION 1
7/4/2004	PA81395	PRIMARY APPLICATION	
27/10/2004	AB50980	TRANSFER	
27/10/2004	AB50981	MORTGAGE	EDITION 2
6/1/2006	DP1087962	DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS

*** END OF SEARCH ***

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Version: 1, Version Date: 05/11/2018

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
18/7/2018 3:40PM

FOLIO: 8/1087962

First Title(s): OLD SYSTEM
Prior Title(s): 2/1059939

Recorded	Number	Type of Instrument	C.T. Issue
6/1/2006	DP1087962	DEPOSITED PLAN	FOLIO CREATED EDITION 1
16/2/2006	AC119930	DISCHARGE OF MORTGAGE	
16/2/2006	AC119931	TRANSFER	EDITION 2
3/8/2006	AC502229	TRANSFER	EDITION 3
10/3/2010	DP1148504	DEPOSITED PLAN	EDITION 4
20/11/2017	DP1236071	DEPOSITED PLAN	EDITION 5

*** END OF SEARCH ***

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Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
20/7/2018 10:55AM

FOLIO: 21/1216618

First Title(s): OLD SYSTEM
Prior Title(s): 2/747153

Recorded	Number	Type of Instrument	C.T. Issue
24/7/2017	DP1216618	DEPOSITED PLAN	FOLIO CREATED EDITION 1
20/11/2017	DP1236071	DEPOSITED PLAN	
15/12/2017	AM974743	TRANSFER	EDITION 2
8/6/2018	AN408964	MORTGAGE	EDITION 3 CORD ISSUED

*** END OF SEARCH ***

advlegs PRINTED ON 20/7/2018

Obtained from NSW LRS on 20 July 2018 10:55 AM AEST

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Req:R940439 /Doc:PA 040565 PA /Rev:23-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:18-Jul-2018 18:08 /Seq:1 o
Ref:advlegs /Src:P

R.P.2.

New South Wales

No. 40565

APPLICATION TO BRING LANDS UNDER THE PROVISIONS OF THE REAL PROPERTY ACT, 1900.

FEE SIMPLE

FEES:—
Lodgment ... £ 3 1 -
Certificate ...
Advertising ...
Office Copy Plan ...
Total £ 4 10 -

CAUTION.—Applicants are reminded that by virtue of the provisions of the Real Property Act, 1900, the penalties of perjury are attached to a false declaration proceedings, any matter or procedure under the Act, and that the utmost care is therefore necessary in framing (or reading over, if the same be drawn up by an Attorney) every particular statement herein.

It is further provided by Section 138 of the Real Property Act, 1900, that any applicant procuring a Certificate through any fraud, error, omission, misrepresentation, or misdescription will, notwithstanding the issue of such Certificate, remain liable for damages to any person thereby prejudiced. And any person who fraudulently procures, assists in fraudulently procuring, or is privy to the fraudulent procurement of any Certificate of Title, is declared guilty of a misdemeanour, and liable to a penalty not exceeding £500, or imprisonment not exceeding three years; and any Certificate thereby procured is rendered void as between all parties or privies to the fraud.

[a] This form may be modified to suit the case of a leasehold title.

[b] Here state Christian and surname (or names) in full with postal address and occupation.

[c] "I am" or if the declaration is made by an attorney "C.D. of is" (as the case may be). Here give description of the property in full. If the land is shown on a plan lodged with the application or is fully described in a deed, it will be sufficient to insert a reference to the area, town, parish, and county and words indicating that the land is shown on the plan or described in the deed in question. The application may include an appurtenant easement expressly created by an instrument not registered under the Real Property Act, 1900 (see section 14A). Unless the Registrar-General has previously dispensed with a plan of survey, an accurate plan, prepared and certified by a surveyor specially licensed under the Act, must accompany the application. If there be any rights of way or other rights or easements affecting the premises the particulars should be stated. If the space for description be insufficient, it may be completed by annexure which must however be identified as part of the declaration, by memorandum signed by the declarant and attesting officer.

[d] The full improved value should be stated.

[e] State whether "the whole" or "part."

[f] Insert allotment with reference to number and section on plan, if any, or if not, number of acres granted.

[g] Name of Grantee.

[h] If there be any Lease, add the words "except as follows" and insert particulars thereof.

[i] If there be any mortgage, lien, etc., add the words "except as follows" and insert particulars thereof.

[j] Insert "unoccupied," or "in the occupation of" adding names and addresses of tenants in full. State also nature of tenancy, if not under agreements before mentioned. Where the applicant is not in actual occupation, but has a caretaker or manager in occupation, the name of such caretaker or manager should be stated, together with the nature of his occupancy.

[k] Here insert names and residences of adjacent owners and occupiers on all sides.

I [b] WE — WILFRED JOSEPH STANTON — of "Glen Mervyn" Castlereagh Road, Penrith Farmer

do solemnly and sincerely declare, that [c] — I am — seized for an Estate in fee simple of ALL THAT piece or parcel of land situated in the County of Cumberland, Parish of Castlereagh and Municipality of Penrith containing and area of 119 acres 2 roods 34 perches BEING the land comprised in the Plan of subdivision of Mr. Surveyor Peter Freeburn dated the 21st day of January, 1958

which land (including all improvements) is of the value of [d] TWENTY THREE THOUSAND EIGHT HUNDRED AND EIGHTY POUNDS — and no more, and is [e] — part — of [f] — ONE THOUSAND THREE HUNDRED ACRES (1300. 0. 0) originally granted to [g] — WILLIAM NEATE CHAPMAN — by Crown grant, under the hand of the Governor of the Colony, dated the — Tenth — day of — February — 18 04 Bk. 3 c No. 124

And I further declare, that I verily believe there does not exist any lease or agreement for lease of the said land for any term exceeding a tenancy for one year, or from year to year, [h]

Also, that there does not exist any mortgage, lien, writ of execution, charge or encumbrance, will or settlement, or any deed or writing, contract, or dealing (other than such lease or tenancy as aforesaid), giving any right, claim, or interest in or to the said land, or any part thereof, to any other person than myself except as follows:— [i]

1. Contract of Sale dated 27th August 1957 to Arthur Lindsay Stanton and
2. Contract of Sale dated 27th August 1957 to Lindsay Allen Stanton,

and I further declare, that there is no person in possession or occupation of the said land or any part thereof adversely to my Estate or Interest therein, and that the said land is now [j] in the occupation of myself, the said Arthur Lindsay Stanton and the said Lindsay Allen Stanton and my wife Bertha Stanton

and that the owners and occupiers of adjacent lands are as follows [k]:—

State whether on North, South, East, or West.	Name.	State whether owner or occupier.	Address.
North & West	A. J. Thompson ✓	Owner and Occupier	Castlereagh Road, Penrith
North & West	Dr. K. E. Dunne ✓	Owner	229 Macquarie Street, Sydney
"	A. L. Stanton ✓	Occupier	Castlereagh Road, Penrith
West	J. H. Bryson ✓	Occupier	Castlereagh Road, Penrith
North	~~Daniel John Davies~~ Does	Legal Owner	Address unknown
North	~~R. G. & S. J. Boyton~~ Allow	Reputed Owner & Occupier	Castlereagh Road, Penrith
East	R. G. & S. J. Boyton ✓	Owner and Occupier	Castlereagh Road, Penrith
East	~~Unformed & Unfenced Road.~~	~~Occupier~~	~~Castlereagh Road, Penrith~~
	~~A. L. Stanton~~ Above		
East (Other side of said road)	Edinburgh Pty Ltd ✓	Owner & Occupier	53 Martin Place, Sydney
"	Millie Lissner	Owner & Occupier	Robert Street, Penrith
"	Mavis Reads ✓ Herleen Florence Hickey ✓ City	Owner & Occupier	Castlereagh Road, Penrith
South	Penrith ~~Municipal~~ Council ✓	Owner & Occupier	Penrith
	~~A. L. Stanton~~	Occupier (part)	Castlereagh Street, Penrith
West	Castlereagh Road ~~Council~~		

Cert. of T. issued for Vol. 8232 Fol. 232 Dated 22 JUN 1961

Document Set ID: 8470004
Version: 1, Version Date: 05/11/2018

Req:R940439 /Doc:PA 040565 PA /Rev:23-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:18-Jul-2018 18:08 /Seq:2 o
Ref:advlegs /Src:P

And I further declare, that the annexed Schedule, to which my signature is affixed, and which is to be taken as part of this Declaration, contains a full and correct list [o] Commencing with Conveyances dated 6.12.1861 Registered Number 173 Book 83 and 15.10.1861 Registered Number 227 Book 538 (the prior title having been accepted in Application Number 11787) of all settlements, deeds, documents, or instruments, maps, plans and papers relating to the land comprised in this application, so far as I have any means of ascertaining the same, distinguishing such as being in my possession or under my control, are herewith lodged and indicating where or with whom, so far as known to me, any others thereof are deposited. Also, that there does not exist any fact or circumstance whatever material to the title, which is not hereby fully and fairly disclosed to the utmost extent of my knowledge, information, and belief; and that there is not, to my knowledge and belief, any action or suit pending affecting the said land, nor any person who has or claims any estate, right, title or interest therein, or in any part thereof, otherwise than by virtue and to the extent of some lease or tenancy hereby fully disclosed [p].

[o] The declaration may be qualified to the extent to which Applicant's title has been previously passed by the Registrar General by inserting the words "Commencing with Conveyance dated ..... registered ....." or as the case may be. Otherwise all documents from the Crown Grant onwards must be entered in the Schedule.

[p] If there be any exception add the words "except as follows" and insert necessary particulars.

And I make this solemn Declaration, conscientiously believing the same to be true.

DATED at Penrith this fifteenth day of July 1958

(RULE UP ALL BLANKS BEFORE SIGNING.)

[r] If made in New South Wales this declaration must be attested by the Registrar General or Deputy, or by a Notary Public, or by a Justice of the Peace, or Commissioner for Affidavits. If made outside the State it should be made according to the law of the State where made, before a person authorised by that law to take declarations. If the signature be by mark, the attestation must state that the document was read over to the declarant, and that he appeared fully to understand the contents. This applies also to the subjoined direction, particularly if a different person be nominated to receive certificate.

Made and subscribed by the abovenamed Wilfred Joseph Stanton this fifteenth day of July 19 58 in the presence of r C. A. Treloar J.P.

Signature of Applicant } W. J. Stanton

AD VALOREM DUTY PAID £570-16-10 £44/14/0 N.S.W. STAMP DUTIES OFFICE

NEW SOUTH WALES ONE POUND TEN SHILLINGS STAMP DUTY

N.S.W. DEPARTMENT 23 JUN 58 OF STAMP DUTIES

NEW SOUTH WALES SEVEN SHILLINGS SIX PENCE DULY STAMPED

NEW SOUTH WALES SEVEN SHILLINGS SIX PENCE DULY STAMPED

To the Registrar-General,—

I—WILFRED JOSEPH STANTON—of Castlereagh Road, Penrith Farmer

We

the above declarant, do hereby apply to have the land described in the above declaration brought under the provisions of the Real Property Act, and request you to issue the Certificate of Title in the name of [s] 1. Arthur Lindsay Stanton of Castlereagh Road, Penrith, Farmer for the fee simple in Lot 7 in the Plan annexed hereto 2. Myself and Bertha Stanton my wife as joint tenants of a life interest in Lot 2 in the said Plan 3. The said Arthur Lindsay Stanton for the Estate in remainder in such Lot 2 DATE[illegible] 4. Lindsay Allen Stanton of Castlereagh Road Penrith, Farmer for the fee simple in Lot 5

[s] If to Applicant, say "myself"; if to other person write name at full length with postal address and occupation. If to two or more state whether as joint tenants or tenants in common; if as tenants in common state shares. If to an infant, the age should be stated, and verified by Certificate of Birth, or by Statutory Declaration. If to a married woman, the name of the husband, together with his postal address and occupation, should be stated.

Witness to Signature— DATED at Penrith this fifteenth day of July 19 58

C. A. Treloar J.P.

(Signature of Applicant) × W. J. Stanton

*N.B.—The Schedule below and Certificate indorsed on fourth page should be also signed.

In no case can any alterations, however trifling, be allowed to be made after the application has been once declared, unless all the parties re-sign and re-declare the same. If it is discovered that any alterations are necessary, the applicant may make a statutory declaration setting out in what manner he desires the application to be altered, which declaration will then (unless the Registrar General considers that a fresh application ought to be made) be read as one with the application.

(RULE UP ALL BLANKS BEFORE SIGNING.)

SCHEDULE REFERRED TO.*

(TO BE SIGNED BY APPLICANT IMMEDIATELY BELOW THE LAST DOCUMENT SCHEDULED.)

To include not only Title Deeds, Probates, Letters of Administration, etc., but also the Surveyor's Plan or Statement in lieu thereof.

* For the particulars which this Schedule must comprise, see concluding part of Declaration, to which particular attention is directed, as any omission or mis-statement will render applicant liable to the penalties of false Declaration.

No.	Date.	Nature of Instrument.	Parties.	Registration. Book.	Registration. No.	For Office use only. By whom Lodged.
1	6.12.1861	Conveyance	John MacHenry and Alexander Frazer to Joseph Staunton	83	173	✓
2	29.3.1884	Conveyance	Joseph Staunton (first part) Theodore Powell (second part) Elizabeth Staunton (third part)	285	907	✓
3	31.3.1884	Mortgage	Theodore Powell to Robert Mead Pearson	285	974	✓
4	3.4.1884	Statutory Declaration	Josiah Stanton			
5	22.1.1889	Re-Conveyance	Robert Mead Pearson to Theodore Powell	406	93	✓

Should any transaction affecting the land in this application be entered into or any alterations in the buildings or fences be made subsequent to the date of the application, but prior to the issue of the Certificate of Title, the Registrar General should be informed immediately, and all documents evidencing such transaction should be lodged.

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

SCHEDULE REFERRED TO—*(continued)*.*

(TO BE SIGNED BY APPLICANT, IF UTILISED, IMMEDIATELY BELOW THE LAST DOCUMENT SCHEDULED.)

No.	Date.	Nature of Instrument.	Parties.	†Registration. Book.	No.	For Office use only. By whom Lodged.
6	7.2.1889	Conveyance	Theodore Powell to Robert Hamilton	493	732	
7	17.12.1912	Probate	Robert Hamilton granted to John Reginald Hamilton			
8	26.9.1921	Conveyance	John Reginald Hamilton to Albert Victor Rose	1254	268	
9	13.11.	Statutory Declaration	John Reginald Hamilton			
10	3.3.1922	Mortgage	Albert Victor Rose to Commissioners of the Government Savings Bank of New South Wales	1254	269	
11	27.3.1929	Discharge of the said Mortgage	The Commissioners of the Government Savings Bank of New South Wales to Albert Victor Rose	1553	616	
12	27.3.1929	Conveyance	Albert Victor Rose to Wilfred Joseph Stanton	1553	812	
13	27.4.1929	Mortgage	Wilfred Joseph Stanton to the Commissioners of the Government Savings Bank of New South Wales (Discharge endorsed Book 2426 No 400) Dec 17	1553	617	
14	27.4.1929	Mortgage	Wilfred Joseph Stanton to the Commissioners of the Government Savings Bank of New South Wales	1553	618	
15	27.4.1929	Overdraft Mortgage	Wilfred Joseph Stanton to Albert Victor Rose (Discharge endorsed Book 2426 No 399) Dec 18.	1553	248	
16	4.3.1937	Discharge of Mortgage	Albert Victor Rose to Wilfred Joseph Stanton	1774	553	
17	5.11.1957	Discharge of Mortgage	Rural Bank of New South Wales to Wilfred Joseph Stanton			
18	5.11.1957	Discharge of Mortgage	Rural Bank of New South Wales to Wilfred Joseph Stanton			
19	15.10.1861	Conveyance	John MacHenry (first part) Alexander Frazer (second part) ~~Alexander~~ William Gale (third part)	583	227	
20	24.8.1896	Acknouledgement	George Nash and William Nash (Executors of William Gale) to Mary Gale	583	964	
21	2.9.1896	Conveyance	Mary Gale to Henry Gale	586	33	
22	8.7.1924	Conveyance	Henry Gale to Ernest James Readford	1352	946	
23	10.7.1924	Statutory Declaration	Henry Gale			
24	15.7.1924	Mortgage	Ernest James Readford to the Commissioners of the Government Savings Bank of New South Wales	1352	947	
25	14.2.1932	further charge Overdraft	Ernest James Readford to the Commissioners of the Government Savings Bank of New South Wales	1647	416	
26	21.7.1936	Mortgage	Ernest James Readford to the Rural Bank of New South Wales	1756	29	
27	22.9.1936	Discharge of Mortgage	Rural Bank of New South Wales to Ernest James Readford	1762	220	
28	22.9.1936	Discharge of Mortgage	Rural Bank of New South Wales to Ernest James Readford	1762	221	
29	22.9.1936	Discharge of Mortgage	Rural Bank of New South Wales to Ernest James Readford	1762	222	
30	22.9.1936	Conveyance	Ernest James Readford to Bertie Hanger	1762	223	
31	21.1.1937	Conveyance	Bertie Hanger to Wilfred Joseph Stanton	1770	338	
32	9.2.1940	Conveyance	Wilfred Joseph Stanton to Council of Municipality of Penrith	1864	936	
33	29.11.1948	Conveyance	Wilfred Joseph Stanton (first part) Rural Bank of New South Wales (second part) Wilfred Bruce Stanton (third part)	2074	344	
34	22.10.1952	Conveyance	Wilfred Joseph Stanton (first part) Rural Bank of New South Wales (second part) Wilfred Bruce Stanton (third part)	2077	249	
35	22.10.1952	Conveyance	Wilfred Joseph Stanton (first part) Rural Bank of New South Wales (second part) Wilfred Bruce Stanton (third part)	2229	183	
36	12.11.1952	Confirmatory Conveyance	Wilfred Joseph Stanton (first Part) Rural Bank of New South Wales (second part) Wilfred Bruce Stanton (third part)	2232	17	

☞ See indorsement overleaf.

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Version: 1, Version Date: 05/11/2018
Req:R940439 /Doc:PA 040565 PA /Rev:23-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:18-Jul-2018 18:08 /Seq:3 of 3
Ref:advlegs /Src:P

Req:R940439 /Doc:PA 040565 PA /Rev:23-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:18-Jul-2018 18:08 /Seq:4 of
Ref:advlegs /Src:P

A. S. Lawton v Lon 65660

37	27.8.1957	Contract of Sale	Wilfred Joseph Stanton to Arthur Lindsay Stanton
38	27.8.1957	Contract of Sale	Wilfred Joseph Stanton to Lindsay Allen Stanton
39	21.1.1958	Plan of Survey	Mr. Surveyor Fredburn

W. J. Stanton

A.S. Lawton

Deed Docs 1651 and 437 & 38

Deed Docs 1-4, 6, 8-31 587-39

CTE 25/7/18

I certify that the within application is correct for the purposes of the Real Property Act, 1900†.

† Section 117 requires that this Certificate be signed by Applicant or his Solicitor and renders liable any person falsely or negligently certifying, to a penalty of £50; also, to damages recoverable by parties injured.
If by Solicitor, he should insert—"And that I am the Solicitor of the within-named Applicant," and should add his own address to his signature. The signature should be that of the Solicitor himself and not of his firm.

(*Signature*) W. J. Stanton

(RULE UP ALL BLANKS BEFORE SIGNING, EXCEPT SPACE IN SCHEDULE BELOW APPLICANT'S SIGNATURE.)

Received Plan 113 OC 2nd 37 per [illegible] 23/7/18.

FEES.

PAYMENT OF THESE MUST ACCOMPANY THE APPLICATION.

	£	s.	d.
Certificate of Title	2	0	0
Office Copy of Plan (when a Plan is furnished)	0	10	0
Preparation of Plan (when a Plan is not furnished)	1	0	0
Advertisement	3	0	0
Lodgment fee	1	0	0

Stamp EXTRA FEE Diagram Fees Entered Folio 16.

correspondence relating to this Application should be sent, with address, as under, viz.:—

Name

Occupation

Post Town

A. H. Petersen, Government Printer

Document Set ID: 8449097
Version: 1 Version Date: 05/11/2018

PRIMARY APPLICATION

New South Wales
Section 14 Real Property Act 1900

Form: 00PA
Release: 1
www.lpi.nsw.gov.au

PA81395N

PRIVACY NOTE: this information is legally required and will become part of the public record

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY
08-09-2003 0001593902-001
TRANSFER- TRANSFER
DUTIABLE AMOUNT $ **********800.00
DUTY $ **********10.00

(A) **LODGED BY**

Delivery Box	Name, Address or DX and Telephone	Reference (optional):
698B	Dibbs Barker Gosling 123 Pitt Street, Sydney NSW 2000	314859

(B) **APPLICANT**

UPLAND TRUST LIMITED
applies to have the land described below brought under the provisions of the Real Property Act 1900:

(C) **LAND**

all that piece of land situated at Penrith in the County of Cumberland
Parish of Castlereagh being Lot 8, DP217705 and Part Lot 89 DP 752021

(D) **REGISTERED PROPRIETOR**

and requests that the folio of the Register issue in the name of
UPLAND TRUST LIMITED

(E) **TENANCY**

(F) **STATUTORY DECLARATION**

CAUTION: SEVERE PENALTIES ARE PROVIDED FOR PROCURING A CERTIFICATE OF TITLE THROUGH FRAUD

PETER MURPHY CAMPBELL MARK of 2079 Castlereagh Road, Penrith NSW 2750
in support of this application solemnly and sincerely declare(s) that—

1. The applicant is seised of an estate in fee simple in the land.
2. There is no person in possession or occupation of the land or any part of it adversely to the estate or interest of the applicant.
3. The land is now occupied by the persons specified in Schedule 1.
4. There is no lease or agreement for lease of the land for any term exceeding 1 year, or from year to year, except as set out in Schedule 1.
5. There is no right of way, right of drainage or other easement or any restrictive covenant affecting the land except as set out in Schedule 1.
6. There is no mortgage, lien, writ of execution, order, charge, encumbrance, will, settlement, deed, writing, contract or dealing giving any right, claim or interest in the land or any part of it to any person other than the applicant except as set out in Schedule 1; nor to the best of my knowledge and belief is there any action, proceeding or suit pending which affects or could affect the land or any person other than the applicant who has or claims any estate, right title or interest in the land except as set out in Schedule 1.
7. There is no resumption or instrument whereby minerals or substrata have been excepted or reserved to any person except as set out in Schedule 1.
8. Schedule 2 contains a full and correct list of all settlements, deeds, documents, instruments, maps, plans and papers relating to the land so far as I have any means of ascertaining them; all such documents as are in my possession or under my control are lodged herewith; the whereabouts of all other documents listed, so far as is known to me, is stated in the list.
9. The applicant is not bankrupt nor has the applicant assigned his estate for the benefit of creditors; if the applicant is a corporation, the corporation has not appointed a liquidator.
10. The information set out in Schedules 1 and 2 is to be taken as part of this declaration.

continued on page 2

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11. Searches and enquiries for those documents shown as "whereabouts unknown" and numbered N/A in the List of Documents in Schedule 2 have been made at the premises of the applicant, previous and present lending institutions, solicitors and agents, and have not been lodged with any person as security for a loan or for any purpose whatsoever.

This application is hereby certified correct for the purposes of the Real Property Act 1900, and the applicant hereby undertakes to notify the Registrar General promptly of any further interest in the land created after the making of this declaration and before issue of the certificate of title.

I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act 1900.

Made and subscribed at Sydney in the State of New South Wales
on 5 September 2003 in the presence of—

Signature of witness: Alexander Mcwatt

Name of witness: Alexander Mcwatt

Address of witness: 123 Pitt Street, Sydney

Qualification of witness: Solicitor

Signature of applicant: Peter Murphy Campbell Mark Peter Mark
As Attorney for the Applicant under Power of Attorney
Registered Book 3790 No 007

CONSENT OF MORTGAGEE

.....being the mortgagee under mortgage Book ..... Number ..... joins in and consents to this application subject to—

i. the entry on the folio of the Register to be created and on the certificate of title to issue of a notification relating to the above mortgage; and
ii. delivery of the certificate of title to me.

Signature of witness:

Name of witness:

Address of witness:

Signature of mortgagee:

SCHEDULE 1 particulars of subsisting interests

Full name and address of the occupier, lessee, mortgagee, etc	Nature of the entitlement e.g. occupier, lessee	Particulars of the instrument, if any, by which the entitlement was created
Mr & Mrs Peter Murphy Campbell Mark, Road Side Mail Box 2079 Castlereagh Road, Penrith NSw 2750	Occupier	Occupants at will

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(I) **SCHEDULE 2**

(a) Location of documents referred to in List of Documents

Lodged herewith:	Document numbers 1, 2 and 3	
Whereabouts unknown: (see clause 11 on page 2)	Document numbers	
Permanently lodged:	Document numbers	Receipt numbers
To be lodged:	Document numbers	To be lodged by

(b) List of Documents list each chain of title separately; the schedule should commence from a good root of title

No.	Date	Nature of Document	Parties	General Register	
				Book	No.
1	13/4/70	CONVEYANCE	Richard Evelyn Dunn, Evelyn Caroline Lettia Dunn and William Alexander Dunn, Peter Murray Campbell Mark and Upland Trust Limited	2968	979
2	22/9/03	Exemplification of Probate	Estate William Alexander Dunn to Evelyn Caroline Letitia Dunn and Richard Evelyn Dunn		
3		Old System Title Search			

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List of Documents (continued) list each chain of title separately

No.	Date	Nature of Document	Parties	General Register	
				Book	No.

Document Set ID: 8449097
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NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 8/1087962

SEARCH DATE	TIME	EDITION NO	DATE
18/7/2018	3:38 PM	5	20/11/2017

LAND

LOT 8 IN DEPOSITED PLAN 1087962
AT PENRITH
LOCAL GOVERNMENT AREA PENRITH
PARISH OF CASTLEREAGH COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1087962

FIRST SCHEDULE

SHARSAY PTY LIMITED
TERAVARN PTY LIMITED
AS TENANTS IN COMMON IN EQUAL SHARES (T AC502229)

SECOND SCHEDULE (9 NOTIFICATIONS)

1 DP1087962 EASEMENT TO DRAIN WATER VARIABLE WIDTH DESIGNATED (FC) AFFECTING THE PART(S) OF THE LAND ABOVE DESCRIBED SHOWN SO BURDENED IN THE TITLE DIAGRAM
2 DP1087962 RESTRICTION(S) ON THE USE OF LAND DESIGNATED (R2) AS REFERRED TO AND NUMBERED (2) IN THE SECTION 88B INSTRUMENT
3 DP1087962 RESTRICTION(S) ON THE USE OF LAND DESIGNATED (B) AS REFERRED TO AND NUMBERED (3) IN THE SECTION 88B INSTRUMENT
4 DP1087962 RESTRICTION(S) ON THE USE OF LAND DESIGNATED (R4) AS REFERRED TO AND NUMBERED (4) IN THE SECTION 88B INSTRUMENT
5 DP1087962 RESTRICTION(S) ON THE USE OF LAND DESIGNATED (RE) AS REFERRED TO AND NUMBERED (6) IN THE SECTION 88B INSTRUMENT
6 DP1087962 RESTRICTION(S) ON THE USE OF LAND AS REFERRED TO AND NUMBERED (7) IN THE SECTION 88B INSTRUMENT
7 DP1087962 EASEMENT TO DRAIN WATER 2.5 METRES WIDE AS REFERRED TO AND NUMBERED (9) IN THE SECTION 88B INSTRUMENT AFFECTING THE PART(S) OF THE LAND ABOVE DESCRIBED SHOWN SO BURDENED IN THE TITLE DIAGRAM
8 DP1148504 RIGHT OF CARRIAGEWAY & EASEMENT FOR SERVICES 7 METRE(S) WIDE AND VARIABLE AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1148504
9 DP1236071 EASEMENT TO DRAIN WATER 3.7, 5 METRE(S) WIDE AND VARIABLE WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1236071

END OF PAGE 1 - CONTINUED OVER

advlegs PRINTED ON 18/7/2018

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 8/1087962 PAGE 2

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

advlegs PRINTED ON 18/7/2018

Obtained from NSW LRS on 18 July 2018 03:38 PM AEST

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register.

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NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 20/1216618

SEARCH DATE	TIME	EDITION NO	DATE
18/7/2018	3:37 PM	2	20/11/2017

LAND

LOT 20 IN DEPOSITED PLAN 1216618
AT CRANEBROOK
LOCAL GOVERNMENT AREA PENRITH
PARISH OF CASTLEREAGH COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1216618

FIRST SCHEDULE

TRADELINK PTY LIMITED

SECOND SCHEDULE (10 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 J303766 EASEMENT FOR TRANSMISSION LINE 15.24 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
3 R679229 EASEMENT TO DRAIN AND CONVEY SEWAGE 6 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
E386304 EASEMENT NOW VESTED IN WATER BOARD
4 DP747153 RIGHT OF CARRIAGEWAY 18 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
5 DP747153 EASEMENT FOR SERVICES 18 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
6 DP747153 RESTRICTION(S) ON THE USE OF LAND
7 DP747153 RIGHT OF CARRIAGEWAY 18 METRE(S) WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED
8 DP747153 EASEMENT FOR SERVICES 18 METRE(S) WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED
9 DP787827 EASEMENT TO DRAIN WATER 2 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
10 DP1236071 EASEMENT TO DRAIN WATER 3.7, 5 METRE(S) WIDE AND VARIABLE WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1236071

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

advlegs PRINTED ON 18/7/2018

Obtained from NSW LRS on 18 July 2018 03:37 PM AEST

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NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 21/1216618

SEARCH DATE	TIME	EDITION NO	DATE
20/7/2018	10:51 AM	3	8/6/2018

NO CERTIFICATE OF TITLE HAS ISSUED FOR THE CURRENT EDITION OF THIS FOLIO.
CONTROL OF THE RIGHT TO DEAL IS HELD BY NATIONAL AUSTRALIA BANK LIMITED.

LAND

LOT 21 IN DEPOSITED PLAN 1216618
AT CRANEBROOK
LOCAL GOVERNMENT AREA PENRITH
PARISH OF CASTLEREAGH COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1216618

FIRST SCHEDULE

VICARY PTY LIMITED (T AM974743)

SECOND SCHEDULE (7 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 DP747153 RESTRICTION(S) ON THE USE OF LAND
3 DP747153 RIGHT OF CARRIAGEWAY 18 METRE(S) WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED
4 DP747153 EASEMENT FOR SERVICES 18 METRE(S) WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED
5 DP1216618 RESTRICTION(S) ON THE USE OF LAND
6 DP1216618 POSITIVE COVENANT
7 AN408964 MORTGAGE TO NATIONAL AUSTRALIA BANK LIMITED

NOTATIONS

UNREGISTERED DEALINGS: DP1245002.

*** END OF SEARCH ***

advlegs PRINTED ON 20/7/2018

Obtained from NSW LRS on 20 July 2018 10:51 AM AEST

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Section 10.7 Certificates

Document Set ID: 8449097
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PENRITH CITY COUNCIL

Civic Centre
601 High Street, Penrith

PO Box 60 Penrith NSW 2751

Telephone: 02 4732 7777
Facsimile: 02 4732 7958

Email: pencit@penrithcity.nsw.gov.au

PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

Property No: 794188
Your Reference: E31675KR
Contact No:

Issue Date: 19 July 2018
Certificate No: 18/03796

Issued to: Jk Group - Eis
115 Wicks Road
MACQUARIE PARK NSW 2113

PRECINCT 2010

DESCRIPTION OF LAND

County: CUMBERLAND **Parish: CASTLEREAGH**

Location: 128 Andrews Road PENRITH NSW 2750
Land Description: Lot 20 DP 1216618

- PART 1 PRESCRIBED MATTERS –

In accordance with the provisions of Section 10.7(2) of the Act the following information is furnished in respect of the abovementioned land:

1 *NAMES OF RELEVANT PLANNING INSTRUMENTS AND DCPs*

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

Penrith Local Environmental Plan 2010, published 22nd September 2010, as amended, applies to the land.

Sydney Regional Environmental Plan No.9 - Extractive Industry (No.2), gazetted 15 September 1995, as amended, applies to the local government area of Penrith.

Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No. 2 - 1997), gazetted 7 November 1997, as amended, applies to the local government area of Penrith (except land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies).

The following State environmental planning policies apply to the land (subject to the exclusions noted below):

State Environmental Planning Policy No.1 - Development Standards. (Note: This policy does not apply to the land to which Penrith Local Environmental Plan 2010 or State Environmental Planning Policy (Western Sydney Employment Area) 2009 apply.)
State Environmental Planning Policy No.19 - Bushland in Urban Areas. (Note: This policy does not apply to certain land referred to in the National Parks and Wildlife Act 1974 and the Forestry Act 1916.)
State Environmental Planning Policy No.21 - Caravan Parks.
State Environmental Planning Policy No.30 - Intensive Agriculture.
State Environmental Planning Policy No.33 - Hazardous and Offensive Development.

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PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

State Environmental Planning Policy No.50 - Canal Estate Development. (Note: This policy does not apply to the land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies.
State Environmental Planning Policy No.55 - Remediation of Land.
State Environmental Planning Policy No.62 - Sustainable Aquaculture.
State Environmental Planning Policy No.64 - Advertising and Signage.
State Environmental Planning Policy No.65 - Design Quality of Residential Apartment Development.
State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes).
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 (Note: This policy applies to land within New South Wales that is land zoned primarily for urban purposes or land that adjoins land zoned primarily for urban purposes, but only as detailed in clause 4 of the policy.)
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.
State Environmental Planning Policy (State Significant Precincts) 2005.
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007.
State Environmental Planning Policy (Infrastructure) 2007.
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.
State Environmental Planning Policy (Affordable Rental Housing) 2009.
State Environmental Planning Policy (State and Regional Development) 2011.
State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017.
State Environmental Planning Policy (Education Establishments and Child Care Centre Facilities) 2017.

1(2) The name of each proposed environmental planning instrument that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Act:

(Information is provided in this section only if a proposed environmental planning instrument that is or has been the subject of community consultation or on public exhibition under the Act will apply to the carrying out of development on the land.)

Draft State Environmental Planning Policy (Infrastructure) Amendment (Shooting Ranges) 2013 applies to the land.

State Environmental Planning Policy (Infrastructure) Amendment (Review) 2016 applies to the land.

Draft State Environmental Planning Policy (Primary Production & Rural Development) applies to the land.

Draft State Environmental Planning Policy (Environment) applies to the land.

Draft State Environmental Planning Policy (Remediation of Land) applies to the land.

1(3) The name of each development control plan that applies to the carrying out of development on the land:

Penrith Development Control Plan 2014 applies to the land.

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PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

2 *ZONING AND LAND USE UNDER RELEVANT LEPs*

For each environmental planning instrument or proposed instrument referred to in clause 1 (other than a SEPP or proposed SEPP) that includes the land in any zone (however described):

2(a)-(d) the identity of the zone; the purposes that may be carried out without development consent; the purposes that may not be carried out except with development consent; and the purposes that are prohibited within the zone. Any zone(s) applying to the land is/are listed below and/or in annexures.

(Note: If no zoning appears in this section see section 1(1) for zoning and land use details (under the Sydney Regional Environmental Plan or State Environmental Planning Policy that zones this property).)

Zone IN1 General Industrial
(Penrith Local Environmental Plan 2010)

1 Objectives of zone

- To provide a wide range of industrial and warehouse land uses.
- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To support and protect industrial land for industrial uses.
- To promote development that makes efficient use of industrial land.
- To permit facilities that serve the daily recreation and convenience needs of the people who work in the surrounding industrial area.

2 Permitted without consent

Nil

3 Permitted with consent

Animal boarding or training establishments; Boat building and repair facilities; Car parks; Depots; Environmental facilities; Environmental protection works; Flood mitigation works; Freight transport facilities; Garden centres; General industries; Hardware and building supplies; Industrial retail outlets; Industrial training facilities; Industries; Kiosks; Landscaping material supplies; Light industries; Neighbourhood shops; Places of public worship; Plant nurseries; Recreation areas; Roads; Rural industries; Self-storage units; Signage; Storage premises; Take away food and drink premises; Timber yards; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Warehouse or distribution centres

4 Prohibited

Hazardous industries; Offensive industries; Any other development not specified in item 2 or 3

Flood planning

All or part of the subject land is identified in Penrith Local Environmental Plan 2010 (PLEP 2010) Clause 7.2 Flood Planning. Development consent is required for any development on land to which Clause 7.2 of PLEP 2010 applies.

Additional information relating to Penrith Local Environmental Plan 2010

Note 1: Under the terms of Clause 2.4 of Penrith Local Environmental Plan 2010 development may be carried out on unzoned land only with development consent.

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Note 2: Under the terms of Clause 2.6 of Penrith Local Environmental Plan 2010 land may be subdivided but only with development consent, except for the exclusions detailed in the clause.

Note 3: Under the terms of Clause 2.7 of Penrith Local Environmental Plan 2010 the demolition of a building or work may be carried out only with development consent.

Note 4: A temporary use may be permitted with development consent subject to the requirements of Clause 2.8 of Penrith Local Environmental Plan 2010.

Note 5: Under the terms of Clause 4.1A of Penrith Local Environmental Plan 2010, despite any other provision of this plan, development consent must not be granted for dual occupancy on an internal lot in Zone R2 Low Density Residential.

Note 6: Under the terms of Clause 5.1 of Penrith Local Environmental Plan 2010 development on land acquired by an authority of the State under the owner-initiated acquisition provisions may, before it is used for the purpose for which it is reserved, be carried out, with development consent, for any purpose.

Note 7: Under the terms of Clause 5.3 of Penrith Local Environmental Plan 2010 development consent may be granted to development of certain land for any purpose that may be carried out in an adjoining zone.

Note 8: Clause 5.10 of Penrith Local Environmental Plan 2010 details when development consent is required/not required in relation to heritage conservation.

Note 9: Under the terms of Clause 5.11 of Penrith Local Environmental Plan 2010 bush fire hazard reduction work authorised by the *Rural Fires Act 1997* may be carried out on any land without development consent.

Note 10: Under the terms of Clause 7.1 of Penrith Local Environmental Plan 2010 (PLEP 2010) development consent is required for earthworks unless the work is exempt development under PLEP 2010 or another applicable environmental planning instrument, or the work is ancillary to other development for which development consent has been given.

Note 11: Sex services premises and restricted premises may only be permitted subject to the requirements of Clause 7.23 of Penrith Local Environmental Plan 2010.

2(e) whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed:

(Information is provided in this section only if any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed.)

2(f) whether the land includes or comprises critical habitat:

(Information is provided in this section only if the land includes or comprises critical habitat.)

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2(g) whether the land is in a conservation area (however described):

(Information is provided in this section only if the land is in a conservation area (however described).)

2(h) whether an item of environmental heritage (however described) is situated on the land:

(Information is provided in this section only if an item of environmental heritage (however described) is situated on the land.)

2A ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

(Information is provided in this section only if the land is within any zone under State Environmental Planning Policy (Sydney Region Growth Centres) 2006.)

3 COMPLYING DEVELOPMENT

HOUSING CODE

(The Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

- The land contains an environmentally sensitive area. Except as otherwise provided by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* if the land is within the relevant zones complying development under the Housing Code **may not** be carried out on any part of the land that is identified as being within an environmentally sensitive area (ie. land identified in *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* or any other environmental planning instrument as being of high Aboriginal cultural significance or high biodiversity significance). Complying development **may** be carried out on any part of the land that is not identified as being within an environmentally sensitive area. For the purposes of this section "environmentally sensitive area" comprises the numbered wetlands under Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No 2 - 1997).

RURAL HOUSING CODE

(The Rural Housing Code only applies if the land is within Zones RU1, RU2, RU3, RU4, RU6 or R5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

- The land contains an environmentally sensitive area. Except as otherwise provided by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* if the land is within the relevant zones complying development under the Rural Housing Code **may not** be carried out on any part of the land that is identified as being within an environmentally sensitive area (ie. land identified in *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* or any other environmental planning instrument as being of high Aboriginal cultural significance or high biodiversity significance). Complying development **may** be carried out on any part of the land that is not identified as being within an

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environmentally sensitive area. For the purposes of this section "environmentally sensitive area" comprises the numbered wetlands under Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No 2 - 1997).

LOW RISE MEDIUM DENSITY HOUSING CODE

(The Low Rise Medium Density Housing Code only applies if the land is within Zones R1, R2, R3 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

- The land contains an environmentally sensitive area. Except as otherwise provided by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* complying development under the Low Rise Medium Density Housing Code **may not** be carried out on any part of the land that is identified as being within an environmentally sensitive area (ie. land identified in *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* or any other environmental planning instrument as being of high Aboriginal cultural significance or high biodiversity significance). Complying development **may** be carried out on any part of the land that is not identified as being within an environmentally sensitive area. For the purposes of this section "environmentally sensitive area" comprises the numbered wetlands under Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No 2 - 1997).

Please note that Council has been deferred from the application of Part 3B of the Low Rise Medium Density Housing Code until 1 July 2019. That Part will not apply to Penrith Local Government Area during this time.

GREENFIELD HOUSING CODE

(The Greenfield Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map.)

- The land contains an environmentally sensitive area. Except as otherwise provided by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* complying development under the Greenfield Housing Code **may not** be carried out on any part of the land that is identified as being within an environmentally sensitive area (ie. land identified in *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* or any other environmental planning instrument as being of high Aboriginal cultural significance or high biodiversity significance). Complying development **may** be carried out on any part of the land that is not identified as being within an environmentally sensitive area. For the purposes of this section "environmentally sensitive area" comprises the numbered wetlands under Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No 2 - 1997).

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Version: 1, Version Date: 05/11/2018

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Facsimile: 02 4732 7958

Email: pencit@penrithcity.nsw.gov.au

HOUSING ALTERATIONS CODE

- The land contains an environmentally sensitive area. Except as otherwise provided by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* complying development under the Housing Alterations Code **may not** be carried out on any part of the land that is identified as being within an environmentally sensitive area (ie. land identified in *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* or any other environmental planning instrument as being of high Aboriginal cultural significance or high biodiversity significance). Complying development **may** be carried out on any part of the land that is not identified as being within an environmentally sensitive area. For the purposes of this section "environmentally sensitive area" comprises the numbered wetlands under Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No 2 - 1997).

GENERAL DEVELOPMENT CODE

- The land contains an environmentally sensitive area. Except as otherwise provided by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* complying development under the General Development Code **may not** be carried out on any part of the land that is identified as being within an environmentally sensitive area (ie. land identified in *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* or any other environmental planning instrument as being of high Aboriginal cultural significance or high biodiversity significance). Complying development **may** be carried out on any part of the land that is not identified as being within an environmentally sensitive area. For the purposes of this section "environmentally sensitive area" comprises the numbered wetlands under Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No 2 - 1997).

COMMERCIAL AND INDUSTRIAL ALTERATIONS CODE

- The land contains an environmentally sensitive area. Except as otherwise provided by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* complying development under the Commercial and Industrial Alterations Code **may not** be carried out on any part of the land that is identified as being within an environmentally sensitive area (ie. land identified in *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* or any other environmental planning instrument as being of high Aboriginal cultural significance or high biodiversity significance). Complying development **may** be carried out on any part of the land that is not identified as being within an environmentally sensitive area. For the purposes of this section "environmentally sensitive area" comprises the numbered wetlands under Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No 2 - 1997).

SUBDIVISIONS CODE

- The land contains an environmentally sensitive area. Except as otherwise provided by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* complying development under the Subdivisions Code **may not** be carried out on any part of the land that is identified as being within an environmentally sensitive area (ie. land identified in *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* or any

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other environmental planning instrument as being of high Aboriginal cultural significance or high biodiversity significance). Complying development **may** be carried out on any part of the land that is not identified as being within an environmentally sensitive area. For the purposes of this section "environmentally sensitive area" comprises the numbered wetlands under Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No 2 - 1997).

DEMOLITION CODE

- The land contains an environmentally sensitive area. Except as otherwise provided by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* complying development under the Demolition Code Code **may not** be carried out on any part of the land that is identified as being within an environmentally sensitive area (ie. land identified in *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* or any other environmental planning instrument as being of high Aboriginal cultural significance or high biodiversity significance). Complying development **may** be carried out on any part of the land that is not identified as being within an environmentally sensitive area. For the purposes of this section "environmentally sensitive area" comprises the numbered wetlands under Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No 2 - 1997).

COMMERCIAL AND INDUSTRIAL (NEW BUILDINGS AND ADDITIONS) CODE

(The Commercial and Industrial (New Buildings and Additions) Code only applies if the land is within Zones B1, B2, B3, B4, B5, B6, B7, B8, IN1, IN2, IN3, IN4 or SP3 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

- The land contains an environmentally sensitive area. Except as otherwise provided by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* if the land is within the relevant zones complying development under the Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on any part of the land that is identified as being within an environmentally sensitive area (ie. land identified in *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* or any other environmental planning instrument as being of high Aboriginal cultural significance or high biodiversity significance). Complying development **may** be carried out on any part of the land that is not identified as being within an environmentally sensitive area. For the purposes of this section "environmentally sensitive area" comprises the numbered wetlands under Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No 2 - 1997).

FIRE SAFETY CODE

- The land contains an environmentally sensitive area. Except as otherwise provided by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* complying development under the Fire Safety Code **may not** be carried out on any part of the land that is identified as being within an environmentally sensitive area (ie. land identified in *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* or any other environmental planning instrument as being of high Aboriginal cultural significance or high biodiversity significance). Complying development **may** be carried out on any part of the land that is not identified as being within an environmentally sensitive area. For the purposes of this section "environmentally sensitive area" comprises the numbered wetlands under Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No 2 - 1997).

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PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

(NOTE: (1) Council has relied on Planning and Infrastructure Circulars and Fact Sheets in the preparation of this information. Applicants should seek their own legal advice in relation to this matter with particular reference to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

(2) Penrith Local Environmental Plan 2010 (if it applies to the land) contains additional complying development not specified in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.)

4 COASTAL PROTECTION

The land is not affected by the operation of sections 38 or 39 of the Coastal Protection Act 1979, to the extent that council has been so notified by the Department of Public Works.

5 MINE SUBSIDENCE

The land is not proclaimed to be a mine subsidence district within the meaning of section 15 of the Mine Subsidence Compensation Act 1961.

6 ROAD WIDENING AND ROAD REALIGNMENT

The land is not affected by any road widening or road realignment under:
(a) Division 2 of Part 3 of the Roads Act 1993, or
(b) an environmental planning instrument, or
(c) a resolution of council.

7 COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

(a) Council Policies

The land is affected by the Asbestos Policy adopted by Council.
The land is not affected by any other policy adopted by the council that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding and the item Noted below).
Note: Council has adopted by resolution a policy on contaminated land which may restrict the development of the land. This policy, Chapter C4 of Penrith Development Control Plan 2014, is implemented when zoning or land use changes are proposed on lands which have previously been used for certain purposes. Consideration of council's adopted policy and the application of provisions under relevant State legislation is warranted.

(b) Other Public Authority Policies

The Bush Fire Co-ordinating Committee has adopted a Bush Fire Risk Management Plan that covers the local government area of Penrith City Council, and includes public, private and Commonwealth lands.
The land is not affected by a policy adopted by any other public authority and notified to the council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the council, that restricts the development of the land because of the likelihood of land slip, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

7A FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

(1) Development on the land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of

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group homes or seniors housing) (if such uses are permissible on the land) is subject to flood related development controls.

(2) Development on the land or part of the land for industrial or commercial purposes (if such uses are permissible on the land) is subject to flood related development controls.
Development on the land or part of the land for purposes other than industrial or commercial, or for purposes other than those referred to in (1) above, will be considered on a merits based approach and flood related development controls may apply.

