ENVIRONMENTAL INVESTIGATION SERVICES

REPORT

TO

NSW DEPARTMENT OF EDUCTION
C/- DESIGNINC SYDNEY PTY LTD

ON

SOIL VALIDATION ASSESSMENT

FOR

PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

AT

100 ETON ROAD, LINDFIELD, NSW

1 MARCH 2019

REF: E30259KDrpt-VAL

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Document Distribution Record		
Report Reference	**Distribution**	**Report Date**
E30259KDrpt-VAL	Client - Draft	23 January 2019
E30259KDrpt-VAL	Client - Final	1 March 2019

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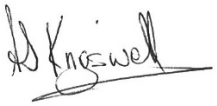

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EXECUTIVE SUMMARY

Savills (Australia) Pty Ltd on behalf of the Department of Education (DoE) ('the client') commissioned Environmental Investigation Services (EIS) to complete a Validation Assessment (VA) for the proposed Lindfield Learning Village development at 100 Eton Road, Lindfield

The proposed development includes refurbishment of the existing facilities of the former University of Technology Sydney (UTS) Lindfield campus to provide school facilities for students from kindergarten to Year 12, childcare facilities, an Intensive English Centre, DoE offices, a centre for educational research and a conference and training centre. Minor excavation works are proposed for services, curb to gutter works and landscaping in the north section of the site. The first phase of the development (identified as Phase 1) includes refurbishment of the northern portion of the site for the purposes of opening a partial school.

The primary aim of the validation assessment is to demonstrate that the EIS Remediation Action Plans (RAPs) prepared for the site were approximately implemented and that the site is suitable for the proposed development.

The adopted remediation approach included the excavation and off-site disposal of contaminated fill material.

Remediation works undertaken included the targeted excavation of the identified fill soil contaminated hotspot areas summarised below:

- Area A – Asbestos Containing Materials (ACM) remediation area, nominated as 3m x 3m ($9m^2$) in the vicinity of the sampling location BH1;
- Area B – polychlorinated biphenyls (PCBs) remediation area, nominated as 3m x 3m ($9m^2$) in the vicinity of the sampling location TP123; and
- Area C – lead remediation area, nominated as 3m x 3m ($9m^2$) in the vicinity of the sampling location TP115.

During site works an unexpected find of ACM was identified in the north-east section of the site. The area (identified as Area D) was subsequently remediated generally in accordance with the methodologies described above for Area A.

The above remediation/validation areas are shown on Figure 2 attached in the appendices.

The remediation areas were validated by obtaining soil samples of the walls and base of the excavation area. Validation samples were also obtained of topsoil imported onto the site for landscaping purposes.

The final validation sample results meet the Validation Site Assessment Criteria.

EIS consider that the validation objectives have been addressed and the remediation works described in the EIS RAPs has been completed successfully.

Based on the available data and information provided by the Remediation Contractor, EIS are of the opinion that the site is suitable for the proposed development and landuse.

The conclusions 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**
Polychlorinated Biphenyls	**PCBs**
Photo-ionisation Detector	**PID**

ABBREVIATIONS

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**
Virgin Excavated Natural Material	**VENM**
Validation Assessment Criteria	**VAC**
Volatile Organic Compounds	**VOC**
Work Health and Safety	**WHS**

Units

Metres BGL	**mBGL**
Metres	**m**
Micrograms per Litre	**µg/L**
Milligrams per Kilogram	**mg/kg**
Percentage	**%**

1 INTRODUCTION

Savills (Australia) Pty Ltd on behalf of the Department of Education (DoE) ('the client') commissioned Environmental Investigation Services (EIS) to complete a Validation Assessment (VA) for the proposed Lindfield Learning Village development at 100 Eton Road, Lindfield ('the site'). The site location is shown on Figure 1 and the assessment is applicable to the areas as shown on Figure 2.

The validation report has been prepared to address the NSW Department of Planning and Environment Consent Condition D33, Lindfield Learning Village (SSD 8114).

Dr Ian Swane (NSW EPA Accredited Site Auditor) of Ian Swane and Associates has been engaged by the client to undertake an independent audit of the project Lindfield Learning Village development.

EIS have previously investigated the site and have prepared the following reports:

- Preliminary Environmental Site Assessment (Report Ref: E30259KMrpt, dated 15 March 2017[1]);
- Preliminary Stage 2 Environmental Site Assessment (Report Ref: E30259KMrpt2, dated 16 October 2017[2]);
- Remediation Action Plan (Report Ref: E30259KMrpt3_RAP, dated 16 August 2018[3]);
- Addendum Letter to the EIS RAP 2018 (Ref: E30259KMrpt3_RAP_Addendum, dated 21 November 2018)[4]; and
- Detailed Site Investigation (Report Ref: E30259KDrpt4, dated 29 January 2019[5]).

EIS understand that the client has provided the auditor with the above reports. A summary of relevant information presented in the previous EIS investigations and RAPs is included in Section 3.