Note: The land is subject to Penrith Development Control Plan 2014 Section C3.5 Flood Planning. On application and payment of the prescribed fee Council may be able to provide in writing a range of advice in regard to the extent of flooding affecting the property.

8 LAND RESERVED FOR ACQUISITION

No environmental planning instrument or proposed environmental planning instrument referred to in clause 1 makes provision in relation to the acquisition of the land by a public authority, as referred to in section 3.15 of the Act.

9 CONTRIBUTIONS PLANS

The Cultural Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith.

The Penrith City Local Open Space Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, excluding industrial areas and the release areas identified in Appendix B of the Plan (Penrith Lakes, Cranebrook, Sydney Regional Environmental Plan No. 30 - St Marys, Waterside, Thornton, the WELL Precinct, Glenmore Park and Erskine Park).

The Penrith City District Open Space Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, with the exclusion of industrial lands and the Penrith Lakes development site.

9A BIODIVERSITY CERTIFIED LAND

(Information is provided in this section only if the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*. (Note. biodiversity certified land includes land certified under Part 7AA of the *Threatened Species Conservation Act 1995* that is taken to be certified under Part 8 of the *Biodiversity Conservation Act 2016*.))

10 BIODIVERSITY STEWARDSHIP SITES

(Information is provided in this section only if Council has been notified by the Chief Executive of the Office of Environment and Heritage that the land is land to which a biobanking stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* relates. Note. Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardships agreements under Part 5 of the *Biodiversity Conservation Act 2016*)

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11 BUSH FIRE PRONE LAND

All of the land is identified as bush fire prone land according to Council records. Guidance as to restrictions that may be placed on the land as a result of the land being bush fire prone can be obtained by contacting Council. Such advice would be subject to further requirements of the NSW Rural Fire Services.

12 PROPERTY VEGETATION PLANS

(Information is provided in this section only if Council has been notified that the land is land to which a property vegetation plan approved under the *Native Vegetation Act 2003* applies and continues in force.)

13 ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

(Information is provided in this section only if Council has been notified that an order has been made under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land.)

14 DIRECTIONS UNDER PART 3A

(Information is provided in this section only if there is a direction by the Minister in force under section 75P(2)(c1) of the Act (repealed on 1st October 2011) that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect.)

15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS AFFECTING SENIORS HOUSING

(Information is provided in this section only if:

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

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

16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

(Information is provided in this section only if there is a valid site compatibility certificate (infrastructure), of which council is aware, in respect of proposed development on the land.)

17 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

(Information is provided in this section only if:

(a) there is a current site compatibility certificate (affordable rental housing), of which the council is aware, in respect of proposed development on the land; and/or

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(b) any terms of a kind referred to in clause 17(1) or 37(1) of State Environmental Planning Policy (Affordable Rental Housing) 2009 have been imposed as a condition of consent to a development application in respect of the land.)

18 PAPER SUBDIVISION INFORMATION

(Information is provided in this section only if a development plan adopted by a relevant authority applies to the land or is proposed to be subject to a consent ballot, or a subdivision order applies to the land.)

19 SITE VERIFICATION CERTIFICATES

(Information is provided in this section only if there is a current site verification certificate, of which council is aware, in respect of the land.)

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

(a) (Information is provided in this section only if, as at the date of this certificate, the land (or part of the land) is significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.)

(b) (Information is provided in this section only if, as at the date of this certificate, the land is subject to a management order within the meaning of the Contaminated Land Management Act 1997.)

(c) (Information is provided in this section only if, as at the date of this certificate, the land is the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.)

(d) (Information is provided in this section only if, at the date of this certificate, the land subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.)

(e) (Information is provided in this section only if the land is the subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997 - a copy of which has been provided to Council.)

Note: Section 10.7(5) information for this property may contain additional information regarding contamination issues.

20 LOOSE FILL ASBESTOS INSULATION

(Information is provided in this section only if there is a residential premises listed on the register of residential premises that contain or have contained loose-fill asbestos insulation (as required by Division 1A of Part 8 of the Home Building Act 1989))

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PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

21 AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICATION ORDERS

(Information is provided in this section only if Council is aware of any "affected building notice" and/or a "building product rectification order" in force for the land).

Note: The Environmental Planning and Assessment Amendment Act 2017 commenced operation on the 1 March 2018. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017, and Environmental Planning and Assessment Regulation 2000.

Information is provided only to the extent that Council has been notified by relevant government departments.

10.7(5) Certificate
This Certificate is directed to the following relevant matters affecting the land

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

Note:

- Council's 10.7(5) information does not include development consent or easement information. Details of development consents may be obtained by making enquiries with Council's Development Services Department pursuant to section 12 of the Local Government Act 1993 or (for development applications lodged after January 2007) by viewing the Online Services area at www.penrithcity.nsw.gov.au . Details of any easements may be obtained from a Title Search at Land and Property Information New South Wales.
- This certificate does not contain information relating to Complying Development Certificates.
- This certificate may not provide full details of development rights over the land.

* Threatened Species Conservation Act 1995
When considering any development application Council must have regard to the Threatened Species Conservation Act 1995. Please note that this legislation may have application to any land throughout the city. Interested persons should make their own enquiries in regard to the impact that this legislation could have on this land.

* Restrictions as to User
This property is subject to restriction(s) as to user. See current or previous Section 88B Instrument(s) for details.

* Covenant(s)
This land is affected by a covenant or covenants.

* Scenic and Landscape Values
The land is identified as "Land with Scenic and Landscape Values" on the Penrith Local Environmental Plan 2010 Scenic and Landscape Values Map. See Clause 7.5 of Penrith Local

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Environmental Plan 2010 and Chapter C1 Site Planning and Design of Penrith Development Control Plan 2014.

* Preservation of Trees and Vegetation
See Chapter C2 of Penrith Development Control Plan 2014 for specific controls relating to the preservation of trees and vegetation.

* Development Control Plan General Information
Penrith Development Control Plan 2014 which applies to the land, sets out requirements for a range of issues that apply across the Penrith Local Government Area, including:

- Site Planning and Design Principles
- Vegetation Management
- Water Management
- Land Management
- Waste Management
- Landscape Design
- Culture and Heritage
- Public Domain
- Advertising and Signage
- Transport, Access and Parking
- Subdivision
- Noise and Vibration, and
- Infrastructure and Services.

The Development Control Plan also specifies requirements relating to various types of land uses including:

- Rural Land Uses
- Residential Development
- Commercial and Retail Development, and
- Industrial Development

as well as for a number of specific activities, including child care centres; health consulting rooms; educational establishments; parent friendly amenities; places of public worship; vehicle repair stations; cemeteries, crematoria and funeral homes; extractive industries; and telecommunication facilities.

The Development Control Plan also details requirements relating to key precincts within the Penrith Local Government Area, including:

- Caddens
- Claremont Meadows Stage 2
- Cranebrook
- Emu Heights
- Emu Plains
- Erskine Business Park
- Glenmore Park
- Kingswood
- Mulgoa Valley

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- Orchard Hills
- Penrith
- Penrith Health and Education Precinct
- Riverlink Precinct
- St Clair,
- St Marys / St Marys North, and
- Sydney Science Park.

Penrith Development Control Plan 2014 may be accessed at https://www.penrithcity.nsw.gov.au/Building-and-Development/Planning-and-Zoning/Planning-Controls/Development-Control-Plans/

* Council holds environmental report(s) relating to the subject property. Copies of the report(s) are available from Council for inspection by interested persons. Interested persons should satisfy themselves as to the state of the land and in relation to any matter or thing, including any documents referred to in, or disclosed by, this notation.

Report Details:

Report title: Final Report
Validation Report for the Remediation of
Affected Fill Materials
Crane Group Vacant Property
Castlereagh Road, Penrith

Prepared by: AGV Woodward-Clyde Pty Limited
(ACN 000-691-690)
Level 6, 486-494 Pacific Highway
St Leonards, NSW, 2065.

Dated: 24 February 2000

Council ref. no: DA985916 (attachment)

Alan Stoneham
General Manager

PER

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PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

Please note:

Certain amendments to the Environmental Planning and Assessment Act 1979 No 203 (Act) commenced on 1 March 2018.

The Environmental Planning and Assessment (Amendment) Act 2017 No 60 makes structural changes to the Act and, as a consequence, the Act has been renumbered in a decimal format. For example, Section 149 Planning Certificates have become Section 10.7 Certificates. Some of the information in this certificate may refer to the previous version of the Act.

Council is committed to updating all relevant documents in a timely manner. This will include planning instruments, applications, approvals, orders, certificates, forms and other associated documents in both printed and electronic versions. Council is required to implement these changes and regrets any inconvenience caused to the local business, industry and the community.

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SafeWork NSW Records

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PD

31 JUL 2018

NSW GOVERNMENT | SafeWork NSW

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

Our Ref: D18/159936

25 July 2018

Priya Dass
ENVIRONMENTAL INVESTIGATION SERVICES
PO Box 976
NORTH RYDE BC NSW 1670

Dear Priya

RE SITE: 128 Andrews Road, PENRITH NSW 2750

I refer to your site search request received by SafeWork NSW on 20 July 2018 requesting information on Storage of Hazardous Chemicals for the above site.

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

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

Yours sincerely

Customer Service Officer
Customer Experience - Operations
SafeWork NSW

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Appendix C: Borehole Logs

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JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 1
1/1

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. 31675B
Date: 26/7/18
Method: SPIRAL AUGER JK300
Logged/Checked by: A.B./D.B.
R.L. Surface: ≈ 25.1m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION AND AFTER 1.5 HRS						0			TOPSOIL: Silt, low plasticity, brown, trace of roots.	w<PL			GRASS COVER
					N = 8 9,5,3			ML	SILT: low plasticity, orange brown, trace of fine grained sand, and clay.	w<PL	(St-VSt)		ALLUVIAL TOO FRIABLE FOR HP TESTING
						1			as above, but with fine grained sand, and clay.				
					N = 7 3,3,4								TOO FRIABLE FOR HP TESTING
						2							
					N = 10 4,4,6	3			SILT: low plasticity, light brown, with fine grained sand, and clay.				TOO FRIABLE FOR HP TESTING
								GM	Sandy silty GRAVEL: medium to coarse grained, dark grey and grey sub rounded and sub angular gravel in a sandy silt, low plasticity, orange brown, fine grained sand matrix, trace of sub rounded and sub angular, dark grey cobbles.	D	D		HIGH 'TC' BIT RESISTANCE
						4			END OF BOREHOLE AT 3.7m				'TC' BIT REFUSAL
						5							
						6							
						7							

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. **2** 1/1

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. 31675B **Method:** SPIRAL AUGER JK300 **R.L. Surface:** ≈ 25.6m

Date: 26/7/18 **Datum:** AHD

Logged/Checked by: A.B./D.B.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION AND AFTER 2 HRS	■					0		ML	SILT: low plasticity, brown, trace of roots.	w<PL	(St-VSt)		GRASS COVER
									as above, but without roots.				ALLUVIAL
				■	N = 16 16,9,7	1			SILT: low plasticity, orange brown, with fine grained sand, and clay.				TOO FRIABLE FOR HP TESTING
				■	N = 9 5,5,4	2		SM	Sandy SILT: low plasticity, orange brown, fine grained sand, with clay.				TOO FRIABLE FOR HP TESTING
					Nc= 7/20 REF	3		GM	Sandy silty GRAVEL: medium to coarse grained, dark grey and grey, sub rounded and sub angular gravel in a sandy silt, low plasticity, orange brown matrix, with sub rounded and sub angular cobbles.	D	D		HIGH 'TC' BIT RESISTANCE
									END OF BOREHOLE AT 3.1m				'TC' BIT REFUSAL
						4							
						5							
						6							
						7							

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BOREHOLE LOG

Borehole No. 3
1/1

Client: CADENCE PROPERTY GROUP PTY LTD
Project: PROPOSED WAREHOUSE
Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. 31675B
Date: 26/7/18
Method: SPIRAL AUGER JK300
Logged/Checked by: A.B./D.B.
R.L. Surface: ≈ 24.6m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■					0		ML	SILT: low plasticity, brown, trace of roots.	w<PL	(St-VSt)		GRASS COVER
									as above, but without roots.				ALLUVIAL
				■	N = 15 8,8,7	1			SILT: low plasticity, orange brown, trace of fine to coarse grained sand, and clay.				TOO FRIABLE FOR HP TESTING
				■	N = 6 2,3,3	2			as above, but with fine grained sand, and clay.				TOO FRIABLE FOR HP TESTING
				■	N = 9 6,4,5	3		SM	Sandy SILT: low plasticity, light brown, fine to medium grained sand, with clay.				
								GM	Sandy silty GRAVEL: medium to coarse grained, dark grey and grey, sub rounded and sub angular gravel in a sandy silt, low plasticity, light brown matrix, fine to medium grained sand.	M	D		HIGH 'TC' BIT RESISTANCE
						4			END OF BOREHOLE AT 3.75m				'TC' BIT REFUSAL
						5							
						6							
						7							

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BOREHOLE LOG

Borehole No. 4
1/1

Client: CADENCE PROPERTY GROUP PTY LTD
Project: PROPOSED WAREHOUSE
Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. 31675B
Date: 26/7/18
Method: SPIRAL AUGER JK300
Logged/Checked by: A.B./D.B.
R.L. Surface: ≈ 24.1m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION AND AFTER 3 HRS						0		-	TOPSOIL: Silty clay, low plasticity, dark brown, trace of roots, and ash.	w<PL			GRASS COVER
									as above, but without roots.				
					N = 5 3,2,3			ML	Clayey SILT: low plasticity, light brown.	w>PL	St	150 130 110	ALLUVIAL
						1							
									as above, but light brown mottled orange brown, trace of fine to medium grained ironstone gravel, and fine grained sand.		VSt		
					N = 14 6,6,8							230 250 310	
						2							
											St- VSt		
					N = 15 5,6,9	3						170 190 220	
								SM	Silty SAND: fine to medium grained, light grey and brown.	M	MD		
					N > 11 11,11/ 60mm			GM	Sandy silty GRAVEL: course grained, dark grey and grey sub rounded and sub angular gravel, in a sandy silt, low plasticity, orange brown, fine to medium grained sand matrix with grey sub rounded and sub angular cobbles.	M	D		HIGH 'TC' BIT RESISTANCE
					REFUSAL	5			END OF BOREHOLE AT 4.9m				'TC' BIT REFUSAL
						6							
						7							

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BOREHOLE LOG

Borehole No. 5
1/1

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. 31675B
Date: 26/7/18

Method: SPIRAL AUGER
JK300

Logged/Checked by: A.B./D.B.

R.L. Surface: ≈ 24.8m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLET-ION					N = 16 9,10,6	0		ML	SILT: low plasticity, brown, trace of roots.	w<PL	(St-VSt)		GRASS COVER
									Clayey SILT: low plasticity, orange brown.				ALLUVIAL
						1							TOO FRIABLE FOR HP TESTING
					N = 7 3,3,4				SILT: low plasticity, orange brown, with clay, trace of fine grained sand, and clay.				TOO FRIABLE FOR HP TESTING
						2							
								GM	Sandy silty GRAVEL: medium to coarse grained, dark grey and grey sub rounded and sub angular gravel in a sandy silt, low plasticity, orange brown, fine to medium grained sand matrix, trace of dark grey, sub rounded and sub angular cobbles.	D	D		HIGH 'TC' BIT RESISTANCE
						3			END OF BOREHOLE AT 3.0m				'TC' BIT REFUSAL
						4							
						5							
						6							
						7							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **101**

1/1

Environmental logs are not to be used for geotechnical purposes

DUPAM18 0.0-0.5

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of fine to coarse grained igneous gravel and concrete fragments.	w<PL			
							0.5			FILL: Clayey silt, low to medium plasticity, grey mottled brown, trace of fine to coarse grained igneous and ironstone gravel.				
							1		ML	Clayey SILT: low to medium plasticity, red mottled grey, trace of fine to coarse grained ironstone gravel.	w<PL			
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **102**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** HAND AUGER **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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			FILL: Clayey silt, low plasticity, dark grey, with organic material, trace of roots.	w>PL			WEED COVER
	■		■							as above, but brown mottled grey, trace of root fibres and ash.				
							0.5		ML	SILT: low plasticity, brown mottled light grey, trace of root fibres.	w>PL			
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **103**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Clayey silt, low plasticity, light brown, trace of root fibres and ash.	w<PL			GRASS COVER
	■		■				0.5		ML	Clayey SILT, low plasticity, brown, trace of root fibres.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **104**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres and clay fines.	w<PL			GRASS COVER
							0.5		ML	Clayey SILT, low plasticity, red brown.	w<PL			
							1			END OF BOREHOLE AT 1.0m				REFUSAL ON INFERRED ROCK
							1.5							
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **105**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
									ML	Clayey SILT, low plasticity, red brown, trace of ash.	w<PL			
	■		■				0.5							
									-	SILT: low plasticity, red brown, trace of clay fines.				
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **106**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of root fibres and clay fines.	w<PL			GRASS COVER
									ML	SILT, low plasticity, red brown, trace of clay fines and ash.	w<PL			
							0.5							
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **107**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of root fibres and clay fines.	w<PL			GRASS COVER
	■		■				0.5		ML	SILT, low plasticity, red brown, trace of clay fines.	w<PL			
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **108**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, red brown, trace of clay fines.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **109**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of root fibres, clay fines and ash.	w<PL			GRASS COVER
									ML	SILT, low plasticity, red brown, trace of ash.	w<PL			
	■		■				0.5							
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **110**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres and ash.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, brown, trace of clay fines.	w<PL			
							1			SILT: low plasticity, red brown.				
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **111**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres, clay fines and ash.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, red brown, trace of clay fines.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **112**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	Clayey SILT, low plasticity, brown, trace of ash.	w<PL			
							1			SILT: low plasticity, red brown, trace of clay fines.				
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **113**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **114**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres, clay fines and ash.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, red brown, trace of clay fines and ash.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **115**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres, clay fines and ash.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, brown, trace of clay fines and ash.	w<PL			
							1			SILT: low plasticity, red brown.				
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **116**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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			FILL: Silty clay, low to medium plasticity, light brown, trace of root fibres and ash.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, light yellow brown, trace of clay fines.	w<PL			
	■		■				1							
										END OF BOREHOLE AT 1.1m				REFUSAL ON INFERRED ROCK
							1.5							
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **117**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, red brown, trace of fine to coarse grained ironstone gravel.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **118**

1/1

Environmental logs are not to be used for geotechnical purposes

DUPAM34 0.0-0.5

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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			FILL: Clayey silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
	■		■				0.5		ML	SILT, low plasticity, red brown, trace of clay fines.	w<PL			
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **119**

1/1

Environmental logs are not to be used for geotechnical purposes

DUPAM33 0.0-0.5

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 24/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres and clay fines.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, red brown.	w<PL			
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **120**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres, clay fines and ash.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **121**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres and ash.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, red brown, trace of clay fines.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **122**

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, red brown, trace of fine to coarse grained ironstone gravel.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **123**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres and clay fines.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, red brown, trace of clay fines.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **124**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Clayey silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
	■		■				0.5		ML	SILT, low plasticity, red brown.	w<PL			
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **125**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION							0			FILL: Clayey silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	Clayey SILT, low plasticity, red brown, trace of fine to coarse grained ironstone gravel.	w<PL			
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **126**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres and clay fines.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **127**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION	■	■	■				0			FILL: Silt, low plasticity, light brown, trace of root fibres and ash.	w<PL			GRASS COVER
	■	■					0.5		ML	Clayey SILT, low plasticity, dark brown, trace of ash.	w<PL			
	■	■					1			SILT, low plasticity, red brown, trace of fine to coarse grained ironstone gravel and ash.				
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **128**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
	■		■				0.5		ML	Clayey SILT, low plasticity, dark brown, trace of ash.	w<PL			
	■		■				1			SILT, low plasticity, red brown, trace of ash.				
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **129**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, red brown, trace of clay fines.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **130**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	Clayey SILT, low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **131**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **132**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres and clay fines.	w<PL			GRASS COVER
							0.5		ML	SILT, low plasticity, red brown, trace of clay fines, and fine to coarse grained ironstone gravel.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **133**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres and clay fines.	w<PL			GRASS COVER
	■		■				0.5		ML	Clayey SILT: low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **134**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres and clay fines.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown, trace of clay fines.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **135**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **136**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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			FILL: Clayey silt, low plasticity, light brown, trace of root fibres and ash.	w<PL			GRASS COVER
	■		■				0.5		ML	Clayey SILT: low plasticity, red brown.	w<PL			
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No.
137/MW137
1/2

Environmental logs are not to be used for geotechnical purposes

DUPAM1 0.5-0.95
DUPAM2 1.5-1.95

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** SPIRAL AUGER JK308 **R.L. Surface:** N/A

Date: 20/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of root fibres.	w<PL			WEED COVER
						N = 8 7,4,4	0.5		ML	SILT: low plasticity, orange brown, trace of fine to medium grained sand.	w<PL			
						N = 5 3,2,3	1							
						N = 4 3,1,3	1.5							
							2							
							2.5							
							3		GP	Sandy silty GRAVEL: fine to coarse grained, dark grey with low plasticity sandy silt, orange brown.	D			
							3.5							

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ENVIRONMENTAL LOG

Borehole No.
137/MW137
2/2

Environmental logs are not to be used for geotechnical purposes

DUPAM1 0.5-0.95
DUPAM2 1.5-1.95

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** SPIRAL AUGER JK308 **R.L. Surface:** N/A

Date: 20/8/18 **Datum:**

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
			■				4			Sandy silty GRAVEL: fine to coarse grained, dark grey with low plasticity sandy silt, orange brown.	D			
							4.5			END OF BOREHOLE AT 4.4m				REFUSAL ON GRAVEL GROUNDWATER MONITORING WELL INSTALLED TO 3.7m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 0.7m TO 3.7m. CASING 0.0m TO 0.7m. 2mm SAND FILTER PACK 0.5m TO 3.7m. BENTONITE SEAL 0.2m TO 0.5m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER
							5							
							5.5							
							6							
							6.5							
							7							

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **138**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres and clay fines.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown, trace of clay fines.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **139**

1/1

Environmental logs are not to be used for geotechnical purposes

DUPAM31 0.0-0.5
DUPAM32 1.1-1.5

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown, trace of clay fines.	w<PL			
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **140**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of root fibres and clay fines.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown, trace of clay fines.	w<PL			
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **141**

1/1

Environmental logs are not to be used for geotechnical purposes

DUPAM27 0.0-0.35
DUPAM28 1.1-1.5

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Clayey silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	Clayey SILT: low plasticity, yellow brown, trace of fine to coarse grained ironstone gravel.	w<PL			
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **142**

1/1

Environmental logs are not to be used for geotechnical purposes

DUP29 0.0-0.3
DUP30 1.0-1.5

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
	■		■				0.5		ML	Clayey SILT: low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **143**

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Clayey silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
									ML	SILT: low plasticity, red brown, trace of clay fines.	w<PL			
	■		■				0.5							
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **144**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres and ash.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **145**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 23/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
									ML	SILT: low plasticity, red brown, trace of clay fines, fine to coarse grained ironstone gravel.	w<PL			
							0.5							
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **146**

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
									ML	SILT: low plasticity, red brown.	w<PL			
	■		■				0.5							
							1							
	■		■				1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **147**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown, trace of fine to coarse grained ironstone gravel.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **148**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Clayey silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
	■		■				0.5		ML	SILT: low plasticity, red brown, trace of fine to coarse grained ironstone gravel.	w<PL			
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **149**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Clayey silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
	■		■				0.5		ML	SILT: low plasticity, red brown, trace of clay fines, fine to coarse grained ironstone gravel.	w<PL			
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **150**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Clayey silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
	■		■				0.5		ML	SILT: low plasticity, red brown, trace of fine to coarse grained ironstone gravel.	w<PL			
							1							
	■		■				1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **151**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
									ML	SILT: low plasticity, red brown, trace of clay fines.	w<PL			
	■		■				0.5							
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **152**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **153**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
	■		■				0.5		ML	SILT: low plasticity, red brown, trace of clay fines.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **154**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
									ML	SILT: low plasticity, red brown, trace of clay fines.	w<PL			
							0.5							
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **155**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **156**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown, trace of clay fines.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **157**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **158**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown, trace of clay fines.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **159**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 22/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown, trace of fine to coarse grained ironstone gravel.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **160**

1/1

Environmental logs are not to be used for geotechnical purposes

DUPAM25 0.0-0.45
DUPAM26 0.6-1.0

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, yellow brown, trace of fine to coarse grained ironstone gravel.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **161**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown.	w<PL			GRASS COVER
							0.5		ML	Clayey SILT: low plasticity, yellow brown.	w<PL			
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **162**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **163**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of root fibres.	w<PL			GRASS COVER
									ML	SILT: low plasticity, red brown.	w<PL			
	■		■				0.5							
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **164**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	Clayey SILT: low plasticity, light brown.	w<PL			
										SILT: low plasticity, red brown, trace of clay fines.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **165**

1/1

Environmental logs are not to be used for geotechnical purposes

DUPAM21 0.0-0.3
DUPAM22 0.6-1.0

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
	■		■				0.5		ML	SILT: low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No.
166/MW166
1/2

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** SPIRAL AUGER JK308 **R.L. Surface:** N/A

Date: 20/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of root fibres.	w<PL			GRASS COVER
									ML	SILT: low plasticity, orange brown, trace of fine to coarse grained sandstone gravel.	w<PL			
	■		■			N = 8 8,4,4	0.5							
							1							
	■		■			N = 5 3,2,3	1.5							
							2							
	■		■			N = 5 3,2,3	2.5			SILT: low plasticity, yellow brown.				
							3			SILT: low plasticity, orange brown, trace of fine to coarse grained river gravel.				
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No.
166/MW166
2/2

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** SPIRAL AUGER JK308 **R.L. Surface:** N/A

Date: 20/8/18 **Datum:**

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
									ML	SILT: low plasticity, orange brown, trace of fine to coarse grained river gravel.	w<PL			
	■		■				4		GC	Silty sandy GRAVEL: fine to coarse grained, dark grey, and low plasticity Sandy SILT, orange brown.	M			
							4.5			END OF BOREHOLE AT 4.4m				REFUSAL ON GRAVEL GROUNDWATER MONITORING WELL INSTALLED TO 4.0m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 1.0m TO 4.0m. CASING 0.0m TO 1.0m. 2mm SAND FILTER PACK 0.6m TO 4.0m. BENTONITE SEAL 0.2m TO 0.6m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER
							5							
							5.5							
							6							
							6.5							
							7							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **167**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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			FILL: Clayey silt, low plasticity, brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **168**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of root fibres.	w<PL			GRASS COVER
	■		■				0.5		ML	SILT: low plasticity, red brown, trace of fine to coarse grained ironstone gravel.	w<PL			
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **169**

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of root fibres.	w<PL			GRASS COVER
									ML	SILT: low plasticity, red brown, trace of clay fines.	w<PL			
	■		■				0.5							
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No.
170/MW170
1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** SPIRAL AUGER JK308 **R.L. Surface:** N/A

Date: 20/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of root fibres.	w<PL			WEED COVER
						N = 8 6,4,4	0.5		ML	SILT: low plasticity, orange brown, trace of fine to medium grained sand.	w<PL			
						N = 5 3,2,3	1.5							
						N = 6 3,2,4	2.5			SILT: low to medium plasticity, light brown, trace of clay fines.				GROUNDWATER MONITORING WELL INSTALLED TO 2.8m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 0.8m TO 2.8m. CASING 0.0m TO 0.8m. 2mm SAND FILTER PACK 0.6m TO 2.8m. BENTONITE SEAL 0.2m TO 0.6m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER
							3		GC	Silty GRAVEL: medium to coarse grained, dark grey, and low plasticity SILT, orange brown.				REFUSAL ON GRAVEL
							3.5			END OF BOREHOLE AT 3.5m				

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **171**

1/1

Environmental logs are not to be used for geotechnical purposes

DUPAM19 0.0-0.5
DUPAM20 0.7-1.1

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of concrete and brick fragments.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown, clay fines, trace of fine to coarse grained ironstone gravel.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **172**

1/1

Environmental logs are not to be used for geotechnical purposes

DUPAM23 0.0-0.4
DUPAM24 0.8-1.3

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
	■		■				0.5		ML	SILT: low plasticity, orange brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **173**

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **174**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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			FILL: Silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown, trace of fine to coarse grained ironstone gravel.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **175**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, red brown, trace of fine to coarse grained ironstone gravel.	w<PL			
	■		■				1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **176**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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			FILL: Clayey silt, low plasticity, light brown, trace of root fibres.	w<PL			GRASS COVER
							0.5			FILL: Silty clay, low to medium plasticity, brown, trace of ash.				
							1		ML	SILT: low plasticity, red brown.	w<PL			
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **177**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of fine to coarse grained igneous gravel, brick and concrete fragments.	w<PL			GRASS COVER
	■		■				0.5			FILL: Clayey silt, low plasticity, dark brown, trace of fine to coarse grained igneous gravel and brick fragments.				
	■		■				1		ML	Clayey SILT: low plasticity, yellow grey, trace of fine to coarse grained ironstone gravel.	w<PL			
										SILT: low plasticity, light grey.				
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **178**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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 COMPLETION							0			FILL: Silty clay, low to medium plasticity, dark brown, trace of root fibres and ash.	w<PL			GRASS COVER
							0.5			FILL: Clayey silt, low to medium plasticity, orange brown.				
									ML	SILT: low plasticity, orange grey, with clay fines.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **179**

1/1

Environmental logs are not to be used for geotechnical purposes

DUPAM7 0.0-0.2
DUPAM8 0.6-0.9

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** SPIRAL AUGER JK308 **R.L. Surface:** N/A

Date: 20/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of root fibres.	w<PL			GRASS COVER
	■		■			N = 23 5,8,15	0.5		ML	Clayey SILT: low plasticity, light brown, trace of ash.	w<PL			
	■		■			N = 18 7,8,10	1			SILT: low plasticity, light brown.	w>PL			
							1.5							
							2			END OF BOREHOLE AT 2.0m				
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **180**

1/1

Environmental logs are not to be used for geotechnical purposes

DUPAM5 0.0-0.1
DUPAM6 0.6-0.95

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** SPIRAL AUGER JK308 **R.L. Surface:** N/A

Date: 20/8/18 **Datum:**

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			FILL: Silty clay, low to medium plasticity, brown, trace of root fibres.	w<PL			GRASS COVER
						N = 11 2,5,6	0.5		ML	Clayey SILT: low plasticity, grey mottled light brown, trace of ash.	w>PL			
							1			SILT: low plasticity, light brown.				
						N = 22 9,11,11	1.5							
							2			END OF BOREHOLE AT 2.0m				
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No.
181/MW181
1/2

Environmental logs are not to be used for geotechnical purposes

DUPAM3 0.0-0.2
DUPAM4 0.5-0.95

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** SPIRAL AUGER JK308 **R.L. Surface:** N/A

Date: 20/8/18 **Datum:**

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			FILL: Silty clay, low to medium plasticity, dark brown, trace of root fibres and ash.	w<PL			GRASS COVER
						N = 11 3,5,6	0.5		ML	Clayey SILT: low plasticity, light brown.	w>PL			
						N = 12 3,5,7	1.5			Clayey SILT: low plasticity, orange brown mottled light brown, trace of fine to coarse grained ironstone gravel.				
						N = 13 5,6,7	2.5			Clayey SILT: low plasticity, orange brown, trace of fine to coarse grained sand.				
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No.
181/MW181
2/2

Environmental logs are not to be used for geotechnical purposes

DUPAM3 0.0-0.2
DUPAM4 0.5-0.95

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** SPIRAL AUGER JK308 **R.L. Surface:** N/A

Date: 20/8/18 **Datum:**

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
									ML	Clayey SILT: low plasticity, orange brown, trace of fine to coarse grained sand.	w>PL			
	■		■						GC	Sandy silty GRAVEL: fine to coarse grained, dark grey, and low plasticity Sandy SILT, orange brown.	M			
							4			END OF BOREHOLE AT 4.0m				REFUSAL ON GRAVEL GROUNDWATER MONITORING WELL INSTALLED TO 4.0m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 1.0m TO 4.0m. CASING 0.0m TO 1.0m. 2mm SAND FILTER PACK 0.5m TO 4.0m. BENTONITE SEAL 0.2m TO 0.5m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER
							4.5							
							5							
							5.5							
							6							
							6.5							
							7							

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **182**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** SPIRAL AUGER JK308 **R.L. Surface:** N/A

Date: 20/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of root fibres.	w<PL			GRASS COVER
						N = 3 1,1,2	0.5		ML	SILT: low plasticity, yellow brown, trace of fine to coarse grained ironstone gravel.	w<PL			
	■		■			N = 5 2,2,3	1							
							1.5							
							2			END OF BOREHOLE AT 2.0m				
							2.5							
							3							
							3.5							

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **183**

1/1

Environmental logs are not to be used for geotechnical purposes

DUPAM16 0.0-0.2
DUPAM17 0.5-0.95

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** SPIRAL AUGER JK308 **R.L. Surface:** N/A

Date: 20/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of root fibres and fine to coarse grained igneous gravel.	w<PL			GRASS COVER
						N = 5 2,2,3	0.5		ML	Clayey SILT: low plasticity, yellow brown, trace of fine to coarse grained ironstone gravel.	w>PL			
							1			Clayey SILT: low plasticity, orange brown, trace of fine to coarse grained ironstone gravel.				
						N = 5 2,2,3	1.5							
							2			END OF BOREHOLE AT 2.0m				
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **184**

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, light brown, trace of fine to coarse grained igneous gravel.	w<PL			GRASS COVER
							0.5		ML	SILT: low to medium plasticity, red brown, trace of fine to coarse grained ironstone gravel.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **185**

1/1

Environmental logs are not to be used for geotechnical purposes

DUPAM9 0.0-0.2
DUPAM10 0.6-0.95

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** SPIRAL AUGER JK308 **R.L. Surface:** N/A

Date: 20/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of fine to coarse grained igneous gravel and root fibres.	w<PL			GRASS COVER
						N = 18 8,9,9	0.5		ML	SILT: low plasticity, orange brown.	w<PL			
						N = 13 5,6,7	1							
							1.5							
							2			END OF BOREHOLE AT 2.0m				
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **186**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** SPIRAL AUGER JK308 **R.L. Surface:** N/A

Date: 20/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of fine to coarse grained igneous gravel, root fibres and ash.	w<PL			GRASS COVER
	■		■			N = 14 8,7,7	0.5							
							1		ML	Clayey SILT: low plasticity, orange brown mottled light brown, trace of fine to coarse grained ironstone gravel.	w<PL			
	■		■			N = 14 6,7,7	1.5							
							2			END OF BOREHOLE AT 2.0m				DUPAM11 0.0-0.1 DUPAM12 0.5-0.95 DUPAM13 1.5-1.95
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **187**

1/1

Environmental logs are not to be used for geotechnical purposes

DUPAM14 0.0-0.2
DUPAM15 0.6-0.95

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** SPIRAL AUGER JK308 **R.L. Surface:** N/A

Date: 20/8/18 **Datum:**

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			FILL: Silt, low plasticity, brown, trace of fine to coarse grained igneous gravel and root fibres.	w<PL			GRASS COVER
							0.5		ML	SILT: low plasticity, light brown, trace of fine to coarse grained ironstone gravel.	w<PL			
						N = 13 6,6,7	1							
							1.5							
						N = 26 13,13,13	2			END OF BOREHOLE AT 2.0m				
							2.5							
							3							
							3.5							

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CONSULTING ENVIRONMENTAL ENGINEERS

ENVIRONMENTAL LOG

Borehole No. **188**

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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 COMPLETION							0			FILL: Silt, low plasticity, light brown, trace of fine to coarse grained igneous gravel.	w<PL			GRASS COVER
							0.5			FILL: Clayey silt, low plasticity, brown.				
									ML	Clayey SILT: low plasticity, red brown.	w<PL			
							1							
							1.5			END OF BOREHOLE AT 1.5m				
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

Borehole No. **189**

1/1

Environmental logs are not to be used for geotechnical purposes

Client: CADENCE PROPERTY GROUP PTY LTD

Project: PROPOSED WAREHOUSE

Location: 128 ANDREWS ROAD, PENRITH, NSW

Job No. E31675KR **Method:** EZI PROBE **R.L. Surface:** N/A

Date: 21/8/18 **Datum:**

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 COMPLETION	■		■				0			FILL: Silt, low plasticity, brown, trace of fine to coarse grained igneous gravel and brick fragments.	w<PL			GRASS COVER
	■		■				0.5			FILL: Clayey silt, low plasticity, red brown, trace of fine to coarse grained igneous gravel.				
	■		■							FILL: Silty sand, fine to coarse grained, dark brown, trace of fine to coarse grained igneous gravel.				FCF SAMPLE MPF1 AT 0.9m
							1			END OF BOREHOLE AT 0.9m				REFUSAL ON VERY HARD SURFACE
							1.5							
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOGS EXPLANATORY 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.

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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.

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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.

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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

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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:

$$C_u = \frac{D_{60}}{D_{10}} \quad \text{and} \quad C_c = \frac{(D_{30})^2}{D_{10}\ D_{60}}$$

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:

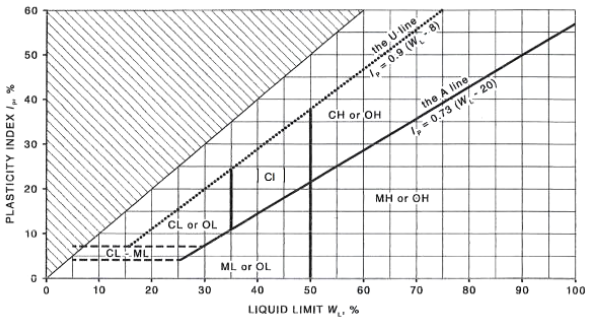
1 For a coarse grained soil with a fines content between 5% and 12%, the soil is given a dual classification comprising the two group symbols separated by a dash; for example, for a poorly graded gravel with between 5% and 12% silt fines, the classification is GP-GM.

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.

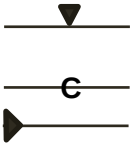
4 The U line on the Modified Casagrande Chart is an approximate upper bound for most natural soils.

Modified Casagrande Chart for Classifying Silts and Clays according to their Behaviour



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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 U50 DB DS ASB ASS SAL	Sample taken over depth indicated, for environmental analysis. Undisturbed 50mm diameter tube sample taken over depth indicated. Bulk disturbed sample taken over depth indicated. Small disturbed bag sample taken over depth indicated. Soil sample taken over depth indicated, for asbestos analysis. Soil sample taken over depth indicated, for acid sulfate soil analysis. Soil sample taken over depth indicated, for salinity analysis.
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.
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.

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Log Column	Symbol	Definition
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 D: Laboratory Report/s & COC Documents

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CERTIFICATE OF ANALYSIS 197510

Client Details

Client	Environmental Investigation Services
Attention	Priya Dass
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E31675KR, Penrith**
Number of Samples	6 Soil
Date samples received	01/08/2018
Date completed instructions received	01/08/2018

Analysis Details

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

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

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

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

Report Details

Date results requested by	08/08/2018
Date of Issue	08/08/2018

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

Results Approved By
Giovanni Agosti, Group Technical Manager
Lucy Zhu, Asbsestos Analyst
Steven Luong, Senior Chemist

Authorised By



Jacinta Hurst, Laboratory Manager

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vTRH(C6-C10)/BTEXN in Soil						
Our Reference		197510-1	197510-2	197510-3	197510-4	197510-5
Your Reference	UNITS	BH1	BH2	BH3	BH4	SS1
Depth		0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.05-0.1
Date Sampled		26/07/2018	26/07/2018	26/07/2018	26/07/2018	26/07/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/08/2018	03/08/2018	03/08/2018	03/08/2018	03/08/2018
Date analysed	-	06/08/2018	06/08/2018	06/08/2018	06/08/2018	06/08/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	72	94	97	91	79

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		197510-6
Your Reference	UNITS	DUP1
Depth		-
Date Sampled		26/07/2018
Type of sample		Soil
Date extracted	-	03/08/2018
Date analysed	-	06/08/2018
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	95

svTRH (C10-C40) in Soil						
Our Reference		197510-1	197510-2	197510-3	197510-4	197510-5
Your Reference	UNITS	BH1	BH2	BH3	BH4	SS1
Depth		0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.05-0.1
Date Sampled		26/07/2018	26/07/2018	26/07/2018	26/07/2018	26/07/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/08/2018	02/08/2018	02/08/2018	02/08/2018	02/08/2018
Date analysed	-	03/08/2018	03/08/2018	03/08/2018	03/08/2018	03/08/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	4,300
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	3,700
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	7,600
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	1,800
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	9,400
Surrogate o-Terphenyl	%	92	85	86	85	#

svTRH (C10-C40) in Soil		
Our Reference		197510-6
Your Reference	UNITS	DUP1
Depth		-
Date Sampled		26/07/2018
Type of sample		Soil
Date extracted	-	02/08/2018
Date analysed	-	03/08/2018
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	85

PAHs in Soil						
Our Reference		197510-1	197510-2	197510-3	197510-4	197510-5
Your Reference	UNITS	BH1	BH2	BH3	BH4	SS1
Depth		0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.05-0.1
Date Sampled		26/07/2018	26/07/2018	26/07/2018	26/07/2018	26/07/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/08/2018	02/08/2018	02/08/2018	02/08/2018	02/08/2018
Date analysed	-	06/08/2018	06/08/2018	06/08/2018	06/08/2018	06/08/2018
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	0.2
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	0.2
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	1.2
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	%	107	106	103	104	117

PAHs in Soil		
Our Reference		197510-6
Your Reference	UNITS	DUP1
Depth		-
Date Sampled		26/07/2018
Type of sample		Soil
Date extracted	-	02/08/2018
Date analysed	-	06/08/2018
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	106

Organochlorine Pesticides in soil					
Our Reference		197510-1	197510-2	197510-3	197510-4
Your Reference	UNITS	BH1	BH2	BH3	BH4
Depth		0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled		26/07/2018	26/07/2018	26/07/2018	26/07/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	02/08/2018	02/08/2018	02/08/2018	02/08/2018
Date analysed	-	03/08/2018	03/08/2018	03/08/2018	03/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	102	102	102	100

Organophosphorus Pesticides					
Our Reference		197510-1	197510-2	197510-3	197510-4
Your Reference	UNITS	BH1	BH2	BH3	BH4
Depth		0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled		26/07/2018	26/07/2018	26/07/2018	26/07/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	02/08/2018	02/08/2018	02/08/2018	02/08/2018
Date analysed	-	03/08/2018	03/08/2018	03/08/2018	03/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	102	102	102	100

PCBs in Soil					
Our Reference		197510-1	197510-2	197510-3	197510-4
Your Reference	UNITS	BH1	BH2	BH3	BH4
Depth		0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled		26/07/2018	26/07/2018	26/07/2018	26/07/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	02/08/2018	02/08/2018	02/08/2018	02/08/2018
Date analysed	-	03/08/2018	03/08/2018	03/08/2018	03/08/2018
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	102	102	102	100

Acid Extractable metals in soil						
Our Reference		197510-1	197510-2	197510-3	197510-4	197510-5
Your Reference	UNITS	BH1	BH2	BH3	BH4	SS1
Depth		0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.05-0.1
Date Sampled		26/07/2018	26/07/2018	26/07/2018	26/07/2018	26/07/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	02/08/2018	02/08/2018	02/08/2018	02/08/2018	02/08/2018
Date analysed	-	03/08/2018	03/08/2018	03/08/2018	07/08/2018	03/08/2018
Arsenic	mg/kg	<4	<4	<4	5	13
Cadmium	mg/kg	<0.4	<0.4	<0.4	1	10
Chromium	mg/kg	9	7	8	930	1,900
Copper	mg/kg	13	13	16	1,500	7,200
Lead	mg/kg	11	8	12	82	920
Mercury	mg/kg	<0.1	<0.1	<0.1	0.1	0.5
Nickel	mg/kg	4	3	5	660	100
Zinc	mg/kg	27	24	35	690	7,300

Acid Extractable metals in soil		
Our Reference		197510-6
Your Reference	UNITS	DUP1
Depth		-
Date Sampled		26/07/2018
Type of sample		Soil
Date prepared	-	02/08/2018
Date analysed	-	03/08/2018
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	9
Copper	mg/kg	13
Lead	mg/kg	10
Mercury	mg/kg	<0.1
Nickel	mg/kg	5
Zinc	mg/kg	26

Moisture						
Our Reference		197510-1	197510-2	197510-3	197510-4	197510-5
Your Reference	UNITS	BH1	BH2	BH3	BH4	SS1
Depth		0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.05-0.1
Date Sampled		26/07/2018	26/07/2018	26/07/2018	26/07/2018	26/07/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	02/08/2018	02/08/2018	02/08/2018	02/08/2018	02/08/2018
Date analysed	-	03/08/2018	03/08/2018	03/08/2018	03/08/2018	03/08/2018
Moisture	%	7.2	4.6	6.6	14	40

Moisture		
Our Reference		197510-6
Your Reference	UNITS	DUP1
Depth		-
Date Sampled		26/07/2018
Type of sample		Soil
Date prepared	-	02/08/2018
Date analysed	-	03/08/2018
Moisture	%	7.1

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Asbestos ID - soils					
Our Reference		197510-1	197510-2	197510-3	197510-4
Your Reference	UNITS	BH1	BH2	BH3	BH4
Depth		0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled		26/07/2018	26/07/2018	26/07/2018	26/07/2018
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	02/08/2018	02/08/2018	02/08/2018	02/08/2018
Sample mass tested	g	Approx. 30g	Approx. 30g	Approx. 35g	Approx. 10g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-003	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-003	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-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-006	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-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.

Method ID	Methodology Summary
Org-012	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-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	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-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date extracted	-			03/08/2018	[NT]	[NT]	[NT]	[NT]	03/08/2018	[NT]
Date analysed	-			06/08/2018	[NT]	[NT]	[NT]	[NT]	06/08/2018	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	87	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	87	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	[NT]	[NT]	85	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	[NT]	[NT]	88	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	85	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	89	[NT]
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	85	[NT]
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	81	[NT]	[NT]	[NT]	[NT]	79	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date extracted	-			03/08/2018	5	02/08/2018	03/08/2018		02/08/2018	[NT]
Date analysed	-			03/08/2018	5	03/08/2018	06/08/2018		02/08/2018	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	5	<50	<50	0	117	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	5	4300	4500	5	107	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	5	3700	4100	10	92	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	5	<50	<50	0	117	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	5	7600	7800	3	107	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	5	1800	1700	6	92	[NT]
Surrogate o-Terphenyl	%		Org-003	91	5	#	#		102	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date extracted	-			02/08/2018	[NT]	[NT]	[NT]	[NT]	02/08/2018	[NT]
Date analysed	-			06/08/2018	[NT]	[NT]	[NT]	[NT]	06/08/2018	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	121	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	[NT]	[NT]	[NT]	[NT]	111	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	103	[NT]	[NT]	[NT]	[NT]	122	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date extracted	-			02/08/2018	[NT]	[NT]	[NT]	[NT]	02/08/2018	[NT]
Date analysed	-			03/08/2018	[NT]	[NT]	[NT]	[NT]	03/08/2018	[NT]
HCB	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	89	[NT]
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	87	[NT]
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	101	[NT]
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	75	[NT]
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-005	102	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date extracted	-			02/08/2018	[NT]	[NT]	[NT]	[NT]	02/08/2018	[NT]
Date analysed	-			03/08/2018	[NT]	[NT]	[NT]	[NT]	03/08/2018	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Dimethoate	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Fenitrothion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Malathion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Parathion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Ronnel	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate TCMX	%		Org-008	102	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date extracted	-			02/08/2018	[NT]	[NT]	[NT]	[NT]	02/08/2018	[NT]
Date analysed	-			03/08/2018	[NT]	[NT]	[NT]	[NT]	03/08/2018	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCLMX	%		Org-006	102	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date prepared	-			02/08/2018	4	02/08/2018	02/08/2018		02/08/2018	[NT]
Date analysed	-			07/08/2018	4	07/08/2018	07/08/2018		03/08/2018	[NT]
Arsenic	mg/kg	4	Metals-020	<4	4	5	<4	22	113	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	4	1	0.8	22	100	[NT]
Chromium	mg/kg	1	Metals-020	<1	4	930	780	18	110	[NT]
Copper	mg/kg	1	Metals-020	<1	4	1500	1300	14	114	[NT]
Lead	mg/kg	1	Metals-020	<1	4	82	73	12	107	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	4	0.1	0.1	0	102	[NT]
Nickel	mg/kg	1	Metals-020	<1	4	660	640	3	108	[NT]
Zinc	mg/kg	1	Metals-020	<1	4	690	630	9	106	[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.

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: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-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.

Report Comments

TRH Soil C10-C40 NEPM - (5 SURROGATE)# Percent recovery is not possible to report as the high concentration of analytes in the sample/s
have caused interference.

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

Envirolab Services Pty Ltd
ABN 37 112 535 645
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www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Priya Dass

Sample Login Details

Your reference	E31675KR, Penrith
Envirolab Reference	197510
Date Sample Received	01/08/2018
Date Instructions Received	01/08/2018
Date Results Expected to be Reported	08/08/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	6 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	18.8
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:

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils
BH1-0.0-0.2	✓	✓	✓	✓	✓	✓	✓	✓
BH2-0.0-0.2	✓	✓	✓	✓	✓	✓	✓	✓
BH3-0.0-0.2	✓	✓	✓	✓	✓	✓	✓	✓
BH4-0.0-0.2	✓	✓	✓	✓	✓	✓	✓	✓
SS1-0.05-0.1	✓	✓	✓				✓	
DUP1	✓	✓	✓				✓	

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.

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E31675KR	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: STANDARD	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 1	Attention: Priya Dass
Attention: Aileen		

Location:	Penrith	Sample Preserved In Esky on Ice
Sampler:		Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos			
26/07/2018	1	BH1	0.0-0.2	G, A	0	Silt				✓								
	2	BH2	0.0-0.2		0	Silt				✓								
	3	BH3	0.0-0.2		0	Silt				✓								
	4	BH4	0.0-0.2		0	Silty Clay				✓								
	5	SS1	0.05-0.1	G	0	Silty Clay		✓										
	6	DUP1				Silt		✓										

ENVIROLAB

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

Job No: 197570
Date Received: 2/8/18
Time Received: 16:00
Received By: MT
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Remarks (comments/detection limits required):	Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag

Relinquished By: Priya Dass	Date: 1/08/18	Time:	Received By: MT	Date: 1/8/18 16:00

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

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www.envirolab.com.au

CERTIFICATE OF ANALYSIS 197510-A

Client Details

Client	Environmental Investigation Services
Attention	Priya Dass
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E31675KR, Penrith**
Number of Samples	6 Soil
Date samples received	01/08/2018
Date completed instructions received	10/08/2018

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	17/08/2018
Date of Issue	16/08/2018

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Results Approved By
Ken Nguyen, Senior Chemist

Authorised By



Jacinta Hurst, Laboratory Manager

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

Metals in TCLP USEPA1311			
Our Reference		197510-A-4	197510-A-5
Your Reference	UNITS	BH4	SS1
Depth		0.0-0.2	0.05-0.1
Date Sampled		26/07/2018	26/07/2018
Type of sample		Soil	Soil
Date extracted	-	14/08/2018	14/08/2018
Date analysed	-	14/08/2018	14/08/2018
pH of soil for fluid# determ.	pH units	6.9	6.6
pH of soil TCLP (after HCl)	pH units	1.6	1.7
Extraction fluid used	-	1	1
pH of final Leachate	pH units	4.9	5.0
Chromium in TCLP	mg/L	[NA]	0.02
Lead in TCLP	mg/L	[NA]	0.38
Nickel in TCLP	mg/L	2.7	[NA]

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.
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	-			14/08/2018	[NT]	[NT]	[NT]	[NT]	14/08/2018	[NT]
Date analysed	-			14/08/2018	[NT]	[NT]	[NT]	[NT]	14/08/2018	[NT]
Chromium in TCLP	mg/L	0.01	Metals-020 ICP-AES	<0.01	[NT]	[NT]	[NT]	[NT]	101	[NT]
Lead in TCLP	mg/L	0.03	Metals-020 ICP-AES	<0.03	[NT]	[NT]	[NT]	[NT]	99	[NT]
Nickel in TCLP	mg/L	0.02	Metals-020 ICP-AES	<0.02	[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.

Laboratory Acceptance Criteria

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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: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-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.

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SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Priya Dass

Sample Login Details

Your reference	E31675KR, Penrith
Envirolab Reference	197510-A
Date Sample Received	01/08/2018
Date Instructions Received	10/08/2018
Date Results Expected to be Reported	17/08/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	6 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	18.8
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:

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

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Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Chromium in TCLP	Lead in TCLP	Nickel in TCLP	On Hold
BH1-0.0-0.2								✓
BH2-0.0-0.2								✓
BH3-0.0-0.2								✓
BH4-0.0-0.2	✓	✓	✓	✓			✓	
SS1-0.05-0.1	✓	✓	✓	✓	✓	✓		
DUP1								✓

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.

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

Andrew Fitzsimons

From: Aileen Hie
Sent: Friday, 10 August 2018 6:01 PM
To: Andrew Fitzsimons
Subject: FW: Results for Registration 197510 E31675KR, Penrith

ELS: 197510-A
TAT: 5 days
Due: 17/8/18
A tz

Regards,

Aileen Hie | Sample Receipt Supervisor | Envirolab Services Pty Ltd

Great Science, Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200 **F** 612 9910 6201
E ahie@envirolab.com.au | **W** www.envirolab.com.au

Please note that all samples submitted to the Envirolab Group laboratories will be analysed under the Envirolab Group Terms and Conditions. The Terms and Conditions are accessible by clicking this link

---

From: Priya Dass [mailto:PDass@jkgroup.net.au]
Sent: Friday, 10 August 2018 2:30 PM
To: Ken Nguyen <KNguyen@envirolab.com.au>
Cc: Aileen Hie <AHie@envirolab.com.au>
Subject: RE: Results for Registration 197510 E31675KR, Penrith

Hi Ken,

Could I get the following analysis done on the following samples from this batch, on standard TAT:

TCLP Nickel – BH4 0.0-0.2 4

TCLP Chromium and TCLP Lead – SS1 0.05-0.1 5

Thanks,

Priya.

Regards,

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

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CERTIFICATE OF ANALYSIS 199517

Client Details

Client	Environmental Investigation Services
Attention	Priya Dass
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E31675KR, Penrith**
Number of Samples	249 SOIL, 2 WATER, 1 MATERIAL
Date samples received	28/08/2018
Date completed instructions received	28/08/2018

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	05/09/2018
Date of Issue	08/10/2018
Reissue Details	This report replaces R02 due to an amendment to sample ID (ELS 1)

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Asbestos Approved By
Analysed by Asbestos Approved Identifier: Matt Tang
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Jeremy Faircloth, Organics Supervisor
Long Pham, Team Leader, Metals
Lucy Zhu, Asbsestos Analyst
Nick Sarlamis, Inorganics Supervisor

Authorised By



Jacinta Hurst, Laboratory Manager

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-1	199517-5	199517-6	199517-7	199517-8
Your Reference	UNITS	BH101	BH102	BH102	BH103	BH103
Depth		0-0.5	0.3-0.4	0.9-1.0	0-0.3	1.2-1.3
Date Sampled		21/08/2018	22/08/2018	22/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	93	89	85	82	94

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-9	199517-10	199517-11	199517-14	199517-16
Your Reference	UNITS	BH104	BH104	BH105	BH106	BH107
Depth		0-0.3	0.7-1.0	0-0.2	0-0.2	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	86	94	83	98	89

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-18	199517-20	199517-21	199517-22	199517-23
Your Reference	UNITS	BH108	BH109	BH109	BH110	BH110
Depth		0-0.2	0-0.3	1.2-1.5	0-0.3	0.5-0.7
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	84	90	87	91	82

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-25	199517-26	199517-27	199517-30	199517-32
Your Reference	UNITS	BH111	BH111	BH112	BH113	BH114
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	85	87	87	95	92

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-33	199517-34	199517-35	199517-37	199517-38
Your Reference	UNITS	BH114	BH115	BH115	BH116	BH116
Depth		1.2-1.5	0-0.3	0.4-0.6	0-0.3	0.9-1.1
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	87	88	86	86	85

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-39	199517-41	199517-42	199517-43	199517-45
Your Reference	UNITS	BH117	BH118	BH118	BH119	BH120
Depth		0-0.3	0-0.5	1.2-1.5	0-0.5	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	99	83	99	98	99

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-46	199517-47	199517-48	199517-49	199517-51
Your Reference	UNITS	BH120	BH121	BH121	BH122	BH123
Depth		1.2-1.5	0-0.3	1.2-1.5	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	99	97	99	82	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-53	199517-55	199517-57	199517-59	199517-60
Your Reference	UNITS	BH124	BH125	BH126	BH127	BH127
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0.3-0.6
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	88	83	98	94	94

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-62	199517-65	199517-66	199517-67	199517-69
Your Reference	UNITS	BH128	BH129	BH129	BH130	BH131
Depth		0-0.2	0-0.3	1.2-1.5	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	82	103	102	99	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-71	199517-72	199517-73	199517-75	199517-76
Your Reference	UNITS	BH132	BH132	BH133	BH134	BH134
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	1.2-1.5
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	97	99	100	92	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-77	199517-79	199517-80	199517-81	199517-83
Your Reference	UNITS	BH135	BH136	BH136	BH137	BH137
Depth		0-0.3	0-0.3	1.3-1.5	0-0.2	1.5-1.95
Date Sampled		23/08/2018	23/08/2018	23/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	93	84	95	96	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-86	199517-88	199517-90	199517-92	199517-94
Your Reference	UNITS	BH138	BH139	BH140	BH141	BH142
Depth		0-0.3	0-0.5	0-0.3	0-0.35	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	89	96	97	99	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-95	199517-96	199517-98	199517-99	199517-100
Your Reference	UNITS	BH142	BH143	BH144	BH144	BH145
Depth		1.0-1.5	0-0.2	0-0.3	1.2-1.5	0-0.2
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	97	97	97	100	94

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-102	199517-103	199517-104	199517-105	199517-106
Your Reference	UNITS	BH146	BH146	BH147	BH147	BH148
Depth		0-0.3	1.2-1.5	0-0.3	1.2-1.5	0-0.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	100	98	97	97	101

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-108	199517-109	199517-110	199517-112	199517-113
Your Reference	UNITS	BH149	BH149	BH150	BH151	BH151
Depth		0-0.3	1.2-1.5	0-0.2	0-0.3	1.2-1.5
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	98	100	99	100	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-114	199517-116	199517-118	199517-119	199517-120
Your Reference	UNITS	BH152	BH153	BH154	BH154	BH155
Depth		0-0.3	0-0.3	0-0.2	0.8-1	0-0.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	100	101	84	100	99

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-122	199517-123	199517-124	199517-126	199517-127
Your Reference	UNITS	BH156	BH156	BH157	BH158	BH158
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	1.2-1.5
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	99	96	94	98	99

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-128	199517-129	199517-130	199517-132	199517-133
Your Reference	UNITS	BH159	BH159	BH160	BH161	BH161
Depth		0-0.25	1.2-1.5	0-0.45	0-0.3	1.3-1.5
Date Sampled		22/08/2018	22/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	96	95	97	96

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-134	199517-136	199517-137	199517-138	199517-141
Your Reference	UNITS	BH162	BH163	BH163	BH164	BH165
Depth		0-0.3	0-0.3	0.5-0.7	0-0.3	0-0.3
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	95	94	94	85

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-143	199517-147	199517-148	199517-150	199517-152
Your Reference	UNITS	BH166	BH166	BH167	BH168	BH169
Depth		0-0.1	4.0-4.1	0-0.3	0-0.3	0-0.2
Date Sampled		20/08/2018	20/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	93	94	95	88	96

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-154	199517-156	199517-158	199517-160	199517-162
Your Reference	UNITS	BH170	BH170	BH171	BH172	BH173
Depth		0-0.1	1.6-1.95	0-0.5	0-0.4	0-0.3
Date Sampled		20/08/2018	20/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	95	96	97	95	95

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-164	199517-165	199517-166	199517-169	199517-170
Your Reference	UNITS	BH174	BH174	BH175	BH176	BH176
Depth		0-0.3	0.4-0.8	0-0.3	0.4-0.6	1.2-1.5
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	95	94	96	94	78

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-172	199517-173	199517-174	199517-176	199517-177
Your Reference	UNITS	BH177	BH177	BH178	BH178	BH179
Depth		0.6-0.9	1-1.2	0-0.3	1-1.2	0-0.2
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	95	94	95	94	84

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-180	199517-183	199517-184	199517-188	199517-191
Your Reference	UNITS	BH180	BH181	BH181	BH182	BH183
Depth		0-0.1	0-0.2	0.5-0.95	0-0.1	0-0.2
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	89	93	90	93	93

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-194	199517-196	199517-199	199517-201	199517-203
Your Reference	UNITS	BH184	BH185	BH186	BH186	BH188
Depth		0-0.4	0-0.2	0-0.1	1.5-1.95	0.4-0.6
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	98	95	93	95	94

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-204	199517-207	199517-209	199517-210	199517-211
Your Reference	UNITS	BH188	BH189	DUPAM2	DUPAM3	DUPAM5
Depth		0.9-1.1	0.8-0.9	-	-	-
Date Sampled		21/08/2018	21/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	95	94	92	91

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-213	199517-216	199517-218	199517-220	199517-222
Your Reference	UNITS	DUPAM7	DUPAM11	DUPAM14	DUPAM16	DUPAM18
Depth		-	-	-	-	-
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	79	98	99	94	99

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-224	199517-226	199517-229	199517-231	199517-232
Your Reference	UNITS	DUPAM21	DUPAM23	DUPAM27	DUPAM29	DUPAM31
Depth		-	-	-	-	-
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	98	100	100	99	75

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-234	199517-235	199517-236	199517-237	199517-238
Your Reference	UNITS	DUPAM33	SP1-1	SP1-2	SP2-1	SP2-2
Depth		-	-	-	-	-
Date Sampled		20/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	97	102	100	98	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		199517-239	199517-240	199517-241	199517-242	199517-243
Your Reference	UNITS	SP3-1	SP3-2	SP4-1	SP4-2	SP5-1
Depth		-	-	-	-	-
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018	04/09/2018
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	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	98	97	98	97	92

vTRH(C6-C10)/BTEXN in Soil					
Our Reference		199517-244	199517-246	199517-248	199517-249
Your Reference	UNITS	SP5-2	BH187	BH187	TBMP
Depth		-	0-0.2	1.7-1.95	-
Date Sampled		24/08/2018	20/08/2018	20/08/2018	17/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	04/09/2018	04/09/2018	04/09/2018	04/09/2018
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	95	97	94	80

svTRH (C10-C40) in Soil						
Our Reference		199517-1	199517-5	199517-6	199517-7	199517-8
Your Reference	UNITS	BH101	BH102	BH102	BH103	BH103
Depth		0-0.5	0.3-0.4	0.9-1.0	0-0.3	1.2-1.3
Date Sampled		21/08/2018	22/08/2018	22/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	130	<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	200	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	200	<50	<50
Surrogate o-Terphenyl	%	99	105	105	98	98

svTRH (C10-C40) in Soil						
Our Reference		199517-9	199517-10	199517-11	199517-14	199517-16
Your Reference	UNITS	BH104	BH104	BH105	BH106	BH107
Depth		0-0.3	0.7-1.0	0-0.2	0-0.2	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
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	%	97	99	97	98	98

svTRH (C10-C40) in Soil						
Our Reference		199517-18	199517-20	199517-21	199517-22	199517-23
Your Reference	UNITS	BH108	BH109	BH109	BH110	BH110
Depth		0-0.2	0-0.3	1.2-1.5	0-0.3	0.5-0.7
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	%	95	98	97	98	96

svTRH (C10-C40) in Soil						
Our Reference		199517-25	199517-26	199517-27	199517-30	199517-32
Your Reference	UNITS	BH111	BH111	BH112	BH113	BH114
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	%	96	97	96	96	97

svTRH (C10-C40) in Soil						
Our Reference		199517-33	199517-34	199517-35	199517-37	199517-38
Your Reference	UNITS	BH114	BH115	BH115	BH116	BH116
Depth		1.2-1.5	0-0.3	0.4-0.6	0-0.3	0.9-1.1
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	%	97	97	96	96	97

svTRH (C10-C40) in Soil						
Our Reference		199517-39	199517-41	199517-42	199517-43	199517-45
Your Reference	UNITS	BH117	BH118	BH118	BH119	BH120
Depth		0-0.3	0-0.5	1.2-1.5	0-0.5	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	%	96	95	96	95	95

svTRH (C10-C40) in Soil						
Our Reference		199517-46	199517-47	199517-48	199517-49	199517-51
Your Reference	UNITS	BH120	BH121	BH121	BH122	BH123
Depth		1.2-1.5	0-0.3	1.2-1.5	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	%	97	94	95	96	101

svTRH (C10-C40) in Soil						
Our Reference		199517-53	199517-55	199517-57	199517-59	199517-60
Your Reference	UNITS	BH124	BH125	BH126	BH127	BH127
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0.3-0.6
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	%	98	99	96	105	106

svTRH (C10-C40) in Soil						
Our Reference		199517-62	199517-65	199517-66	199517-67	199517-69
Your Reference	UNITS	BH128	BH129	BH129	BH130	BH131
Depth		0-0.2	0-0.3	1.2-1.5	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	%	112	102	102	99	101

svTRH (C10-C40) in Soil						
Our Reference		199517-71	199517-72	199517-73	199517-75	199517-76
Your Reference	UNITS	BH132	BH132	BH133	BH134	BH134
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	1.2-1.5
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	%	101	101	109	112	122

svTRH (C10-C40) in Soil						
Our Reference		199517-77	199517-79	199517-80	199517-81	199517-83
Your Reference	UNITS	BH135	BH136	BH136	BH137	BH137
Depth		0-0.3	0-0.3	1.3-1.5	0-0.2	1.5-1.95
Date Sampled		23/08/2018	23/08/2018	23/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	%	101	98	99	99	100

svTRH (C10-C40) in Soil						
Our Reference		199517-86	199517-88	199517-90	199517-92	199517-94
Your Reference	UNITS	BH138	BH139	BH140	BH141	BH142
Depth		0-0.3	0-0.5	0-0.3	0-0.35	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	01/09/2018	01/09/2018	01/09/2018
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	%	99	99	98	99	98

svTRH (C10-C40) in Soil						
Our Reference		199517-95	199517-96	199517-98	199517-99	199517-100
Your Reference	UNITS	BH142	BH143	BH144	BH144	BH145
Depth		1.0-1.5	0-0.2	0-0.3	1.2-1.5	0-0.2
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	01/09/2018	01/09/2018	01/09/2018	01/09/2018	01/09/2018
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	%	98	99	72	74	73

svTRH (C10-C40) in Soil						
Our Reference		199517-102	199517-103	199517-104	199517-105	199517-106
Your Reference	UNITS	BH146	BH146	BH147	BH147	BH148
Depth		0-0.3	1.2-1.5	0-0.3	1.2-1.5	0-0.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	01/09/2018	01/09/2018	01/09/2018	01/09/2018	01/09/2018
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	%	76	76	76	75	76

svTRH (C10-C40) in Soil						
Our Reference		199517-108	199517-109	199517-110	199517-112	199517-113
Your Reference	UNITS	BH149	BH149	BH150	BH151	BH151
Depth		0-0.3	1.2-1.5	0-0.2	0-0.3	1.2-1.5
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	01/09/2018	01/09/2018	01/09/2018	01/09/2018	01/09/2018
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	%	76	77	77	77	75

svTRH (C10-C40) in Soil						
Our Reference		199517-114	199517-116	199517-118	199517-119	199517-120
Your Reference	UNITS	BH152	BH153	BH154	BH154	BH155
Depth		0-0.3	0-0.3	0-0.2	0.8-1	0-0.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	01/09/2018	01/09/2018	30/08/2018	30/08/2018	30/08/2018
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	%	74	74	76	78	76

svTRH (C10-C40) in Soil						
Our Reference		199517-122	199517-123	199517-124	199517-126	199517-127
Your Reference	UNITS	BH156	BH156	BH157	BH158	BH158
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	1.2-1.5
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
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	%	77	76	74	92	95

svTRH (C10-C40) in Soil						
Our Reference		199517-128	199517-129	199517-130	199517-132	199517-133
Your Reference	UNITS	BH159	BH159	BH160	BH161	BH161
Depth		0-0.25	1.2-1.5	0-0.45	0-0.3	1.3-1.5
Date Sampled		22/08/2018	22/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	31/08/2018	31/08/2018
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	%	93	111	105	107	105

svTRH (C10-C40) in Soil						
Our Reference		199517-134	199517-136	199517-137	199517-138	199517-141
Your Reference	UNITS	BH162	BH163	BH163	BH164	BH165
Depth		0-0.3	0-0.3	0.5-0.7	0-0.3	0-0.3
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	%	115	109	112	107	104

svTRH (C10-C40) in Soil						
Our Reference		199517-143	199517-147	199517-148	199517-150	199517-152
Your Reference	UNITS	BH166	BH166	BH167	BH168	BH169
Depth		0-0.1	4.0-4.1	0-0.3	0-0.3	0-0.2
Date Sampled		20/08/2018	20/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	%	105	108	108	109	108

svTRH (C10-C40) in Soil						
Our Reference		199517-154	199517-156	199517-158	199517-160	199517-162
Your Reference	UNITS	BH170	BH170	BH171	BH172	BH173
Depth		0-0.1	1.6-1.95	0-0.5	0-0.4	0-0.3
Date Sampled		20/08/2018	20/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	%	109	105	108	111	112

svTRH (C10-C40) in Soil						
Our Reference		199517-164	199517-165	199517-166	199517-169	199517-170
Your Reference	UNITS	BH174	BH174	BH175	BH176	BH176
Depth		0-0.3	0.4-0.8	0-0.3	0.4-0.6	1.2-1.5
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	%	116	113	107	109	109

svTRH (C10-C40) in Soil						
Our Reference		199517-172	199517-173	199517-174	199517-176	199517-177
Your Reference	UNITS	BH177	BH177	BH178	BH178	BH179
Depth		0.6-0.9	1-1.2	0-0.3	1-1.2	0-0.2
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	1,500
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	1,200
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	2,600
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	500
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	3,100
Surrogate o-Terphenyl	%	113	127	90	89	#

svTRH (C10-C40) in Soil						
Our Reference		199517-180	199517-183	199517-184	199517-188	199517-191
Your Reference	UNITS	BH180	BH181	BH181	BH182	BH183
Depth		0-0.1	0-0.2	0.5-0.95	0-0.1	0-0.2
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	670	<100	<100	<100	900
TRH C_{29} - C_{36}	mg/kg	470	<100	<100	<100	240
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	1,100	<100	<100	<100	1,100
TRH >C_{34} -C_{40}	mg/kg	170	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	1,300	<50	<50	<50	1,100
Surrogate o-Terphenyl	%	108	70	88	91	#

svTRH (C10-C40) in Soil						
Our Reference		199517-194	199517-196	199517-199	199517-201	199517-203
Your Reference	UNITS	BH184	BH185	BH186	BH186	BH188
Depth		0-0.4	0-0.2	0-0.1	1.5-1.95	0.4-0.6
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	110	<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	180	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	180	<50	<50	<50
Surrogate o-Terphenyl	%	88	87	88	85	125

svTRH (C10-C40) in Soil						
Our Reference		199517-204	199517-207	199517-209	199517-210	199517-211
Your Reference	UNITS	BH188	BH189	DUPAM2	DUPAM3	DUPAM5
Depth		0.9-1.1	0.8-0.9	-	-	-
Date Sampled		21/08/2018	21/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	120	<100	<100	140
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	120	<50	<50	140
Surrogate o-Terphenyl	%	88	91	92	90	90

svTRH (C10-C40) in Soil						
Our Reference		199517-213	199517-216	199517-218	199517-220	199517-222
Your Reference	UNITS	DUPAM7	DUPAM11	DUPAM14	DUPAM16	DUPAM18
Depth		-	-	-	-	-
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	01/09/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	1,500	<100	<100	930	<100
TRH C_{29} - C_{36}	mg/kg	1,100	<100	<100	340	<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	2,500	<100	100	1,200	<100
TRH >C_{34} -C_{40}	mg/kg	430	<100	<100	110	<100
Total +ve TRH (>C10-C40)	mg/kg	3,000	<50	100	1,300	<50
Surrogate o-Terphenyl	%	#	90	94	#	91

svTRH (C10-C40) in Soil						
Our Reference		199517-224	199517-226	199517-229	199517-231	199517-232
Your Reference	UNITS	DUPAM21	DUPAM23	DUPAM27	DUPAM29	DUPAM31
Depth		-	-	-	-	-
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	01/09/2018	01/09/2018	01/09/2018	01/09/2018	01/09/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	91	90	90	89	90

svTRH (C10-C40) in Soil						
Our Reference		199517-234	199517-235	199517-236	199517-237	199517-238
Your Reference	UNITS	DUPAM33	SP1-1	SP1-2	SP2-1	SP2-2
Depth		-	-	-	-	-
Date Sampled		20/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	01/09/2018	01/09/2018	01/09/2018	01/09/2018	01/09/2018
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	%	88	94	93	91	94

svTRH (C10-C40) in Soil						
Our Reference		199517-239	199517-240	199517-241	199517-242	199517-243
Your Reference	UNITS	SP3-1	SP3-2	SP4-1	SP4-2	SP5-1
Depth		-	-	-	-	-
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	01/09/2018	01/09/2018	01/09/2018	01/09/2018	01/09/2018
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	%	94	94	98	90	92

svTRH (C10-C40) in Soil				
Our Reference		199517-244	199517-246	199517-248
Your Reference	UNITS	SP5-2	BH187	BH187
Depth		-	0-0.2	1.7-1.95
Date Sampled		24/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	01/09/2018	01/09/2018	01/09/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	260	<100	<100
TRH C_{29} - C_{36}	mg/kg	350	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	560	<100	<100
TRH >C_{34} -C_{40}	mg/kg	160	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	720	<50	<50
Surrogate o-Terphenyl	%	94	93	89

PAHs in Soil						
Our Reference		199517-1	199517-5	199517-6	199517-7	199517-8
Your Reference	UNITS	BH101	BH102	BH102	BH103	BH103
Depth		0-0.5	0.3-0.4	0.9-1.0	0-0.3	1.2-1.3
Date Sampled		21/08/2018	22/08/2018	22/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	0.3	<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	<0.05	<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	0.62	<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	%	93	107	103	96	99

PAHs in Soil						
Our Reference		199517-9	199517-10	199517-11	199517-14	199517-16
Your Reference	UNITS	BH104	BH104	BH105	BH106	BH107
Depth		0-0.3	0.7-1.0	0-0.2	0-0.2	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	92	97	88	87	90

PAHs in Soil						
Our Reference		199517-18	199517-20	199517-21	199517-22	199517-23
Your Reference	UNITS	BH108	BH109	BH109	BH110	BH110
Depth		0-0.2	0-0.3	1.2-1.5	0-0.3	0.5-0.7
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	84	91	94	94	93

PAHs in Soil						
Our Reference		199517-25	199517-26	199517-27	199517-30	199517-32
Your Reference	UNITS	BH111	BH111	BH112	BH113	BH114
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	95	87	87	89	99

PAHs in Soil						
Our Reference		199517-33	199517-34	199517-35	199517-37	199517-38
Your Reference	UNITS	BH114	BH115	BH115	BH116	BH116
Depth		1.2-1.5	0-0.3	0.4-0.6	0-0.3	0.9-1.1
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	88	92	93	90	88

PAHs in Soil						
Our Reference		199517-39	199517-41	199517-42	199517-43	199517-45
Your Reference	UNITS	BH117	BH118	BH118	BH119	BH120
Depth		0-0.3	0-0.5	1.2-1.5	0-0.5	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	97	93	97	96	88

PAHs in Soil						
Our Reference		199517-46	199517-47	199517-48	199517-49	199517-51
Your Reference	UNITS	BH120	BH121	BH121	BH122	BH123
Depth		1.2-1.5	0-0.3	1.2-1.5	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	94	92	90	96	90

PAHs in Soil						
Our Reference		199517-53	199517-55	199517-57	199517-59	199517-60
Your Reference	UNITS	BH124	BH125	BH126	BH127	BH127
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0.3-0.6
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	90	94	92	100	95

PAHs in Soil						
Our Reference		199517-62	199517-65	199517-66	199517-67	199517-69
Your Reference	UNITS	BH128	BH129	BH129	BH130	BH131
Depth		0-0.2	0-0.3	1.2-1.5	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	93	98	95	90	94

PAHs in Soil						
Our Reference		199517-71	199517-72	199517-73	199517-75	199517-76
Your Reference	UNITS	BH132	BH132	BH133	BH134	BH134
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	1.2-1.5
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	95	92	91	98	91

PAHs in Soil						
Our Reference		199517-77	199517-79	199517-80	199517-81	199517-83
Your Reference	UNITS	BH135	BH136	BH136	BH137	BH137
Depth		0-0.3	0-0.3	1.3-1.5	0-0.2	1.5-1.95
Date Sampled		23/08/2018	23/08/2018	23/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	93	89	94	91	89

PAHs in Soil						
Our Reference		199517-86	199517-88	199517-90	199517-92	199517-94
Your Reference	UNITS	BH138	BH139	BH140	BH141	BH142
Depth		0-0.3	0-0.5	0-0.3	0-0.35	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	95	90	100	93	104

PAHs in Soil						
Our Reference		199517-95	199517-96	199517-98	199517-99	199517-100
Your Reference	UNITS	BH142	BH143	BH144	BH144	BH145
Depth		1.0-1.5	0-0.2	0-0.3	1.2-1.5	0-0.2
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	87	93	64	65	66

PAHs in Soil						
Our Reference		199517-102	199517-103	199517-104	199517-105	199517-106
Your Reference	UNITS	BH146	BH146	BH147	BH147	BH148
Depth		0-0.3	1.2-1.5	0-0.3	1.2-1.5	0-0.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	67	70	75	69	68

PAHs in Soil						
Our Reference		199517-108	199517-109	199517-110	199517-112	199517-113
Your Reference	UNITS	BH149	BH149	BH150	BH151	BH151
Depth		0-0.3	1.2-1.5	0-0.2	0-0.3	1.2-1.5
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	69	71	72	72	64

PAHs in Soil						
Our Reference		199517-114	199517-116	199517-118	199517-119	199517-120
Your Reference	UNITS	BH152	BH153	BH154	BH154	BH155
Depth		0-0.3	0-0.3	0-0.2	0.8-1	0-0.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	68	67	65	66	67

PAHs in Soil						
Our Reference		199517-122	199517-123	199517-124	199517-126	199517-127
Your Reference	UNITS	BH156	BH156	BH157	BH158	BH158
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	1.2-1.5
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	70	65	66	94	94

PAHs in Soil						
Our Reference		199517-128	199517-129	199517-130	199517-132	199517-133
Your Reference	UNITS	BH159	BH159	BH160	BH161	BH161
Depth		0-0.25	1.2-1.5	0-0.45	0-0.3	1.3-1.5
Date Sampled		22/08/2018	22/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	88	108	100	104	111

PAHs in Soil						
Our Reference		199517-134	199517-136	199517-137	199517-138	199517-141
Your Reference	UNITS	BH162	BH163	BH163	BH164	BH165
Depth		0-0.3	0-0.3	0.5-0.7	0-0.3	0-0.3
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	115	104	110	105	111

PAHs in Soil						
Our Reference		199517-143	199517-147	199517-148	199517-150	199517-152
Your Reference	UNITS	BH166	BH166	BH167	BH168	BH169
Depth		0-0.1	4.0-4.1	0-0.3	0-0.3	0-0.2
Date Sampled		20/08/2018	20/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	107	101	108	107	108

PAHs in Soil						
Our Reference		199517-154	199517-156	199517-158	199517-160	199517-162
Your Reference	UNITS	BH170	BH170	BH171	BH172	BH173
Depth		0-0.1	1.6-1.95	0-0.5	0-0.4	0-0.3
Date Sampled		20/08/2018	20/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	107	135	138	134	131

PAHs in Soil						
Our Reference		199517-164	199517-165	199517-166	199517-169	199517-170
Your Reference	UNITS	BH174	BH174	BH175	BH176	BH176
Depth		0-0.3	0.4-0.8	0-0.3	0.4-0.6	1.2-1.5
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	134	132	132	130	128

PAHs in Soil						
Our Reference		199517-172	199517-173	199517-174	199517-176	199517-177
Your Reference	UNITS	BH177	BH177	BH178	BH178	BH179
Depth		0.6-0.9	1-1.2	0-0.3	1-1.2	0-0.2
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	1.7	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	1.6	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	3.5	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	3.6	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	1.7	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	1.4	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	2.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	1.4	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.6	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.7	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	19	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	2.1	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	2.1	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	2.1	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	134	110	109	107	127

PAHs in Soil						
Our Reference		199517-180	199517-183	199517-184	199517-188	199517-191
Your Reference	UNITS	BH180	BH181	BH181	BH182	BH183
Depth		0-0.1	0-0.2	0.5-0.95	0-0.1	0-0.2
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	0.2
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	%	112	113	109	108	117

PAHs in Soil						
Our Reference		199517-194	199517-196	199517-199	199517-201	199517-203
Your Reference	UNITS	BH184	BH185	BH186	BH186	BH188
Depth		0-0.4	0-0.2	0-0.1	1.5-1.95	0.4-0.6
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	0.4	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	114	114	109	110	109

PAHs in Soil						
Our Reference		199517-204	199517-207	199517-209	199517-210	199517-211
Your Reference	UNITS	BH188	BH189	DUPAM2	DUPAM3	DUPAM5
Depth		0.9-1.1	0.8-0.9	-	-	-
Date Sampled		21/08/2018	21/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	0.9	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	1.8	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	1.6	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.6	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.5	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.9	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.56	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.3	<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	0.3	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	7.7	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	0.7	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	0.8	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	0.8	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	110	108	109	107	107

PAHs in Soil						
Our Reference		199517-213	199517-216	199517-218	199517-220	199517-222
Your Reference	UNITS	DUPAM7	DUPAM11	DUPAM14	DUPAM16	DUPAM18
Depth		-	-	-	-	-
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	%	118	104	101	101	109

PAHs in Soil						
Our Reference		199517-224	199517-226	199517-229	199517-231	199517-232
Your Reference	UNITS	DUPAM21	DUPAM23	DUPAM27	DUPAM29	DUPAM31
Depth		-	-	-	-	-
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	103	102	104	102	101

PAHs in Soil						
Our Reference		199517-234	199517-235	199517-236	199517-237	199517-238
Your Reference	UNITS	DUPAM33	SP1-1	SP1-2	SP2-1	SP2-2
Depth		-	-	-	-	-
Date Sampled		20/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	0.2
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	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	0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	0.2
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	1.5
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	101	107	105	113	105

PAHs in Soil						
Our Reference		199517-239	199517-240	199517-241	199517-242	199517-243
Your Reference	UNITS	SP3-1	SP3-2	SP4-1	SP4-2	SP5-1
Depth		-	-	-	-	-
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
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	0.06	<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	0.3	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	108	106	108	102	103

PAHs in Soil				
Our Reference		199517-244	199517-246	199517-248
Your Reference	UNITS	SP5-2	BH187	BH187
Depth		-	0-0.2	1.7-1.95
Date Sampled		24/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.3	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.4	<0.1
Pyrene	mg/kg	<0.1	0.4	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.2	<0.1
Chrysene	mg/kg	<0.1	0.2	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.3	<0.2
Benzo(a)pyrene	mg/kg	0.07	0.2	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.1	<0.1
Total +ve PAH's	mg/kg	0.07	2.3	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	108	103	100

Organochlorine Pesticides in soil						
Our Reference		199517-1	199517-5	199517-7	199517-9	199517-11
Your Reference	UNITS	BH101	BH102	BH103	BH104	BH105
Depth		0-0.5	0.3-0.4	0-0.3	0-0.3	0-0.2
Date Sampled		21/08/2018	22/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	94	90	94	92

Organochlorine Pesticides in soil						
Our Reference		199517-14	199517-16	199517-18	199517-20	199517-22
Your Reference	UNITS	BH106	BH107	BH108	BH109	BH110
Depth		0-0.2	0-0.3	0-0.2	0-0.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
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	%	93	92	92	94	92

Organochlorine Pesticides in soil						
Our Reference		199517-25	199517-27	199517-30	199517-32	199517-34
Your Reference	UNITS	BH111	BH112	BH113	BH114	BH115
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
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	%	93	93	93	93	93

Organochlorine Pesticides in soil						
Our Reference		199517-37	199517-39	199517-41	199517-43	199517-45
Your Reference	UNITS	BH116	BH117	BH118	BH119	BH120
Depth		0-0.3	0-0.3	0-0.5	0-0.5	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
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	%	93	92	93	93	92

Organochlorine Pesticides in soil						
Our Reference		199517-47	199517-49	199517-51	199517-53	199517-55
Your Reference	UNITS	BH121	BH122	BH123	BH124	BH125
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
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	%	93	94	94	91	93

Organochlorine Pesticides in soil						
Our Reference		199517-57	199517-59	199517-62	199517-65	199517-67
Your Reference	UNITS	BH126	BH127	BH128	BH129	BH130
Depth		0-0.3	0-0.3	0-0.2	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	92	91	97	99

Organochlorine Pesticides in soil						
Our Reference		199517-69	199517-71	199517-73	199517-75	199517-77
Your Reference	UNITS	BH131	BH132	BH133	BH134	BH135
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	99	97	95	96	97

Organochlorine Pesticides in soil						
Our Reference		199517-79	199517-81	199517-86	199517-88	199517-90
Your Reference	UNITS	BH136	BH137	BH138	BH139	BH140
Depth		0-0.3	0-0.2	0-0.3	0-0.5	0-0.3
Date Sampled		23/08/2018	20/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	31/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
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	%	94	96	96	95	97

Organochlorine Pesticides in soil						
Our Reference		199517-92	199517-94	199517-96	199517-98	199517-100
Your Reference	UNITS	BH141	BH142	BH143	BH144	BH145
Depth		0-0.35	0-0.3	0-0.2	0-0.3	0-0.2
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	95	99	73	71

Organochlorine Pesticides in soil						
Our Reference		199517-102	199517-104	199517-106	199517-108	199517-110
Your Reference	UNITS	BH146	BH147	BH148	BH149	BH150
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.2
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
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	%	74	74	73	73	74

Organochlorine Pesticides in soil						
Our Reference		199517-112	199517-114	199517-116	199517-118	199517-120
Your Reference	UNITS	BH151	BH152	BH153	BH154	BH155
Depth		0-0.3	0-0.3	0-0.3	0-0.2	0-0.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
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	%	75	71	71	73	71

Organochlorine Pesticides in soil						
Our Reference		199517-122	199517-124	199517-126	199517-128	199517-130
Your Reference	UNITS	BH156	BH157	BH158	BH159	BH160
Depth		0-0.3	0-0.3	0-0.3	0-0.25	0-0.45
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
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	%	71	70	93	96	113

Organochlorine Pesticides in soil						
Our Reference		199517-132	199517-134	199517-136	199517-138	199517-141
Your Reference	UNITS	BH161	BH162	BH163	BH164	BH165
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	112	113	113	112	112

Organochlorine Pesticides in soil						
Our Reference		199517-143	199517-148	199517-150	199517-152	199517-154
Your Reference	UNITS	BH166	BH167	BH168	BH169	BH170
Depth		0-0.1	0-0.3	0-0.3	0-0.2	0-0.1
Date Sampled		20/08/2018	21/08/2018	21/08/2018	21/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	109	111	111	111	111

Organochlorine Pesticides in soil						
Our Reference		199517-158	199517-160	199517-162	199517-164	199517-166
Your Reference	UNITS	BH171	BH172	BH173	BH174	BH175
Depth		0-0.5	0-0.4	0-0.3	0-0.3	0-0.3
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
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	%	114	111	113	113	114

Organochlorine Pesticides in soil						
Our Reference		199517-169	199517-172	199517-174	199517-177	199517-180
Your Reference	UNITS	BH176	BH177	BH178	BH179	BH180
Depth		0.4-0.6	0.6-0.9	0-0.3	0-0.2	0-0.1
Date Sampled		21/08/2018	21/08/2018	21/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	112	112	94	103	93

Organochlorine Pesticides in soil						
Our Reference		199517-183	199517-188	199517-191	199517-194	199517-196
Your Reference	UNITS	BH181	BH182	BH183	BH184	BH185
Depth		0-0.2	0-0.1	0-0.2	0-0.4	0-0.2
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	89	85	94	92

Organochlorine Pesticides in soil						
Our Reference		199517-199	199517-203	199517-207	199517-235	199517-236
Your Reference	UNITS	BH186	BH188	BH189	SP1-1	SP1-2
Depth		0-0.1	0.4-0.6	0.8-0.9	-	-
Date Sampled		20/08/2018	21/08/2018	21/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	92	95	96	95	102

Organochlorine Pesticides in soil						
Our Reference		199517-237	199517-238	199517-239	199517-240	199517-241
Your Reference	UNITS	SP2-1	SP2-2	SP3-1	SP3-2	SP4-1
Depth		-	-	-	-	-
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-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
beta-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
pp-DDD	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-DDT	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
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	93	94	96	98

Organochlorine Pesticides in soil					
Our Reference		199517-242	199517-243	199517-244	199517-246
Your Reference	UNITS	SP4-2	SP5-1	SP5-2	BH187
Depth		-	-	-	0-0.2
Date Sampled		22/08/2018	24/08/2018	24/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	92	94	93	91

Organophosphorus Pesticides						
Our Reference		199517-1	199517-5	199517-7	199517-9	199517-11
Your Reference	UNITS	BH101	BH102	BH103	BH104	BH105
Depth		0-0.5	0.3-0.4	0-0.3	0-0.3	0-0.2
Date Sampled		21/08/2018	22/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	94	90	94	92

Organophosphorus Pesticides						
Our Reference		199517-14	199517-16	199517-18	199517-20	199517-22
Your Reference	UNITS	BH106	BH107	BH108	BH109	BH110
Depth		0-0.2	0-0.3	0-0.2	0-0.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	92	92	94	92

Organophosphorus Pesticides						
Our Reference		199517-25	199517-27	199517-30	199517-32	199517-34
Your Reference	UNITS	BH111	BH112	BH113	BH114	BH115
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	93	93	93	93

Organophosphorus Pesticides						
Our Reference		199517-37	199517-39	199517-41	199517-43	199517-45
Your Reference	UNITS	BH116	BH117	BH118	BH119	BH120
Depth		0-0.3	0-0.3	0-0.5	0-0.5	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	92	93	93	92

Organophosphorus Pesticides						
Our Reference		199517-47	199517-49	199517-51	199517-53	199517-55
Your Reference	UNITS	BH121	BH122	BH123	BH124	BH125
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	94	94	91	93

Organophosphorus Pesticides						
Our Reference		199517-57	199517-59	199517-62	199517-65	199517-67
Your Reference	UNITS	BH126	BH127	BH128	BH129	BH130
Depth		0-0.3	0-0.3	0-0.2	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	92	91	97	99

Organophosphorus Pesticides						
Our Reference		199517-69	199517-71	199517-73	199517-75	199517-77
Your Reference	UNITS	BH131	BH132	BH133	BH134	BH135
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	99	97	95	96	97

Organophosphorus Pesticides						
Our Reference		199517-79	199517-81	199517-86	199517-88	199517-90
Your Reference	UNITS	BH136	BH137	BH138	BH139	BH140
Depth		0-0.3	0-0.2	0-0.3	0-0.5	0-0.3
Date Sampled		23/08/2018	20/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	94	96	96	95	97

Organophosphorus Pesticides						
Our Reference		199517-92	199517-94	199517-96	199517-98	199517-100
Your Reference	UNITS	BH141	BH142	BH143	BH144	BH145
Depth		0-0.35	0-0.3	0-0.2	0-0.3	0-0.2
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	95	99	73	71

Organophosphorus Pesticides						
Our Reference		199517-102	199517-104	199517-106	199517-108	199517-110
Your Reference	UNITS	BH146	BH147	BH148	BH149	BH150
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.2
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	74	74	73	73	74

Organophosphorus Pesticides						
Our Reference		199517-112	199517-114	199517-116	199517-118	199517-120
Your Reference	UNITS	BH151	BH152	BH153	BH154	BH155
Depth		0-0.3	0-0.3	0-0.3	0-0.2	0-0.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	75	71	71	73	71

Organophosphorus Pesticides						
Our Reference		199517-122	199517-124	199517-126	199517-128	199517-130
Your Reference	UNITS	BH156	BH157	BH158	BH159	BH160
Depth		0-0.3	0-0.3	0-0.3	0-0.25	0-0.45
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	71	70	93	96	113

Organophosphorus Pesticides						
Our Reference		199517-132	199517-134	199517-136	199517-138	199517-141
Your Reference	UNITS	BH161	BH162	BH163	BH164	BH165
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	112	113	113	112	112

Organophosphorus Pesticides						
Our Reference		199517-143	199517-148	199517-150	199517-152	199517-154
Your Reference	UNITS	BH166	BH167	BH168	BH169	BH170
Depth		0-0.1	0-0.3	0-0.3	0-0.2	0-0.1
Date Sampled		20/08/2018	21/08/2018	21/08/2018	21/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	109	111	111	111	111

Organophosphorus Pesticides						
Our Reference		199517-158	199517-160	199517-162	199517-164	199517-166
Your Reference	UNITS	BH171	BH172	BH173	BH174	BH175
Depth		0-0.5	0-0.4	0-0.3	0-0.3	0-0.3
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	111	113	113	114

Organophosphorus Pesticides						
Our Reference		199517-169	199517-172	199517-174	199517-177	199517-180
Your Reference	UNITS	BH176	BH177	BH178	BH179	BH180
Depth		0.4-0.6	0.6-0.9	0-0.3	0-0.2	0-0.1
Date Sampled		21/08/2018	21/08/2018	21/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	112	112	94	103	93

Organophosphorus Pesticides						
Our Reference		199517-183	199517-188	199517-191	199517-194	199517-196
Your Reference	UNITS	BH181	BH182	BH183	BH184	BH185
Depth		0-0.2	0-0.1	0-0.2	0-0.4	0-0.2
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	89	85	94	92

Organophosphorus Pesticides						
Our Reference		199517-199	199517-203	199517-207	199517-235	199517-236
Your Reference	UNITS	BH186	BH188	BH189	SP1-1	SP1-2
Depth		0-0.1	0.4-0.6	0.8-0.9	-	-
Date Sampled		20/08/2018	21/08/2018	21/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	92	95	96	95	102