1.1 Proposed Development Details

The proposed development includes refurbishment of the existing facilities of the former University of Technology Sydney (UTS) Lindfield campus to provide school facilities for students from kindergarten to Year 12, childcare facilities, an Intensive English Centre, DoE offices, a centre for educational research and a conference and training centre. Minor excavation works are proposed for services, curb to gutter works and landscaping in the north section of the site.

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[1] EIS, (2017a). *Report to Designinc Sydney Pty Ltd on Preliminary Environmental Site Assessment for Proposed Lindfield Learning Village Development at Eton Road, Lindfield, NSW.* (referred to as EIS 2017a).

[2] EIS, (2017b). *Report to Designinc Sydney Pty Ltd on Preliminary Stage 2 Environmental Site Assessment for Proposed Lindfield Learning Village Development at Eton Road, Lindfield, NSW.* (referred to as EIS 2017b).

[3] EIS, (2018a). *Report to Designinc Sydney Pty Ltd on Remediation Action Plan for Proposed Lindfield Learning Village Development at Eton Road, Lindfield, NSW.* (referred to as EIS RAP 2018).

[4] EIS (2018b) *Report to NSW Department of Education C/- Savills Australia Pty Ltd on Remediation Action Plan - Addendum for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt3_RAP_Addendum dated 21 November 2018) (referred to as EIS RAP Addendum 2018)

[5] EIS, (2019c). *Report to NSW Department of Education C/- Designinc Sydney Pty Ltd on Detailed Site Investigation for Proposed Lindfield Learning Village Development at 100 Eton Road, Lindfield, NSW.* (referred to as EIS DSI 2019).

The first phase of the development (identified as Phase 1) includes refurbishment of the northern portion of the site for the purposes of opening a partial school for the start of term 1 in 2019. EIS understand that the majority of the required excavation works have been undertaken during the phase 1 partial school development.

The proposed development plans are attached in the appendices.

1.2 Aims and Objectives

The primary aim of the validation assessment is to demonstrate that the EIS RAP 2018 and EIS RAP Addendum 2018 were implemented and that the site is suitable for the proposed development. The objectives of the validation assessment were to:

- Document the implementation of the validation plan and unexpected finds protocol (UFP) outlined in the RAPs; and
- Provide a site validation report to address Conditions D33 of the approval, and facilitate the preparation of the Site Audit Statement by the Auditor.

1.3 Scope of Work

The validation assessment was undertaken generally in accordance with EIS proposal (Ref: EP48652KD) of 13 December 2018 and written acceptance from the client of 13 December 2018. The scope of work included the following:

- Attendance and validation sampling during soil remediation works;
- Regular site inspections to observe the excavation works;
- Preparation of waste classification documentation for off-site disposal, where required; and
- Preparation of a site validation assessment report.

The scope of work was undertaken with reference to the National Environmental Protection (Assessment of Site Contamination) Measure 1999 as amended (2013)[6], other guidelines made under or with regards to the Contaminated Land Management Act (1997)[7] and State Environmental Planning Policy No.55 – Remediation of Land (1998)[8]. A list of reference documents/guidelines is included in the appendices.

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

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

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

2 SITE INFORMATION

2.1 Site Identification

Table 2-1: Site Identification

Current Site Owner:	NSW Minister for Education
Site Address:	100 Eton Road, Lindfield, NSW, 2070
Lot & Deposited Plan:	Lot 2 and Lot 4 DP1151638
Current Land Use:	Vacant/Construction site
Proposed Land Use:	Education
Local Government Authority:	Ku-ring-gai Council
Current Zoning:	Part zoned B4 Mixed Use Part zoned E3 Environmental Management Part zoned R1 General Residential
Total Area of Former UTS Campus:	Approximately 5ha
Maximum Total Area of Proposed Soil Disturbance For Development:	Approximately 50,000m^2
RL (AHD) (approx.):	50m – 66m
Geographical Location (decimal degrees) (approx.):	Latitude: -33.7899690° Longitude: 151.1606190°

2.2 Summary of Site Condition

2.2.1 Site Conditions during the DSI in 2018

The site is located close to a predominantly residential area of Lindfield. The site is located on the crest of a hill, which in the vicinity of the site generally slopes downwards towards the south-west, south and south-east.

A walkover inspection of the site was undertaken by EIS on the 15th and 17th October 2018 as documented in the EIS DSI 2019 report. The inspection was limited to accessible areas of the site and immediate surrounds. An internal inspection of buildings was not undertaken.

Signage at various locations across the site indicated that it had most recently served as the UTS Ku-ring-gai campus). At the time of the inspection, the site consisted of a variety of multi-level brick and

concrete buildings, some interconnected, surrounded by landscaped areas and bushland. The internal refurbishment works for the proposed school had commenced. A gymnasium was located in the north-west corner of the site, beyond Dunstan Grove, with a bridge providing a pedestrian connection the main building.