Organophosphorus Pesticides						
Our Reference		199517-237	199517-238	199517-239	199517-240	199517-241
Your Reference	UNITS	SP2-1	SP2-2	SP3-1	SP3-2	SP4-1
Depth		-	-	-	-	-
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	93	94	96	98

Organophosphorus Pesticides					
Our Reference		199517-242	199517-243	199517-244	199517-246
Your Reference	UNITS	SP4-2	SP5-1	SP5-2	BH187
Depth		-	-	-	0-0.2
Date Sampled		22/08/2018	24/08/2018	24/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	92	94	93	91

PCBs in Soil						
Our Reference		199517-1	199517-5	199517-7	199517-9	199517-11
Your Reference	UNITS	BH101	BH102	BH103	BH104	BH105
Depth		0-0.5	0.3-0.4	0-0.3	0-0.3	0-0.2
Date Sampled		21/08/2018	22/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
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 TCLMX	%	96	94	90	94	92

PCBs in Soil						
Our Reference		199517-14	199517-16	199517-18	199517-20	199517-22
Your Reference	UNITS	BH106	BH107	BH108	BH109	BH110
Depth		0-0.2	0-0.3	0-0.2	0-0.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
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 TCLMX	%	93	92	92	94	92

PCBs in Soil						
Our Reference		199517-25	199517-27	199517-30	199517-32	199517-34
Your Reference	UNITS	BH111	BH112	BH113	BH114	BH115
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
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 TCLMX	%	93	93	93	93	93

PCBs in Soil						
Our Reference		199517-37	199517-39	199517-41	199517-43	199517-45
Your Reference	UNITS	BH116	BH117	BH118	BH119	BH120
Depth		0-0.3	0-0.3	0-0.5	0-0.5	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
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 TCLMX	%	93	92	93	93	92

PCBs in Soil						
Our Reference		199517-47	199517-49	199517-51	199517-53	199517-55
Your Reference	UNITS	BH121	BH122	BH123	BH124	BH125
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
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 TCLMX	%	93	94	94	91	93

PCBs in Soil						
Our Reference		199517-57	199517-59	199517-62	199517-65	199517-67
Your Reference	UNITS	BH126	BH127	BH128	BH129	BH130
Depth		0-0.3	0-0.3	0-0.2	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
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 TCLMX	%	91	92	91	97	99

PCBs in Soil						
Our Reference		199517-69	199517-71	199517-73	199517-75	199517-77
Your Reference	UNITS	BH131	BH132	BH133	BH134	BH135
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
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 TCLMX	%	99	97	95	96	97

PCBs in Soil						
Our Reference		199517-79	199517-81	199517-86	199517-88	199517-90
Your Reference	UNITS	BH136	BH137	BH138	BH139	BH140
Depth		0-0.3	0-0.2	0-0.3	0-0.5	0-0.3
Date Sampled		23/08/2018	20/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	31/08/2018
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 TCLMX	%	94	96	96	95	97

PCBs in Soil						
Our Reference		199517-92	199517-94	199517-96	199517-98	199517-100
Your Reference	UNITS	BH141	BH142	BH143	BH144	BH145
Depth		0-0.35	0-0.3	0-0.2	0-0.3	0-0.2
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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 TCLMX	%	96	95	99	73	71

PCBs in Soil						
Our Reference		199517-102	199517-104	199517-106	199517-108	199517-110
Your Reference	UNITS	BH146	BH147	BH148	BH149	BH150
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.2
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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 TCLMX	%	74	74	73	73	74

PCBs in Soil						
Our Reference		199517-112	199517-114	199517-116	199517-118	199517-120
Your Reference	UNITS	BH151	BH152	BH153	BH154	BH155
Depth		0-0.3	0-0.3	0-0.3	0-0.2	0-0.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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 TCLMX	%	75	71	71	73	71

PCBs in Soil						
Our Reference		199517-122	199517-124	199517-126	199517-128	199517-130
Your Reference	UNITS	BH156	BH157	BH158	BH159	BH160
Depth		0-0.3	0-0.3	0-0.3	0-0.25	0-0.45
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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 TCLMX	%	71	70	93	96	113

PCBs in Soil						
Our Reference		199517-132	199517-134	199517-136	199517-138	199517-141
Your Reference	UNITS	BH161	BH162	BH163	BH164	BH165
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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 TCLMX	%	112	113	113	112	112

PCBs in Soil						
Our Reference		199517-143	199517-148	199517-150	199517-152	199517-154
Your Reference	UNITS	BH166	BH167	BH168	BH169	BH170
Depth		0-0.1	0-0.3	0-0.3	0-0.2	0-0.1
Date Sampled		20/08/2018	21/08/2018	21/08/2018	21/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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 TCLMX	%	109	111	111	111	111

PCBs in Soil						
Our Reference		199517-158	199517-160	199517-162	199517-164	199517-166
Your Reference	UNITS	BH171	BH172	BH173	BH174	BH175
Depth		0-0.5	0-0.4	0-0.3	0-0.3	0-0.3
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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 TCLMX	%	114	111	113	113	114

PCBs in Soil						
Our Reference		199517-169	199517-172	199517-174	199517-177	199517-180
Your Reference	UNITS	BH176	BH177	BH178	BH179	BH180
Depth		0.4-0.6	0.6-0.9	0-0.3	0-0.2	0-0.1
Date Sampled		21/08/2018	21/08/2018	21/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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 TCLMX	%	112	112	94	103	93

PCBs in Soil						
Our Reference		199517-183	199517-188	199517-191	199517-194	199517-196
Your Reference	UNITS	BH181	BH182	BH183	BH184	BH185
Depth		0-0.2	0-0.1	0-0.2	0-0.4	0-0.2
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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	0.6	0.2	<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	0.6	0.2	<0.1	<0.1
Surrogate TCLMX	%	91	89	85	94	92

PCBs in Soil						
Our Reference		199517-199	199517-203	199517-207	199517-235	199517-236
Your Reference	UNITS	BH186	BH188	BH189	SP1-1	SP1-2
Depth		0-0.1	0.4-0.6	0.8-0.9	-	-
Date Sampled		20/08/2018	21/08/2018	21/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Aroclor 1016	mg/kg	<0.1	<0.1	<0.2	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.2	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.2	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.2	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.2	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.2	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.2	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.2	<0.1	<0.1
Surrogate TCLMX	%	92	95	96	95	102

PCBs in Soil						
Our Reference		199517-237	199517-238	199517-239	199517-240	199517-241
Your Reference	UNITS	SP2-1	SP2-2	SP3-1	SP3-2	SP4-1
Depth		-	-	-	-	-
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
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 TCLMX	%	96	93	94	96	98

PCBs in Soil					
Our Reference		199517-242	199517-243	199517-244	199517-246
Your Reference	UNITS	SP4-2	SP5-1	SP5-2	BH187
Depth		-	-	-	0-0.2
Date Sampled		22/08/2018	24/08/2018	24/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL
Date extracted	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	92	94	93	91

Acid Extractable metals in soil						
Our Reference		199517-1	199517-5	199517-6	199517-7	199517-8
Your Reference	UNITS	BH101	BH102	BH102	BH103	BH103
Depth		0-0.5	0.3-0.4	0.9-1.0	0-0.3	1.2-1.3
Date Sampled		21/08/2018	22/08/2018	22/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	4	4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	24	13	10	7
Copper	mg/kg	63	45	21	11	3
Lead	mg/kg	29	15	8	19	5
Mercury	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Nickel	mg/kg	8	54	10	7	4
Zinc	mg/kg	87	170	29	35	11

Acid Extractable metals in soil						
Our Reference		199517-9	199517-10	199517-11	199517-14	199517-16
Your Reference	UNITS	BH104	BH104	BH105	BH106	BH107
Depth		0-0.3	0.7-1.0	0-0.2	0-0.2	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	9	9	10	9
Copper	mg/kg	13	5	11	13	8
Lead	mg/kg	10	7	11	14	9
Mercury	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Nickel	mg/kg	7	5	6	7	6
Zinc	mg/kg	32	18	31	38	26

Acid Extractable metals in soil						
Our Reference		199517-18	199517-20	199517-21	199517-22	199517-23
Your Reference	UNITS	BH108	BH109	BH109	BH110	BH110
Depth		0-0.2	0-0.3	1.2-1.5	0-0.3	0.5-0.7
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	9	8	10	10
Copper	mg/kg	15	10	3	11	6
Lead	mg/kg	16	11	6	15	8
Mercury	mg/kg	0.2	0.2	<0.1	0.1	<0.1
Nickel	mg/kg	5	5	4	7	6
Zinc	mg/kg	38	32	13	32	21

Acid Extractable metals in soil						
Our Reference		199517-25	199517-26	199517-27	199517-30	199517-32
Your Reference	UNITS	BH111	BH111	BH112	BH113	BH114
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	8	9	8	9
Copper	mg/kg	11	4	14	11	8
Lead	mg/kg	11	6	15	10	9
Mercury	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Nickel	mg/kg	5	4	5	4	6
Zinc	mg/kg	28	13	39	25	24

Acid Extractable metals in soil						
Our Reference		199517-33	199517-34	199517-35	199517-37	199517-38
Your Reference	UNITS	BH114	BH115	BH115	BH116	BH116
Depth		1.2-1.5	0-0.3	0.4-0.6	0-0.3	0.9-1.1
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	5	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	7	11	11	15	7
Copper	mg/kg	3	12	7	20	5
Lead	mg/kg	4	35	12	23	5
Mercury	mg/kg	<0.1	0.1	<0.1	0.2	<0.1
Nickel	mg/kg	3	8	7	11	5
Zinc	mg/kg	11	34	21	56	8

Acid Extractable metals in soil						
Our Reference		199517-39	199517-41	199517-42	199517-43	199517-45
Your Reference	UNITS	BH117	BH118	BH118	BH119	BH120
Depth		0-0.3	0-0.5	1.2-1.5	0-0.5	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
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	8	8	7	8
Copper	mg/kg	14	6	3	9	11
Lead	mg/kg	13	8	5	9	10
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	5	4	4	4
Zinc	mg/kg	38	22	12	22	25

Acid Extractable metals in soil						
Our Reference		199517-46	199517-47	199517-48	199517-49	199517-51
Your Reference	UNITS	BH120	BH121	BH121	BH122	BH123
Depth		1.2-1.5	0-0.3	1.2-1.5	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	7	9	8	10	8
Copper	mg/kg	3	14	4	13	10
Lead	mg/kg	4	14	5	11	9
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	5	4	6	5
Zinc	mg/kg	11	32	13	30	24

Acid Extractable metals in soil						
Our Reference		199517-53	199517-55	199517-57	199517-59	199517-60
Your Reference	UNITS	BH124	BH125	BH126	BH127	BH127
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0.3-0.6
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	7	7	7	8	9
Copper	mg/kg	8	12	12	18	4
Lead	mg/kg	8	12	9	13	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	4	3	4	5
Zinc	mg/kg	24	31	27	32	13

Acid Extractable metals in soil						
Our Reference		199517-62	199517-65	199517-66	199517-67	199517-69
Your Reference	UNITS	BH128	BH129	BH129	BH130	BH131
Depth		0-0.2	0-0.3	1.2-1.5	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	8	9	8	9
Copper	mg/kg	12	11	4	7	13
Lead	mg/kg	10	10	6	8	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Nickel	mg/kg	5	6	4	5	4
Zinc	mg/kg	26	24	12	24	35

Acid Extractable metals in soil						
Our Reference		199517-71	199517-72	199517-73	199517-75	199517-76
Your Reference	UNITS	BH132	BH132	BH133	BH134	BH134
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	1.2-1.5
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
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	9	9	8	8
Copper	mg/kg	13	4	9	14	4
Lead	mg/kg	12	7	10	12	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	5	5	3	4
Zinc	mg/kg	27	13	25	25	12

Acid Extractable metals in soil						
Our Reference		199517-77	199517-79	199517-80	199517-81	199517-83
Your Reference	UNITS	BH135	BH136	BH136	BH137	BH137
Depth		0-0.3	0-0.3	1.3-1.5	0-0.2	1.5-1.95
Date Sampled		23/08/2018	23/08/2018	23/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
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	10	9	8	9
Copper	mg/kg	16	8	4	13	3
Lead	mg/kg	16	10	6	11	5
Mercury	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Nickel	mg/kg	6	6	4	4	4
Zinc	mg/kg	34	22	11	30	11

Acid Extractable metals in soil						
Our Reference		199517-86	199517-88	199517-90	199517-92	199517-94
Your Reference	UNITS	BH138	BH139	BH140	BH141	BH142
Depth		0-0.3	0-0.5	0-0.3	0-0.35	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
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	8	13	11
Copper	mg/kg	19	7	16	23	17
Lead	mg/kg	14	9	11	19	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	4	4	9	7
Zinc	mg/kg	33	28	32	56	38

Acid Extractable metals in soil						
Our Reference		199517-95	199517-96	199517-98	199517-99	199517-100
Your Reference	UNITS	BH142	BH143	BH144	BH144	BH145
Depth		1.0-1.5	0-0.2	0-0.3	1.2-1.5	0-0.2
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	9	8	9	8
Copper	mg/kg	5	16	23	4	25
Lead	mg/kg	6	13	14	6	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	6	4	4	3
Zinc	mg/kg	11	39	44	13	37

Acid Extractable metals in soil						
Our Reference		199517-102	199517-103	199517-104	199517-105	199517-106
Your Reference	UNITS	BH146	BH146	BH147	BH147	BH148
Depth		0-0.3	1.2-1.5	0-0.3	1.2-1.5	0-0.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	7	8	9	9	9
Copper	mg/kg	22	4	15	4	20
Lead	mg/kg	11	6	13	7	13
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	4	6	4	5
Zinc	mg/kg	36	12	39	12	34

Acid Extractable metals in soil						
Our Reference		199517-108	199517-109	199517-110	199517-112	199517-113
Your Reference	UNITS	BH149	BH149	BH150	BH151	BH151
Depth		0-0.3	1.2-1.5	0-0.2	0-0.3	1.2-1.5
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	9	8	7	8
Copper	mg/kg	19	4	23	23	4
Lead	mg/kg	13	7	12	11	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	5	4	3	4
Zinc	mg/kg	34	13	44	44	12

Acid Extractable metals in soil						
Our Reference		199517-114	199517-116	199517-118	199517-119	199517-120
Your Reference	UNITS	BH152	BH153	BH154	BH154	BH155
Depth		0-0.3	0-0.3	0-0.2	0.8-1	0-0.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	7	9	8	10	9
Copper	mg/kg	15	25	16	5	18
Lead	mg/kg	8	13	10	7	19
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	5	4	5	6
Zinc	mg/kg	29	40	31	13	46

Acid Extractable metals in soil						
Our Reference		199517-122	199517-123	199517-124	199517-126	199517-127
Your Reference	UNITS	BH156	BH156	BH157	BH158	BH158
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	1.2-1.5
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	6	<4	4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	9	8	8	9
Copper	mg/kg	29	4	19	19	4
Lead	mg/kg	28	6	18	13	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	4	4	5	4
Zinc	mg/kg	60	12	48	39	12

Acid Extractable metals in soil						
Our Reference		199517-128	199517-129	199517-130	199517-132	199517-133
Your Reference	UNITS	BH159	BH159	BH160	BH161	BH161
Depth		0-0.25	1.2-1.5	0-0.45	0-0.3	1.3-1.5
Date Sampled		22/08/2018	22/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	5	<4	5	4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	10	11	10	9
Copper	mg/kg	31	5	38	22	5
Lead	mg/kg	22	6	25	19	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	5	7	7	5
Zinc	mg/kg	59	11	65	50	12

Acid Extractable metals in soil						
Our Reference		199517-134	199517-136	199517-137	199517-138	199517-141
Your Reference	UNITS	BH162	BH163	BH163	BH164	BH165
Depth		0-0.3	0-0.3	0.5-0.7	0-0.3	0-0.3
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	5	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	9	10	7	11
Copper	mg/kg	26	43	5	30	30
Lead	mg/kg	22	21	8	14	15
Mercury	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Nickel	mg/kg	5	5	5	3	8
Zinc	mg/kg	65	110	15	65	48

Acid Extractable metals in soil						
Our Reference		199517-143	199517-147	199517-148	199517-150	199517-152
Your Reference	UNITS	BH166	BH166	BH167	BH168	BH169
Depth		0-0.1	4.0-4.1	0-0.3	0-0.3	0-0.2
Date Sampled		20/08/2018	20/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	10	9	8	8
Copper	mg/kg	57	5	8	45	18
Lead	mg/kg	19	8	9	15	9
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	5	6	5	4
Zinc	mg/kg	74	16	31	89	100

Acid Extractable metals in soil						
Our Reference		199517-154	199517-156	199517-158	199517-160	199517-162
Your Reference	UNITS	BH170	BH170	BH171	BH172	BH173
Depth		0-0.1	1.6-1.95	0-0.5	0-0.4	0-0.3
Date Sampled		20/08/2018	20/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	0.5	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	7	9	15	10	9
Copper	mg/kg	78	3	50	19	74
Lead	mg/kg	19	6	19	12	17
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	4	14	7	6
Zinc	mg/kg	100	13	76	35	78

Acid Extractable metals in soil						
Our Reference		199517-164	199517-165	199517-166	199517-169	199517-170
Your Reference	UNITS	BH174	BH174	BH175	BH176	BH176
Depth		0-0.3	0.4-0.8	0-0.3	0.4-0.6	1.2-1.5
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
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	9	9	12	9
Copper	mg/kg	48	12	9	22	7
Lead	mg/kg	14	9	9	9	5
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	6	6	7	5
Zinc	mg/kg	81	22	30	52	13

Acid Extractable metals in soil						
Our Reference		199517-172	199517-173	199517-174	199517-176	199517-177
Your Reference	UNITS	BH177	BH177	BH178	BH178	BH179
Depth		0.6-0.9	1-1.2	0-0.3	1-1.2	0-0.2
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	4.2
Chromium	mg/kg	18	11	26	9	310
Copper	mg/kg	27	9	100	21	1,700
Lead	mg/kg	17	8	25	7	240
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Nickel	mg/kg	16	15	32	7	280
Zinc	mg/kg	41	20	230	24	2,600

Acid Extractable metals in soil						
Our Reference		199517-180	199517-183	199517-184	199517-188	199517-191
Your Reference	UNITS	BH180	BH181	BH181	BH182	BH183
Depth		0-0.1	0-0.2	0.5-0.95	0-0.1	0-0.2
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	4	<4	<4	5
Cadmium	mg/kg	<0.4	0.6	<0.4	1	19
Chromium	mg/kg	36	20	14	27	39
Copper	mg/kg	100	170	39	760	6,800
Lead	mg/kg	24	46	16	76	920
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Nickel	mg/kg	17	25	10	25	81
Zinc	mg/kg	160	450	98	800	17,000

Acid Extractable metals in soil						
Our Reference		199517-194	199517-196	199517-199	199517-201	199517-203
Your Reference	UNITS	BH184	BH185	BH186	BH186	BH188
Depth		0-0.4	0-0.2	0-0.1	1.5-1.95	0.4-0.6
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	1	<0.4	<0.4	<0.4
Chromium	mg/kg	11	24	10	16	11
Copper	mg/kg	14	1,700	150	8	6
Lead	mg/kg	11	190	26	9	9
Mercury	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	17	8	8	7
Zinc	mg/kg	24	1,700	180	17	17

Acid Extractable metals in soil						
Our Reference		199517-204	199517-207	199517-209	199517-210	199517-211
Your Reference	UNITS	BH188	BH189	DUPAM2	DUPAM3	DUPAM5
Depth		0.9-1.1	0.8-0.9	-	-	-
Date Sampled		21/08/2018	21/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	0.6	<0.4
Chromium	mg/kg	10	14	9	17	19
Copper	mg/kg	5	32	3	130	53
Lead	mg/kg	8	38	6	31	17
Mercury	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	7	4	20	12
Zinc	mg/kg	14	120	12	340	98

Acid Extractable metals in soil						
Our Reference		199517-213	199517-216	199517-218	199517-220	199517-222
Your Reference	UNITS	DUPAM7	DUPAM11	DUPAM14	DUPAM16	DUPAM18
Depth		-	-	-	-	-
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	7	<4	<4	7	<4
Cadmium	mg/kg	4.4	<0.4	0.7	12	<0.4
Chromium	mg/kg	260	10	13	46	12
Copper	mg/kg	1,900	110	370	6,600	36
Lead	mg/kg	260	22	50	760	20
Mercury	mg/kg	0.2	<0.1	<0.1	0.3	<0.1
Nickel	mg/kg	270	8	19	110	8
Zinc	mg/kg	2,600	160	450	12,000	48

Acid Extractable metals in soil						
Our Reference		199517-224	199517-226	199517-229	199517-231	199517-232
Your Reference	UNITS	DUPAM21	DUPAM23	DUPAM27	DUPAM29	DUPAM31
Depth		-	-	-	-	-
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	11	12	11	8
Copper	mg/kg	25	21	17	21	8
Lead	mg/kg	14	12	17	18	8
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	7	9	7	5
Zinc	mg/kg	44	36	47	43	25

Acid Extractable metals in soil						
Our Reference		199517-234	199517-235	199517-236	199517-237	199517-238
Your Reference	UNITS	DUPAM33	SP1-1	SP1-2	SP2-1	SP2-2
Depth		-	-	-	-	-
Date Sampled		20/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	12	14	12	12
Copper	mg/kg	8	77	31	27	18
Lead	mg/kg	9	21	12	15	25
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	8	8	7	9
Zinc	mg/kg	23	77	42	42	42

Acid Extractable metals in soil						
Our Reference		199517-239	199517-240	199517-241	199517-242	199517-243
Your Reference	UNITS	SP3-1	SP3-2	SP4-1	SP4-2	SP5-1
Depth		-	-	-	-	-
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	<4	<4	4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	0.7
Chromium	mg/kg	16	35	23	19	10
Copper	mg/kg	61	57	31	27	100
Lead	mg/kg	13	19	13	17	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	21	39	24	24	5
Zinc	mg/kg	47	95	38	39	200

Acid Extractable metals in soil						
Our Reference		199517-244	199517-246	199517-248	199517-253	199517-254
Your Reference	UNITS	SP5-2	BH187	BH187	BH101 - [TRIPLICATE]	BH184 - [TRIPLICATE]
Depth		-	0-0.2	1.7-1.95	0-0.3	0-0.4
Date Sampled		24/08/2018	20/08/2018	20/08/2018	21/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Arsenic	mg/kg	<4	6	<4	<4	<4
Cadmium	mg/kg	2	0.9	<0.4	<0.4	<0.4
Chromium	mg/kg	42	77	15	13	14
Copper	mg/kg	290	570	7	36	19
Lead	mg/kg	41	57	8	19	20
Mercury	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	22	6	7	8
Zinc	mg/kg	550	560	18	52	26

Acid Extractable metals in soil		
Our Reference		199517-255
Your Reference	UNITS	SP1-1 - [TRIPLICATE]
Depth		-
Date Sampled		22/08/2018
Type of sample		SOIL
Date prepared	-	29/08/2018
Date analysed	-	30/08/2018
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	12
Copper	mg/kg	85
Lead	mg/kg	19
Mercury	mg/kg	<0.1
Nickel	mg/kg	8
Zinc	mg/kg	75

Moisture						
Our Reference		199517-1	199517-5	199517-6	199517-7	199517-8
Your Reference	UNITS	BH101	BH102	BH102	BH103	BH103
Depth		0-0.5	0.3-0.4	0.9-1.0	0-0.3	1.2-1.3
Date Sampled		21/08/2018	22/08/2018	22/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Moisture	%	3.8	21	16	22	6.2

Moisture						
Our Reference		199517-9	199517-10	199517-11	199517-14	199517-16
Your Reference	UNITS	BH104	BH104	BH105	BH106	BH107
Depth		0-0.3	0.7-1.0	0-0.2	0-0.2	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Moisture	%	4.0	3.4	6.8	4.6	5.3

Moisture						
Our Reference		199517-18	199517-20	199517-21	199517-22	199517-23
Your Reference	UNITS	BH108	BH109	BH109	BH110	BH110
Depth		0-0.2	0-0.3	1.2-1.5	0-0.3	0.5-0.7
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Moisture	%	17	5.3	4.7	6.8	5.6

Moisture						
Our Reference		199517-25	199517-26	199517-27	199517-30	199517-32
Your Reference	UNITS	BH111	BH111	BH112	BH113	BH114
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	29/08/2018	29/08/2018	29/08/2018	29/08/2018
Date analysed	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Moisture	%	6.6	4.4	5.5	5.1	4.1

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Moisture						
Our Reference		199517-33	199517-34	199517-35	199517-37	199517-38
Your Reference	UNITS	BH114	BH115	BH115	BH116	BH116
Depth		1.2-1.5	0-0.3	0.4-0.6	0-0.3	0.9-1.1
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	29/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	30/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	11	6.5	5.4	8.4	4.6

Moisture						
Our Reference		199517-39	199517-41	199517-42	199517-43	199517-45
Your Reference	UNITS	BH117	BH118	BH118	BH119	BH120
Depth		0-0.3	0-0.5	1.2-1.5	0-0.5	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	4.3	6.5	4.0	5.6	5.2

Moisture						
Our Reference		199517-46	199517-47	199517-48	199517-49	199517-51
Your Reference	UNITS	BH120	BH121	BH121	BH122	BH123
Depth		1.2-1.5	0-0.3	1.2-1.5	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	2.8	6.3	3.4	4.9	5.4

Moisture						
Our Reference		199517-53	199517-55	199517-57	199517-59	199517-60
Your Reference	UNITS	BH124	BH125	BH126	BH127	BH127
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0.3-0.6
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	5.9	4.6	7.4	4.7	4.8

Moisture						
Our Reference		199517-62	199517-65	199517-66	199517-67	199517-69
Your Reference	UNITS	BH128	BH129	BH129	BH130	BH131
Depth		0-0.2	0-0.3	1.2-1.5	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	6.1	5.7	4.5	5.0	3.0

Moisture						
Our Reference		199517-71	199517-72	199517-73	199517-75	199517-76
Your Reference	UNITS	BH132	BH132	BH133	BH134	BH134
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	1.2-1.5
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	5.6	4.6	5.6	5.5	4.5

Moisture						
Our Reference		199517-77	199517-79	199517-80	199517-81	199517-83
Your Reference	UNITS	BH135	BH136	BH136	BH137	BH137
Depth		0-0.3	0-0.3	1.3-1.5	0-0.2	1.5-1.95
Date Sampled		23/08/2018	23/08/2018	23/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	5.1	8.0	5.4	5.4	5.7

Moisture						
Our Reference		199517-86	199517-88	199517-90	199517-92	199517-94
Your Reference	UNITS	BH138	BH139	BH140	BH141	BH142
Depth		0-0.3	0-0.5	0-0.3	0-0.35	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	4.9	5.1	5.7	7.2	7.1

Moisture						
Our Reference		199517-95	199517-96	199517-98	199517-99	199517-100
Your Reference	UNITS	BH142	BH143	BH144	BH144	BH145
Depth		1.0-1.5	0-0.2	0-0.3	1.2-1.5	0-0.2
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	6.4	4.8	5.0	4.4	4.5

Moisture						
Our Reference		199517-102	199517-103	199517-104	199517-105	199517-106
Your Reference	UNITS	BH146	BH146	BH147	BH147	BH148
Depth		0-0.3	1.2-1.5	0-0.3	1.2-1.5	0-0.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	5.2	3.9	3.6	4.3	5.3

Moisture						
Our Reference		199517-108	199517-109	199517-110	199517-112	199517-113
Your Reference	UNITS	BH149	BH149	BH150	BH151	BH151
Depth		0-0.3	1.2-1.5	0-0.2	0-0.3	1.2-1.5
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	4.9	5.0	4.9	4.2	4.4

Moisture						
Our Reference		199517-114	199517-116	199517-118	199517-119	199517-120
Your Reference	UNITS	BH152	BH153	BH154	BH154	BH155
Depth		0-0.3	0-0.3	0-0.2	0.8-1	0-0.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	4.1	5.4	5.0	5.2	5.9

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Moisture						
Our Reference		199517-122	199517-123	199517-124	199517-126	199517-127
Your Reference	UNITS	BH156	BH156	BH157	BH158	BH158
Depth		0-0.3	1.2-1.5	0-0.3	0-0.3	1.2-1.5
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	4.8	5.5	5.4	4.6	5.0

Moisture						
Our Reference		199517-128	199517-129	199517-130	199517-132	199517-133
Your Reference	UNITS	BH159	BH159	BH160	BH161	BH161
Depth		0-0.25	1.2-1.5	0-0.45	0-0.3	1.3-1.5
Date Sampled		22/08/2018	22/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	7.9	5.3	6.6	6.4	6.0

Moisture						
Our Reference		199517-134	199517-136	199517-137	199517-138	199517-141
Your Reference	UNITS	BH162	BH163	BH163	BH164	BH165
Depth		0-0.3	0-0.3	0.5-0.7	0-0.3	0-0.3
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	4.6	3.7	5.0	4.9	6.7

Moisture						
Our Reference		199517-143	199517-147	199517-148	199517-150	199517-152
Your Reference	UNITS	BH166	BH166	BH167	BH168	BH169
Depth		0-0.1	4.0-4.1	0-0.3	0-0.3	0-0.2
Date Sampled		20/08/2018	20/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	8.3	7.9	7.2	6.1	5.4

Moisture						
Our Reference		199517-154	199517-156	199517-158	199517-160	199517-162
Your Reference	UNITS	BH170	BH170	BH171	BH172	BH173
Depth		0-0.1	1.6-1.95	0-0.5	0-0.4	0-0.3
Date Sampled		20/08/2018	20/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	4.2	4.7	6.5	5.0	3.0

Moisture						
Our Reference		199517-164	199517-165	199517-166	199517-169	199517-170
Your Reference	UNITS	BH174	BH174	BH175	BH176	BH176
Depth		0-0.3	0.4-0.8	0-0.3	0.4-0.6	1.2-1.5
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	5.1	4.8	6.1	8.3	6.4

Moisture						
Our Reference		199517-172	199517-173	199517-174	199517-176	199517-177
Your Reference	UNITS	BH177	BH177	BH178	BH178	BH179
Depth		0.6-0.9	1-1.2	0-0.3	1-1.2	0-0.2
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	7.2	7.5	15	8.0	37

Moisture						
Our Reference		199517-180	199517-183	199517-184	199517-188	199517-191
Your Reference	UNITS	BH180	BH181	BH181	BH182	BH183
Depth		0-0.1	0-0.2	0.5-0.95	0-0.1	0-0.2
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	18	15	15	11	13

Moisture						
Our Reference		199517-194	199517-196	199517-199	199517-201	199517-203
Your Reference	UNITS	BH184	BH185	BH186	BH186	BH188
Depth		0-0.4	0-0.2	0-0.1	1.5-1.95	0.4-0.6
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	4.7	5.7	9.5	9.7	8.9

Moisture						
Our Reference		199517-204	199517-207	199517-209	199517-210	199517-211
Your Reference	UNITS	BH188	BH189	DUPAM2	DUPAM3	DUPAM5
Depth		0.9-1.1	0.8-0.9	-	-	-
Date Sampled		21/08/2018	21/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	7.4	9.3	5.6	16	15

Moisture						
Our Reference		199517-213	199517-216	199517-218	199517-220	199517-222
Your Reference	UNITS	DUPAM7	DUPAM11	DUPAM14	DUPAM16	DUPAM18
Depth		-	-	-	-	-
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	46	8.8	6.8	13	4.1

Moisture						
Our Reference		199517-224	199517-226	199517-229	199517-231	199517-232
Your Reference	UNITS	DUPAM21	DUPAM23	DUPAM27	DUPAM29	DUPAM31
Depth		-	-	-	-	-
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	6.6	4.9	6.9	7.1	5.5

Moisture						
Our Reference		199517-234	199517-235	199517-236	199517-237	199517-238
Your Reference	UNITS	DUPAM33	SP1-1	SP1-2	SP2-1	SP2-2
Depth		-	-	-	-	-
Date Sampled		20/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	6.0	1.2	1.3	1.1	2.1

Moisture						
Our Reference		199517-239	199517-240	199517-241	199517-242	199517-243
Your Reference	UNITS	SP3-1	SP3-2	SP4-1	SP4-2	SP5-1
Depth		-	-	-	-	-
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Moisture	%	1.9	3.8	1.6	7.0	1.5

Moisture				
Our Reference		199517-244	199517-246	199517-248
Your Reference	UNITS	SP5-2	BH187	BH187
Depth		-	0-0.2	1.7-1.95
Date Sampled		24/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL
Date prepared	-	30/08/2018	30/08/2018	30/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018
Moisture	%	3.1	6.6	8.4

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Asbestos ID - soils						
Our Reference		199517-1	199517-5	199517-7	199517-9	199517-11
Your Reference	UNITS	BH101	BH102	BH103	BH104	BH105
Depth		0-0.5	0.3-0.4	0-0.3	0-0.3	0-0.2
Date Sampled		21/08/2018	22/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 55g	Approx. 55g	Approx. 65g	Approx. 30g	Approx. 25g
Sample Description	-	Brown fine-grained soil & rocks	Grey coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-14	199517-16	199517-18	199517-20	199517-22
Your Reference	UNITS	BH106	BH107	BH108	BH109	BH110
Depth		0-0.2	0-0.3	0-0.2	0-0.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 60g	Approx. 50g	Approx. 40g	Approx. 50g	Approx. 35g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-25	199517-27	199517-30	199517-32	199517-34
Your Reference	UNITS	BH111	BH112	BH113	BH114	BH115
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 35g	Approx. 20g	Approx. 50g	Approx. 60g	Approx. 50g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-37	199517-39	199517-41	199517-43	199517-45
Your Reference	UNITS	BH116	BH117	BH118	BH119	BH120
Depth		0-0.3	0-0.3	0-0.5	0-0.5	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 20g	Approx. 45g	Approx. 40g	Approx. 45g	Approx. 55g
Sample Description	-	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-47	199517-49	199517-51	199517-53	199517-55
Your Reference	UNITS	BH121	BH122	BH123	BH124	BH125
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 35g	Approx. 50g	Approx. 25g	Approx. 60g	Approx. 50g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-57	199517-59	199517-62	199517-65	199517-67
Your Reference	UNITS	BH126	BH127	BH128	BH129	BH130
Depth		0-0.3	0-0.3	0-0.2	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 50g	Approx. 45g	Approx. 45g	Approx. 30g	Approx. 50g
Sample Description	-	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-69	199517-71	199517-73	199517-75	199517-77
Your Reference	UNITS	BH131	BH132	BH133	BH134	BH135
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 45g	Approx. 30g	Approx. 50g	Approx. 55g	Approx. 40g
Sample Description	-	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-79	199517-81	199517-86	199517-88	199517-90
Your Reference	UNITS	BH136	BH137	BH138	BH139	BH140
Depth		0-0.3	0-0.2	0-0.3	0-0.5	0-0.3
Date Sampled		23/08/2018	20/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 40g	Approx. 30g	Approx. 60g	Approx. 50g	Approx. 40g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-92	199517-94	199517-96	199517-98	199517-100
Your Reference	UNITS	BH141	BH142	BH143	BH144	BH145
Depth		0-0.35	0-0.3	0-0.2	0-0.3	0-0.2
Date Sampled		23/08/2018	23/08/2018	23/08/2018	23/08/2018	23/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 45g	Approx. 30g	Approx. 45g	Approx. 70g	Approx. 40g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-102	199517-104	199517-106	199517-108	199517-110
Your Reference	UNITS	BH146	BH147	BH148	BH149	BH150
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.2
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 40g	Approx. 40g	Approx. 25g	Approx. 40g	Approx. 35g
Sample Description	-	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-112	199517-114	199517-116	199517-118	199517-120
Your Reference	UNITS	BH151	BH152	BH153	BH154	BH155
Depth		0-0.3	0-0.3	0-0.3	0-0.2	0-0.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 45g	Approx. 35g	Approx. 30g	Approx. 45g	Approx. 50g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-122	199517-124	199517-126	199517-128	199517-130
Your Reference	UNITS	BH156	BH157	BH158	BH159	BH160
Depth		0-0.3	0-0.3	0-0.3	0-0.25	0-0.45
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 40g	Approx. 25g	Approx. 30g	Approx. 20g	Approx. 30g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-132	199517-134	199517-136	199517-138	199517-141
Your Reference	UNITS	BH161	BH162	BH163	BH164	BH165
Depth		0-0.3	0-0.3	0-0.3	0-0.3	0-0.3
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 25g	Approx. 30g	Approx. 25g	Approx. 20g	Approx. 30g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-143	199517-148	199517-150	199517-152	199517-154
Your Reference	UNITS	BH166	BH167	BH168	BH169	BH170
Depth		0-0.1	0-0.3	0-0.3	0-0.2	0-0.1
Date Sampled		20/08/2018	21/08/2018	21/08/2018	21/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 25g	Approx. 15g	Approx. 20g	Approx. 25g	Approx. 20g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-158	199517-160	199517-162	199517-164	199517-166
Your Reference	UNITS	BH171	BH172	BH173	BH174	BH175
Depth		0-0.5	0-0.4	0-0.3	0-0.3	0-0.3
Date Sampled		21/08/2018	21/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 30g	Approx. 35g	Approx. 30g	Approx. 15g	Approx. 25g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-169	199517-172	199517-174	199517-177	199517-180
Your Reference	UNITS	BH176	BH177	BH178	BH179	BH180
Depth		0.4-0.6	0.6-0.9	0-0.3	0-0.2	0-0.1
Date Sampled		21/08/2018	21/08/2018	21/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 30g	Approx. 35g	Approx. 25g	Approx. 25g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-183	199517-188	199517-191	199517-194	199517-196
Your Reference	UNITS	BH181	BH182	BH183	BH184	BH185
Depth		0-0.2	0-0.1	0-0.2	0-0.4	0-0.2
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 20g	Approx. 25g	Approx. 20g	Approx. 20g	Approx. 25g
Sample Description	-	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown-red clayey soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-199	199517-203	199517-207	199517-235	199517-236
Your Reference	UNITS	BH186	BH188	BH189	SP1-1	SP1-2
Depth		0-0.1	0.4-0.6	0.8-0.9	-	-
Date Sampled		20/08/2018	21/08/2018	21/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 20g	Approx. 30g	Approx. 30g	Approx. 30g	Approx. 35g
Sample Description	-	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks	Grey sandy soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		199517-237	199517-238	199517-239	199517-240	199517-241
Your Reference	UNITS	SP2-1	SP2-2	SP3-1	SP3-2	SP4-1
Depth		-	-	-	-	-
Date Sampled		22/08/2018	22/08/2018	22/08/2018	22/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 35g	Approx. 45g	Approx. 30g	Approx. 25g	Approx. 40g
Sample Description	-	Brown fine-grained soil & rocks	Brown sandy soil & rocks	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils					
Our Reference		199517-242	199517-243	199517-244	199517-246
Your Reference	UNITS	SP4-2	SP5-1	SP5-2	BH187
Depth		-	-	-	0-0.2
Date Sampled		22/08/2018	24/08/2018	24/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Sample mass tested	g	Approx. 35g	Approx. 25g	Approx. 35g	Approx. 40g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	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

CEC						
Our Reference		199517-4	199517-7	199517-9	199517-14	199517-25
Your Reference	UNITS	BH102	BH103	BH104	BH106	BH111
Depth		0-0.1	0-0.3	0-0.3	0-0.2	0-0.3
Date Sampled		22/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	05/09/2018	05/09/2018	05/09/2018	05/09/2018	05/09/2018
Date analysed	-	05/09/2018	05/09/2018	05/09/2018	05/09/2018	05/09/2018
Exchangeable Ca	meq/100g	2.5	3.0	1.9	2.8	2.6
Exchangeable K	meq/100g	0.2	0.3	0.5	0.2	0.3
Exchangeable Mg	meq/100g	0.49	0.89	0.90	0.90	0.88
Exchangeable Na	meq/100g	<0.1	<0.1	<0.1	<0.1	<0.1
Cation Exchange Capacity	meq/100g	3.3	4.2	3.3	3.9	3.8

CEC						
Our Reference		199517-30	199517-37	199517-41	199517-47	199517-81
Your Reference	UNITS	BH113	BH116	BH118	BH121	BH137
Depth		0-0.3	0-0.3	0-0.5	0-0.3	0-0.2
Date Sampled		24/08/2018	24/08/2018	24/08/2018	23/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	05/09/2018	05/09/2018	05/09/2018	05/09/2018	05/09/2018
Date analysed	-	05/09/2018	05/09/2018	05/09/2018	05/09/2018	05/09/2018
Exchangeable Ca	meq/100g	1.9	6.8	2.0	2.6	1.4
Exchangeable K	meq/100g	0.2	0.3	0.1	0.2	0.2
Exchangeable Mg	meq/100g	0.59	2.5	0.55	0.59	0.44
Exchangeable Na	meq/100g	<0.1	<0.1	<0.1	<0.1	<0.1
Cation Exchange Capacity	meq/100g	2.7	9.6	2.7	3.4	2.0

CEC						
Our Reference		199517-90	199517-120	199517-124	199517-143	199517-150
Your Reference	UNITS	BH140	BH155	BH157	BH166	BH168
Depth		0-0.3	0-0.3	0-0.3	0-0.1	0-0.3
Date Sampled		23/08/2018	22/08/2018	22/08/2018	20/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	05/09/2018	05/09/2018	05/09/2018	05/09/2018	05/09/2018
Date analysed	-	05/09/2018	05/09/2018	05/09/2018	05/09/2018	05/09/2018
Exchangeable Ca	meq/100g	1.3	2.7	2.3	3.5	1.8
Exchangeable K	meq/100g	0.1	0.2	<0.1	0.5	0.2
Exchangeable Mg	meq/100g	0.45	0.70	0.51	1.2	0.51
Exchangeable Na	meq/100g	<0.1	<0.1	<0.1	<0.1	<0.1
Cation Exchange Capacity	meq/100g	1.9	3.6	2.9	5.3	2.6

CEC				
Our Reference		199517-154	199517-183	199517-202
Your Reference	UNITS	BH170	BH181	BH188
Depth		0-0.1	0-0.2	0-0.3
Date Sampled		20/08/2018	20/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL
Date prepared	-	05/09/2018	05/09/2018	05/09/2018
Date analysed	-	05/09/2018	05/09/2018	05/09/2018
Exchangeable Ca	meq/100g	1.5	3.1	4.1
Exchangeable K	meq/100g	0.4	0.3	0.2
Exchangeable Mg	meq/100g	0.56	0.76	0.85
Exchangeable Na	meq/100g	<0.1	<0.1	<0.1
Cation Exchange Capacity	meq/100g	2.4	4.1	5.1

Misc Inorg - Soil						
Our Reference		199517-4	199517-5	199517-6	199517-7	199517-8
Your Reference	UNITS	BH102	BH102	BH102	BH103	BH103
Depth		0-0.1	0.3-0.4	0.9-1.0	0-0.3	1.2-1.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
pH 1:5 soil:water	pH Units	5.5	4.8	4.9	6.1	6.6
Chloride, Cl 1:5 soil:water	mg/kg	<10	23	<10	<10	<10
Sulphate, SO4 1:5 soil:water	mg/kg	31	64	<10	<10	<10

Misc Inorg - Soil						
Our Reference		199517-9	199517-10	199517-14	199517-15	199517-25
Your Reference	UNITS	BH104	BH104	BH106	BH106	BH111
Depth		0-0.3	0.7-1.0	0-0.2	1.2-1.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
pH 1:5 soil:water	pH Units	6.2	6.1	5.9	6.6	5.8
Chloride, Cl 1:5 soil:water	mg/kg	<10	<10	<10	<10	<10
Sulphate, SO4 1:5 soil:water	mg/kg	<10	<10	<10	20	<10

Misc Inorg - Soil						
Our Reference		199517-26	199517-30	199517-31	199517-37	199517-38
Your Reference	UNITS	BH111	BH113	BH113	BH116	BH116
Depth		1.2-1.5	0-0.3	1.2-1.5	0-0.3	0.9-1.1
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
pH 1:5 soil:water	pH Units	6.2	5.8	6.6	5.7	7.9
Chloride, Cl 1:5 soil:water	mg/kg	<10	<10	<10	10	25
Sulphate, SO4 1:5 soil:water	mg/kg	10	<10	<10	<10	40

Misc Inorg - Soil						
Our Reference		199517-41	199517-42	199517-47	199517-48	199517-81
Your Reference	UNITS	BH118	BH118	BH121	BH121	BH137
Depth		0-0.5	1.2-1.5	0-0.3	1.2-1.5	0-0.2
Date Sampled		24/08/2018	24/08/2018	23/08/2018	23/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
pH 1:5 soil:water	pH Units	5.8	6.4	5.8	6.7	5.8
Chloride, Cl 1:5 soil:water	mg/kg	<10	<10	<10	<10	<10
Sulphate, SO4 1:5 soil:water	mg/kg	<10	<10	<10	<10	<10

Misc Inorg - Soil						
Our Reference		199517-83	199517-85	199517-90	199517-91	199517-120
Your Reference	UNITS	BH137	BH137	BH140	BH140	BH155
Depth		1.5-1.95	4.3-4.4	0-0.3	1.3-1.5	0-0.3
Date Sampled		20/08/2018	20/08/2018	23/08/2018	23/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
pH 1:5 soil:water	pH Units	6.5	6.8	5.6	6.5	5.8
Chloride, Cl 1:5 soil:water	mg/kg	<10	<10	<10	<10	<10
Sulphate, SO4 1:5 soil:water	mg/kg	<10	<10	<10	<10	<10

Misc Inorg - Soil						
Our Reference		199517-121	199517-124	199517-125	199517-143	199517-144
Your Reference	UNITS	BH155	BH157	BH157	BH166	BH166
Depth		1.2-1.5	0-0.3	1.2-1.5	0-0.1	0.7-0.95
Date Sampled		22/08/2018	22/08/2018	22/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
pH 1:5 soil:water	pH Units	6.0	5.8	6.4	6.0	6.4
Chloride, Cl 1:5 soil:water	mg/kg	<10	<10	<10	20	<10
Sulphate, SO4 1:5 soil:water	mg/kg	10	<10	10	10	<10

Misc Inorg - Soil						
Our Reference		199517-146	199517-147	199517-150	199517-151	199517-154
Your Reference	UNITS	BH166	BH166	BH168	BH168	BH170
Depth		2.9-3.15	4.0-4.1	0-0.3	1.2-1.5	0-0.1
Date Sampled		20/08/2018	20/08/2018	21/08/2018	21/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
pH 1:5 soil:water	pH Units	6.6	6.7	5.7	6.7	5.7
Chloride, Cl 1:5 soil:water	mg/kg	<10	<10	<10	<10	<10
Sulphate, SO4 1:5 soil:water	mg/kg	<10	<10	<10	<10	<10

Misc Inorg - Soil						
Our Reference		199517-155	199517-157	199517-183	199517-184	199517-185
Your Reference	UNITS	BH170	BH170	BH181	BH181	BH181
Depth		0.6-0.95	2.9-3.15	0-0.2	0.5-0.95	1.7-1.95
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
pH 1:5 soil:water	pH Units	6.3	6.7	5.6	5.8	5.6
Chloride, Cl 1:5 soil:water	mg/kg	<10	<10	<10	<10	<10
Sulphate, SO4 1:5 soil:water	mg/kg	<10	<10	20	31	<10

Misc Inorg - Soil						
Our Reference		199517-186	199517-187	199517-202	199517-203	199517-204
Your Reference	UNITS	BH181	BH181	BH188	BH188	BH188
Depth		2.7-2.9	3.9-4.0	0-0.3	0.4-0.6	0.9-1.1
Date Sampled		20/08/2018	20/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
Date analysed	-	03/09/2018	03/09/2018	03/09/2018	03/09/2018	03/09/2018
pH 1:5 soil:water	pH Units	6.1	6.5	6.8	7.0	7.4
Chloride, Cl 1:5 soil:water	mg/kg	<10	<10	<10	<10	<10
Sulphate, SO4 1:5 soil:water	mg/kg	<10	10	<10	37	26

Misc Inorg - Soil		
Our Reference		199517-245
Your Reference	UNITS	BH170
Depth		3.4-3.5
Date Sampled		20/08/2018
Type of sample		SOIL
Date prepared	-	03/09/2018
Date analysed	-	03/09/2018
pH 1:5 soil:water	pH Units	6.6
Chloride, Cl 1:5 soil:water	mg/kg	<10
Sulphate, SO4 1:5 soil:water	mg/kg	<10

Texture and Salinity*						
Our Reference		199517-4	199517-5	199517-6	199517-7	199517-8
Your Reference	UNITS	BH102	BH102	BH102	BH103	BH103
Depth		0-0.1	0.3-0.4	0.9-1.0	0-0.3	1.2-1.3
Date Sampled		22/08/2018	22/08/2018	22/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Electrical Conductivity 1:5 soil:water	µS/cm	32	61	13	48	9
Texture Value	-	9.0	8.0	8.5	9.0	14
Texture		CLAY LOAM	LIGHT MEDIUM CLAY	LIGHT CLAY	CLAY LOAM	SANDY LOAM
ECe	dS/m	<2	<2	<2	<2	<2
Class		NON SALINE	NON SALINE	NON SALINE	NON SALINE	NON SALINE

Texture and Salinity*						
Our Reference		199517-9	199517-10	199517-14	199517-15	199517-25
Your Reference	UNITS	BH104	BH104	BH106	BH106	BH111
Depth		0-0.3	0.7-1.0	0-0.2	1.2-1.3	0-0.3
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Electrical Conductivity 1:5 soil:water	µS/cm	42	12	24	17	24
Texture Value	-	9.0	14	9.0	14	9.0
Texture		CLAY LOAM	SANDY LOAM	CLAY LOAM	SANDY LOAM	CLAY LOAM
ECe	dS/m	<2	<2	<2	<2	<2
Class		NON SALINE	NON SALINE	NON SALINE	NON SALINE	NON SALINE

Texture and Salinity*						
Our Reference		199517-26	199517-30	199517-31	199517-37	199517-38
Your Reference	UNITS	BH111	BH113	BH113	BH116	BH116
Depth		1.2-1.5	0-0.3	1.2-1.5	0-0.3	0.9-1.1
Date Sampled		24/08/2018	24/08/2018	24/08/2018	24/08/2018	24/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Electrical Conductivity 1:5 soil:water	µS/cm	12	15	7	34	52
Texture Value	-	14	9.0	14	9.0	7.0
Texture		SANDY LOAM	CLAY LOAM	SANDY LOAM	CLAY LOAM	MEDIUM CLAY
ECe	dS/m	<2	<2	<2	<2	<2
Class		NON SALINE	NON SALINE	NON SALINE	NON SALINE	NON SALINE

Texture and Salinity*						
Our Reference		199517-41	199517-42	199517-47	199517-48	199517-81
Your Reference	UNITS	BH118	BH118	BH121	BH121	BH137
Depth		0-0.5	1.2-1.5	0-0.3	1.2-1.5	0-0.2
Date Sampled		24/08/2018	24/08/2018	23/08/2018	23/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Electrical Conductivity 1:5 soil:water	µS/cm	10	8	18	6	12
Texture Value	-	9.0	14	9.0	14	14
Texture		CLAY LOAM	SANDY LOAM	CLAY LOAM	SANDY LOAM	SANDY LOAM
ECe	dS/m	<2	<2	<2	<2	<2
Class		NON SALINE	NON SALINE	NON SALINE	NON SALINE	NON SALINE

Texture and Salinity*						
Our Reference		199517-83	199517-85	199517-90	199517-91	199517-120
Your Reference	UNITS	BH137	BH137	BH140	BH140	BH155
Depth		1.5-1.95	4.3-4.4	0-0.3	1.3-1.5	0-0.3
Date Sampled		20/08/2018	20/08/2018	23/08/2018	23/08/2018	22/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Electrical Conductivity 1:5 soil:water	µS/cm	9	11	16	10	16
Texture Value	-	14	14	9.0	14	9.0
Texture		SANDY LOAM	SANDY LOAM	CLAY LOAM	SANDY LOAM	CLAY LOAM
ECe	dS/m	<2	<2	<2	<2	<2
Class		NON SALINE	NON SALINE	NON SALINE	NON SALINE	NON SALINE

Texture and Salinity*						
Our Reference		199517-121	199517-124	199517-125	199517-143	199517-144
Your Reference	UNITS	BH155	BH157	BH157	BH166	BH166
Depth		1.2-1.5	0-0.3	1.2-1.5	0-0.1	0.7-0.95
Date Sampled		22/08/2018	22/08/2018	22/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Electrical Conductivity 1:5 soil:water	µS/cm	13	12	10	53	8
Texture Value	-	14	9.0	14	9.0	14
Texture		SANDY LOAM	CLAY LOAM	SANDY LOAM	CLAY LOAM	SANDY LOAM
ECe	dS/m	<2	<2	<2	<2	<2
Class		NON SALINE	NON SALINE	NON SALINE	NON SALINE	NON SALINE

Texture and Salinity*						
Our Reference		199517-146	199517-147	199517-150	199517-151	199517-154
Your Reference	UNITS	BH166	BH166	BH168	BH168	BH170
Depth		2.9-3.15	4.0-4.1	0-0.3	1.2-1.5	0-0.1
Date Sampled		20/08/2018	20/08/2018	21/08/2018	21/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Electrical Conductivity 1:5 soil:water	µS/cm	9	11	14	11	37
Texture Value	-	14	14	9.0	14	9.0
Texture		SANDY LOAM	SANDY LOAM	CLAY LOAM	SANDY LOAM	CLAY LOAM
ECe	dS/m	<2	<2	<2	<2	<2
Class		NON SALINE	NON SALINE	NON SALINE	NON SALINE	NON SALINE

Texture and Salinity*						
Our Reference		199517-155	199517-157	199517-183	199517-184	199517-185
Your Reference	UNITS	BH170	BH170	BH181	BH181	BH181
Depth		0.6-0.95	2.9-3.15	0-0.2	0.5-0.95	1.7-1.95
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Electrical Conductivity 1:5 soil:water	µS/cm	8	7	21	25	9
Texture Value	-	14	14	9.0	8.0	14
Texture		SANDY LOAM	SANDY LOAM	CLAY LOAM	LIGHT MEDIUM CLAY	SANDY LOAM
ECe	dS/m	<2	<2	<2	<2	<2
Class		NON SALINE	NON SALINE	NON SALINE	NON SALINE	NON SALINE

Texture and Salinity*						
Our Reference		199517-186	199517-187	199517-202	199517-203	199517-204
Your Reference	UNITS	BH181	BH181	BH188	BH188	BH188
Depth		2.7-2.9	3.9-4.0	0-0.3	0.4-0.6	0.9-1.1
Date Sampled		20/08/2018	20/08/2018	21/08/2018	21/08/2018	21/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Date analysed	-	31/08/2018	31/08/2018	31/08/2018	31/08/2018	31/08/2018
Electrical Conductivity 1:5 soil:water	µS/cm	8	14	37	42	34
Texture Value	-	8.0	8.0	14	9.0	14
Texture		LIGHT MEDIUM CLAY	LIGHT MEDIUM CLAY	SANDY LOAM	CLAY LOAM	SANDY LOAM
ECe	dS/m	<2	<2	<2	<2	<2
Class		NON SALINE	NON SALINE	NON SALINE	NON SALINE	NON SALINE

Texture and Salinity*		
Our Reference		199517-245
Your Reference	UNITS	BH170
Depth		3.4-3.5
Date Sampled		20/08/2018
Type of sample		SOIL
Date prepared	-	31/08/2018
Date analysed	-	31/08/2018
Electrical Conductivity 1:5 soil:water	µS/cm	10
Texture Value	-	14
Texture		SANDY LOAM
ECe	dS/m	<2
Class		NON SALINE

Asbestos ID - materials		
Our Reference		199517-251
Your Reference	UNITS	MPF1
Depth		-
Date Sampled		21/08/2018
Type of sample		MATERIAL
Date analysed	-	31/08/2018
Mass / Dimension of Sample	-	35x35x5mm
Sample Description	-	Beige layered fibre cement material
Asbestos ID in materials	-	No asbestos detected Organic fibres detected

VOCs in water		
Our Reference		199517-252
Your Reference	UNITS	SW1
Depth		-
Date Sampled		22/08/2018
Type of sample		WATER
Date extracted	-	03/09/2018
Date analysed	-	04/09/2018
Dichlorodifluoromethane	µg/L	<10
Chloromethane	µg/L	<10
Vinyl Chloride	µg/L	<10
Bromomethane	µg/L	<10
Chloroethane	µg/L	<10
Trichlorofluoromethane	µg/L	<10
1,1-Dichloroethene	µg/L	<1
Trans-1,2-dichloroethene	µg/L	<1
1,1-dichloroethane	µg/L	<1
Cis-1,2-dichloroethene	µg/L	<1
Bromochloromethane	µg/L	<1
Chloroform	µg/L	1
2,2-dichloropropane	µg/L	<1
1,2-dichloroethane	µg/L	<1
1,1,1-trichloroethane	µg/L	<1
1,1-dichloropropene	µg/L	<1
Cyclohexane	µg/L	<1
Carbon tetrachloride	µg/L	<1
Benzene	µg/L	<1
Dibromomethane	µg/L	<1
1,2-dichloropropane	µg/L	<1
Trichloroethene	µg/L	<1
Bromodichloromethane	µg/L	<1
trans-1,3-dichloropropene	µg/L	<1
cis-1,3-dichloropropene	µg/L	<1
1,1,2-trichloroethane	µg/L	<1
Toluene	µg/L	<1
1,3-dichloropropane	µg/L	<1
Dibromochloromethane	µg/L	<1
1,2-dibromoethane	µg/L	<1
Tetrachloroethene	µg/L	<1
1,1,1,2-tetrachloroethane	µg/L	<1
Chlorobenzene	µg/L	<1
Ethylbenzene	µg/L	<1

VOCs in water		
Our Reference		199517-252
Your Reference	UNITS	SW1
Depth		-
Date Sampled		22/08/2018
Type of sample		WATER
Bromoform	µg/L	<1
m+p-xylene	µg/L	<2
Styrene	µg/L	<1
1,1,2,2-tetrachloroethane	µg/L	<1
o-xylene	µg/L	<1
1,2,3-trichloropropane	µg/L	<1
Isopropylbenzene	µg/L	<1
Bromobenzene	µg/L	<1
n-propyl benzene	µg/L	<1
2-chlorotoluene	µg/L	<1
4-chlorotoluene	µg/L	<1
1,3,5-trimethyl benzene	µg/L	<1
Tert-butyl benzene	µg/L	<1
1,2,4-trimethyl benzene	µg/L	<1
1,3-dichlorobenzene	µg/L	<1
Sec-butyl benzene	µg/L	<1
1,4-dichlorobenzene	µg/L	6
4-isopropyl toluene	µg/L	<1
1,2-dichlorobenzene	µg/L	<1
n-butyl benzene	µg/L	<1
1,2-dibromo-3-chloropropane	µg/L	<1
1,2,4-trichlorobenzene	µg/L	<1
Hexachlorobutadiene	µg/L	<1
1,2,3-trichlorobenzene	µg/L	<1
Surrogate Dibromofluoromethane	%	120
Surrogate toluene-d8	%	101
Surrogate 4-BFB	%	79

vTRH(C6-C10)/BTEXN in Water			
Our Reference		199517-250	199517-252
Your Reference	UNITS	FRMP1	SW1
Depth		-	-
Date Sampled		22/08/2018	22/08/2018
Type of sample		WATER	WATER
Date extracted	-	03/09/2018	03/09/2018
Date analysed	-	04/09/2018	04/09/2018
TRH C_6 - C_9	µg/L	<10	<10
TRH C_6 - C_{10}	µg/L	<10	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10
Benzene	µg/L	<1	<1
Toluene	µg/L	<1	<1
Ethylbenzene	µg/L	<1	<1
m+p-xylene	µg/L	<2	<2
o-xylene	µg/L	<1	<1
Naphthalene	µg/L	<1	<1
Surrogate Dibromofluoromethane	%	120	120
Surrogate toluene-d8	%	100	101
Surrogate 4-BFB	%	78	79

svTRH (C10-C40) in Water		
Our Reference		199517-252
Your Reference	UNITS	SW1
Depth		-
Date Sampled		22/08/2018
Type of sample		WATER
Date extracted	-	02/09/2018
Date analysed	-	03/09/2018
TRH C_{10} - C_{14}	µg/L	<50
TRH C_{15} - C_{28}	µg/L	280
TRH C_{29} - C_{36}	µg/L	<100
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	350
TRH >C_{34} - C_{40}	µg/L	<100
Surrogate o-Terphenyl	%	102

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PAHs in Water - Low Level		
Our Reference		199517-252
Your Reference	UNITS	SW1
Depth		-
Date Sampled		22/08/2018
Type of sample		WATER
Date extracted	-	02/09/2018
Date analysed	-	03/09/2018
Naphthalene	µg/L	<0.2
Acenaphthylene	µg/L	<0.1
Acenaphthene	µg/L	<0.1
Fluorene	µg/L	<0.1
Phenanthrene	µg/L	<0.1
Anthracene	µg/L	<0.1
Fluoranthene	µg/L	<0.1
Pyrene	µg/L	<0.1
Benzo(a)anthracene	µg/L	<0.1
Chrysene	µg/L	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2
Benzo(a)pyrene	µg/L	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5
Total +ve PAH's	µg/L	NIL (+)VE
Surrogate p-Terphenyl-d14	%	84

HM in water - dissolved		
Our Reference		199517-252
Your Reference	UNITS	SW1
Depth		-
Date Sampled		22/08/2018
Type of sample		WATER
Date prepared	-	31/08/2018
Date analysed	-	31/08/2018
Arsenic-Dissolved	µg/L	2
Cadmium-Dissolved	µg/L	0.2
Chromium-Dissolved	µg/L	<1
Copper-Dissolved	µg/L	210
Lead-Dissolved	µg/L	<1
Mercury-Dissolved	µg/L	<0.05
Nickel-Dissolved	µg/L	3
Zinc-Dissolved	µg/L	64

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Miscellaneous Inorganics		
Our Reference		199517-252
Your Reference	UNITS	SW1
Depth		-
Date Sampled		22/08/2018
Type of sample		WATER
Date prepared	-	30/08/2018
Date analysed	-	30/08/2018
pH	pH Units	7.7
Electrical Conductivity	µS/cm	660
Chloride, Cl	mg/L	95
Sulphate, SO4	mg/L	21

Cations in water Dissolved		
Our Reference		199517-252
Your Reference	UNITS	SW1
Depth		-
Date Sampled		22/08/2018
Type of sample		WATER
Date digested	-	31/08/2018
Date analysed	-	31/08/2018
Calcium - Dissolved	mg/L	35
Magnesium - Dissolved	mg/L	11
Hardness	mgCaCO 3 /L	130

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Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell at 25°C in accordance with APHA latest edition 2510 and Rayment & Lyons.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-081	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA latest edition, 4110-B. Alternatively determined by colourimetry/turbidity using Discrete Analyer.
INORG-123	Determined using a "Texture by Feel" method.
Metals-009	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS.
Org-003	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-003	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-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-006	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.

Method ID	Methodology Summary
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-012	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.
Org-012	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-013	Water samples are analysed directly by purge and trap GC-MS.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	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-016	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-7	199517-5
Date extracted	-			03/09/2018	1	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			04/09/2018	1	04/09/2018	04/09/2018		04/09/2018	04/09/2018
TRH C_6 - C_9	mg/kg	25	Org-016	<25	1	<25	<25	0	103	93
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	1	<25	<25	0	103	93
Benzene	mg/kg	0.2	Org-016	<0.2	1	<0.2	<0.2	0	87	78
Toluene	mg/kg	0.5	Org-016	<0.5	1	<0.5	<0.5	0	98	89
Ethylbenzene	mg/kg	1	Org-016	<1	1	<1	<1	0	107	95
m+p-xylene	mg/kg	2	Org-016	<2	1	<2	<2	0	111	101
o-Xylene	mg/kg	1	Org-016	<1	1	<1	<1	0	111	97
naphthalene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	101	1	93	94	1	101	90

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	199517-37
Date extracted	-			[NT]	18	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	18	04/09/2018	04/09/2018		04/09/2018	04/09/2018
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	18	<25	<25	0	98	84
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	18	<25	<25	0	98	84
Benzene	mg/kg	0.2	Org-016	[NT]	18	<0.2	<0.2	0	84	70
Toluene	mg/kg	0.5	Org-016	[NT]	18	<0.5	<0.5	0	95	80
Ethylbenzene	mg/kg	1	Org-016	[NT]	18	<1	<1	0	101	87
m+p-xylene	mg/kg	2	Org-016	[NT]	18	<2	<2	0	106	91
o-Xylene	mg/kg	1	Org-016	[NT]	18	<1	<1	0	104	88
naphthalene	mg/kg	1	Org-014	[NT]	18	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	18	84	72	15	100	82

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	199517-65
Date extracted	-			[NT]	34	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	34	04/09/2018	04/09/2018		04/09/2018	04/09/2018
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	34	<25	<25	0	106	94
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	34	<25	<25	0	106	94
Benzene	mg/kg	0.2	Org-016	[NT]	34	<0.2	<0.2	0	89	80
Toluene	mg/kg	0.5	Org-016	[NT]	34	<0.5	<0.5	0	102	90
Ethylbenzene	mg/kg	1	Org-016	[NT]	34	<1	<1	0	110	97
m+p-xylene	mg/kg	2	Org-016	[NT]	34	<2	<2	0	115	101
o-Xylene	mg/kg	1	Org-016	[NT]	34	<1	<1	0	113	100
naphthalene	mg/kg	1	Org-014	[NT]	34	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	34	88	94	7	105	92

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	199517-98
Date extracted	-			[NT]	49	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	49	04/09/2018	04/09/2018		04/09/2018	04/09/2018
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	49	<25	<25	0	104	105
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	49	<25	<25	0	104	105
Benzene	mg/kg	0.2	Org-016	[NT]	49	<0.2	<0.2	0	87	89
Toluene	mg/kg	0.5	Org-016	[NT]	49	<0.5	<0.5	0	99	101
Ethylbenzene	mg/kg	1	Org-016	[NT]	49	<1	<1	0	108	108
m+p-xylene	mg/kg	2	Org-016	[NT]	49	<2	<2	0	114	114
o-Xylene	mg/kg	1	Org-016	[NT]	49	<1	<1	0	111	114
naphthalene	mg/kg	1	Org-014	[NT]	49	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	49	82	102	22	102	101

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	199517-124
Date extracted	-			[NT]	62	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	62	04/09/2018	04/09/2018		04/09/2018	04/09/2018
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	62	<25	<25	0	113	99
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	62	<25	<25	0	113	99
Benzene	mg/kg	0.2	Org-016	[NT]	62	<0.2	<0.2	0	96	84
Toluene	mg/kg	0.5	Org-016	[NT]	62	<0.5	<0.5	0	108	96
Ethylbenzene	mg/kg	1	Org-016	[NT]	62	<1	<1	0	116	102
m+p-xylene	mg/kg	2	Org-016	[NT]	62	<2	<2	0	122	106
o-Xylene	mg/kg	1	Org-016	[NT]	62	<1	<1	0	122	105
naphthalene	mg/kg	1	Org-014	[NT]	62	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	62	82	93	13	108	98

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	199517-158
Date extracted	-			[NT]	77	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	77	04/09/2018	04/09/2018		04/09/2018	04/09/2018
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	77	<25	<25	0	102	95
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	77	<25	<25	0	102	95
Benzene	mg/kg	0.2	Org-016	[NT]	77	<0.2	<0.2	0	86	80
Toluene	mg/kg	0.5	Org-016	[NT]	77	<0.5	<0.5	0	99	92
Ethylbenzene	mg/kg	1	Org-016	[NT]	77	<1	<1	0	104	98
m+p-xylene	mg/kg	2	Org-016	[NT]	77	<2	<2	0	110	103
o-Xylene	mg/kg	1	Org-016	[NT]	77	<1	<1	0	110	101
naphthalene	mg/kg	1	Org-014	[NT]	77	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	77	93	99	6	102	97

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	199517-196
Date extracted	-			[NT]	96	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	96	04/09/2018	04/09/2018		04/09/2018	04/09/2018
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	96	<25	<25	0	104	92
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	96	<25	<25	0	104	92
Benzene	mg/kg	0.2	Org-016	[NT]	96	<0.2	<0.2	0	87	77
Toluene	mg/kg	0.5	Org-016	[NT]	96	<0.5	<0.5	0	99	88
Ethylbenzene	mg/kg	1	Org-016	[NT]	96	<1	<1	0	108	96
m+p-xylene	mg/kg	2	Org-016	[NT]	96	<2	<2	0	113	100
o-Xylene	mg/kg	1	Org-016	[NT]	96	<1	<1	0	110	100
naphthalene	mg/kg	1	Org-014	[NT]	96	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	96	97	97	0	102	93

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	199517-236
Date extracted	-			[NT]	108	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	108	04/09/2018	04/09/2018		04/09/2018	04/09/2018
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	108	<25	<25	0	103	98
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	108	<25	<25	0	103	98
Benzene	mg/kg	0.2	Org-016	[NT]	108	<0.2	<0.2	0	87	82
Toluene	mg/kg	0.5	Org-016	[NT]	108	<0.5	<0.5	0	99	95
Ethylbenzene	mg/kg	1	Org-016	[NT]	108	<1	<1	0	107	103
m+p-xylene	mg/kg	2	Org-016	[NT]	108	<2	<2	0	112	106
o-Xylene	mg/kg	1	Org-016	[NT]	108	<1	<1	0	112	105
naphthalene	mg/kg	1	Org-014	[NT]	108	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	108	98	83	17	102	99

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-15	199517-243
Date extracted	-			[NT]	122	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	122	04/09/2018	04/09/2018		04/09/2018	04/09/2018
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	122	<25	<25	0	104	95
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	122	<25	<25	0	104	95
Benzene	mg/kg	0.2	Org-016	[NT]	122	<0.2	<0.2	0	87	80
Toluene	mg/kg	0.5	Org-016	[NT]	122	<0.5	<0.5	0	98	92
Ethylbenzene	mg/kg	1	Org-016	[NT]	122	<1	<1	0	109	97
m+p-xylene	mg/kg	2	Org-016	[NT]	122	<2	<2	0	112	102
o-Xylene	mg/kg	1	Org-016	[NT]	122	<1	<1	0	113	101
naphthalene	mg/kg	1	Org-014	[NT]	122	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	122	99	102	3	99	97

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	134	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	134	04/09/2018	04/09/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	134	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	134	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	134	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	134	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	134	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	134	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	134	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	134	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	134	96	98	2	[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]	154	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	154	04/09/2018	04/09/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	154	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	154	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	154	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	154	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	154	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	154	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	154	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	154	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	154	95	92	3	[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]	172	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	172	04/09/2018	04/09/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	172	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	172	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	172	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	172	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	172	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	172	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	172	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	172	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	172	95	92	3	[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]	194	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	194	04/09/2018	04/09/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	194	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	194	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	194	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	194	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	194	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	194	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	194	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	194	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	194	98	96	2	[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]	211	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	211	04/09/2018	04/09/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	211	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	211	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	211	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	211	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	211	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	211	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	211	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	211	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	211	91	92	1	[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]	235	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	235	04/09/2018	04/09/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	235	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	235	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	235	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	235	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	235	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	235	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	235	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	235	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	235	102	98	4	[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]	241	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	241	04/09/2018	04/09/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	241	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	241	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	241	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	241	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	241	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	241	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	241	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	241	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	241	98	98	0	[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]	242	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	242	04/09/2018	04/09/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	242	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	242	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	242	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	242	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	242	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	242	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	242	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	242	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	242	97	95	2	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	199517-5
Date extracted	-			30/08/2018	1	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			31/08/2018	1	30/08/2018	30/08/2018		30/08/2018	30/08/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	1	<50	<50	0	110	115
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	1	<100	<100	0	102	120
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	1	<100	<100	0	90	91
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	1	<50	<50	0	110	115
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	1	<100	<100	0	102	120
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	1	<100	<100	0	90	91
Surrogate o-Terphenyl	%		Org-003	94	1	99	98	1	99	105

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	199517-37
Date extracted	-			[NT]	18	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	18	30/08/2018	31/08/2018		31/08/2018	31/08/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	18	<50	<50	0	112	110
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	18	<100	<100	0	105	106
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	18	<100	<100	0	90	74
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	18	<50	<50	0	112	110
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	18	<100	<100	0	105	106
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	18	<100	<100	0	90	74
Surrogate o-Terphenyl	%		Org-003	[NT]	18	95	96	1	102	96

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	199517-65
Date extracted	-			[NT]	34	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	34	31/08/2018	31/08/2018		31/08/2018	31/08/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	34	<50	<50	0	120	114
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	34	<100	<100	0	112	108
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	34	<100	<100	0	104	77
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	34	<50	<50	0	120	114
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	34	<100	<100	0	112	108
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	34	<100	<100	0	104	77
Surrogate o-Terphenyl	%		Org-003	[NT]	34	97	97	0	110	102

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	199517-98
Date extracted	-			[NT]	49	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	49	31/08/2018	31/08/2018		31/08/2018	01/09/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	49	<50	<50	0	113	109
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	49	<100	<100	0	106	106
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	49	<100	<100	0	104	94
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	49	<50	<50	0	113	109
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	49	<100	<100	0	106	106
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	49	<100	<100	0	104	94
Surrogate o-Terphenyl	%		Org-003	[NT]	49	96	96	0	102	72

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	199517-124
Date extracted	-			[NT]	62	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	62	31/08/2018	31/08/2018		01/09/2018	30/08/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	62	<50	<50	0	113	108
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	62	<100	<100	0	109	104
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	62	<100	<100	0	104	88
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	62	<50	<50	0	113	108
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	62	<100	<100	0	109	104
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	62	<100	<100	0	104	88
Surrogate o-Terphenyl	%		Org-003	[NT]	62	112	130	15	109	74

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	199517-158
Date extracted	-			[NT]	77	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	77	31/08/2018	31/08/2018		30/08/2018	31/08/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	77	<50	<50	0	105	104
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	77	<100	<100	0	96	100
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	77	<100	<100	0	90	73
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	77	<50	<50	0	105	104
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	77	<100	<100	0	96	100
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	77	<100	<100	0	90	73
Surrogate o-Terphenyl	%		Org-003	[NT]	77	101	101	0	102	108

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	199517-196
Date extracted	-			[NT]	96	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	96	01/09/2018	01/09/2018		31/08/2018	31/08/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	96	<50	<50	0	107	93
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	96	<100	<100	0	100	81
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	96	<100	<100	0	90	90
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	96	<50	<50	0	107	93
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	96	<100	<100	0	100	81
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	96	<100	<100	0	90	90
Surrogate o-Terphenyl	%		Org-003	[NT]	96	99	74	29	103	87

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	199517-236
Date extracted	-			[NT]	108	30/08/2018	30/08/2018		31/08/2018	30/08/2018
Date analysed	-			[NT]	108	01/09/2018	01/09/2018		01/09/2018	01/09/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	108	<50	<50	0	124	104
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	108	<100	<100	0	103	103
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	108	<100	<100	0	104	78
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	108	<50	<50	0	124	104
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	108	<100	<100	0	103	103
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	108	<100	<100	0	104	78
Surrogate o-Terphenyl	%		Org-003	[NT]	108	76	77	1	104	93

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-15	199517-243
Date extracted	-			[NT]	122	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	122	30/08/2018	30/08/2018		31/08/2018	01/09/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	122	<50	<50	0	105	112
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	122	<100	<100	0	96	106
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	122	<100	<100	0	90	70
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	122	<50	<50	0	105	112
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	122	<100	<100	0	96	106
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	122	<100	<100	0	90	70
Surrogate o-Terphenyl	%		Org-003	[NT]	122	77	76	1	103	92

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	134	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	134	31/08/2018	31/08/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	134	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	134	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	134	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	134	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	134	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	134	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	134	115	112	3	[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]	154	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	154	31/08/2018	31/08/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	154	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	154	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	154	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	154	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	154	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	154	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	154	109	109	0	[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]	172	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	172	31/08/2018	31/08/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	172	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	172	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	172	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	172	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	172	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	172	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	172	113	105	7	[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]	194	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	194	31/08/2018	31/08/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	194	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	194	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	194	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	194	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	194	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	194	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	194	88	88	0	[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]	211	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	211	31/08/2018	31/08/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	211	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	211	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	211	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	211	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	211	140	<100	33	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	211	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	211	90	87	3	[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]	235	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	235	01/09/2018	01/09/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	235	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	235	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	235	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	235	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	235	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	235	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	235	94	91	3	[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]	241	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	241	01/09/2018	01/09/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	241	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	241	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	241	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	241	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	241	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	241	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	241	98	94	4	[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]	242	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	242	01/09/2018	01/09/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	242	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	242	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	242	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	242	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	242	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	242	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	242	90	89	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	199517-5
Date extracted	-			30/08/2018	1	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			03/09/2018	1	03/09/2018	03/09/2018		03/09/2018	03/09/2018
Naphthalene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	105	95
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	106	94
Phenanthrene	mg/kg	0.1	Org-012	<0.1	1	0.1	<0.1	0	111	109
Anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	1	0.3	<0.1	100	115	116
Pyrene	mg/kg	0.1	Org-012	<0.1	1	0.2	<0.1	67	107	109
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	97	96
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	1	<0.05	<0.05	0	124	128
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	117	1	93	93	0	100	106

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	199517-37
Date extracted	-			[NT]	18	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	18	03/09/2018	03/09/2018		03/09/2018	03/09/2018
Naphthalene	mg/kg	0.1	Org-012	[NT]	18	<0.1	<0.1	0	105	94
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	18	<0.1	<0.1	0	106	87
Phenanthrene	mg/kg	0.1	Org-012	[NT]	18	<0.1	<0.1	0	110	106
Anthracene	mg/kg	0.1	Org-012	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	18	<0.1	<0.1	0	110	104
Pyrene	mg/kg	0.1	Org-012	[NT]	18	<0.1	<0.1	0	101	95
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	18	<0.1	<0.1	0	98	91
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	18	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	18	<0.05	<0.05	0	118	107
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	18	84	87	4	95	95

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	199517-65
Date extracted	-			[NT]	34	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	34	03/09/2018	03/09/2018		03/09/2018	03/09/2018
Naphthalene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	107	93
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	106	88
Phenanthrene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	114	105
Anthracene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	112	110
Pyrene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	102	101
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	99	91
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	34	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	34	<0.05	<0.05	0	121	103
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	34	92	94	2	100	104

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	199517-98
Date extracted	-			[NT]	49	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	49	03/09/2018	03/09/2018		03/09/2018	03/09/2018
Naphthalene	mg/kg	0.1	Org-012	[NT]	49	<0.1	<0.1	0	104	91
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	49	<0.1	<0.1	0	106	88
Phenanthrene	mg/kg	0.1	Org-012	[NT]	49	<0.1	<0.1	0	113	102
Anthracene	mg/kg	0.1	Org-012	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	49	<0.1	<0.1	0	110	104
Pyrene	mg/kg	0.1	Org-012	[NT]	49	<0.1	<0.1	0	101	95
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	49	<0.1	<0.1	0	97	91
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	49	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	49	<0.05	<0.05	0	118	109
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	49	96	94	2	96	87

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	199517-124
Date extracted	-			[NT]	62	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	62	03/09/2018	03/09/2018		03/09/2018	03/09/2018
Naphthalene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	108	96
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	107	87
Phenanthrene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	114	105
Anthracene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	114	105
Pyrene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	105	98
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	98	92
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	62	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	62	<0.05	<0.05	0	116	99
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	62	93	93	0	131	99

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	199517-158
Date extracted	-			[NT]	77	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	77	03/09/2018	03/09/2018		03/09/2018	03/09/2018
Naphthalene	mg/kg	0.1	Org-012	[NT]	77	<0.1	<0.1	0	103	94
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	77	<0.1	<0.1	0	105	86
Phenanthrene	mg/kg	0.1	Org-012	[NT]	77	<0.1	<0.1	0	117	106
Anthracene	mg/kg	0.1	Org-012	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	77	<0.1	<0.1	0	119	111
Pyrene	mg/kg	0.1	Org-012	[NT]	77	<0.1	<0.1	0	109	104
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	77	<0.1	<0.1	0	100	97
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	77	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	77	<0.05	<0.05	0	117	98
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	77	93	90	3	108	121

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	199517-196
Date extracted	-			[NT]	96	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	96	03/09/2018	03/09/2018		03/09/2018	03/09/2018
Naphthalene	mg/kg	0.1	Org-012	[NT]	96	<0.1	<0.1	0	106	95
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	96	<0.1	<0.1	0	104	87
Phenanthrene	mg/kg	0.1	Org-012	[NT]	96	<0.1	<0.1	0	112	103
Anthracene	mg/kg	0.1	Org-012	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	96	<0.1	<0.1	0	120	109
Pyrene	mg/kg	0.1	Org-012	[NT]	96	<0.1	<0.1	0	112	103
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	96	<0.1	<0.1	0	103	96
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	96	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	96	<0.05	<0.05	0	105	96
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	96	93	65	35	120	124

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	199517-236
Date extracted	-			[NT]	108	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	108	03/09/2018	03/09/2018		03/09/2018	03/09/2018
Naphthalene	mg/kg	0.1	Org-012	[NT]	108	<0.1	<0.1	0	107	93
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	108	<0.1	<0.1	0	105	86
Phenanthrene	mg/kg	0.1	Org-012	[NT]	108	<0.1	<0.1	0	114	104
Anthracene	mg/kg	0.1	Org-012	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	108	<0.1	<0.1	0	120	103
Pyrene	mg/kg	0.1	Org-012	[NT]	108	<0.1	<0.1	0	113	96
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	108	<0.1	<0.1	0	105	95
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	108	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	108	<0.05	<0.05	0	110	87
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	108	69	70	1	121	108

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-15	199517-243
Date extracted	-			[NT]	122	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	122	03/09/2018	03/09/2018		03/09/2018	03/09/2018
Naphthalene	mg/kg	0.1	Org-012	[NT]	122	<0.1	<0.1	0	105	93
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	122	<0.1	<0.1	0	105	87
Phenanthrene	mg/kg	0.1	Org-012	[NT]	122	<0.1	<0.1	0	111	103
Anthracene	mg/kg	0.1	Org-012	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	122	<0.1	<0.1	0	114	103
Pyrene	mg/kg	0.1	Org-012	[NT]	122	<0.1	<0.1	0	107	97
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	122	<0.1	<0.1	0	102	93
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	122	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	122	<0.05	<0.05	0	97	85
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	122	70	65	7	109	110

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	134	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	134	03/09/2018	03/09/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	134	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	134	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	134	115	104	10	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	154	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	154	03/09/2018	03/09/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	154	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	154	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	154	107	135	23	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	172	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	172	03/09/2018	03/09/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	172	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	172	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	172	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	172	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	172	1.7	0.2	158	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	172	1.6	0.2	156	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	172	3.5	0.3	168	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	172	3.6	0.3	169	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	172	1.7	0.2	158	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	172	1.4	0.1	173	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	172	2.2	<0.2	167	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	172	1.4	0.1	173	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	172	0.6	<0.1	143	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	172	0.2	<0.1	67	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	172	0.7	<0.1	150	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	172	134	112	18	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	194	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	194	03/09/2018	03/09/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	194	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	194	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	194	114	113	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]	211	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	211	03/09/2018	03/09/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	211	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	211	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	211	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	211	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	211	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	211	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	211	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	211	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	211	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	211	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	211	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	211	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	211	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	211	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	211	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	211	107	110	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]	235	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	235	03/09/2018	03/09/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	235	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	235	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	235	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	235	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	235	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	235	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	235	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	235	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	235	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	235	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	235	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	235	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	235	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	235	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	235	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	235	107	105	2	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	241	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	241	03/09/2018	03/09/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	241	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	241	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	241	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	241	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	241	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	241	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	241	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	241	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	241	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	241	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	241	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	241	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	241	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	241	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	241	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	241	108	110	2	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	242	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	242	03/09/2018	03/09/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	242	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	242	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	242	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	242	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	242	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	242	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	242	0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	242	0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	242	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	242	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	242	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	242	0.06	<0.05	18	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	242	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	242	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	242	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	242	102	103	1	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	199517-5
Date extracted	-			30/08/2018	1	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			31/08/2018	1	30/08/2018	30/08/2018		30/08/2018	30/08/2018
HCB	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	106	95
gamma-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	92	83
Heptachlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	91	82
delta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	91	82
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	93	82
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	97	86
Dieldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	104	92
Endrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	98	85
pp-DDD	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	85	73
Endosulfan II	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	98	86
Methoxychlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	84	1	96	93	3	109	106

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	199517-37
Date extracted	-			[NT]	18	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	18	30/08/2018	30/08/2018		30/08/2018	30/08/2018
HCB	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	104	101
gamma-BHC	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	91	88
Heptachlor	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	90	86
delta-BHC	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	90	86
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	92	87
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	95	90
Dieldrin	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	103	97
Endrin	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	95	88
pp-DDD	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	83	78
Endosulfan II	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	93	89
Methoxychlor	mg/kg	0.1	Org-005	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	18	92	91	1	108	106

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	199517-65
Date extracted	-			[NT]	34	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	34	30/08/2018	30/08/2018		30/08/2018	30/08/2018
HCB	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	107	106
gamma-BHC	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	94	92
Heptachlor	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	92	89
delta-BHC	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	93	91
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	94	92
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	98	95
Dieldrin	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	105	102
Endrin	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	96	95
pp-DDD	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	84	81
Endosulfan II	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	91	91
Methoxychlor	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	34	93	91	2	114	117

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	199517-124
Date extracted	-			[NT]	49	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	49	30/08/2018	30/08/2018		31/08/2018	31/08/2018
HCB	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	97	93
gamma-BHC	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	82	81
Heptachlor	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	83	82
delta-BHC	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	83	82
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	82	81
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	88	88
Dieldrin	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	90	89
Endrin	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	92	91
pp-DDD	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	83	82
Endosulfan II	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	76	71
Methoxychlor	mg/kg	0.1	Org-005	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	49	94	92	2	107	109

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	199517-196
Date extracted	-			[NT]	62	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	62	30/08/2018	30/08/2018		31/08/2018	31/08/2018
HCB	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	96	101
gamma-BHC	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	83	79
Heptachlor	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	82	78
delta-BHC	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	83	81
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	83	79
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	89	85
Dieldrin	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	91	87
Endrin	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	92	87
pp-DDD	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	83	78
Endosulfan II	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	70	69
Methoxychlor	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	62	91	92	1	112	116

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	77	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	77	30/08/2018	30/08/2018		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	77	97	96	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]	96	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	96	31/08/2018	31/08/2018		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	96	99	100	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]	108	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	108	31/08/2018	31/08/2018		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	108	73	74	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]	122	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	122	31/08/2018	31/08/2018		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	122	71	71	0	[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]	134	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	134	31/08/2018	31/08/2018		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	134	<0.1	0.2	67	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	134	113	113	0	[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]	154	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	154	31/08/2018	31/08/2018		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	154	111	109	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]	194	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	194	31/08/2018	31/08/2018		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	194	94	94	0	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	199517-5
Date extracted	-			30/08/2018	1	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			31/08/2018	1	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	94	95
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	94	100
Dimethoate	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	95	105
Fenitrothion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	102	101
Malathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	83	81
Parathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	98	98
Ronnel	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	104	106
Surrogate TCMX	%		Org-008	84	1	96	93	3	81	93

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	199517-37
Date extracted	-			[NT]	18	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	18	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	18	<0.1	<0.1	0	94	94
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	18	<0.1	<0.1	0	86	93
Dimethoate	mg/kg	0.1	Org-008	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	18	<0.1	<0.1	0	94	101
Fenitrothion	mg/kg	0.1	Org-008	[NT]	18	<0.1	<0.1	0	100	99
Malathion	mg/kg	0.1	Org-008	[NT]	18	<0.1	<0.1	0	77	79
Parathion	mg/kg	0.1	Org-008	[NT]	18	<0.1	<0.1	0	97	97
Ronnel	mg/kg	0.1	Org-008	[NT]	18	<0.1	<0.1	0	104	104
Surrogate TCMX	%		Org-008	[NT]	18	92	91	1	82	91

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	199517-65
Date extracted	-			[NT]	34	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	34	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	96	101
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	97	97
Dimethoate	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	94	105
Fenitrothion	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	102	104
Malathion	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	74	84
Parathion	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	99	100
Ronnel	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	106	111
Surrogate TCMX	%		Org-008	[NT]	34	93	91	2	91	98

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	199517-124
Date extracted	-			[NT]	49	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	49	30/08/2018	30/08/2018		31/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	49	<0.1	<0.1	0	100	99
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	49	<0.1	<0.1	0	78	88
Dimethoate	mg/kg	0.1	Org-008	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	49	<0.1	<0.1	0	90	103
Fenitrothion	mg/kg	0.1	Org-008	[NT]	49	<0.1	<0.1	0	113	110
Malathion	mg/kg	0.1	Org-008	[NT]	49	<0.1	<0.1	0	75	76
Parathion	mg/kg	0.1	Org-008	[NT]	49	<0.1	<0.1	0	102	114
Ronnel	mg/kg	0.1	Org-008	[NT]	49	<0.1	<0.1	0	104	102
Surrogate TCMX	%		Org-008	[NT]	49	94	92	2	84	92

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	199517-196
Date extracted	-			[NT]	62	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	62	30/08/2018	30/08/2018		31/08/2018	31/08/2018
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	98	95
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	78	80
Dimethoate	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	89	96
Fenitrothion	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	113	100
Malathion	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	74	105
Parathion	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	116	122
Ronnel	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	103	98
Surrogate TCMX	%		Org-008	[NT]	62	91	92	1	83	106

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	77	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	77	30/08/2018	30/08/2018		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	77	97	96	1	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	96	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	96	31/08/2018	31/08/2018		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	96	99	100	1	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	108	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	108	31/08/2018	31/08/2018		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	108	73	74	1	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	122	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	122	31/08/2018	31/08/2018		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	122	71	71	0	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	134	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	134	31/08/2018	31/08/2018		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	134	113	113	0	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	154	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	154	31/08/2018	31/08/2018		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	154	111	109	2	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	194	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	194	31/08/2018	31/08/2018		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	194	94	94	0	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	199517-5
Date extracted	-			30/08/2018	1	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			31/08/2018	1	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	103	103
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	84	1	96	93	3	81	93

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	199517-37
Date extracted	-			[NT]	18	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	18	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	18	<0.1	<0.1	0	103	104
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	18	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	18	92	91	1	82	91

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	199517-65
Date extracted	-			[NT]	34	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	34	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	34	<0.1	<0.1	0	105	103
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	34	93	91	2	91	98

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	199517-124
Date extracted	-			[NT]	49	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	49	30/08/2018	30/08/2018		31/08/2018	31/08/2018
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	49	<0.1	<0.1	0	103	100
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	49	94	92	2	84	92

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	199517-196
Date extracted	-			[NT]	62	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Date analysed	-			[NT]	62	30/08/2018	30/08/2018		31/08/2018	31/08/2018
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	104	99
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	62	91	92	1	83	106

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	77	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	77	30/08/2018	30/08/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	77	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	77	97	96	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]	96	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	96	31/08/2018	31/08/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	96	99	100	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]	108	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	108	31/08/2018	31/08/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	108	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	108	73	74	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]	122	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	122	31/08/2018	31/08/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	122	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	122	71	71	0	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	134	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	134	31/08/2018	31/08/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	134	113	113	0	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	154	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	154	31/08/2018	31/08/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	154	111	109	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]	194	30/08/2018	30/08/2018		[NT]	[NT]
Date analysed	-			[NT]	194	31/08/2018	31/08/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	194	94	94	0	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	199517-5
Date prepared	-			29/08/2018	1	29/08/2018	29/08/2018		29/08/2018	29/08/2018
Date analysed	-			30/08/2018	1	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Arsenic	mg/kg	4	Metals-020	<4	1	4	<4	0	120	103
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	113	104
Chromium	mg/kg	1	Metals-020	<1	1	12	11	9	111	100
Copper	mg/kg	1	Metals-020	<1	1	63	31	68	110	148
Lead	mg/kg	1	Metals-020	<1	1	29	18	47	109	101
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	106	128
Nickel	mg/kg	1	Metals-020	<1	1	8	7	13	109	90
Zinc	mg/kg	1	Metals-020	<1	1	87	42	70	113	80

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	199517-37
Date prepared	-			[NT]	18	29/08/2018	29/08/2018		29/08/2018	29/08/2018
Date analysed	-			[NT]	18	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Arsenic	mg/kg	4	Metals-020	[NT]	18	<4	<4	0	111	92
Cadmium	mg/kg	0.4	Metals-020	[NT]	18	<0.4	<0.4	0	106	96
Chromium	mg/kg	1	Metals-020	[NT]	18	9	9	0	106	95
Copper	mg/kg	1	Metals-020	[NT]	18	15	16	6	107	97
Lead	mg/kg	1	Metals-020	[NT]	18	16	17	6	105	92
Mercury	mg/kg	0.1	Metals-021	[NT]	18	0.2	0.2	0	105	103
Nickel	mg/kg	1	Metals-020	[NT]	18	5	4	22	103	94
Zinc	mg/kg	1	Metals-020	[NT]	18	38	38	0	106	88

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	199517-65
Date prepared	-			[NT]	34	29/08/2018	29/08/2018		29/08/2018	29/08/2018
Date analysed	-			[NT]	34	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Arsenic	mg/kg	4	Metals-020	[NT]	34	<4	<4	0	115	99
Cadmium	mg/kg	0.4	Metals-020	[NT]	34	<0.4	<0.4	0	109	105
Chromium	mg/kg	1	Metals-020	[NT]	34	11	11	0	112	106
Copper	mg/kg	1	Metals-020	[NT]	34	12	14	15	116	115
Lead	mg/kg	1	Metals-020	[NT]	34	35	43	21	113	108
Mercury	mg/kg	0.1	Metals-021	[NT]	34	0.1	<0.1	0	104	110
Nickel	mg/kg	1	Metals-020	[NT]	34	8	8	0	115	111
Zinc	mg/kg	1	Metals-020	[NT]	34	34	36	6	108	105

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	199517-98
Date prepared	-			[NT]	49	29/08/2018	29/08/2018		29/08/2018	29/08/2018
Date analysed	-			[NT]	49	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Arsenic	mg/kg	4	Metals-020	[NT]	49	<4	<4	0	113	101
Cadmium	mg/kg	0.4	Metals-020	[NT]	49	<0.4	<0.4	0	107	106
Chromium	mg/kg	1	Metals-020	[NT]	49	10	9	11	109	105
Copper	mg/kg	1	Metals-020	[NT]	49	13	14	7	115	105
Lead	mg/kg	1	Metals-020	[NT]	49	11	11	0	111	106
Mercury	mg/kg	0.1	Metals-021	[NT]	49	<0.1	<0.1	0	100	121
Nickel	mg/kg	1	Metals-020	[NT]	49	6	6	0	112	112
Zinc	mg/kg	1	Metals-020	[NT]	49	30	32	6	106	93

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	199517-124
Date prepared	-			[NT]	62	29/08/2018	29/08/2018		29/08/2018	29/08/2018
Date analysed	-			[NT]	62	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Arsenic	mg/kg	4	Metals-020	[NT]	62	<4	<4	0	112	98
Cadmium	mg/kg	0.4	Metals-020	[NT]	62	<0.4	<0.4	0	107	105
Chromium	mg/kg	1	Metals-020	[NT]	62	9	9	0	107	104
Copper	mg/kg	1	Metals-020	[NT]	62	12	14	15	111	99
Lead	mg/kg	1	Metals-020	[NT]	62	10	11	10	110	102
Mercury	mg/kg	0.1	Metals-021	[NT]	62	<0.1	<0.1	0	117	117
Nickel	mg/kg	1	Metals-020	[NT]	62	5	5	0	111	111
Zinc	mg/kg	1	Metals-020	[NT]	62	26	27	4	108	91

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	199517-158
Date prepared	-			[NT]	77	29/08/2018	29/08/2018		29/08/2018	29/08/2018
Date analysed	-			[NT]	77	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Arsenic	mg/kg	4	Metals-020	[NT]	77	<4	<4	0	112	96
Cadmium	mg/kg	0.4	Metals-020	[NT]	77	<0.4	<0.4	0	106	99
Chromium	mg/kg	1	Metals-020	[NT]	77	10	10	0	109	108
Copper	mg/kg	1	Metals-020	[NT]	77	16	16	0	114	121
Lead	mg/kg	1	Metals-020	[NT]	77	16	16	0	110	103
Mercury	mg/kg	0.1	Metals-021	[NT]	77	<0.1	<0.1	0	101	122
Nickel	mg/kg	1	Metals-020	[NT]	77	6	6	0	112	114
Zinc	mg/kg	1	Metals-020	[NT]	77	34	33	3	105	102

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	199517-196
Date prepared	-			[NT]	96	29/08/2018	29/08/2018		29/08/2018	29/08/2018
Date analysed	-			[NT]	96	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Arsenic	mg/kg	4	Metals-020	[NT]	96	<4	<4	0	115	99
Cadmium	mg/kg	0.4	Metals-020	[NT]	96	<0.4	<0.4	0	110	100
Chromium	mg/kg	1	Metals-020	[NT]	96	9	10	11	112	98
Copper	mg/kg	1	Metals-020	[NT]	96	16	15	6	115	#
Lead	mg/kg	1	Metals-020	[NT]	96	13	13	0	113	#
Mercury	mg/kg	0.1	Metals-021	[NT]	96	<0.1	<0.1	0	117	129
Nickel	mg/kg	1	Metals-020	[NT]	96	6	6	0	115	112
Zinc	mg/kg	1	Metals-020	[NT]	96	39	39	0	111	#

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	199517-236
Date prepared	-			[NT]	108	29/08/2018	29/08/2018		29/08/2018	29/08/2018
Date analysed	-			[NT]	108	30/08/2018	30/08/2018		30/08/2018	30/08/2018
Arsenic	mg/kg	4	Metals-020	[NT]	108	<4	<4	0	116	92
Cadmium	mg/kg	0.4	Metals-020	[NT]	108	<0.4	<0.4	0	109	96
Chromium	mg/kg	1	Metals-020	[NT]	108	9	9	0	113	96
Copper	mg/kg	1	Metals-020	[NT]	108	19	14	30	118	108
Lead	mg/kg	1	Metals-020	[NT]	108	13	11	17	113	97
Mercury	mg/kg	0.1	Metals-021	[NT]	108	<0.1	<0.1	0	92	108
Nickel	mg/kg	1	Metals-020	[NT]	108	5	5	0	115	101
Zinc	mg/kg	1	Metals-020	[NT]	108	34	30	12	108	86

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	199517-243
Date prepared	-			[NT]	122	29/08/2018	29/08/2018		[NT]	29/08/2018
Date analysed	-			[NT]	122	30/08/2018	30/08/2018		[NT]	30/08/2018
Arsenic	mg/kg	4	Metals-020	[NT]	122	6	6	0	[NT]	98
Cadmium	mg/kg	0.4	Metals-020	[NT]	122	<0.4	<0.4	0	[NT]	104
Chromium	mg/kg	1	Metals-020	[NT]	122	9	9	0	[NT]	103
Copper	mg/kg	1	Metals-020	[NT]	122	29	24	19	[NT]	84
Lead	mg/kg	1	Metals-020	[NT]	122	28	26	7	[NT]	104
Mercury	mg/kg	0.1	Metals-021	[NT]	122	<0.1	<0.1	0	[NT]	117
Nickel	mg/kg	1	Metals-020	[NT]	122	5	5	0	[NT]	110
Zinc	mg/kg	1	Metals-020	[NT]	122	60	58	3	[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]	134	29/08/2018	29/08/2018		[NT]	[NT]
Date analysed	-			[NT]	134	30/08/2018	30/08/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	134	5	5	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	134	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	134	9	9	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	134	26	17	42	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	134	22	20	10	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	134	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	134	5	5	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	134	65	57	13	[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]	154	29/08/2018	29/08/2018		[NT]	[NT]
Date analysed	-			[NT]	154	30/08/2018	30/08/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	154	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	154	0.5	0.5	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	154	7	8	13	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	154	78	81	4	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	154	19	19	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	154	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	154	3	3	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	154	100	110	10	[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]	172	29/08/2018	29/08/2018		[NT]	[NT]
Date analysed	-			[NT]	172	30/08/2018	30/08/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	172	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	172	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	172	18	19	5	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	172	27	27	0	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	172	17	23	30	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	172	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	172	16	17	6	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	172	41	45	9	[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]	194	29/08/2018	29/08/2018		[NT]	[NT]
Date analysed	-			[NT]	194	30/08/2018	30/08/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	194	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	194	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	194	11	14	24	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	194	14	23	49	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	194	11	24	74	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	194	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	194	8	9	12	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	194	24	35	37	[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]	211	29/08/2018	29/08/2018		[NT]	[NT]
Date analysed	-			[NT]	211	30/08/2018	30/08/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	211	<4	5	22	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	211	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	211	19	24	23	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	211	53	75	34	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	211	17	20	16	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	211	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	211	12	13	8	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	211	98	130	28	[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]	235	29/08/2018	29/08/2018		[NT]	[NT]
Date analysed	-			[NT]	235	30/08/2018	30/08/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	235	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	235	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	235	12	44	114	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	235	77	97	23	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	235	21	28	29	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	235	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	235	8	18	77	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	235	77	87	12	[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]	241	29/08/2018	29/08/2018		[NT]	[NT]
Date analysed	-			[NT]	241	30/08/2018	30/08/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	241	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	241	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	241	23	17	30	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	241	31	25	21	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	241	13	12	8	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	241	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	241	24	20	18	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	241	38	35	8	[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]	242	29/08/2018	29/08/2018		[NT]	[NT]
Date analysed	-			[NT]	242	30/08/2018	30/08/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	242	4	5	22	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	242	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	242	19	19	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	242	27	25	8	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	242	17	15	12	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	242	<0.1	0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	242	24	20	18	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	242	39	35	11	[NT]	[NT]

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date prepared	-			05/09/2018	9	05/09/2018	05/09/2018		05/09/2018	[NT]
Date analysed	-			05/09/2018	9	05/09/2018	05/09/2018		05/09/2018	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-009	<0.1	9	1.9	2.0	5	102	[NT]
Exchangeable K	meq/100g	0.1	Metals-009	<0.1	9	0.5	0.6	18	117	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-009	<0.1	9	0.90	0.96	6	101	[NT]
Exchangeable Na	meq/100g	0.1	Metals-009	<0.1	9	<0.1	<0.1	0	103	[NT]

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	120	05/09/2018	05/09/2018		[NT]	[NT]
Date analysed	-			[NT]	120	05/09/2018	05/09/2018		[NT]	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-009	[NT]	120	2.7	2.9	7	[NT]	[NT]
Exchangeable K	meq/100g	0.1	Metals-009	[NT]	120	0.2	0.2	0	[NT]	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-009	[NT]	120	0.70	0.73	4	[NT]	[NT]
Exchangeable Na	meq/100g	0.1	Metals-009	[NT]	120	<0.1	<0.1	0	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	199517-5
Date prepared	-			03/09/2018	6	03/09/2018	03/09/2018		03/09/2018	03/09/2018
Date analysed	-			03/09/2018	6	03/09/2018	03/09/2018		03/09/2018	03/09/2018
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	6	4.9	5.0	2	102	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	<10	6	<10	<10	0	91	73
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	<10	6	<10	<10	0	97	84

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	199517-85
Date prepared	-			[NT]	26	03/09/2018	03/09/2018		03/09/2018	03/09/2018
Date analysed	-			[NT]	26	03/09/2018	03/09/2018		03/09/2018	03/09/2018
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	26	6.2	6.2	0	102	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	26	<10	<10	0	92	87
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	26	10	10	0	101	92

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	199517-187
Date prepared	-			[NT]	83	03/09/2018	03/09/2018		03/09/2018	03/09/2018
Date analysed	-			[NT]	83	03/09/2018	03/09/2018		03/09/2018	03/09/2018
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	83	6.5	6.6	2	101	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	83	<10	<10	0	92	89
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	83	<10	<10	0	101	94

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	146	03/09/2018	03/09/2018		[NT]	[NT]
Date analysed	-			[NT]	146	03/09/2018	03/09/2018		[NT]	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	146	6.6	6.6	0	[NT]	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	146	<10	<10	0	[NT]	[NT]
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	146	<10	<10	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]	186	03/09/2018	03/09/2018		[NT]	[NT]
Date analysed	-			[NT]	186	03/09/2018	03/09/2018		[NT]	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	186	6.1	6.0	2	[NT]	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	186	<10	<10	0	[NT]	[NT]
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	186	<10	<10	0	[NT]	[NT]

QUALITY CONTROL: Texture and Salinity*						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date prepared	-			31/08/2018	6	31/08/2018	31/08/2018		31/08/2018	[NT]
Date analysed	-			31/08/2018	6	31/08/2018	31/08/2018		31/08/2018	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	<1	6	13	16	21	99	[NT]
Texture Value	-		INORG-123	[NT]	6	8.5	[NT]		[NT]	[NT]

QUALITY CONTROL: Texture and Salinity*						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date prepared	-			[NT]	26	31/08/2018	31/08/2018		31/08/2018	[NT]
Date analysed	-			[NT]	26	31/08/2018	31/08/2018		31/08/2018	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	26	12	12	0	99	[NT]
Texture Value	-		INORG-123	[NT]	26	14	[NT]		[NT]	[NT]

QUALITY CONTROL: Texture and Salinity*						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date prepared	-			[NT]	83	31/08/2018	31/08/2018		31/08/2018	[NT]
Date analysed	-			[NT]	83	31/08/2018	31/08/2018		31/08/2018	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	83	9	10	11	101	[NT]
Texture Value	-		INORG-123	[NT]	83	14	[NT]		[NT]	[NT]

QUALITY CONTROL: Texture and Salinity*						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	146	31/08/2018	31/08/2018		[NT]	[NT]
Date analysed	-			[NT]	146	31/08/2018	31/08/2018		[NT]	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	146	9	9	0	[NT]	[NT]
Texture Value	-		INORG-123	[NT]	146	14	[NT]		[NT]	[NT]

QUALITY CONTROL: Texture and Salinity*						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	186	31/08/2018	31/08/2018		[NT]	[NT]
Date analysed	-			[NT]	186	31/08/2018	31/08/2018		[NT]	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	186	8	9	12	[NT]	[NT]
Texture Value	-		INORG-123	[NT]	186	8.0	[NT]		[NT]	[NT]

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
Date extracted	-			03/09/2018	[NT]	[NT]	[NT]	[NT]	03/09/2018	[NT]
Date analysed	-			04/09/2018	[NT]	[NT]	[NT]	[NT]	04/09/2018	[NT]
Dichlorodifluoromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-013	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroform	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
2,2-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
1,1,1-trichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
1,1-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Cyclohexane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibromomethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Bromodichloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Toluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
1,2-dibromoethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromoform	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
m+p-xylene	µg/L	2	Org-013	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Styrene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
o-xylene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: VOCs in water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
1,2,3-trichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-013	119	[NT]	[NT]	[NT]	[NT]	98	[NT]
Surrogate toluene-d8	%		Org-013	100	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate 4-BFB	%		Org-013	78	[NT]	[NT]	[NT]	[NT]	112	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
Date extracted	-			03/09/2018	[NT]	[NT]	[NT]	[NT]	03/09/2018	[NT]
Date analysed	-			04/09/2018	[NT]	[NT]	[NT]	[NT]	04/09/2018	[NT]
TRH C_6 - C_9	µg/L	10	Org-016	<10	[NT]	[NT]	[NT]	[NT]	92	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-016	<10	[NT]	[NT]	[NT]	[NT]	92	[NT]
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	84	[NT]
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	93	[NT]
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Naphthalene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-016	119	[NT]	[NT]	[NT]	[NT]	98	[NT]
Surrogate toluene-d8	%		Org-016	100	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate 4-BFB	%		Org-016	78	[NT]	[NT]	[NT]	[NT]	112	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			02/09/2018	[NT]	[NT]	[NT]	[NT]	02/09/2018	[NT]
Date analysed	-			03/09/2018	[NT]	[NT]	[NT]	[NT]	03/09/2018	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	113	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	118	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	113	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	118	[NT]
Surrogate o-Terphenyl	%		Org-003	81	[NT]	[NT]	[NT]	[NT]	96	[NT]

QUALITY CONTROL: PAHs in Water - Low Level					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			02/09/2018	[NT]	[NT]	[NT]	[NT]	02/09/2018	[NT]
Date analysed	-			03/09/2018	[NT]	[NT]	[NT]	[NT]	03/09/2018	[NT]
Naphthalene	µg/L	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	79	[NT]
Acenaphthylene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	85	[NT]
Phenanthrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Anthracene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Pyrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	85	[NT]
Benzo(a)anthracene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	87	[NT]	[NT]	[NT]	[NT]	90	[NT]

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date prepared	-			31/08/2018	[NT]	[NT]	[NT]	[NT]	31/08/2018	[NT]
Date analysed	-			31/08/2018	[NT]	[NT]	[NT]	[NT]	31/08/2018	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	118	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	[NT]	[NT]	119	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	120	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	[NT]	[NT]	[NT]	[NT]	108	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	116	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	116	[NT]

QUALITY CONTROL: Miscellaneous Inorganics					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			30/08/2018	[NT]	[NT]	[NT]	[NT]	30/08/2018	[NT]
Date analysed	-			30/08/2018	[NT]	[NT]	[NT]	[NT]	30/08/2018	[NT]
pH	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	102	[NT]
Electrical Conductivity	µS/cm	1	Inorg-002	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Chloride, Cl	mg/L	1	Inorg-081	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Sulphate, SO4	mg/L	1	Inorg-081	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]

QUALITY CONTROL: Cations in water Dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date digested	-			31/08/2018	[NT]	[NT]	[NT]	[NT]	31/08/2018	[NT]
Date analysed	-			31/08/2018	[NT]	[NT]	[NT]	[NT]	31/08/2018	[NT]
Calcium - Dissolved	mg/L	0.5	Metals-020	<0.5	[NT]	[NT]	[NT]	[NT]	93	[NT]
Magnesium - Dissolved	mg/L	0.5	Metals-020	<0.5	[NT]	[NT]	[NT]	[NT]	92	[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.

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; 60-140% for organics (+/-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.

Report Comments

Acid Extractable Metals in Soil:
The laboratory RPD acceptance criteria has been exceeded for 199517-1 for Cu and Zn. Therefore a triplicate result has been issued as laboratory sample number 199517-253.

Acid Extractable Metals in Soil:
The laboratory RPD acceptance criteria has been exceeded for 199517-194 for Pb. Therefore a triplicate result has been issued as laboratory sample number 199517-254.

Acid Extractable Metals in Soil:
The laboratory RPD acceptance criteria has been exceeded for 199517-235 for Cr and Ni. Therefore a triplicate result has been issued as laboratory sample number 199517-255.

Acid Extractable Metals in Soil:
Spike recovery for Cu in sample #5 at 148% which is outside lab acceptance criteria (70-130%), however, the LCS recovery is acceptable at 110%, sample heterogeneity suspected

Acid Extractable Metals in Soil:
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.

TRH Soil C10-C40 NEPM - (177,191,213,220 surrogate)# Percent recovery is not possible to report as the high concentration of analytes in the sample/s
have caused interference.
PCBs in Soil - PQL has been raised due to interference from analytes(other than those being tested) in the sample 207.

Dissolved Metals: no filtered, preserved sample was received, therefore
the unpreserved sample was filtered through 0.45 µm filter at the lab.
Note: there is a possibility some elements may be underestimated.

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

PAHs in Soil - The RPD for duplicate results is accepted due to the non homogenous nature of the sample/s.

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SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Priya Dass

Sample Login Details

Your reference	E31675KR, Penrith
Envirolab Reference	199517
Date Sample Received	28/08/2018
Date Instructions Received	28/08/2018
Date Results Expected to be Reported	05/09/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	249 SOIL, 2 WATER, 1 MATERIAL
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	13.0
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils	CEC	Misc Inorg - Soil	Texture and Salinity*	Asbestos ID - materials	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	HM in water - dissolved	pH	Electrical Conductivity	Chloride, Cl	Sulphate, SO4	Cations in water Dissolved	On Hold
BH101-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH101-0.3-0.7																							✓
BH101-1.2-1.4																							✓
BH102-0-0.1									✓	✓	✓												
BH102-0.3-0.4	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓												
BH102-0.9-1.0	✓	✓	✓				✓			✓	✓												
BH103-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH103-1.2-1.3	✓	✓	✓				✓			✓	✓												
BH104-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH104-0.7-1.0	✓	✓	✓				✓			✓	✓												
BH105-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓															
BH105-0.3-0.8																							✓
BH105-1.2-1.5																							✓
BH106-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH106-1.2-1.3										✓	✓												
BH107-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH107-1.2-1.35																							✓
BH108-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓															
BH108-1.2-1.5																							✓
BH109-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils	CEC	Misc Inorg - Soil	Texture and Salinity*	Asbestos ID - materials	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	HM in water - dissolved	pH	Electrical Conductivity	Chloride, Cl	Sulphate, SO4	Cations in water Dissolved	On Hold
BH109-1.2-1.5	✓	✓	✓				✓																
BH110-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH110-0.5-0.7	✓	✓	✓				✓																
BH110-1.2-1.5																							✓
BH111-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH111-1.2-1.5	✓	✓	✓				✓			✓	✓												
BH112-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH112-0.5-0.7																							✓
BH112-1.2-1.5																							✓
BH113-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH113-1.2-1.5										✓	✓												
BH114-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH114-1.2-1.5	✓	✓	✓				✓																
BH115-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH115-0.4-0.6	✓	✓	✓				✓																
BH115-1.2-1.5																							✓
BH116-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH116-0.9-1.1	✓	✓	✓				✓			✓	✓												
BH117-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH117-1.2+-1.5																							✓

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BH118-0-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH118-1.2-1.5	✓	✓	✓				✓			✓	✓												
BH119-0-0.5	✓	✓	✓	✓	✓	✓	✓	✓															
BH119-1.3-1.5																							✓
BH120-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH120-1.2-1.5	✓	✓	✓				✓																
BH121-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH121-1.2-1.5	✓	✓	✓				✓			✓	✓												
BH122-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH122-1.2-1.5																							✓
BH123-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH123-1.2-1.5																							✓
BH124-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH124-1.2-1.5																							✓
BH125-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH125-1.2-1.5																							✓
BH126-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH126-1.2-1.5																							✓
BH127-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH127-0.3-0.6	✓	✓	✓				✓																

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils	CEC	Misc Inorg - Soil	Texture and Salinity*	Asbestos ID - materials	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	HM in water - dissolved	pH	Electrical Conductivity	Chloride, Cl	Sulphate, SO4	Cations in water Dissolved	On Hold
BH127-1.2-1.5																							✓
BH128-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓															
BH128-0.5-0.7																							✓
BH128-1.2-1.5																							✓
BH129-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH129-1.2-1.5	✓	✓	✓				✓																
BH130-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH130-1.2-1.5																							✓
BH131-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH131-1.2-1.5																							✓
BH132-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH132-1.2-1.5	✓	✓	✓				✓																
BH133-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH133-1.2-1.5																							✓
BH134-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH134-1.2-1.5	✓	✓	✓				✓																
BH135-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH135-1.2-1.5																							✓
BH136-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH136-1.3-1.5	✓	✓	✓				✓																

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BH137-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH137-0.5-0.95																							✓
BH137-1.5-1.95	✓	✓	✓				✓			✓	✓												
BH137-3-3.15																							✓
BH137-4.3-4.4										✓	✓												
BH138-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH138-1.2-1.5																							✓
BH138-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH138-1.1-1.5																							✓
BH140-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH140-1.3-1.5										✓	✓												
BH141-0-0.35	✓	✓	✓	✓	✓	✓	✓	✓															
BH141-1.1-1.5																							✓
BH142-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH142-1.0-1.5	✓	✓	✓				✓																
BH143-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓															
BH143-1.3-1.5																							✓
BH144-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH144-1.2-1.5	✓	✓	✓				✓																
BH145-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓															

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BH145-1.1-1.5																							✓
BH146-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH146-1.2-1.5	✓	✓	✓				✓																
BH147-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH147-1.2-1.5	✓	✓	✓				✓																
BH148-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH148-1.2-1.5																							✓
BH149-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH149-1.2-1.5	✓	✓	✓				✓																
BH150-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓															
BH150-1.2-1.5																							✓
BH151-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH151-1.2-1.5	✓	✓	✓				✓																
BH152-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH152-1.2-1.5																							✓
BH153-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH153-1.2-1.5																							✓
BH154-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓															
BH154-0.8-1	✓	✓	✓				✓																
BH155-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils	CEC	Misc Inorg - Soil	Texture and Salinity*	Asbestos ID - materials	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	HM in water - dissolved	pH	Electrical Conductivity	Chloride, Cl	Sulphate, SO4	Cations in water Dissolved	On Hold
BH155-1.2-1.5										✓	✓												
BH156-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH156-1.2-1.5	✓	✓	✓				✓																
BH157-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH157-1.2-1.5										✓	✓												
BH158-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH158-1.2-1.5	✓	✓	✓				✓																
BH159-0-0.25	✓	✓	✓	✓	✓	✓	✓	✓															
BH159-1.2-1.5	✓	✓	✓				✓																
BH160-0-0.45	✓	✓	✓	✓	✓	✓	✓	✓															
BH160-0.6-1.0																							✓
BH161-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH161-1.3-1.5	✓	✓	✓				✓																
BH162-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH162-0.9-1.1																							✓
BH163-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH163-0.5-0.7	✓	✓	✓				✓																
BH164-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH164-0.4-0.6																							✓
BH164-1.2-1.5																							✓

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

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils	CEC	Misc Inorg - Soil	Texture and Salinity*	Asbestos ID - materials	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	HM in water - dissolved	pH	Electrical Conductivity	Chloride, Cl	Sulphate, SO4	Cations in water Dissolved	On Hold
BH165-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH165-0.6-1.0																							✓
BH166-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH166-0.7-0.95										✓	✓												
BH166-1.7-1.95																							✓
BH166-2.9-3.15										✓	✓												
BH166-4.0-4.1	✓	✓	✓				✓			✓	✓												
BH167-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH167-1.2-1.5																							✓
BH168-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH168-1.2-1.5										✓	✓												
BH169-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓															
BH169-0.3-0.6																							✓
BH170-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH170-0.6-0.95										✓	✓												
BH170-1.6-1.95	✓	✓	✓				✓																
BH170-2.9-3.15										✓	✓												
BH171-0-0.5	✓	✓	✓	✓	✓	✓	✓	✓															
BH171-0.7-1.1																							✓
BH172-0-0.4	✓	✓	✓	✓	✓	✓	✓	✓															

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils	CEC	Misc Inorg - Soil	Texture and Salinity*	Asbestos ID - materials	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	HM in water - dissolved	pH	Electrical Conductivity	Chloride, Cl	Sulphate, SO4	Cations in water Dissolved	On Hold
BH172-0.8-1.3																							✓
BH173-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH173-0.5-0.7																							✓
BH174-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH174-0.4-0.8	✓	✓	✓				✓																
BH175-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH175-0.7-0.9																							✓
BH176-0-0.3																							✓
BH176-0.4-0.6	✓	✓	✓	✓	✓	✓	✓	✓															
BH176-1.2-1.5	✓	✓	✓				✓																
BH177-0-0.2																							✓
BH177-0.6-0.9	✓	✓	✓	✓	✓	✓	✓	✓															
BH177-1-1.2	✓	✓	✓				✓																
BH178-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓															
BH178-0.5-0.7																							✓
BH178-1-1.2	✓	✓	✓				✓																
BH179-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓															
BH179-0.6-0.9																							✓
BH180-1.5-1.95																							✓
BH180-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓															

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils	CEC	Misc Inorg - Soil	Texture and Salinity*	Asbestos ID - materials	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	HM in water - dissolved	pH	Electrical Conductivity	Chloride, Cl	Sulphate, SO4	Cations in water Dissolved	On Hold
BH180-0.6-0.95																							✓
BH180-1.7-1.95																							✓
BH181-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
BH181-0.5-0.95	✓	✓	✓				✓			✓	✓												
BH181-1.7-1.95										✓	✓												
BH181-2.7-2.9										✓	✓												
BH181-3.9-4.0										✓	✓												
BH182-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓															
BH182-0.7-0.95																							✓
BH182-1.6-1.9																							✓
BH183-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓															
BH183-0.5-0.95																							✓
BH183-1.5-1.95																							✓
BH184-0-0.4	✓	✓	✓	✓	✓	✓	✓	✓															
BH184-0.6-0.9																							✓
BH185-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓															
BH185-0.6-0.95																							✓
BH185-1.7-1.95																							✓
BH186-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓															
BH186-0.5-0.95																							✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils	CEC	Misc Inorg - Soil	Texture and Salinity*	Asbestos ID - materials	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	HM in water - dissolved	pH	Electrical Conductivity	Chloride, Cl	Sulphate, SO4	Cations in water Dissolved	On Hold
BH186-1.5-1.95	✓	✓	✓				✓																
BH188-0-0.3									✓	✓	✓												
BH188-0.4-0.6	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓												
BH188-0.9-1.1	✓	✓	✓				✓			✓	✓												
BH189-0-0.2																							✓
BH189-0.5-0.7																							✓
BH189-0.8-0.9	✓	✓	✓	✓	✓	✓	✓	✓															
DUPAM1																							✓
DUPAM2	✓	✓	✓				✓																
DUPAM3	✓	✓	✓				✓																
DUPAM5	✓	✓	✓				✓																
DUPAM6																							✓
DUPAM7	✓	✓	✓				✓																
DUPAM8																							✓
DUPAM10																							✓
DUPAM11	✓	✓	✓				✓																
DUPAM12																							✓
DUPAM14	✓	✓	✓				✓																
DUPAM15																							✓
DUPAM16	✓	✓	✓				✓																

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils	CEC	Misc Inorg - Soil	Texture and Salinity*	Asbestos ID - materials	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	HM in water - dissolved	pH	Electrical Conductivity	Chloride, Cl	Sulphate, SO4	Cations in water Dissolved	On Hold
DUPAM17																							✓
DUPAM18	✓	✓	✓				✓																
DUPAM20																							✓
DUPAM21	✓	✓	✓				✓																
DUPAM22																							✓
DUPAM23	✓	✓	✓				✓																
DUPAM24																							✓
DUPAM26																							✓
DUPAM27	✓	✓	✓				✓																
DUPAM28																							✓
DUPAM29	✓	✓	✓				✓																
DUPAM31	✓	✓	✓				✓																
DUPAM32																							✓
DUPAM33	✓	✓	✓				✓																
SP1-1	✓	✓	✓	✓	✓	✓	✓	✓															
SP1-2	✓	✓	✓	✓	✓	✓	✓	✓															
SP2-1	✓	✓	✓	✓	✓	✓	✓	✓															
SP2-2	✓	✓	✓	✓	✓	✓	✓	✓															
SP3-1	✓	✓	✓	✓	✓	✓	✓	✓															
SP3-2	✓	✓	✓	✓	✓	✓	✓	✓															

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils	CEC	Misc Inorg - Soil	Texture and Salinity*	Asbestos ID - materials	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	HM in water - dissolved	pH	Electrical Conductivity	Chloride, Cl	Sulphate, SO4	Cations in water Dissolved	On Hold
SP4-1	✓	✓	✓	✓	✓	✓	✓	✓															
SP4-2	✓	✓	✓	✓	✓	✓	✓	✓															
SP5-1	✓	✓	✓	✓	✓	✓	✓	✓															
SP5-2	✓	✓	✓	✓	✓	✓	✓	✓															
BH170-3.4-3.5										✓	✓												
BH187-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓															
BH187-0.6-0.95																							✓
BH187-1.7-1.95	✓	✓	✓				✓																
TBMP	✓																						
FRMP1														✓									
MPF1												✓											
SW1													✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

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.

SAMPLE AND CHAIN OF CUSTODY FORM

Sulphate, Chloride, pH, EC

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E31675KR	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 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: Priya Dass
Attention: Aileen	Page: 1 / 2	

Location: Penrith

Sampler:

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3A	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos	CEC	Aggressivity	ECe (Texture)
21/8/18	1	BH101	0-0.5	G, A	0.1	FILL: Silt				✓								
"	2	"	0.5-0.7		0	FILL: Clayey Silt												
"	3	"	1.2-1.4		0	Clayey Silt												
22/8/18	4	BH102	0-0.1		0	FILL: Clayey Silt										✓	✓	✓
"	5	"	0.3-0.4		0.1	FILL				✓							✓	✓
"	6	"	0.9-1.0		0.1	Silt		✓									✓	✓
21/8/18	7	BH103	0-0.3		0	FILL: Clayey Silt				✓						✓	✓	✓
"	8	"	1.2-1.5		0	Clayey Silt		✓									✓	✓
	9	BH104	0-0.3		0	FILL: Silt				✓						✓	✓	✓
	10	"	0.7-1.0		0.1	Clayey Silt		✓									✓	✓
	11	BH105	0-0.2		0.1	FILL: Silt				✓								
	12	"	0.3-0.5		0.3	Clayey Silt												
	13	"	1.2-1.5		0	Silt												
	14	BH106	0-0.25		0	FILL: Silt				✓						✓	✓	✓
	15	"	1.2-1.5		0	Silt											✓	✓
	16	BH107	0-0.3		0	FILL: Silt				✓								
	17	"	1.2-1.5		0.1	Silt												
	18	BH108	0-0.2		0	FILL: Silt				✓								
	19	"	1.2-1.5		0	Silt												
	20	BH109	0-0.3		0	FILL: Silt				✓								
	21	"	1.2-1.5		0	Silt		✓										
	22	BH110	0-0.3		0	FILL: Silt				✓								
	23	"	0.5-0.7		0	Silt		✓										
	24	"	1.2-1.5		0	Silt												
✓	25	BH111	0-0.3	✓	0	FILL: Silt				✓						✓	✓	✓

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By: Envirolab Services 12 Ashley St Chatswood NSW 2067 Ph. (02) 9910 6200 Date: 28/8/18

Time:

Received By: [signature] Date: 28/8/18.

Job No: 199517

Date Received: 28/8/18
Time Received: 17:00
Received By: SB
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E31675KR	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 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: Aileen	Page: 2 of 2	Attention: Priya Dass

Location: Penrith

Sampler:

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos	CEC	Sulphate, Chloride pH, EC	ECe (Texture)
19/8/18	26	BH11	1.2-1.5	G, A	0	Silt		✓									✓	✓
	27	BH12	0-0.3		0	FILL: Silt				✓								
	28		0.5-0.7		0	Topsoil												
	29		1.2-1.5		0	Silt												
	30	BH12	0-0.3		0	[illegible]				✓						✓	✓	✓
	31		1.2-1.5		0	Silt											✓	✓
	32	BH14	0-0.3		0	FILL: Silt				✓								
	33		1.2-1.5		0	Silt		✓										
	34	BH15	0-0.3		0	FILL: Silt				✓								
	35		0.4-0.6		0	Silt		✓										
	36		1.2-1.5		0	Silt												
	37	BH16	0-0.3		0	[illegible]				✓						✓	✓	✓
	38		0.9-1.1		0	Silt		✓									✓	✓
	39	BH17	0-0.3		0	FILL: Silt				✓								
	40		1.2-1.5		0	Silt												
	41	BH18	0-0.5		0	[illegible]				✓						✓	✓	✓
	42		1.2-1.5		0	Silt		✓									✓	✓
	43	BH19	0-0.5		0	FILL: Silt				✓								
	44		1.3-1.5		0	Silt												
20/8/18	45	BH20	0-0.3		0	FILL: Silt				✓								
	46		1.2-1.5		0	Silt		✓										
	47	BH21	0-0.3		0.2	[illegible]				✓						✓	✓	✓
	48		1.2-1.5		0.1	Silt		✓									✓	✓
	49	BH22	0-0.3		0.1	FILL: Silt				✓								
	50		1.2-1.5	V	0	Silt												

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Priya Dass	28/08/18		[illegible]	28/8/18

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E31675KR	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 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: Aileen	Page: 1 of 3/12	Attention: Priya Dass

Location: Penrith

Sampler:

Sample Preserved In Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3a	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos			
19/8/18	51	BH83	0-0.3	G, A	0.1	Fill:S/L				✓								
	52	"	1.2-1.5		0	S/L												
	53	BH84	0-0.3		0	Fill: Clay: S/L				✓								
	54	"	1.2-1.5		0	S/L												
	55	BH85	0-0.3		0	Clayey Fill: S/L				✓								
	56	"	1.2-1.5		0	Clayey S/L												
	57	BH86	0-0.3		0	Fill: S/L				✓								
	58	"	1.2-1.5		0	S/L												
	59	BH87	0-0.3		0	Fill: S/L				✓								
	60	"	0.3-0.6		0.1	Clayey S/L		✓										
	61	"	1.2-1.5		3.1	S/L												
	62	BH88	0-0.2		0	Fill: S/L				✓								
	63	"	0.5-0.2		0	Clayey S/L												
	64	"	1.2-1.5		0.1	S/L												
	65	BH89	0-0.3		0.1	Fill: S/L				✓								
	66	"	1.2-1.5		0.1	S/L		✓										
	67	BH90	0-0.3		0.1	Fill: S/L				✓								
	68	"	1.2-1.5		0.2	S/Stone												
	69	BH91	0-0.3		0	Fill: S/L				✓								
	70	"	1.2-1.5		0	S/L												
	71	BH92	0-0.3		0.2	Fill: S/L				✓								
	72	"	1.2-1.5		0.2	S/L		✓										
	73	BH93	0-0.3		0.2	Fill: S/L				✓								
	74	"	1.2-1.5		0	Clayey S/L												
▽	75	BH94	0-0.3		0	Fill: S/L				✓								

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Priya Dass	28/08/18	17:00	Kevin	28/8/18

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E31875KR	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 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) 99105201		Attention: Priya Dass
Attention: Aileen	Page: 5 of 12	

Location: Penrith

Sampler:

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos	CEC	Sulphate Chloride, pH + EC	EC e (Texture)
23/8/18	76	BH134	1.2-1.5	G, A	0.1	S.Cl		✓										
	77	BH135	0-0.3		0.1	Fill: S.Cl				✓								
	78	↓	1.2-1.5		0	S.Cl												
	79	BH136	0-0.3		0	Fill: Gravelly Cl				✓								
↓	80	↓	1.3-1.5		0	clayey S.Cl		✓										
20/8/18	81	BH137	0-0.2		0	Fill: S.Cl				✓						✓	✓	✓
	82		0.5-0.95		0.1	S.Cl												
	83		1.5-1.95		0	S.Cl		✓									✓	✓
	84		3-3.15		0	Sandy S.Cl												
↓	85	↓	4.3-4.4		0	"											✓	✓
23/8/18	86	BH138	0-0.3		0	Fill: S.Cl				✓								
	87	↓	1.2-1.5		0	S.Cl												
	88	BH139	0-0.5		0	Fill: S.Cl				✓								
	89	↓	1.1-1.5		0.1	S.Cl												
	90	BH140	0-0.3		0	Fill: S.Cl				✓						✓	✓	✓
	91	↓	1.3-1.5		0	S.Cl											✓	✓
	92	BH141	0-0.35		0	Fill: Gravelly Cl				✓								
	93	↓	1.1-1.5		0	Gravelly S.Cl												
	94	BH142	0-0.3		0	Fill: S.Cl				✓								
	95	↓	1.0-1.5		0	Clayey S.Cl		✓										
	96	BH143	0-0.2		0	Fill: Gravelly Cl				✓								
	97	↓	1.3-1.5		0.1	S.Cl												
	98	BH144	0-0.3		0	Fill: Cl				✓								
	99	↓	1.2-1.5		0	S.Cl		✓										
↓	100	BH145	0-0.2		0	Fill: S.Cl				✓								

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Priya Dass	28/08/18	17:00	[illegible]	28/8/18

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E31675KR	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 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: Priya Dass
Attention: Aileen	Page: 5 of 12	

Location: Penrith

Sampler:

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos	CEC	Sulphate+Chloride pH + EC	ECe Clexture
15/9/17	101	BH145	1.1-1.5	G, A	0	S/L												
22/8/18	102	BH146	0-0.3		0	FILL S/L				✓								
	103		1.2-1.5		0.1	S/L		✓										
	104	BH147	0-0.3		0	FILL S/L				✓								
	105		1.2-1.5		0	S/L		✓										
	106	BH148	0-0.3		0.1	FILL GRAVEL S/L				✓								
	107		1.2-1.5		0	S/L												
	108	BH149	0-0.3		0	FILL GRAVEL				✓								
	109		1.2-1.5		0	S/L		✓										
	110	BH150	0-0.2		0.1	FILL GRAVEL				✓								
	111		1.2-1.5		0.1	S/L												
	112	BH151	0-0.3		0.1	FILL S/L				✓								
	113		1.2-1.5		0	S/L		✓										
	114	BH152	0-0.3		0	FILL S/L				✓								
	115		1.2-1.5		0	S/L												
	116	BH153	0-0.3		0.1	FILL S/L				✓								
	117		1.2-1.5		0	S/L												
	118	BH154	0-0.2		0	FILL S/L				✓								
	119		0.8-1		0	S/L		✓										
	120	BH155	0-0.3		0	FILL S/L				✓						✓	✓	✓
	121		1.2-1.5		0	S/L											✓	✓
	122	BH156	0-0.3		0	FILL S/L				✓								
	123		1.2-1.5		0	S/L		✓										
	124	BH157	0-0.3		0	FILL S/L				✓						✓	✓	✓
	125		1.2-1.5		0	S/L											✓	✓

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Priya Dass	28/08/18	17:00	Kevin My	28/8/18

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E31675KR	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 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: Priya Dass
Attention: Aileen	Page: 6 of 12	

Location: Penrith

Sampler:

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3a	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos	CEC	Sulphate+chloride pH + EC	ECe (Texture)
22/8/18	126	BH167	0-0.3	G, A	0	FILL: Silt				✓								
	127	"	1.2-1.5		0	Silt		✓										
	128	BH169	0-0.25		0.1	FILL: Silt				✓								
	129	"	1.2-1.5		0	Silt		✓										
21/8/18	130	BH168	0-0.45		0	FILL: Silt				✓								
	131	"	0.6-1.0		0	Silt												
	132	BH161	0-0.3		0	FILL: Silt				✓								
	133	"	1.3-1.5		0.1	clayey Silt		✓										
	134	BH167	0-0.3		0	FILL: Silt				✓								
	135	"	0.9-1.1		0	Silt												
	136	BH162	0-0.3		0.1	FILL: Silt				✓								
	137	"	0.5-0.7		0	Silt		✓										
	138	BH161	0-0.3		0	FILL: Silt				✓								
	139		0.4-0.6		0	clayey silt												
	140	"	1.2-1.5		0	Silt												
	141	BH165	0-0.3		0	FILL: Silt				✓								
"	142	"	0.6-1.0		0	Silt												
21/8/18	143	BH166	0-0.1		0	FILL: Silt				✓						✓	✓	✓
	144		0.7-0.95		0	Silt											✓	✓
	145		1.7-1.95		0	Silt												
	146		2.9-3.15		0	Silt											✓	✓
"	147	"	4.0-4.1		0	Silty Sand		✓									✓	✓
21/8/18	148	BH167	0-0.3		0	FILL: Clayey silt				✓								
	149	"	1.2-1.5		0	Silt												
"	150	BH168	0-0.3		0	FILL: Silt				✓						✓	✓	✓

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Priya Dass	28/8/18	17:00	[illegible]	28/8/18

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E31675KR	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: STANDARD	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 1 of 2	Attention: Priya Dass
Attention: Aileen		

Location: Penrith

Sampler:

Sample Preserved In Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3a	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos	CEC	Sulphate+Chloride pH + EC	ECe (Texture)
21/8/18	151	BH169	1.2-1.5	G, A	0	Silt											✓	✓
"	152	BH169	0.0-0.2	"	0	Fill: silt				✓								
"	153	"	0.3-0.6	"	0	Silt												
20/8/18	154	BH170	0-0.1	"	0	Fill: silt				✓						✓	✓	✓
"	155	"	0.6-0.95	"	0	Silt											✓	✓
"	156	"	1.6-1.95	P, A	0	Silt		✓										
"	157	"	2.9-3.15	"	0	Silt											✓	✓
21/8/18	158	BH171	0.0-0.5	"	0	Fill: silt				✓								
"	159	"	0.7-1.1	"	0	Silt												
"	160	BH172	0-0.4	"	0	Fill: silt				✓								
"	161	"	0.4-1.3	"	0	Silt												
"	162	BH173	0.0-0.3	"	0	Fill: silt				✓								
"	163	"	0.5-0.7	"	0.1	Silt												
"	164	BH174	0-0.3	"	0	Fill: silt				✓								
	165	"	0.4-0.9	"	0	Silt		✓										
	166	BH175	0-0.3	"	0.1	Fill: silt				✓								
	167	"	0.7-0.9	"	0	Silt												
	168	BH176	0-0.3	"	0	Fill: gravelly silt												
	169	"	0.4-0.6	"	0	Fill: silty clay				✓								
	170	"	1.2-1.5	"	0	Silt		✓										
	171	BH177	0-0.2	"	0	Fill: silt												
	172	"	0.6-0.9	"	0	Fill: gravelly silt				✓								
	173	"	1-1.2	"	0	Gravelly silt		✓										
	174	BH178	0-0.3	"	0	Fill: silty clay				✓								
"	175	"	0.5-0.7	"	0	Gravelly silt												

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Priya Dass	28/8/18	17:00		28/8/18

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E31675KR	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: STANDARD	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 1 of 2	Attention: Priya Dass
Attention: Aileen		

Location: Penrith

Sampler:

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3a	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos	CEC	Sulphate+chloride pH+EC	ECe (Texture)
19/5/18	176	BH178	1-1.2	G, A	0	Silt		✓										
20/5/18	177	BH179	0-0.2		0	Fill: silt				✓								
	178	"	0.6-0.9		0	Clayey silt												
	179	"	1.5-1.95		0	Silt												
	180	BH180	0-0.1		0	Fill: silty clay				✓								
	181	"	0.6-0.95		0	Clayey silt												
	182	"	1.7-1.95		0	Silt												
	183	BH181	0-0.2		0	Fill: silty clay				✓						✓	✓	✓
	184	"	0.5-0.95		0	Clayey silt		✓									✓	✓
	185	"	1.7-1.95		0	"											✓	✓
	186	"	2.7-2.9		0	"											✓	✓
	187	"	3.9-4.0		0	Sandy silt											✓	✓
	188	BH182	0-0.1		0	Fill: silt				✓								
	189	"	0.7-0.95		0	Silt												
	190	"	1.6-1.9		0	Silt												
	191	BH183	0-0.2		0.2	Fill: silt				✓								
	192	"	0.5-0.95		0.3	Clayey silt												
	193	"	1.5-1.95		0.6	"												
	194	BH184	0-0.4		0	Fill: silt				✓								
	195	"	0.6-0.9		0	Silt												
	196	BH185	0-0.2		0	Fill: silt				✓								
	197	"	0.6-0.95		0	Silt												
	198	"	1.7-1.95		0	Silt												
	199	BH186	0-0.1		0	Fill: silt				✓								
	200	"	0.5-0.95	↓	0	"												

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Priya Dass	28/08/18	17:00		28/8/18

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E31675KR	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: STANDARD	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 1 of 2	Attention: Priya Dass
Attention: Aileen		

Location: Penrith

Sampler:

Sample Preserved In Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos	CEC	Sulphate+Chloride pH + EC	ECe (Texture)
19/5/18	201	BH6	1.5-1.95	G, A	0	silt		✓										
21/5/18	202	BH7	0-0.3	1	0	fill silt										✓	✓	✓
	203		0.4-0.6		0	fill clayey silt				✓							✓	✓
	204	↓	0.9-1.1		0	clayey silt		✓									✓	✓
	205	BH8	0-0.2		0	fill silt												
	206		0.5-0.7		0	fill coarse silt												
↓	207	↓	0.8-0.9	↓	0	fill silt/clay				✓								
	208	QDUPAH1		G														
	209	QDUPAH2						✓										
	210	QDUPAH3						✓										
	*	QDUPAH4						✓							Send to SGS			
	211	QDUPAH5						✓										
	212	QDUPAH6																
	213	QDUPAH7						✓										
	214	QDUPAH8																
	*	QDUPAH9						✓						Send to SGS				
	215	QDUPAH10																
	216	QDUPAH11						✓										
	217	QDUPAH12																
	*	QDUPAH13						✓							Send to SGS			
	218	QDUPAH14						✓										
	219	QDUPAH15																
	220	QDUPAH16						✓										
	221	QDUPAH17																
	222	QDUPAH18		↓				✓										

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Priya Dass	28/5/18	1700	[illegible]	28/5/18

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E31676KR	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 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: Aileen	Page: 1 of 10/12	Attention: Priya Dass

Location: Penrith

Sampler:

Sample Preserved in Esky on ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos			
19/9/17	[illegible]	DUPAM19		G, A				✓						Send to SGS				
	223	DUPAM20																
	224	DUPAM01						✓										
	225	DUPAM02																
	226	DUPAM03						✓										
	227	DUPAM04																
	[illegible]	DUPAM05						✓						Send to SGS				
	228	DUPAM06																
	229	DUPAM07						✓										
	230	DUPAM08																
	231	DUPAM09						✓										
	[illegible]	DUPAM20						✓						Send to SGS				
	232	DUPAM21						✓										
	233	DUPAM22																
	234	DUPAM23						✓										
	[illegible]	DUPAM24		✓				✓						Send to SGS				
22/8/18	235	SP1-1		G, A	0					✓								
	236	SP1-2			0.1					✓								
	237	SP2-1			0.1					✓								
	238	SP2-2			0					✓								
	239	SP3-1			0					✓								
	240	SP3-2			0					✓								
	241	SP4-1			0					✓								
✓	242	SP4-2			0					✓								
21/8/18	243	SP5-1		✓	0					✓								

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Priya Duss	28/8/18	17:00.	[illegible]	28/8/18

SP4-2 0.1

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E31575KR	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 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: Priya Dass
Attention: Aileen	Page: 1 / 2	

Location: Penrith

Sampler:

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3a	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos	CEC	Sulphate+Chloride pH + EC	EC e CTexture
21/8/18	244	SPS-2		G, A	0.1					✓								
20/8/18	245	BH10	2.4-2.5	1	0	SS. Gravel											✓	✓
1	246	BH7	0-0.2	1	0	TOPSOIL				✓								
1	247	1	0.6-0.9	1	0	SILT												
↓	248	↓	1.7-1.95	↓	0	SILT		✓										
17/8/18	249	TBMP	—	G	—	Sand								✓				
22/8/18	250	FRMP1	—	V×2	—	Water								✓				
21/8/18	251	MPF1	—		—	Frag									✓			

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Priya Dass	28/8/18	17:00	Kevin	28/8/18

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E31675KR	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 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: Priya Dass
Attention: Aileen	Page: ~~1~~ 1 of 2	

Location: Penrith

Sampler:

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Sample Containers	PID	Sample Description	Combo 2	Combo 3L	VOCs	pH / EC	8 Metals	PAHs	TRH/BTEX	BTEX	Hardness	Sulphate/ Chloride		
22/8/18	252	SW1	1xG1 1xV 1xH 1xPVC	–	Water		✓	✓	✓					✓	✓		

Remarks (comments/detection limits required):

All analysis PQLs to ANZECC (2000) Detection Limits Please

Sample Containers:
G1 - 500mL Amber Glass Bottle G2 - 1L Amber Glass Bottle
V - BTEX Vial H - HNO3 Wash PVC
PVC - HDPE Plastic Bottles

Relinquished By:	Date:	Time:	Received By:	Date:
Priya Dass	28/8/18	17:00	Kevin	28/8/18

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CERTIFICATE OF ANALYSIS 199517-A

Client Details

Client	Environmental Investigation Services
Attention	Priya Dass
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E31675KR, Penrith**
Number of Samples	Additional Testing on Soils
Date samples received	28/08/2018
Date completed instructions received	11/09/2018

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	18/09/2018
Date of Issue	18/09/2018

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Authorised By



Jacinta Hurst, Laboratory Manager

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Metals in TCLP USEPA1311						
Our Reference		199517-A-5	199517-A-172	199517-A-177	199517-A-191	199517-A-196
Your Reference	UNITS	BH102	BH177	BH179	BH183	BH185
Depth		0.3-0.4	0.6-0.9	0-0.2	0-0.2	0-0.2
Date Sampled		22/08/2018	21/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	14/09/2018	13/09/2018	13/09/2018	14/09/2018	14/09/2018
Date analysed	-	14/09/2018	[NA]	13/09/2018	14/09/2018	14/09/2018
pH of soil for fluid# determ.	pH units	5.4	8.8	5.3	10.9	8.0
pH of soil TCLP (after HCl)	pH units	1.6	1.7	1.7	2.6	1.7
Extraction fluid used	-	1	1	1	1	1
pH of final Leachate	pH units	5.0	5.2	4.9	7.8	5.1
Chromium in TCLP	mg/L	[NA]	[NA]	0.02	[NA]	[NA]
Lead in TCLP	mg/L	[NA]	[NA]	<0.03	<0.03	0.3
Nickel in TCLP	mg/L	0.6	[NA]	0.1	0.03	[NA]

PAHs in TCLP (USEPA 1311)		
Our Reference		199517-A-172
Your Reference	UNITS	BH177
Depth		0.6-0.9
Date Sampled		21/08/2018
Type of sample		SOIL
Date extracted	-	13/09/2018
Date analysed	-	14/09/2018
Naphthalene in TCLP	mg/L	<0.001
Acenaphthylene in TCLP	mg/L	<0.001
Acenaphthene in TCLP	mg/L	<0.001
Fluorene in TCLP	mg/L	<0.001
Phenanthrene in TCLP	mg/L	<0.001
Anthracene in TCLP	mg/L	<0.001
Fluoranthene in TCLP	mg/L	<0.001
Pyrene in TCLP	mg/L	<0.001
Benzo(a)anthracene in TCLP	mg/L	<0.001
Chrysene in TCLP	mg/L	<0.001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.002
Benzo(a)pyrene in TCLP	mg/L	<0.001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.001
Total +ve PAH's	mg/L	NIL (+)VE
Surrogate p-Terphenyl-d14	%	101

vTRH(C6-C10)/BTEXN in Soil					
Our Reference		199517-A-178	199517-A-189	199517-A-192	199517-A-197
Your Reference	UNITS	BH179	BH182	BH183	BH185
Depth		0.6-0.9	0.7-0.95	0.5-0.95	0.6-0.95
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL
Date extracted	-	12/09/2018	12/09/2018	12/09/2018	12/09/2018
Date analysed	-	17/09/2018	17/09/2018	17/09/2018	17/09/2018
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	89	96	96	97

svTRH (C10-C40) in Soil					
Our Reference		199517-A-178	199517-A-189	199517-A-192	199517-A-197
Your Reference	UNITS	BH179	BH182	BH183	BH185
Depth		0.6-0.9	0.7-0.95	0.5-0.95	0.6-0.95
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL
Date extracted	-	12/09/2018	12/09/2018	12/09/2018	12/09/2018
Date analysed	-	13/09/2018	13/09/2018	13/09/2018	13/09/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	2,200	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100
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	2,100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	2,100	<50
Surrogate o-Terphenyl	%	97	93	#	94

PAHs in Soil					
Our Reference		199517-A-178	199517-A-189	199517-A-192	199517-A-197
Your Reference	UNITS	BH179	BH182	BH183	BH185
Depth		0.6-0.9	0.7-0.95	0.5-0.95	0.6-0.95
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL
Date extracted	-	12/09/2018	12/09/2018	12/09/2018	12/09/2018
Date analysed	-	13/09/2018	13/09/2018	13/09/2018	13/09/2018
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	105	100	102	105

Acid Extractable metals in soil					
Our Reference		199517-A-178	199517-A-189	199517-A-192	199517-A-197
Your Reference	UNITS	BH179	BH182	BH183	BH185
Depth		0.6-0.9	0.7-0.95	0.5-0.95	0.6-0.95
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL
Date prepared	-	12/09/2018	12/09/2018	12/09/2018	12/09/2018
Date analysed	-	13/09/2018	13/09/2018	13/09/2018	13/09/2018
Arsenic	mg/kg	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	3	<0.4
Chromium	mg/kg	11	8	11	12
Copper	mg/kg	6	9	27	7
Lead	mg/kg	7	6	19	10
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	4	7	7
Zinc	mg/kg	15	24	160	20

Moisture					
Our Reference		199517-A-178	199517-A-189	199517-A-192	199517-A-197
Your Reference	UNITS	BH179	BH182	BH183	BH185
Depth		0.6-0.9	0.7-0.95	0.5-0.95	0.6-0.95
Date Sampled		20/08/2018	20/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL
Date prepared	-	12/09/2018	12/09/2018	12/09/2018	12/09/2018
Date analysed	-	13/09/2018	13/09/2018	13/09/2018	13/09/2018
Moisture	%	7.9	9.3	11	6.7

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CEC					
Our Reference		199517-A-43	199517-A-110	199517-A-177	199517-A-191
Your Reference	UNITS	BH119	BH150	BH179	BH183
Depth		0-0.5	0-0.2	0-0.2	0-0.2
Date Sampled		24/08/2018	22/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL
Date prepared	-	17/09/2018	17/09/2018	17/09/2018	17/09/2018
Date analysed	-	17/09/2018	17/09/2018	17/09/2018	17/09/2018
Exchangeable Ca	meq/100g	1.8	2.3	7.7	91
Exchangeable K	meq/100g	0.1	0.2	0.8	0.5
Exchangeable Mg	meq/100g	0.49	0.48	1.3	1.1
Exchangeable Na	meq/100g	<0.1	<0.1	<0.1	<0.1
Cation Exchange Capacity	meq/100g	2.4	3.0	9.8	93

Misc Soil - Inorg				
Our Reference		199517-A-138	199517-A-177	199517-A-183
Your Reference	UNITS	BH164	BH179	BH181
Depth		0-0.3	0-0.2	0-0.2
Date Sampled		21/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL
Date prepared	-	13/09/2018	13/09/2018	13/09/2018
Date analysed	-	14/09/2018	14/09/2018	14/09/2018
Hexavalent Chromium, Cr^{6+}	mg/kg	<1	<10	<5

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Misc Inorg - Soil					
Our Reference		199517-A-43	199517-A-110	199517-A-177	199517-A-191
Your Reference	UNITS	BH119	BH150	BH179	BH183
Depth		0-0.5	0-0.2	0-0.2	0-0.2
Date Sampled		24/08/2018	22/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL
Date prepared	-	14/09/2018	14/09/2018	14/09/2018	14/09/2018
Date analysed	-	14/09/2018	14/09/2018	14/09/2018	14/09/2018
pH 1:5 soil:water	pH Units	6.1	6.0	6.2	11.7

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Clay 50-120g					
Our Reference		199517-A-43	199517-A-110	199517-A-177	199517-A-191
Your Reference	UNITS	BH119	BH150	BH179	BH183
Depth		0-0.5	0-0.2	0-0.2	0-0.2
Date Sampled		24/08/2018	22/08/2018	20/08/2018	20/08/2018
Type of sample		SOIL	SOIL	SOIL	SOIL
Date prepared	-	18/09/2018	18/09/2018	18/09/2018	18/09/2018
Date analysed	-	18/09/2018	18/09/2018	18/09/2018	18/09/2018
Clay in soils <2µm	% (w/w)	16	16	25	16

Method ID	Methodology Summary
AS1289.3.6.3	Determination Particle Size Analysis using AS1289.3.6.3 and AS1289.3.6.1 and in house method INORG-107. Clay fraction at <2µm reported.
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.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-024	Hexavalent Chromium (Cr6+) - determined colourimetrically.
Metals-009	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.
Metals-020	Determination of various metals by ICP-AES.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-003	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-003	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-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-012	Leachates are extracted with Dichloromethane and analysed by GC-MS.
Org-012	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.

Method ID	Methodology Summary
Org-012	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-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	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-016	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: Metals in TCLP USEPA1311					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			14/09/2018	[NT]	[NT]	[NT]	[NT]	14/09/2018	[NT]
Date analysed	-			14/09/2018	[NT]	[NT]	[NT]	[NT]	14/09/2018	[NT]
Chromium in TCLP	mg/L	0.01	Metals-020 ICP-AES	<0.01	[NT]	[NT]	[NT]	[NT]	111	[NT]
Lead in TCLP	mg/L	0.03	Metals-020 ICP-AES	<0.03	[NT]	[NT]	[NT]	[NT]	108	[NT]
Nickel in TCLP	mg/L	0.02	Metals-020 ICP-AES	<0.02	[NT]	[NT]	[NT]	[NT]	110	[NT]

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			13/09/2018	[NT]	[NT]	[NT]	[NT]	13/09/2018	[NT]
Date analysed	-			14/09/2018	[NT]	[NT]	[NT]	[NT]	14/09/2018	[NT]
Naphthalene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NT]	[NT]	77	[NT]
Acenaphthylene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NT]	[NT]	80	[NT]
Phenanthrene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NT]	[NT]	84	[NT]
Anthracene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NT]	[NT]	82	[NT]
Pyrene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NT]	[NT]	75	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NT]	[NT]	78	[NT]
Benzo(bjk)fluoranthene in TCLP	mg/L	0.002	Org-012	<0.002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NT]	[NT]	77	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.001	Org-012	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	85	[NT]	[NT]	[NT]	[NT]	82	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			12/09/2018	[NT]	[NT]	[NT]	[NT]	12/09/2018	[NT]
Date analysed	-			17/09/2018	[NT]	[NT]	[NT]	[NT]	17/09/2018	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	91	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	91	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	[NT]	[NT]	95	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	[NT]	[NT]	101	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	84	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	88	[NT]
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	85	[NT]
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	104	[NT]	[NT]	[NT]	[NT]	96	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			12/09/2018	[NT]	[NT]	[NT]	[NT]	12/09/2018	[NT]
Date analysed	-			13/09/2018	[NT]	[NT]	[NT]	[NT]	13/09/2018	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	86	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	98	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	90	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	86	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	98	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	90	[NT]
Surrogate o-Terphenyl	%		Org-003	96	[NT]	[NT]	[NT]	[NT]	106	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			12/09/2018	[NT]	[NT]	[NT]	[NT]	12/09/2018	[NT]
Date analysed	-			13/09/2018	[NT]	[NT]	[NT]	[NT]	13/09/2018	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	113	[NT]
Anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	[NT]	[NT]	[NT]	[NT]	105	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	103	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			12/09/2018	[NT]	[NT]	[NT]	[NT]	12/09/2018	[NT]
Date analysed	-			13/09/2018	[NT]	[NT]	[NT]	[NT]	13/09/2018	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	107	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	108	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	109	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]

QUALITY CONTROL: CEC					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			17/09/2018	[NT]	[NT]	[NT]	[NT]	17/09/2018	[NT]
Date analysed	-			17/09/2018	[NT]	[NT]	[NT]	[NT]	17/09/2018	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Exchangeable K	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Exchangeable Na	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	199517-A-177
Date prepared	-			13/09/2018	138	13/09/2018	13/09/2018		13/09/2018	13/09/2018
Date analysed	-			14/09/2018	138	14/09/2018	14/09/2018		14/09/2018	14/09/2018
Hexavalent Chromium, Cr^{6+}	mg/kg	1	Inorg-024	<1	138	<1	<1	0	100	79

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			14/09/2018	[NT]	[NT]	[NT]	[NT]	14/09/2018	[NT]
Date analysed	-			14/09/2018	[NT]	[NT]	[NT]	[NT]	14/09/2018	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[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.

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; 60-140% for organics (+/-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.

Report Comments

All organic testing has been performed outside of recommended holding time.

TRH Soil C10-C40 NEPM - # Percent recovery is not possible to report due to interference from analytes (other than those being tested) in sample 192.

MISC_INORG_CRVI: Hexavalent Chromium PQL has been raised due to matrix interferences. Samples were diluted and reanalysed however same results were achieved.

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SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Priya Dass

Sample Login Details

Your reference	E31675KR, Penrith
Envirolab Reference	199517-A
Date Sample Received	28/08/2018
Date Instructions Received	11/09/2018
Date Results Expected to be Reported	18/09/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	Additional Testing on Soils
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	13.0
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

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Sample ID	Metals in TCLP USEPA1311	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metalsin soil	CEC	Misc Soil - Inorg	Misc Inorg - Soil	Clay 50-120g	On Hold
BH101-0-0.3																											✓
BH101-0.3-0.7																											✓
BH101-1.2-1.4																											✓
BH102-0-0.1																											✓
BH102-0.3-0.4	✓																										
BH102-0.9-1.0																											✓
BH103-0-0.3																											✓
BH103-1.2-1.3																											✓
BH104-0-0.3																											✓
BH104-0.7-1.0																											✓
BH105-0-0.2																											✓
BH105-0.3-0.8																											✓
BH105-1.2-1.5																											✓
BH106-0-0.2																											✓
BH106-1.2-1.3																											✓
BH107-0-0.3																											✓
BH107-1.2-1.35																											✓
BH108-0-0.2																											✓
BH108-1.2-1.5																											✓
BH109-0-0.3																											✓

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Sample ID	Metals in TCLP USEPA1311	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metalsin soil	CEC	Misc Soil - Inorg	Misc Inorg - Soil	Clay 50-120g	On Hold
BH109-1.2-1.5																											✓
BH110-0-0.3																											✓
BH110-0.5-0.7																											✓
BH110-1.2-1.5																											✓
BH111-0-0.3																											✓
BH111-1.2-1.5																											✓
BH112-0-0.3																											✓
BH112-0.5-0.7																											✓
BH112-1.2-1.5																											✓
BH113-0-0.3																											✓
BH113-1.2-1.5																											✓
BH114-0-0.3																											✓
BH114-1.2-1.5																											✓
BH115-0-0.3																											✓
BH115-0.4-0.6																											✓
BH115-1.2-1.5																											✓
BH116-0-0.3																											✓
BH116-0.9-1.1																											✓
BH117-0-0.3																											✓
BH117-1.2-1.5																											✓

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Sample ID	Metals in TCLP USEPA1311	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metalsin soil	CEC	Misc Soil - Inorg	Misc Inorg - Soil	Clay 50-120g	On Hold
BH118-0-0.5																											✓
BH118-1.2-1.5																											✓
BH119-0-0.5																							✓		✓	✓	
BH119-1.3-1.5																											✓
BH120-0-0.3																											✓
BH120-1.2-1.5																											✓
BH121-0-0.3																											✓
BH121-1.2-1.5																											✓
BH122-0-0.3																											✓
BH122-1.2-1.5																											✓
BH123-0-0.3																											✓
BH123-1.2-1.5																											✓
BH124-0-0.3																											✓
BH124-1.2-1.5																											✓
BH125-0-0.3																											✓
BH125-1.2-1.5																											✓
BH126-0-0.3																											✓
BH126-1.2-1.5																											✓
BH127-0-0.3																											✓
BH127-0.3-0.6																											✓

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BH127-1.2-1.5																											✓
BH128-0-0.2																											✓
BH128-0.5-0.7																											✓
BH128-1.2-1.5																											✓
BH129-0-0.3																											✓
BH129-1.2-1.5																											✓
BH130-0-0.3																											✓
BH130-1.2-1.5																											✓
BH131-0-0.3																											✓
BH131-1.2-1.5																											✓
BH132-0-0.3																											✓
BH132-1.2-1.5																											✓
BH133-0-0.3																											✓
BH133-1.2-1.5																											✓
BH134-0-0.3																											✓
BH134-1.2-1.5																											✓
BH135-0-0.3																											✓
BH135-1.2-1.5																											✓
BH136-0-0.3																											✓
BH136-1.3-1.5																											✓

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BH137-0-0.2																											✓
BH137-0.5-0.95																											✓
BH137-1.5-1.95																											✓
BH137-3-3.15																											✓
BH137-4.3-4.4																											✓
BH138-0-0.3																											✓
BH138-1.2-1.5																											✓
BH139-0-0.3																											✓
BH139-1.1-1.5																											✓
BH140-0-0.3																											✓
BH140-1.3-1.5																											✓
BH141-0-0.35																											✓
BH141-1.1-1.5																											✓
BH142-0-0.3																											✓
BH142-1.0-1.5																											✓
BH143-0-0.2																											✓
BH143-1.3-1.5																											✓
BH144-0-0.3																											✓
BH144-1.2-1.5																											✓
BH145-0-0.2																											✓

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Sample ID	Metals in TCLP USEPA1311	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metalsin soil	CEC	Misc Soil - Inorg	Misc Inorg - Soil	Clay 50-120g	On Hold
BH145-1.1-1.5																											✓
BH146-0-0.3																											✓
BH146-1.2-1.5																											✓
BH147-0-0.3																											✓
BH147-1.2-1.5																											✓
BH148-0-0.3																											✓
BH148-1.2-1.5																											✓
BH149-0-0.3																											✓
BH149-1.2-1.5																											✓
BH150-0-0.2																							✓		✓	✓	
BH150-1.2-1.5																											✓
BH151-0-0.3																											✓
BH151-1.2-1.5																											✓
BH152-0-0.3																											✓
BH152-1.2-1.5																											✓
BH153-0-0.3																											✓
BH153-1.2-1.5																											✓
BH154-0-0.2																											✓
BH154-0.8-1																											✓
BH155-0-0.3																											✓

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Sample ID	Metals in TCLP USEPA1311	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metalsin soil	CEC	Misc Soil - Inorg	Misc Inorg - Soil	Clay 50-120g	On Hold
BH155-1.2-1.5																											✓
BH156-0-0.3																											✓
BH156-1.2-1.5																											✓
BH157-0-0.3																											✓
BH157-1.2-1.5																											✓
BH158-0-0.3																											✓
BH158-1.2-1.5																											✓
BH159-0-0.25																											✓
BH159-1.2-1.5																											✓
BH160-0-0.45																											✓
BH160-0.6-1.0																											✓
BH161-0-0.3																											✓
BH161-1.3-1.5																											✓
BH162-0-0.3																											✓
BH162-0.9-1.1																											✓
BH163-0-0.3																											✓
BH163-0.5-0.7																											✓
BH164-0-0.3																								✓			
BH164-0.4-0.6																											✓
BH164-1.2-1.5																											✓

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Sample ID	Metals in TCLP USEPA1311	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metalsin soil	CEC	Misc Soil - Inorg	Misc Inorg - Soil	Clay 50-120g	On Hold
BH165-0-0.3																											✓
BH165-0.6-1.0																											✓
BH166-0-0.1																											✓
BH166-0.7-0.95																											✓
BH166-1.7-1.95																											✓
BH166-2.9-3.15																											✓
BH166-4.0-4.1																											✓
BH167-0-0.3																											✓
BH167-1.2-1.5																											✓
BH168-0-0.3																											✓
BH168-1.2-1.5																											✓
BH169-0-0.2																											✓
BH169-0.3-0.6																											✓
BH170-0-0.1																											✓
BH170-0.6-0.95																											✓
BH170-1.6-1.95																											✓
BH170-2.9-3.15																											✓
BH171-0-0.5																											✓
BH171-0.7-1.1																											✓
BH172-0-0.4																											✓

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Sample ID	Metals in TCLP USEPA1311	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metalsin soil	CEC	Misc Soil - Inorg	Misc Inorg - Soil	Clay 50-120g	On Hold
BH172-0.8-1.3																											✓
BH173-0-0.3																											✓
BH173-0.5-0.7																											✓
BH174-0-0.3																											✓
BH174-0.4-0.8																											✓
BH175-0-0.3																											✓
BH175-0.7-0.9																											✓
BH176-0-0.3																											✓
BH176-0.4-0.6																											✓
BH176-1.2-1.5																											✓
BH177-0-0.2																											✓
BH177-0.6-0.9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓									
BH177-1-1.2																											✓
BH178-0-0.3																											✓
BH178-0.5-0.7																											✓
BH178-1-1.2																											✓
BH179-0-0.2	✓																						✓	✓	✓	✓	
BH179-0.6-0.9																			✓	✓	✓	✓					
BH180-1.5-1.95																											✓
BH180-0-0.1																											✓

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Sample ID	Metals in TCLP USEPA1311	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metalsin soil	CEC	Misc Soil - Inorg	Misc Inorg - Soil	Clay 50-120g	On Hold
BH180-0.6-0.95																											✓
BH180-1.7-1.95																											✓
BH181-0-0.2																								✓			
BH181-0.5-0.95																											✓
BH181-1.7-1.95																											✓
BH181-2.7-2.9																											✓
BH181-3.9-4.0																											✓
BH182-0-0.1																											✓
BH182-0.7-0.95																			✓	✓	✓	✓					
BH182-1.6-1.9																											✓
BH183-0-0.2	✓																						✓		✓	✓	
BH183-0.5-0.95																			✓	✓	✓	✓					
BH183-1.5-1.95																											✓
BH184-0-0.4																											✓
BH184-0.6-0.9																											✓
BH185-0-0.2	✓																										
BH185-0.6-0.95																			✓	✓	✓	✓					
BH185-1.7-1.95																											✓
BH186-0-0.1																											✓
BH186-0.5-0.95																											✓

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Sample ID	Metals in TCLP USEPA1311	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metalsin soil	CEC	Misc Soil - Inorg	Misc Inorg - Soil	Clay 50-120g	On Hold
BH186-1.5-1.95																											✓
BH188-0-0.3																											✓
BH188-0.4-0.6																											✓
BH188-0.9-1.1																											✓
BH189-0-0.2																											✓
BH189-0.5-0.7																											✓
BH189-0.8-0.9																											✓
DUPAM1																											✓
DUPAM2																											✓
DUPAM3																											✓
DUPAM5																											✓
DUPAM6																											✓
DUPAM7																											✓
DUPAM8																											✓
DUPAM10																											✓
DUPAM11																											✓
DUPAM12																											✓
DUPAM14																											✓
DUPAM15																											✓
DUPAM16																											✓

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Sample ID	Metals in TCLP USEPA1311	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metalsin soil	CEC	Misc Soil - Inorg	Misc Inorg - Soil	Clay 50-120g	On Hold
DUPAM17																											✓
DUPAM18																											✓
DUPAM20																											✓
DUPAM21																											✓
DUPAM22																											✓
DUPAM23																											✓
DUPAM24																											✓
DUPAM26																											✓
DUPAM27																											✓
DUPAM28																											✓
DUPAM29																											✓
DUPAM31																											✓
DUPAM32																											✓
DUPAM33																											✓
SP1-1																											✓
SP1-2																											✓
SP2-1																											✓
SP2-2																											✓
SP3-1																											✓
SP3-2																											✓

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Sample ID	Metals in TCLP USEPA1311	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metalsin soil	CEC	Misc Soil - Inorg	Misc Inorg - Soil	Clay 50-120g	On Hold
SP4-1																											✓
SP4-2																											✓
SP5-1																											✓
SP5-2																											✓
BH170-3.4-3.5																											✓
BH187-0-0.2																											✓
BH187-0.6-0.95																											✓
BH187-1.7-1.95																											✓
TBMP																											✓
FRMP1																											✓
MPF1																											✓
SW1																											✓
BH101 - [TRIPLICATE]-0-0.3																											✓
BH184 - [TRIPLICATE]-0-0.4																											✓
SP1-1 - [TRIPLICATE]																											✓

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.

Aileen Hie

From: Priya Dass <PDass@jkgroup.net.au>
Sent: Tuesday, 11 September 2018 9:38 AM
To: Ken Nguyen
Cc: Aileen Hie
Subject: RE: Results for Registration 199517 E31675KR, Penrith

Hi Ken,

Please could I have the following analysis done on the following samples from this lab batch, on a standard TAT.

Envirolab Ref: 199517A
Due: 18/9/18
Std T/A.

TCLP

1. Chromium
177 – BH179 0.0-0.2

2. Lead
177 – BH179 0.0-0.2
191 - BH183 0.0-0.2
196 - BH185 0.0-0.2

3. Nickel
5 - BH102 0.3-0.4
177 - BH179 0.0-0.2
191 - BH183 0.0-0.2

4. PAHs
172 - BH177 0.6-0.9

Combo #3

178 - BH179 0.6-0.9
189 - BH182 0.7-0.95
192 - BH183 0.5-0.95
197 - BH185 0.6-0.95

Chromium VI

138 - BH164 0.0-0.3
177 - BH179 0.0-0.2
183 - BH181 0.0-0.2

pH, CEC & Clay Content

43 - BH119 0.0-0.5
100 - BH150 0.0-0.2
177 - BH179 0.0-0.2
191 - BH183 0.0-0.2

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

Also the sample BH138 0.0-0.3 (lab reference 86 & 88) has been reported twice in the lab report 199517. I think lab reference sample 88 should be reported as BH139 0.0-0.5, as per the COC. Please make the change and reissue report 199517.

Regards,

Priya.

Regards,

Priya Dass
Senior Environmental Scientist

T: +612 9888 5000
F: +612 9888 5001
PDass@jkgroup.net.au
www.jkgroup.net.au

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From: Ken Nguyen [mailto:KNguyen@envirolab.com.au]
Sent: Wednesday, 5 September 2018 8:27 PM
To: Priya Dass <PDass@jkgroup.net.au>
Subject: Results for Registration 199517 E31675KR, Penrith

Please refer to attached for:
a copy of the Certificate of Analysis
a copy of the COC/paperwork received from you
an Excel or .csv file containing the results
Please note that a hard copy will not be posted.

We have a new reporting format and would welcome your feedback. Sydney@envirolab.com.au

Enquiries should be made directly to:
customerservice@envirolab.com.au

Regards,

Ken Nguyen | Chemist | Envirolab Services Pty Ltd
(Monday to Friday 1pm to 9pm)

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

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E knguyen@envirolab.com.au | **W** www.envirolab.com.au



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Emerging Contaminants ● Forensic Toxicology ● Soil Vapours ● Microbiol



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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Priya Dass
Client	Jeffery & Katauskas Pty Ltd
Address	Rear 115 Wicks Road MACQUARIE PARK NSW 2113
Telephone	(02) 9888 5000
Facsimile	(02) 9888 5004
Email	pdass@jkgroup.net.au
Project	**E31675KR Penrith**
Order Number	(Not specified)
Samples	7

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE183280 R0**
Date Received	30/8/2018
Date Reported	6/9/2018

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SIGNATORIES



Akheeqar Beniameen
Chemist



Bennet Lo
Senior Organic Chemist/Metals Chemist



Kamrul Ahsan
Senior Chemist



Ly Kim Ha
Organic Section Head



Shane McDermott
Inorganic/Metals Chemist



Teresa Nguyen
Organic Chemist

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

VOC's in Soil [AN433] Tested: 3/9/2018

PARAMETER	UOM	LOR	DUPAM4 SOIL - 21/8/2018 SE183280.001	DUPAM9 SOIL - 21/8/2018 SE183280.002	DUPAM13 SOIL - 21/8/2018 SE183280.003	DUPAM19 SOIL - 21/8/2018 SE183280.004	DUPAM25 SOIL - 21/8/2018 SE183280.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	DUPAM30 SOIL - 21/8/2018 SE183280.006	DUPAM34 SOIL - 21/8/2018 SE183280.007
Benzene	mg/kg	0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 3/9/2018

PARAMETER	UOM	LOR	DUPAM4 SOIL - 21/8/2018 SE183280.001	DUPAM9 SOIL - 21/8/2018 SE183280.002	DUPAM13 SOIL - 21/8/2018 SE183280.003	DUPAM19 SOIL - 21/8/2018 SE183280.004	DUPAM25 SOIL - 21/8/2018 SE183280.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	DUPAM30 SOIL - 21/8/2018 SE183280.006	DUPAM34 SOIL - 21/8/2018 SE183280.007
TRH C6-C9	mg/kg	20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 3/9/2018

PARAMETER	UOM	LOR	DUPAM4 SOIL - 21/8/2018 SE183280.001	DUPAM9 SOIL - 21/8/2018 SE183280.002	DUPAM13 SOIL - 21/8/2018 SE183280.003	DUPAM19 SOIL - 21/8/2018 SE183280.004	DUPAM25 SOIL - 21/8/2018 SE183280.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	**110**	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	**96**	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	**180**	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	**200**	<110	<110	<110
TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	DUPAM30 SOIL - 21/8/2018 SE183280.006	DUPAM34 SOIL - 21/8/2018 SE183280.007
TRH C10-C14	mg/kg	20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110
TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 3/9/2018

PARAMETER	UOM	LOR	DUPAM4 SOIL - 21/8/2018 SE183280.001	DUPAM9 SOIL - 21/8/2018 SE183280.002	DUPAM13 SOIL - 21/8/2018 SE183280.003	DUPAM19 SOIL - 21/8/2018 SE183280.004	DUPAM25 SOIL - 21/8/2018 SE183280.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<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	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	DUPAM30 SOIL - 21/8/2018 SE183280.006	DUPAM34 SOIL - 21/8/2018 SE183280.007
Naphthalene	mg/kg	0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 3/9/2018

PARAMETER	UOM	LOR	DUPAM4 SOIL - 21/8/2018 SE183280.001	DUPAM9 SOIL - 21/8/2018 SE183280.002	DUPAM13 SOIL - 21/8/2018 SE183280.003	DUPAM19 SOIL - 21/8/2018 SE183280.004	DUPAM25 SOIL - 21/8/2018 SE183280.005
Arsenic, As	mg/kg	1	2	6	5	6	6
Cadmium, Cd	mg/kg	0.3	<0.3	5.0	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	9.9	51	13	17	8.5
Copper, Cu	mg/kg	0.5	48	8400	8.5	52	8.6
Lead, Pb	mg/kg	1	12	780	10	18	9
Nickel, Ni	mg/kg	0.5	6.0	110	6.6	18	7.5
Zinc, Zn	mg/kg	2	100	7400	18	82	27

PARAMETER	UOM	LOR	DUPAM30 SOIL - 21/8/2018 SE183280.006	DUPAM34 SOIL - 21/8/2018 SE183280.007
Arsenic, As	mg/kg	1	4	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	9.3	6.8
Copper, Cu	mg/kg	0.5	5.1	5.2
Lead, Pb	mg/kg	1	4	5
Nickel, Ni	mg/kg	0.5	3.0	3.9
Zinc, Zn	mg/kg	2	11	17

Mercury in Soil [AN312] Tested: 3/9/2018

PARAMETER	UOM	LOR	DUPAM4 SOIL - 21/8/2018 SE183280.001	DUPAM9 SOIL - 21/8/2018 SE183280.002	DUPAM13 SOIL - 21/8/2018 SE183280.003	DUPAM19 SOIL - 21/8/2018 SE183280.004	DUPAM25 SOIL - 21/8/2018 SE183280.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	DUPAM30 SOIL - 21/8/2018 SE183280.006	DUPAM34 SOIL - 21/8/2018 SE183280.007
Mercury	mg/kg	0.05	<0.05	<0.05

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Moisture Content [AN002] Tested: 3/9/2018

PARAMETER	UOM	LOR	DUPAM4 SOIL - 21/8/2018 SE183280.001	DUPAM9 SOIL - 21/8/2018 SE183280.002	DUPAM13 SOIL - 21/8/2018 SE183280.003	DUPAM19 SOIL - 21/8/2018 SE183280.004	DUPAM25 SOIL - 21/8/2018 SE183280.005
% Moisture	%w/w	0.5	15	5.4	9.2	6.5	7.2

PARAMETER	UOM	LOR	DUPAM30 SOIL - 21/8/2018 SE183280.006	DUPAM34 SOIL - 21/8/2018 SE183280.007
% Moisture	%w/w	0.5	7.2	6.5

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Petroleum Hydrocarbons (TPH) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	Carcinogenic PAHs may be expressed as Benzo(a)pyrene equivalents by applying the BaP toxicity equivalence factor (NEPM 1999, June 2013, B7). These can be reported as the individual PAHs and as a sum of carcinogenic PAHs. The sum is reported three ways, the first assuming all <LOR results are zero, the second assuming all < LOR results are half the LOR and the third assuming all <LOR results are the LOR.
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : http://www.sgs.com.au/~/media/Local/Australia/Documents/ Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

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STATEMENT OF QA/QC PERFORMANCE

SE183280 R0

CLIENT DETAILS

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Project	**E31675KR Penrith**
Order Number	(Not specified)
Samples	7

LABORATORY DETAILS

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SGS Reference	**SE183280 R0**
Date Received	30 Aug 2018
Date Reported	06 Sep 2018

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document and was supplied by the Client.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	6 items

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	Other Lab	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	7 Soil
Date documentation received	30/8/2018	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	6.1°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

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SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
DUPAM4	SE183280.001	LB155658	21 Aug 2018	30 Aug 2018	18 Sep 2018	03 Sep 2018	18 Sep 2018	05 Sep 2018
DUPAM9	SE183280.002	LB155658	21 Aug 2018	30 Aug 2018	18 Sep 2018	03 Sep 2018	18 Sep 2018	05 Sep 2018
DUPAM13	SE183280.003	LB155658	21 Aug 2018	30 Aug 2018	18 Sep 2018	03 Sep 2018	18 Sep 2018	05 Sep 2018
DUPAM19	SE183280.004	LB155658	21 Aug 2018	30 Aug 2018	18 Sep 2018	03 Sep 2018	18 Sep 2018	05 Sep 2018
DUPAM25	SE183280.005	LB155658	21 Aug 2018	30 Aug 2018	18 Sep 2018	03 Sep 2018	18 Sep 2018	05 Sep 2018
DUPAM30	SE183280.006	LB155658	21 Aug 2018	30 Aug 2018	18 Sep 2018	03 Sep 2018	18 Sep 2018	05 Sep 2018
DUPAM34	SE183280.007	LB155658	21 Aug 2018	30 Aug 2018	18 Sep 2018	03 Sep 2018	18 Sep 2018	05 Sep 2018

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
DUPAM4	SE183280.001	LB155654	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	08 Sep 2018	04 Sep 2018
DUPAM9	SE183280.002	LB155654	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	08 Sep 2018	04 Sep 2018
DUPAM13	SE183280.003	LB155654	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	08 Sep 2018	04 Sep 2018
DUPAM19	SE183280.004	LB155654	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	08 Sep 2018	04 Sep 2018
DUPAM25	SE183280.005	LB155654	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	08 Sep 2018	04 Sep 2018
DUPAM30	SE183280.006	LB155654	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	08 Sep 2018	04 Sep 2018
DUPAM34	SE183280.007	LB155654	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	08 Sep 2018	04 Sep 2018

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
DUPAM4	SE183280.001	LB155656	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM9	SE183280.002	LB155656	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM13	SE183280.003	LB155656	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM19	SE183280.004	LB155656	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM25	SE183280.005	LB155656	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM30	SE183280.006	LB155656	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM34	SE183280.007	LB155656	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
DUPAM4	SE183280.001	LB155657	21 Aug 2018	30 Aug 2018	17 Feb 2019	03 Sep 2018	17 Feb 2019	04 Sep 2018
DUPAM9	SE183280.002	LB155657	21 Aug 2018	30 Aug 2018	17 Feb 2019	03 Sep 2018	17 Feb 2019	04 Sep 2018
DUPAM13	SE183280.003	LB155657	21 Aug 2018	30 Aug 2018	17 Feb 2019	03 Sep 2018	17 Feb 2019	04 Sep 2018
DUPAM19	SE183280.004	LB155657	21 Aug 2018	30 Aug 2018	17 Feb 2019	03 Sep 2018	17 Feb 2019	04 Sep 2018
DUPAM25	SE183280.005	LB155657	21 Aug 2018	30 Aug 2018	17 Feb 2019	03 Sep 2018	17 Feb 2019	04 Sep 2018
DUPAM30	SE183280.006	LB155657	21 Aug 2018	30 Aug 2018	17 Feb 2019	03 Sep 2018	17 Feb 2019	04 Sep 2018
DUPAM34	SE183280.007	LB155657	21 Aug 2018	30 Aug 2018	17 Feb 2019	03 Sep 2018	17 Feb 2019	04 Sep 2018

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
DUPAM4	SE183280.001	LB155656	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM9	SE183280.002	LB155656	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM13	SE183280.003	LB155656	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM19	SE183280.004	LB155656	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM25	SE183280.005	LB155656	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM30	SE183280.006	LB155656	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM34	SE183280.007	LB155656	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
DUPAM4	SE183280.001	LB155655	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM9	SE183280.002	LB155655	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM13	SE183280.003	LB155655	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM19	SE183280.004	LB155655	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM25	SE183280.005	LB155655	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM30	SE183280.006	LB155655	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM34	SE183280.007	LB155655	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
DUPAM4	SE183280.001	LB155655	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM9	SE183280.002	LB155655	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM13	SE183280.003	LB155655	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018

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HOLDING TIME SUMMARY

SE183280 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS “Field Sampling Guide for Containers and Holding Time” (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Volatile Petroleum Hydrocarbons in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
DUPAM19	SE183280.004	LB155655	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM25	SE183280.005	LB155655	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM30	SE183280.006	LB155655	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018
DUPAM34	SE183280.007	LB155655	21 Aug 2018	30 Aug 2018	04 Sep 2018	03 Sep 2018	13 Oct 2018	05 Sep 2018

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	DUPAM4	SE183280.001	%	70 - 130%	88
	DUPAM9	SE183280.002	%	70 - 130%	94
	DUPAM13	SE183280.003	%	70 - 130%	92
	DUPAM19	SE183280.004	%	70 - 130%	86
	DUPAM25	SE183280.005	%	70 - 130%	100
	DUPAM30	SE183280.006	%	70 - 130%	86
	DUPAM34	SE183280.007	%	70 - 130%	98
d14-p-terphenyl (Surrogate)	DUPAM4	SE183280.001	%	70 - 130%	94
	DUPAM9	SE183280.002	%	70 - 130%	108
	DUPAM13	SE183280.003	%	70 - 130%	102
	DUPAM19	SE183280.004	%	70 - 130%	96
	DUPAM25	SE183280.005	%	70 - 130%	106
	DUPAM30	SE183280.006	%	70 - 130%	90
	DUPAM34	SE183280.007	%	70 - 130%	102
d5-nitrobenzene (Surrogate)	DUPAM4	SE183280.001	%	70 - 130%	78
	DUPAM9	SE183280.002	%	70 - 130%	72
	DUPAM13	SE183280.003	%	70 - 130%	82
	DUPAM19	SE183280.004	%	70 - 130%	76
	DUPAM25	SE183280.005	%	70 - 130%	96
	DUPAM30	SE183280.006	%	70 - 130%	76
	DUPAM34	SE183280.007	%	70 - 130%	90

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	DUPAM4	SE183280.001	%	60 - 130%	78
	DUPAM9	SE183280.002	%	60 - 130%	78
	DUPAM13	SE183280.003	%	60 - 130%	81
	DUPAM19	SE183280.004	%	60 - 130%	76
	DUPAM25	SE183280.005	%	60 - 130%	82
	DUPAM30	SE183280.006	%	60 - 130%	82
	DUPAM34	SE183280.007	%	60 - 130%	82
d4-1,2-dichloroethane (Surrogate)	DUPAM4	SE183280.001	%	60 - 130%	84
	DUPAM9	SE183280.002	%	60 - 130%	86
	DUPAM13	SE183280.003	%	60 - 130%	88
	DUPAM19	SE183280.004	%	60 - 130%	87
	DUPAM25	SE183280.005	%	60 - 130%	90
	DUPAM30	SE183280.006	%	60 - 130%	92
	DUPAM34	SE183280.007	%	60 - 130%	90
d8-toluene (Surrogate)	DUPAM4	SE183280.001	%	60 - 130%	77
	DUPAM9	SE183280.002	%	60 - 130%	75
	DUPAM13	SE183280.003	%	60 - 130%	79
	DUPAM19	SE183280.004	%	60 - 130%	78
	DUPAM25	SE183280.005	%	60 - 130%	79
	DUPAM30	SE183280.006	%	60 - 130%	81
	DUPAM34	SE183280.007	%	60 - 130%	79
Dibromofluoromethane (Surrogate)	DUPAM4	SE183280.001	%	60 - 130%	85
	DUPAM9	SE183280.002	%	60 - 130%	85
	DUPAM13	SE183280.003	%	60 - 130%	90
	DUPAM19	SE183280.004	%	60 - 130%	89
	DUPAM25	SE183280.005	%	60 - 130%	91
	DUPAM30	SE183280.006	%	60 - 130%	94
	DUPAM34	SE183280.007	%	60 - 130%	88

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	DUPAM4	SE183280.001	%	60 - 130%	78
	DUPAM9	SE183280.002	%	60 - 130%	78
	DUPAM13	SE183280.003	%	60 - 130%	81
	DUPAM19	SE183280.004	%	60 - 130%	76
	DUPAM25	SE183280.005	%	60 - 130%	82
	DUPAM30	SE183280.006	%	60 - 130%	82
	DUPAM34	SE183280.007	%	60 - 130%	82

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Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued) — **Method: ME-(AU)-[ENV]AN433**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	DUPAM4	SE183280.001	%	60 - 130%	84
	DUPAM9	SE183280.002	%	60 - 130%	86
	DUPAM13	SE183280.003	%	60 - 130%	88
	DUPAM19	SE183280.004	%	60 - 130%	87
	DUPAM25	SE183280.005	%	60 - 130%	90
	DUPAM30	SE183280.006	%	60 - 130%	92
	DUPAM34	SE183280.007	%	60 - 130%	90
d8-toluene (Surrogate)	DUPAM4	SE183280.001	%	60 - 130%	77
	DUPAM9	SE183280.002	%	60 - 130%	75
	DUPAM13	SE183280.003	%	60 - 130%	79
	DUPAM19	SE183280.004	%	60 - 130%	78
	DUPAM25	SE183280.005	%	60 - 130%	79
	DUPAM30	SE183280.006	%	60 - 130%	81
	DUPAM34	SE183280.007	%	60 - 130%	79
Dibromofluoromethane (Surrogate)	DUPAM4	SE183280.001	%	60 - 130%	85
	DUPAM9	SE183280.002	%	60 - 130%	85
	DUPAM13	SE183280.003	%	60 - 130%	90
	DUPAM19	SE183280.004	%	60 - 130%	89
	DUPAM25	SE183280.005	%	60 - 130%	91
	DUPAM30	SE183280.006	%	60 - 130%	94
	DUPAM34	SE183280.007	%	60 - 130%	88

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB155658.001	Mercury	mg/kg	0.05	<0.05

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB155656.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	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(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	80
		2-fluorobiphenyl (Surrogate)	%	-	96
		d14-p-terphenyl (Surrogate)	%	-	98

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB155657.001	Arsenic, As	mg/kg	1	2
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB155656.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB155655.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	88
		d4-1,2-dichloroethane (Surrogate)	%	-	87
		d8-toluene (Surrogate)	%	-	85
		Bromofluorobenzene (Surrogate)	%	-	83
	Totals	Total BTEX	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Volatile Petroleum Hydrocarbons in Soil (continued) — **Method: ME-(AU)-[ENV]AN433**

Sample Number		Parameter	Units	LOR	Result
LB155655.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	88
		d4-1,2-dichloroethane (Surrogate)	%	-	87
		d8-toluene (Surrogate)	%	-	85

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE183280.003	LB155658.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE183286.001	LB155658.020	Mercury	mg/kg	0.05	0.0332130556	0.0370238676	172	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE183248.004	LB155654.011	% Moisture	%w/w	0.5	18	20	35	12
SE183286.001	LB155654.021	% Moisture	%w/w	0.5	6.63507109006	6.7574931880	45	2

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE183280.001	LB155656.026		Naphthalene	mg/kg	0.1	<0.1	0	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	0	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	0	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	0	200	0
			Acenaphthene	mg/kg	0.1	<0.1	0	200	0
			Fluorene	mg/kg	0.1	<0.1	0	200	0
			Phenanthrene	mg/kg	0.1	<0.1	0	200	0
			Anthracene	mg/kg	0.1	<0.1	0	200	0
			Fluoranthene	mg/kg	0.1	<0.1	0	200	0
			Pyrene	mg/kg	0.1	<0.1	0	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	0	200	0
			Chrysene	mg/kg	0.1	<0.1	0	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	0.01	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	0	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	0	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	0	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	0.242	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	0.121	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	0	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.38	30	3
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.42	30	5
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.44	30	7
SE183286.001	LB155656.024		Naphthalene	mg/kg	0.1	0.02	0	200	0
			2-methylnaphthalene	mg/kg	0.1	0	0	200	0
			1-methylnaphthalene	mg/kg	0.1	0.01	0	200	0
			Acenaphthylene	mg/kg	0.1	0.05	0.04	200	0
			Acenaphthene	mg/kg	0.1	0.06	0.02	200	0
			Fluorene	mg/kg	0.1	0.08	0.02	200	0
			Phenanthrene	mg/kg	0.1	1.29	0.44	42	98 ⑧
			Anthracene	mg/kg	0.1	0.2	0.06	107	67
			Fluoranthene	mg/kg	0.1	2.32	1.18	36	65 ⑧
			Pyrene	mg/kg	0.1	2.18	1.13	36	63 ⑧
			Benzo(a)anthracene	mg/kg	0.1	0.69	0.38	49	58 ⑧
			Chrysene	mg/kg	0.1	0.73	0.41	48	56 ⑧
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.94	0.63	43	39
			Benzo(k)fluoranthene	mg/kg	0.1	0.4	0.24	61	50
			Benzo(a)pyrene	mg/kg	0.1	0.71	0.45	47	45
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.54	0.35	52	43
			Dibenzo(ah)anthracene	mg/kg	0.1	0.03	0.02	200	0
			Benzo(ghi)perylene	mg/kg	0.1	0.46	0.32	56	36
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	0.9759	0.6972	34	33
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	1.0759	0.7972	42	30
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	1.0259	0.7472	33	31
			Total PAH (18)	mg/kg	0.8	10.43	6.21	40	51 ⑧
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.43	0.52	30	19
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.47	0.55	30	16

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE183286.001	LB155656.024	Surrogates	d14-p-terphenyl (Surrogate)	mg/kg	-	0.53	0.62	30	16

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE183280.003	LB155657.014		Arsenic, As	mg/kg	1	5	6	48	26
			Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
			Chromium, Cr	mg/kg	0.3	13	12	34	5
			Copper, Cu	mg/kg	0.5	8.5	7.7	36	10
			Nickel, Ni	mg/kg	0.5	6.6	7.2	37	10
			Lead, Pb	mg/kg	1	10	10	40	1
			Zinc, Zn	mg/kg	2	18	16	42	9
SE183286.001	LB155657.020		Arsenic, As	mg/kg	1	3.59147127542	.7524779069	62	26
			Cadmium, Cd	mg/kg	0.3	0.12325759400	.0830310077	200	0
			Chromium, Cr	mg/kg	0.3	7.960740472111	.300520155(	35	35
			Copper, Cu	mg/kg	0.5	16.38900974942	.0519507751	34	30
			Nickel, Ni	mg/kg	0.5	6.35414148735	.9989903100	38	6
			Lead, Pb	mg/kg	1	22.46263395379	.371134108[	35	15
			Zinc, Zn	mg/kg	2	31.33293046427	.213412790(	37	14

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE183280.001	LB155656.026		TRH C10-C14	mg/kg	20	<20	0	200	0
			TRH C15-C28	mg/kg	45	<45	0	200	0
			TRH C29-C36	mg/kg	45	<45	0	200	0
			TRH C37-C40	mg/kg	100	<100	0	200	0
			TRH C10-C36 Total	mg/kg	110	<110	0	200	0
			TRH C10-C40 Total (F bands)	mg/kg	210	<210	0	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	0	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	0	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	0	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	0	200	0
SE183286.001	LB155656.024		TRH C10-C14	mg/kg	20	0	0	200	0
			TRH C15-C28	mg/kg	45	0	0	200	0
			TRH C29-C36	mg/kg	45	0	0	200	0
			TRH C37-C40	mg/kg	100	0	0	200	0
			TRH C10-C36 Total	mg/kg	110	0	0	200	0
			TRH C10-C40 Total (F bands)	mg/kg	210	0	0	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	0	0	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	0	0	200	0
			TRH >C16-C34 (F3)	mg/kg	90	0	0	200	0
			TRH >C34-C40 (F4)	mg/kg	120	0	0	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE183279.001	LB155655.025	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.4	3.9	50	12
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.4	3.9	50	13
			d8-toluene (Surrogate)	mg/kg	-	4.1	3.6	50	11
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.1	3.6	50	14
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE183286.001	LB155655.024	Monocyclic	Benzene	mg/kg	0.1	0	0	200	0
		Aromatic	Toluene	mg/kg	0.1	0.01	0.01	200	0
			Ethylbenzene	mg/kg	0.1	0	0	200	0
			m/p-xylene	mg/kg	0.2	0.02	0.01	200	0
			o-xylene	mg/kg	0.1	0.01	0.01	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	0	0	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE183286.001	LB155655.024	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.55	4.36	50	4
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.59	4.47	50	3
			d8-toluene (Surrogate)	mg/kg	-	4.13	3.92	50	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.12	3.9	50	5
		Totals	Total Xylenes	mg/kg	0.3	0.03	0.02	200	0
			Total BTEX	mg/kg	0.6	0.04	0.03	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE183279.001	LB155655.025		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.4	3.9	30	12
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.4	3.9	30	13
			d8-toluene (Surrogate)	mg/kg	-	4.1	3.6	30	11
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.1	3.6	30	14
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE183286.001	LB155655.024		TRH C6-C10	mg/kg	25	0	0	200	0
			TRH C6-C9	mg/kg	20	0	0	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.55	4.36	30	4
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.59	4.47	30	3
			d8-toluene (Surrogate)	mg/kg	-	4.13	3.92	30	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.12	3.9	30	5
		VPH F Bands	Benzene (F0)	mg/kg	0.1	0	0	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	-0.04	-0.03	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB155658.002	Mercury	mg/kg	0.05	0.18	0.2	70 - 130	89

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB155656.002		Naphthalene	mg/kg	0.1	4.7	4	60 - 140	117
		Acenaphthylene	mg/kg	0.1	4.4	4	60 - 140	111
		Acenaphthene	mg/kg	0.1	4.5	4	60 - 140	112
		Phenanthrene	mg/kg	0.1	4.6	4	60 - 140	116
		Anthracene	mg/kg	0.1	4.6	4	60 - 140	116
		Fluoranthene	mg/kg	0.1	4.7	4	60 - 140	117
		Pyrene	mg/kg	0.1	4.7	4	60 - 140	118
		Benzo(a)pyrene	mg/kg	0.1	4.5	4	60 - 140	112
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	76
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	86
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	88

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB155657.002	Arsenic, As	mg/kg	1	330	336.32	79 - 120	98
	Cadmium, Cd	mg/kg	0.3	430	416.6	69 - 131	104
	Chromium, Cr	mg/kg	0.3	33	35.2	80 - 120	93
	Copper, Cu	mg/kg	0.5	320	370.46	80 - 120	87
	Nickel, Ni	mg/kg	0.5	180	210.88	79 - 120	84
	Lead, Pb	mg/kg	1	93	107.87	79 - 120	86
	Zinc, Zn	mg/kg	2	290	301.27	80 - 121	97

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB155656.002		TRH C10-C14	mg/kg	20	33	40	60 - 140	83
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	93
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	65
	TRH F Bands	TRH >C10-C16	mg/kg	25	34	40	60 - 140	85
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	80
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	75

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB155655.002	Monocyclic	Benzene	mg/kg	0.1	3.3	2.9	60 - 140	112
	Aromatic	Toluene	mg/kg	0.1	2.4	2.9	60 - 140	82
		Ethylbenzene	mg/kg	0.1	2.5	2.9	60 - 140	87
		m/p-xylene	mg/kg	0.2	5.5	5.8	60 - 140	95
		o-xylene	mg/kg	0.1	2.6	2.9	60 - 140	90
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.7	5	60 - 140	95
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.8	5	60 - 140	95
		d8-toluene (Surrogate)	mg/kg	-	4.6	5	60 - 140	91
		Bromofluorobenzene (Surrogate)	mg/kg	-	4.7	5	60 - 140	94

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB155655.002		TRH C6-C10	mg/kg	25	<25	24.65	60 - 140	95
		TRH C6-C9	mg/kg	20	21	23.2	60 - 140	88
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.7	5	60 - 140	95
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.8	5	60 - 140	95
		d8-toluene (Surrogate)	mg/kg	-	4.6	5	60 - 140	91
		Bromofluorobenzene (Surrogate)	mg/kg	-	4.7	5	60 - 140	94
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	7.25	60 - 140	98

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE183217.001	LB155658.004	Mercury	mg/kg	0.05	0.18	<0.05	0.2	84

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE183217.002	LB155656.025		Naphthalene	mg/kg	0.1	4.6	<0.1	4	114
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.4	<0.1	4	110
			Acenaphthene	mg/kg	0.1	4.3	<0.1	4	107
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	4.5	<0.1	4	113
			Anthracene	mg/kg	0.1	4.5	<0.1	4	111
			Fluoranthene	mg/kg	0.1	4.6	<0.1	4	115
			Pyrene	mg/kg	0.1	4.6	<0.1	4	115
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.8	<0.1	4	120
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	4.8	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	5.0	<0.3	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	4.9	<0.2	-	-
			Total PAH (18)	mg/kg	0.8	36	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	-	76
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	84
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	96

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE183217.001	LB155657.004	Arsenic, As	mg/kg	1	46	3	50	86
		Cadmium, Cd	mg/kg	0.3	47	<0.3	50	94
		Chromium, Cr	mg/kg	0.3	51	2.4	50	96
		Copper, Cu	mg/kg	0.5	54	3.1	50	101
		Nickel, Ni	mg/kg	0.5	48	1.2	50	94
		Lead, Pb	mg/kg	1	55	7	50	95
		Zinc, Zn	mg/kg	2	130	69	50	113

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE183217.002	LB155656.025		TRH C10-C14	mg/kg	20	39	<20	40	98
			TRH C15-C28	mg/kg	45	<45	<45	40	110
			TRH C29-C36	mg/kg	45	<45	<45	40	90
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	39	<25	40	98
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	39	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	110
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE183217.001	LB155655.004	Monocyclic	Benzene	mg/kg	0.1	3.2	<0.1	2.9	110
		Aromatic	Toluene	mg/kg	0.1	2.4	<0.1	2.9	81
			Ethylbenzene	mg/kg	0.1	2.6	<0.1	2.9	90
			m/p-xylene	mg/kg	0.2	5.8	<0.2	5.8	99
			o-xylene	mg/kg	0.1	2.8	<0.1	2.9	94

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Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE183217.001	LB155655.004	Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.5	4.4	-	90
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.5	4.4	-	90
			d8-toluene (Surrogate)	mg/kg	-	4.4	4.3	-	88
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.5	4.3	-	90
		Totals	Total Xylenes	mg/kg	0.3	8.5	<0.3	-	-
			Total BTEX	mg/kg	0.6	17	<0.6	-	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE183217.001	LB155655.004		TRH C6-C10	mg/kg	25	<25	<25	24.65	97
			TRH C6-C9	mg/kg	20	21	<20	23.2	89
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.5	4.4	-	90
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.5	4.4	-	90
			d8-toluene (Surrogate)	mg/kg	-	4.4	4.3	-	88
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.5	4.3	-	90
		VPH F	Benzene (F0)	mg/kg	0.1	3.2	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	7.25	102

MATRIX SPIKE DUPLICATES

SE183280 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: http://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.

①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to Analytical Report comments for further information.

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SAMPLE RECEIPT ADVICE

SE183280

CLIENT DETAILS

Contact	Priya Dass
Client	Jeffery & Katauskas Pty Ltd
Address	Rear 115 Wicks Road MACQUARIE PARK NSW 2113
Telephone	(02) 9888 5000
Facsimile	(02) 9888 5004
Email	pdass@jkgroup.net.au
Project	**E31675KR Penrith**
Order Number	(Not specified)
Samples	7

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Thu 30/8/2018
Report Due	Thu 6/9/2018
SGS Reference	**SE183280**

SUBMISSION DETAILS

This is to confirm that 7 samples were received on Thursday 30/8/2018. Results are expected to be ready by COB Thursday 6/9/2018. Please quote SGS reference SE183280 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	Other Lab	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	7 Soil
Date documentation received	30/8/2018	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	6.1°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

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SAMPLE RECEIPT ADVICE

SE183280

CLIENT DETAILS

Client Jeffery & Katauskas Pty Ltd

Project E31675KR Penrith

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	DUPAM4	1	26	7	10	12	8
002	DUPAM9	1	26	7	10	12	8
003	DUPAM13	1	26	7	10	12	8
004	DUPAM19	1	26	7	10	12	8
005	DUPAM25	1	26	7	10	12	8
006	DUPAM30	1	26	7	10	12	8
007	DUPAM34	1	26	7	10	12	8

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

SAMPLE RECEIPT ADVICE

SE183280

CLIENT DETAILS

Client Jeffery & Katauskas Pty Ltd

Project E31675KR Penrith

SUMMARY OF ANALYSIS

No.	Sample ID	Moisture Content
001	DUPAM4	1
002	DUPAM9	1
003	DUPAM13	1
004	DUPAM19	1
005	DUPAM25	1
006	DUPAM30	1
007	DUPAM34	1

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

Document Set ID: 8449097
Version: 1, Version Date: 05/11/2018

source: [Untitled].pdf page: 5 SGS Ref: SE183280_COC

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: E31675KR
Date Results Required: STANDARD
Page: 1 of 9/12

FROM: EIS
ENVIRONMENTAL INVESTIGATION SERVICES
REAR OF 115 WICKS ROAD
MACQUARIE PARK, NSW 2113
P: 02-9888 5000 F: 02-9888 5001
Attention: Priya Dass

Location: Penrith
Sampler:

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos	CEC	Sulphate+Chloride pH + EC	ECe (Texture)
29/8/18	201	BHE6	1.5-1.95	G, A	0	Silt		✓										
21/8/18	202	BH[illegible]6	0-0.3	1	0	Fill Silt										✓	✓	✓
	203	↓	0.4-0.6		0	Fill Clay/Silt				✓							✓	✓
	204	↓	0.9-1.1		0	Clay/Silt		✓									✓	✓
	205	BH[illegible]7	0-0.2		0	Fill Silt												
	206	↓	0.5-0.7		0	Fill Clay/Silt												
↓	207	↓	0.8-0.9	↓	0	Fill Clay/Silt				✓								
	208	DUPAH1		G														
	209	DUPAM2						✓										
	210	DUPAH3						✓										
1	#	DUPAM4						✓							Send to SGS			
	211	DUPAM5						✓										
	212	DUPAM6																
	213	DUPAM7						✓										
	214	DUPTRE																
2	#	DUPAM9						✓						Send to SGS				
	215	DUPAM10																
	216	DUPAM11						✓										
	217	DUPAH12																
3	#	DUPAH13						✓							Send to SGS			
	218	DUPAM14						✓										
	219	DUPAH15																
	220	DUPAM16						✓										
	221	DUPAM17																
	222	DUPAH18		✓				✓										

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos
P - Plastic Bag

SGS EHS Alexandria Laboratory
SE183280 COC
Received: 30 – Aug – 2018

Relinquished By:	Date:	Time:	Received By:	Date:
Priya Dass	28/8/18	17:00	Kevin Wang	28/8/18
Kevin Wang	30/8/18	2:20	Nessa A SGS	30/8/18

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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: E31675KR Date Results Required: STANDARD Page: 1 of 10/12	ENVIRONMENTAL INVESTIGATION SERVICES REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Priya Dasa

Location: Penrith — Sample Preserved in Esky on Ice

Sampler: — Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos			
19/5/17																		
4	[illegible]	DUPAM19		G				✓							Send to SGS			
	223	DUPAM20						✓										
	224	DUPAM01						✓										
	225	DUPAM02						✓										
	226	DUPAM03						✓										
	227	DUPAM04						✓										
5	[illegible]	DUPAM05						✓							Send to SGS			
	228	DUPAM06						✓										
	229	DUPAM07						✓										
	230	DUPAM08						✓										
	231	DUPAM09						✓										
6	[illegible]	DUPAM10						✓							Send to SGS			
	232	DUPAM11						✓										
	233	DUPAM12						✓										
	234	DUPAM13						✓										
7	[illegible]	DUPAM14						✓							Send to SGS			
22/8/18	235	SP1-1		GA	0					✓								
	236	SP1-2			0.1					✓								
	237	SP2-1			0.1					✓								
	238	SP2-2			0					✓								
	239	SP3-1			0					✓								
	240	SP3-2			0					✓								
	241	SP4-1			0					✓								
	242	SP4-2			0					✓								
24/8/18	243	SP5-1			0					✓								

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Priya Dass	28/8/18	17:00	Kevin	28/8/18

Kevin Wy 30/8/18
Sp ~~O.K~~

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Appendix E: Report Explanatory Notes

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STANDARD SAMPLING PROCEDURE

These protocols specify the basic procedures to be used when sampling soils or groundwater for environmental site assessments undertaken by EIS. The purpose of these protocols is to provide standard methods for: sampling, decontamination procedures for sampling equipment, sample preservation, sample storage and sample handling. Deviations from these procedures must be recorded.

Soil Sampling

- Prepare a borehole/test pit log or made a note of the sample description for stockpiles.
- Layout sampling equipment on clean plastic sheeting to prevent direct contact with ground surface. The work area should be at a distance from the drill rig/excavator such that the machine can operate in a safe manner.
- Ensure all sampling equipment has been decontaminated prior to use.
- Remove any surface debris from the immediate area of the sampling location.
- Collect samples and place in glass jar with a Teflon seal. This should be undertaken as quickly as possible to prevent the loss of any volatiles. If possible, fill the glass jars completely.
- Collect samples for asbestos analysis and place in a zip-lock plastic bag.
- Label the sampling containers with the EIS job number, sample location (eg. BH1), sampling depth interval and date. If more than one sample container is used, this should also be indicated (eg. 2 = Sample jar 1 of 2 jars).
- Photoionisation detector (PID) screening of volatile organic compounds (VOCs) should be undertaken on samples using the soil sample headspace method. Headspace measurements are taken following equilibration of the headspace gasses in partly filled zip-lock plastic bags. PID headspace data is recorded on the borehole/test pit log and the chain of custody forms.
- Record the lithology of the sample and sample depth on the borehole/test pit log generally in accordance with AS1726-1993[21].
- Store the sample in a sample container cooled with ice or chill packs. On completion of the sampling the sample container should be delivered to the lab immediately or stored in the refrigerator prior to delivery to the lab. All samples are preserved in accordance with the standards outlined in the report.
- Check for the presence of groundwater after completion of each borehole using an electronic dip metre or water whistle. Boreholes should be left open until the end of fieldwork where it is safe to do so. All groundwater levels in the boreholes should be rechecked on the completion of the fieldwork.
- Backfill the boreholes/test pits with the excavation cuttings or clean sand prior to leaving the site.

Decontamination Procedures for Soil Sampling Equipment

- All sampling equipment should be decontaminated between every sampling location. This excludes single use PVC tubing used for push tubes etc. Equipment and materials required for the decontamination include:
  - Phosphate free detergent (Decon 90);
  - Potable water;
  - Stiff brushes; and
  - Plastic sheets.
- Ensure the decontamination materials are clean prior to proceeding with the decontamination.
- Fill both buckets with clean potable water and add phosphate free detergent to one bucket.

[21] Standards Australia,(1993),*Geotechnical Site Investigations.* (AS1726-1993)

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- In the bucket containing the detergent, scrub the sampling equipment until all the material attached to the equipment has been removed.
- Rinse sampling equipment in the bucket containing potable water.
- Place cleaned equipment on clean plastic sheets.

If all materials are not removed by this procedure, high-pressure water cleaning is recommended. If any equipment is not completely decontaminated by both these processes, then the equipment should not be used until it has been thoroughly cleaned.

Groundwater Sampling

Groundwater samples are more sensitive to contamination than soil samples and therefore adhesion to this protocol is particularly important to obtain reliable, reproducible results. The recommendations detailed in AS/NZS 5667.1:1998 are considered to form a minimum standard.

The basis of this protocol is to maintain the security of the borehole and obtain accurate and representative groundwater samples. The following procedure should be used for collection of groundwater samples from previously installed groundwater monitoring wells.

- After monitoring well installation, at least three bore volumes should be pumped from the monitoring wells (well development) to remove any water introduced during the drilling process and/or the water that is disturbed during installation of the monitoring well. This should be completed prior to purging and sampling.
- Groundwater monitoring wells should then be left to recharge for at least three days before purging and sampling. Prior to purging or sampling, the condition of each well should observed and any anomalies recorded on the field data sheets. The following information should be noted: the condition of the well, noting any signs of damage, tampering or complete destruction; the condition and operation of the well lock; the condition of the protective casing and the cement footing (raised or cracked); and, the presence of water between protective casing and well.
- Measure the groundwater level from the collar of the piezometer/monitoring well using an electronic dipmeter. The collar level should be taken (if required) during the site visit using a dumpy level and staff.
- Purging and sampling of piezometers/monitoring wells is done on the same site visit when using micro-purge (or other low flow) techniques.
- Layout and organize all equipment associated with groundwater sampling in a location where they will not interfere with the sampling procedure and will not pose a risk of contaminating samples. Equipment generally required includes:
  - Stericup single-use filters (for heavy metals samples);
  - Bucket with volume increments;
  - Sample containers: teflon bottles with 1 ml nitric acid, 75mL glass vials with 1 mL hydrochloric acid, 1 L amber glass bottles;
  - Bucket with volume increments;
  - Flow cell;
  - pH/EC/Eh/Temperature meters;
  - Plastic drums used for transportation of purged water;
  - Esky and ice;
  - Nitrile gloves;
  - Distilled water (for cleaning);
  - Electronic dip meter;
  - Low flow peristaltic pump and associated tubing; and
  - Groundwater sampling forms.

- Ensure all non-disposable sampling equipment is decontaminated or that new disposable equipment is available prior to any work commencing at a new location. The procedure for decontamination of groundwater equipment is outlined at the end of this section.
- Disposable gloves should be used whenever samples are taken to protect the sampler and to assist in avoidance of contamination.
- Groundwater samples are obtained from the monitoring wells using low flow sampling equipment to reduce the disturbance of the water column and loss of volatiles.
- During pumping to purge the well, the pH, temperature, conductivity, dissolved oxygen, redox potential and groundwater levels are monitored (where possible) using calibrated field instruments to assess the development of steady state conditions. Steady state conditions are generally considered to have been achieved when the difference in the pH measurements was less than 0.2 units and the difference in conductivity was less than 10%.
- All measurements are recorded on specific data sheets.
- Once steady state conditions are considered to have been achieved, groundwater samples are obtained directly from the pump tubing and placed in appropriate glass bottles, BTEX vials or plastic bottles.
- All samples are preserved in accordance with water sampling requirements specified by the laboratory and placed in an insulated container with ice. Groundwater samples are preserved by immediate storage in an insulated sample container with ice.
- At the end of each water sampling complete a chain of custody form for samples being sent to the laboratory.

Decontamination Procedures for Groundwater Sampling Equipment

- All equipment associated with the groundwater sampling procedure (other than single-use items) should be decontaminated between every sampling location.
- The following equipment and materials are required for the decontamination procedure:
  - Phosphate free detergent;
  - Potable water;
  - Distilled water; and
  - Plastic Sheets or bulk bags (plastic bags).
- Fill one bucket with clean potable water and phosphate free detergent, and one bucket with distilled water.
- Flush potable water and detergent through pump head. Wash sampling equipment and pump head using brushes in the bucket containing detergent until all materials attached to the equipment are removed.
- Flush pump head with distilled water.
- Change water and detergent solution after each sampling location.
- Rinse sampling equipment in the bucket containing distilled water.
- Place cleaned equipment on clean plastic sheets.
- If all materials are not removed by this procedure that equipment should not be used until it has been thoroughly cleaned

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)[22] methods and those described in *Environmental Sampling and Analysis, A Practical Guide,* (1991)[23].

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).

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).

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.

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 handing and analysis protocols and use of proper chain-of-custody and documentation procedures.

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;

[22]US EPA, (1994). *SW-846: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.*(US EPA SW-846)

[23]Keith., H, (1991).*Environmental Sampling and Analysis, A Practical Guide.*

- All blank data reported;
- 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.

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).

Blanks

The purpose of laboratory and field blanks is to check for artefacts and interferences that may arise during sampling, transport and analysis.

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%.

$$\frac{\text{(Spike Sample Result – Sample Result) x 100}}{\text{Concentration of Spike Added}}$$

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.

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:

$$\frac{(D1 - D2) \times 100}{\{(D1 + D2)/2\}}$$

SCREENING CRITERIA DEFINITIONS

The following definitions have been adopted based on Schedule B(1) of NEPM (2013) and are relevant to Tier 1 screening criteria adopted for contamination assessments.

Health investigation levels (HILs) have been developed for a broad range of metals and organic substances. The HILs are applicable for assessing human health risk via all relevant pathways of exposure. The HILs are generic to all soil types and apply generally to a depth of 3 m below the surface for residential use. Site-specific conditions should determine the depth to which HILs apply for other land uses.

Health screening levels (HSLs) have been developed for selected petroleum compounds and fractions and are applicable to assessing human health risk via the inhalation and direct contact pathways. The HSLs depend on specific soil physicochemical properties, land use scenarios, and the characteristics of building structures. They apply to different soil types, and depths below surface to >4 m. HSLs have also been developed for asbestos and apply to the top 3m of soil.

Ecological investigation levels (EILs) have been developed for selected metals and organic substances and are applicable for assessing risk to terrestrial ecosystems. EILs depend on specific soil physicochemical properties and land use scenarios and generally apply to the top 2 m of soil.

Ecological screening levels (ESLs) have been developed for selected petroleum hydrocarbon compounds and total petroleum/recoverable hydrocarbon (TPH/TRH) fractions and are applicable for assessing risk to terrestrial ecosystems. ESLs broadly apply to coarse- and fine-grained soils and various land uses. They are generally applicable to the top 2 m of soil.

Groundwater investigation levels (GILs) are the concentrations of a contaminant in groundwater above which further investigation (point of extraction) or a response (point of use) is required. GILs are based on Australian water quality guidelines and drinking water guidelines and are applicable for assessing human health risk and ecological risk from direct contact (including consumption) with groundwater.

Management Limits for Petroleum hydrocarbons are applicable to petroleum hydrocarbon compounds only. They are applicable as screening levels following evaluation of human health and ecological risks and risks to groundwater resources. They are relevant for operating sites where significant sub-surface leakage of petroleum compounds has occurred and when decommissioning industrial and commercial sites.

Interim soil vapour health investigation levels (interim HILs) have been developed for selected volatile organic chlorinated compounds (VOCCs) and are applicable to assessing human health risk by the inhalational pathway. They have interim status pending further scientific work on volatile gas modelling from the sub-surface to building interiors for chlorinated compounds.

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Appendix F: Data (QA/QC) Evaluation

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DATA (QA/QC) EVALUATION

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.

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.

Field QA/QC Samples and Analysis

A summary of the field QA/QC samples collected and analysed for this assessment is provided in the following table:

Sample Type	Sample Identification	Frequency (of Sample Type)	Analysis Performed
Intra-laboratory duplicate (soil)	DUP1 (primary sample BH1 0-0.2m)	Approximately 10% of primary samples	Heavy metals, TRH/BTEX, and PAHs
Intra-laboratory duplicate (soil)	DUPAM2 (primary sample BH137 1.5-1.95m)	As above	Heavy metals, TRH/BTEX, and PAHs
Intra-laboratory duplicate (soil)	DUPAM3 (primary sample BH181 0.0-0.2m)	As above	Heavy metals, TRH/BTEX, and PAHs
Intra-laboratory duplicate (soil)	DUPAM5 (primary sample BH180 0.0-0.1m)	As above	Heavy metals, TRH/BTEX, and PAHs
Intra-laboratory duplicate (soil)	DUPAM7 (primary sample BH179 0.0-0.2m)	As above	Heavy metals, TRH/BTEX, and PAHs
Intra-laboratory duplicate (soil)	DUPAM11 (primary sample BH186 0.0-0.1m)	As above	Heavy metals, TRH/BTEX, and PAHs
Intra-laboratory duplicate (soil)	DUPAM14 (primary sample BH187 0.0-0.2m)	As above	Heavy metals, TRH/BTEX, and PAHs

Sample Type	Sample Identification	Frequency (of Sample Type)	Analysis Performed
Intra-laboratory duplicate (soil)	DUPAM16 (primary sample BH183 0.0-0.2m)	As above	Heavy metals, TRH/BTEX, and PAHs
Intra-laboratory duplicate (soil)	DUPAM18 (primary sample BH101 0.0-0.5m)	As above	Heavy metals, TRH/BTEX, and PAHs
Intra-laboratory duplicate (soil)	DUPAM21 (primary sample BH165 0.0-0.3m)	As above	Heavy metals, TRH/BTEX, and PAHs
Intra-laboratory duplicate (soil)	DUPAM23 (primary sample BH172 0.0-0.4m)	As above	Heavy metals, TRH/BTEX, and PAHs
Intra-laboratory duplicate (soil)	DUPAM27 (primary sample BH141 0.0-0.35m)	As above	Heavy metals, TRH/BTEX, and PAHs
Intra-laboratory duplicate (soil)	DUPAM29 (primary sample BH142 0.0-0.3m)	As above	Heavy metals, TRH/BTEX, and PAHs
Intra-laboratory duplicate (soil)	DUPAM31 (primary sample BH139 0.0-0.5m)	As above	Heavy metals, TRH/BTEX, and PAHs
Intra-laboratory duplicate (soil)	DUPAM33 (primary sample BH119 0.0-0.5m)	As above	Heavy metals, TRH/BTEX, and PAHs
Inter-laboratory duplicate (soil)	DUPAM4 (primary sample BH181 0.5-0.95m)	Approximately 5% of primary samples	Heavy metals, TRH/BTEX, and PAHs
Inter-laboratory duplicate (soil)	DUPAM9 (primary sample BH185 0.0-0.2m)	Approximately 5% of primary samples	Heavy metals, TRH/BTEX, and PAHs
Inter-laboratory duplicate (soil)	DUPAM13 (primary sample BH186 1.5-1.95m)	Approximately 5% of primary samples	Heavy metals, TRH/BTEX, and PAHs
Inter-laboratory duplicate (soil)	DUPAM19 (primary sample BH171 0.0-0.5m)	Approximately 5% of primary samples	Heavy metals, TRH/BTEX, and PAHs
Inter-laboratory duplicate (soil)	DUPAM25 (primary sample BH160 0.0-0.45m)	Approximately 5% of primary samples	Heavy metals, TRH/BTEX, and PAHs
Inter-laboratory duplicate (soil)	DUPAM30 (primary sample BH142 1.0-1.5m)	Approximately 5% of primary samples	Heavy metals, TRH/BTEX, and PAHs
Inter-laboratory duplicate (soil)	DUPAM34 (primary sample BH118 0.0-0.5m)	Approximately 5% of primary samples	Heavy metals, TRH/BTEX, and PAHs

Sample Type	Sample Identification	Frequency (of Sample Type)	Analysis Performed
Trip blank (soil)	TBMP (17/08/18)	One for the assessment to demonstrate adequacy of storage and transport methods	BTEX
Rinsate (soil SPT)	FRMP1 (22/08/18)	One for the assessment to demonstrate adequacy of decontamination methods	BTEX

The results for the field QA/QC samples are detailed in the laboratory summary tables (Table K to Table CC inclusive) attached to the assessment report and are discussed in the subsequent sections of this Data (QA/QC) Evaluation report.

Data Assessment Criteria

EIS 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 less than 50% RPD for concentrations greater than 10 times the PQL, less than 75% RPD for concentrations between five and 10 times the PQL and less than 100% RPD for concentrations that are less than five times the PQL. RPD failures will be considered qualitatively on a case-by-case basis taking into account factors such as the sample type, collection methods and the specific analyte where the RPD exceedance was reported.

Field Blanks and Rinsates

Acceptable targets for field blank and rinsate samples in this report will be less than the PQL for organic analytes. Metals will be considered on a case-by-case basis with regards to typical background concentrations in soils and published drinking water guidelines for waters.

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.

DATA EVALUATION

Sample Collection, Storage, Transport and Analysis

Samples were collected by trained field staff in accordance with the EIS SSP. The SSP was developed 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 in accordance with Schedule B(3) of NEPM (2013) and the laboratory NATA accredited methodologies. EIS note that the temperature on receipt of samples was reported to be up to 18.8°C. EIS 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, EIS are of the opinion that the temperatures reported on the Sample Receipts are unlikely to be reliable or representative of each batch.

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.

Laboratory PQLs

Appropriate PQLs were adopted for the analysis and all PQLs were below the SAC with the exception of the anthracene PQL for surface water analysis which was 10 times greater than the ecological SAC and benzo(a)pyrene PQL for surface water which was 10 times greater than the human health SAC and 1,1-Dichloroethene which was 3 times greater than the human health recreational SAC. In light of the PAH and VOC concentrations reported for soil and/or surface water, EIS 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 assessment.

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 some heavy metal compounds and TRH fractions in DUPAM5/BH180 (0-0.1m);
- Elevated RPDs were reported for chromium and several PAHs compounds in DUPAM14/BH187 (0-0.2m);
- Elevated RPDs were reported for some heavy metals and PAHs compounds in DUPAM18/BH101 (0-0.5m);
- Elevated RPDs were reported for the heavy metals compounds in DUPAM9/BH185 (0-0.2m).
- Elevated RPDs were reported for arsenic in DUPAM19/BH171 (0-0.5m); and
- Elevated RPDs were reported for some heavy metals compounds in DUPAM25/BH160 (0-0.45m).

Values outside the acceptable limits have been attributed to sample heterogeneity and the difficulties associated with obtaining homogenous duplicate samples of heterogeneous matrices. Where applicable, the higher duplicate value has been adopted as a conservative measure (see attached report tables).

Field Blanks

During the investigation, one soil trip blank was placed in the esky 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.

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 assessment. EIS note that due to the limited number of samples submitted for analysis during the preliminary investigation and additional analysis requested during the Stage 2 ESA,, duplicates and matrix spikes were not reported in the laboratory reports 197510 and 199517-A. This is not considered to have an impact on the data quality for this assessment.

A review of the laboratory QA/QC data identified the following minor non-conformances:

- TRH C10-C40 fraction surrogate percent recovery was not possible to report as the high concentration of analytes in the sample caused interference, as reported in laboratory report 197510;
- The laboratory RPD acceptance criteria had exceeded in a sample for copper and zinc. A triplicate result was issued, as reported in laboratory report 199517;
- The laboratory RPD acceptance criteria had exceeded in a sample for lead. A triplicate result was issued, as reported in laboratory report 199517;
- The laboratory RPD acceptance criteria had exceeded in a sample for chromium and nickel. A triplicate result was issued, as reported in laboratory report 199517;
- The spike recovery for copper in a sample was outside the laboratory acceptance criteria (70-130%), however the LCS recovery was acceptable at 110%. Sample heterogeneity was suspected, as reported in laboratory report 199517;
- The percent recovery was not possible to report for metals in soil due to high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS, as reported in laboratory report 199517;
- The percent recovery was not possible to report for TRH C10-C40 due to high concentration of the analytes in the sample/s, as reported in laboratory report 199517 and 199517-A;
- The PQL was raised for PCBs in soil due to interference from analytes in a sample, as reported in laboratory report 199517;
- The unpreserved water sample was filtered through 0.45 um filter at the laboratory. Some elements may be underestimated, as reported in laboratory report 199517;
- A portion of the supplied sample was sub-sampled for asbestos analysis by the laboratory. Samples requested for asbestos testing were sub-sampled from jar samples provided, as reported in laboratory report 199517;
- The RPD for duplicate results for PAHs in soil was accepted due to the non-homogenous nature of the sample/s, as reported in laboratory report 199517;
- Hexavalent chromium PQL was raised due to matrix interferences, as reported in Laboratory report 199517-A. Samples were diluted and reanalysed however the same results were achieved; and
- Reanalysis of a sample in duplicate for PAHs confirmed sample heterogeneity and inconsistency of results, as reported in laboratory report SE183280.

DATA QUALITY SUMMARY

EIS 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.

A number of results from field duplicates indicated some uncertainty in quantification for heavy metals, PAHs and TRH Fractions. Due to the characteristics of the duplicate samples, the uncertainty is not considered to materially impact the report findings.

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 surface water sampling event undertaken for the assessment. On this basis there is some uncertainty around the representativeness of the surface water data, particularly during different climatic conditions and after wet/dry periods.

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Appendix G: Field Work Documents

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JOB NO: E31675KR
LOCATION: 128 Andrews Road, Penrith, NSW

FIELD CALIBRATION FORM

PID

Make: MiniRAE	Model: 2000	Unit: Green	Date of last factory calibration: 19/5/18
Date of calibration: 26/7/18 + 27/8/18		Name of Calibrator: AM	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: 100 ppm		Error in measured reading: ± ppm	
Measured reading Acceptable (Yes/No):			

DISSOLVED OXYGEN

Make:	Model: Aqua DY
Date of calibration:	Name of Calibrator:
Span value: 70% to 130%%	
Measured value:	
Measured reading Acceptable (Yes/No):	

pH METER

Make: Orion	Model: Four star	
Date of calibration:	Name of Calibrator:	
Buffer 1: Theoretical pH = 7.01± 0.01	Expiry date:	Lot No:
Buffer 2: Theoretical pH = 4.01± 0.01	Expiry date:	Lot No:
Measured reading of Buffer 1:		
Measured reading of Buffer 2:		
Slope:	Measured reading Acceptable (Yes/No):	

CONDUCTIVITY METER

Make: Orion		Model: Four star	
Date:	Name of Calibrator:		Temperature: °C
Calibration solution:		Expiry date:	Lot No:
Theoretical conductivity at temperature (see solution container):			µS/cm
Measured conductivity: µS/cm		Measured reading Acceptable (Yes/No):	

REDOX METER

Make: Orion	Model: Four star	
Date of calibration:	Name of Calibrator:	
Calibration solution:	Expiry date:	Lot No:
Theoretical redox value:	240mV	
Measured redox reading: mV	Measured reading Acceptable (Yes/No):	

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Groundwater Sampling Report

Client:		**Job No.:**	
Project:		**Well No.:**	
Location:		**Depth (m):**	

WELL DETAILS

	Gatic Cover		**Standpipe**		**PVC Pipe**

MONITORING WELL SAMPLING DETAILS

Method:		**SWL (m):**	
Date:		**Time:**	
Undertaken By:		**PID (ppm):**	

FIELD MEASUREMENTS

Volume Removed (L)	Temp (°C)	pH	EC (S/m)	DO (mg/L)	Eh (mV)

Comments:

Tested By:		**Remarks:**
Date Tested:		- SWL is an abbreviation for standing water level
Checked By:		- EC is electrical conductivity
Date:		- DO is dissolved oxygen
		- Eh is redox potential

Surface Water (SW1)

~~*Groundwater Sampling Report*~~

Client:	Cadence Property Group Pty Ltd.	**Job No.:**	E31675KR
Project:	Proposed Mixed Development	~~**Well No.:**~~	N/A
Location:	128 Andrew Rd Penrith	**Depth (m):**	

WELL DETAILS

	Gatic Cover		**Standpipe**		**PVC Pipe**

MONITORING WELL SAMPLING DETAILS

Method:	Bailer	**SWL (m):**	0.10
Date:	22/8/18	**Time:**	8:15
Undertaken By:	AM		

FIELD MEASUREMENTS

Volume Removed (L)	Temp (°C)	pH	EC (mS/m)	DO (mg/L)	Eh (mV)

Comments: 4xBTEX Vials 1x Amber 1xmetals (unfiltered) 1x PVC

Tested By:	AM	**Remarks:**
Date Tested:	22/8/18	- SWL is an abbreviation for standing water level
Checked By:	PD	- EC is electrical conductivity
Date:	27/8/18	- DO is dissolved oxygen
		- Eh is redox potential

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

EIS

Client:	Cadence Property Group Pty Ltd	**Job No.:**	E31675KR
Project:	Proposed Warehouse	**Well No.:**	MW 137
Location:	128 ANDREWS ROAD, PENRITH, NSW	**Depth (m):**	3.7

WELL FINISH DETAILS

	Gatic Cover ☐	**Standpipe** ☒	**Other (describe)** ☐

WELL DEVELOPMENT DETAILS

Method:	Development	**SWL – Before (m):**	—
Date:	24/8/18	**Time – Before:**	8:30
Undertaken By:	AM/MMP	**SWL – After (m):**	—
Total Vol. Removed:	—	**Time – After:**	—
PID Reading (ppm):	—		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/m)	pH	Eh (mV)
Dry well					

Comments:Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

Tested By:	AM/MMP
Date Tested:	24/8/18
Checked By:	PD
Date:	27/8/18

Remarks:

- All measurements are corrected to ground level
- All stated Volumes are in Litres
- SWL is an abbreviation for standing water level
- Steady state conditions - difference in the pH less than 0.2 units and difference in conductivity less than 10%
- Minimum 3 monitoring well volumes are purged

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

EIS

Client:	Cadence Property Group Pty Ltd	**Job No.:**	E31675KR
Project:	Proposed Warehouse	**Well No.:**	MW 166
Location:	128 ANDREWS ROAD, PENRITH, NSW	**Depth (m):**	4.0

WELL FINISH DETAILS

	Gatic Cover ☐	**Standpipe** ☒	**Other (describe)** ☐

WELL DEVELOPMENT DETAILS

Method:	Development	**SWL – Before (m):**	–
Date:	24/8/18	**Time – Before:**	8:35
Undertaken By:	AM / MMP	**SWL – After (m):**	–
Total Vol. Removed:	–	**Time – After:**	–
PID Reading (ppm):	–		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/m)	pH	Eh (mV)
Well Dry					

Comments:Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

Tested By:	AM / MMP
Date Tested:	24/8/18
Checked By:	PD
Date:	27/8/18

Remarks:

- All measurements are corrected to ground level
- All stated Volumes are in Litres
- SWL is an abbreviation for standing water level
- Steady state conditions - difference in the pH less than 0.2 units and difference in conductivity less than 10%
- Minimum 3 monitoring well volumes are purged

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

EIS

Client:	Cadence Property Group Pty Ltd	Job No.:	E31675KR
Project:	Proposed Warehouse	Well No.:	MW 170
Location:	128 ANDREWS ROAD, PENRITH, NSW	Depth (m):	2.8

WELL FINISH DETAILS

	Gatic Cover ☐	Standpipe ☒	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Development	SWL – Before (m):	—
Date:	24/8/18	Time – Before:	8:40
Undertaken By:	AM/MNP	SWL – After (m):	—
Total Vol. Removed:	—	Time – After:	—
PID Reading (ppm):	—		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/m)	pH	Eh (mV)
Well Dry					

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

Tested By:	AM/MNP
Date Tested:	24/8/18
Checked By:	PD
Date:	27/8/18

Remarks:

- All measurements are corrected to ground level
- All stated Volumes are in Litres
- SWL is an abbreviation for standing water level
- Steady state conditions - difference in the pH less than 0.2 units and difference in conductivity less than 10%
- Minimum 3 monitoring well volumes are purged

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

EIS

Client:	Cadence Property Group Pty Ltd	**Job No.:**	E31675KR
Project:	Proposed Warehouse	**Well No.:**	181
Location:	128 ANDREWS ROAD, PENRITH, NSW	**Depth (m):**	4.0

WELL FINISH DETAILS

	Gatic Cover ☐	**Standpipe** ☒	**Other (describe)** ☐

WELL DEVELOPMENT DETAILS

Method:	Development	**SWL – Before (m):**	–
Date:	24/8/18	**Time – Before:**	8:45
Undertaken By:	AM/MMP	**SWL – After (m):**	–
Total Vol. Removed:	–	**Time – After:**	–
PID Reading (ppm):	–		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/m)	pH	Eh (mV)
Dry Well					

Comments:Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

Tested By:	AM / MMP
Date Tested:	24/8/18
Checked By:	PD
Date:	27/8/18

Remarks:

- All measurements are corrected to ground level
- All stated Volumes are in Litres
- SWL is an abbreviation for standing water level
- Steady state conditions - difference in the pH less than 0.2 units and difference in conductivity less than 10%
- Minimum 3 monitoring well volumes are purged

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

EIS

Client:	Cadence Property Group Pty Ltd	**Job No.:**	E31675KR
Project:	Proposed Warehouse	**Well No.:**	MW137
Location:	128 ANDREWS ROAD, PENRITH, NSW	**Depth (m):**	3.20m

WELL FINISH

	Gatic Cover		**Standpipe** ✓ 800mm		**Other (describe)**

WELL PURGE DETAILS:

Method:	Low flow Peristaltic pump	**SWL – Before:**	—
Date:	27/08/2018	**Time – Before:**	9:39am
Undertaken By:	HW/JH	**Total Vol Removed:**	—
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)
Well dry								

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

Sampling Containers Used: x glass amber, x BTEX vials, x H2NO3 plastic, x H2SO4 plastic, x unpreserved plastic

Tested By: ~~Priya Dass~~ HW/JH

Date Tested: 27/8/2018

Checked By: PD

Date: 28/8/18

Remarks:

- All measurements are corrected to ground level
- SWL is an abbreviation for standing water level
- Steady state conditions - difference in the pH less than 0.2 units and difference in conductivity less than 10%

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

EIS

Client:	Cadence Property Group Pty Ltd	**Job No.:**	E31675KR
Project:	Proposed Warehouse	**Well No.:**	MW166
Location:	128 ANDREWS ROAD, PENRITH, NSW	**Depth (m):**	3.90m

WELL FINISH

	Gatic Cover		**Standpipe** ✓ 800mm		**Other (describe)**

WELL PURGE DETAILS:

Method:	Low flow Peristaltic Pump	**SWL – Before:**	—
Date:	27/08/2018	**Time – Before:**	9:55am
Undertaken By:	HW/JH	**Total Vol Removed:**	—
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)
Well dry								

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

Sampling Containers Used: x glass amber, x BTEX vials, x H2NO3 plastic, x H2SO4 plastic, x unpreserved plastic

Tested By: ~~Priya Dass~~ HW/JH

Date Tested: 27/8/2018

Checked By: PD

Date: 28/8/18

Remarks:

- All measurements are corrected to ground level
- SWL is an abbreviation for standing water level
- Steady state conditions - difference in the pH less than 0.2 units and difference in conductivity less than 10%

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

EIS

Client:	Cadence Property Group Pty Ltd	**Job No.:**	E31675KR
Project:	Proposed Warehouse	**Well No.:**	MW10
Location:	128 ANDREWS ROAD, PENRITH, NSW	**Depth (m):**	3.0m

WELL FINISH

	Gatic Cover		**Standpipe** ✓		**Other (describe)**

WELL PURGE DETAILS:

Method:	Low flow Peristaltic	**SWL – Before:**	—
Date:	27/08/2018	**Time – Before:**	10:20am
Undertaken By:	HW/JH	**Total Vol Removed:**	—
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)
Well dry.								

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

Sampling Containers Used: x glass amber, x BTEX vials, x H2NO3 plastic, x H2SO4 plastic, x unpreserved plastic

Tested By: ~~Priya Dass~~ HW/JH

Date Tested: 27/08/2018

Checked By: PD

Date: 28/8/18

Remarks:

- All measurements are corrected to ground level
- SWL is an abbreviation for standing water level
- Steady state conditions - difference in the pH less than 0.2 units and difference in conductivity less than 10%

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ENVIRONMENTAL INVESTIGATION SERVICES

CONSULTING ENVIRONMENTAL ENGINEERS

EIS

Client:	Cadence Property Group Pty Ltd	**Job No.:**	E31675KR
Project:	Proposed Warehouse	**Well No.:**	MW18
Location:	128 ANDREWS ROAD, PENRITH, NSW	**Depth (m):**	4.0m

WELL FINISH

	Gatic Cover		**Standpipe** ✓		**Other (describe)**

WELL PURGE DETAILS:

Method:	Low flow Peristaltic pump.	**SWL – Before:**	–
Date:	27/08/2018	**Time – Before:**	10:15am
Undertaken By:	HW/JH	**Total Vol Removed:**	–
Pump Program No:	–	**PID (ppm):**	0.7

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)

Sampling Containers Used: x glass amber, x BTEX vials, x H2NO3 plastic, x H2SO4 plastic, x unpreserved plastic

Tested By: ~~Priya Dass~~ HW/JH	**Remarks:**
Date Tested: 27/8/2018	- All measurements are corrected to ground level
Checked By: PD	- SWL is an abbreviation for standing water level
Date: 28/8/18	- Steady state conditions - difference in the pH less than 0.2 units and difference in conductivity less than 10%

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Appendix H: Guidelines and Reference Documents

Document Set ID: 8449097
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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

CRC Care, (2011). Technical Report No. 10 – Health screening levels for hydrocarbons in soil and groundwater Part 1: Technical development document

CRC Care, (2017). Technical Report No. 39 – Risk-based management and guidance for benzo(a)pyrene

Contaminated Land Management Act 1997 (NSW)

Department of Land and Water Conservation, (1997). 1:25,000 Acid Sulfate Soil Risk Map (Series 9130N3, Ed 2)

Managing Land Contamination, Planning Guidelines SEPP55 – Remediation of Land (1998)

National Health and Medical Research Council (NHMRC), (2011). National Water Quality Management Strategy, Australian Drinking Water Guidelines

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

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)

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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

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