Two asphaltic concrete (AC) paved car parking areas were located in the eastern section of the site. Concrete and AC roads and footpaths were situated at various locations around the site.

No obvious signs of potentially contaminating activities were observed during the site inspection and no visual suspected Asbestos Containing Materials (ACM) were observed during a visual assessment of the site surface on 17 October 2018. A visual Asbestos Clearance Certificate was subsequently issued by EIS (Report Ref: E30259KDlet.Clr, dated 17 October 2018[9]) and has been attached in the appendices.

A number of services were observed entering the north section of the site and extending towards the existing site building. These presence of these services was confirmed following a review of the 'Dial Before You Dig' (DBYD) plans undertaken as part of the EIS DSI 2019.

The north, south and east sections of the site were heavily vegetated with primarily native shrubs and trees. The vegetation appeared to be healthy and showed no visible signs of stress.

During the site inspections, EIS observed the following land uses in the immediate surrounds:

- North – Charles Bean Reserve (sports field), beyond which was a vacant remediation site (see Section 3 for further details);
- South – Bushland;
- East – Bushland; and
- West – Multistorey residential building, beyond which was bushland.

2.2.2 Site Conditions during Validation Works

The site conditions generally appeared similar to the 2018 description. The main changes were as follows:

- The building internal refurbishment works were well underway;
- Excavation associated with underground services were undertaken and appeared to have been completed at the time of reporting;
- Non-contaminated fill, natural soil and sandstone bedrock was placed in the south section of the site to maintain the fire truck access to the area and to raise site levels (an alternative to off-site disposal to landfill); and
- Landscaping works were undertaken in the north-east section of the site and appeared almost completed at the time of reporting.

[9] EIS, (2018). *Report to Department of Education C/- Savills on Visual Asbestos Clearance Certificate for Proposed Lindfield Learning Village Development at 100 Eton Road, Lindfield, NSW.*

2.3 Summary of Geology and Hydrogeology

Regional geological maps reviewed EIS DSI 2019, indicated that the site is underlain by Hawkesbury Sandstone, which typically consists of medium to coarse grained quartz sandstone with minor shale and laminite lenses.

Hydrogeological information presented in the Lotsearch report (refer to EIS 2017a report) indicated that the regional aquifer on-site and in the areas immediately surrounding the site includes porous, extensive aquifers of low to moderate productivity.

Subsurface conditions during the EIS DSI 2019 generally encountered fill at the surface or beneath the pavement in the boreholes/testpits and extended to depths of approximately 0.05m below ground level (mBGL) to 1.40mBGL. Natural soils and or sandstone bedrock was encountered beneath the fill in the majority of the boreholes/testpits. No staining, odours, potential ACM or significant amounts of building rubble were observed during soil sampling. Groundwater seepage was encountered at sampling locations BH139, BH145, TP150 and BH156 ranging from approximately 0.25mBGL to 3.0mBGL. Standing water levels measured in the monitoring wells installed for the EIS DSI 2019 ranged from Dry (MW120) to 6.7mBGL (MW139).

Considering the above, groundwater is unlikely to be encountered during the proposed development. The development proposal does not include extraction or use of groundwater.

3 SUMMARY OF SITE CONTAMINATION

3.1 Areas of Environmental Concern (AEC)

A summary of the AEC identified in the Conceptual Site Model (CSM) presented in the EIS DSI 2019 is summarised below.

3.1.1 Fill Material (on-site)

The EIS DSI 2019 indicated that the majority of the site appeared to have been historically filled to achieve existing levels. The depth of fill varied from approximately 0.05mbgl to 1.4mbgl. The origin and source of fill is unknown with the potential to contain Contaminants of Potential Concern (CoPC). A fragment of Asbestos Containing Material (ACM) in the form of a fibre cement fragment was identified within the fill material as the main CoPC that could pose a risk to site receptors in the south section of the site as part of the EIS 2017b investigation.

3.1.2 Potential Use of Pesticides (on-site)

The EIS DSI 2019 identified that pesticides may have been used beneath the buildings and/or around the site.

3.1.3 Hazardous Building Materials (on-site)

The EIS DSI 2019 identified that Greencap had completed a Hazardous Materials Risk Assessment for the proposed school development[10]. Hazardous building materials were identified at the site within the existing buildings by Greencap. EIS have been advised that limited hazardous building material are to be removed for the proposed development. The remaining hazardous materials are to be captured under a revised hazardous material register.

3.1.4 Former Bushfires (on-site)

The EIS DSI 2019 identified that the site appeared to have been impacted by bushfire in at least 1969 and 1993. Firefighting foam containing Per- and poly-fluoroalkyl substances (PFAS) may have potentially been used during fire suppression activities.

3.1.5 Former Rifle Range (off-site)

The EIS DSI 2019 identified that a rifle range was formerly located approximately 150m to the south-east and down gradient of the site. Stray bullets may have potentially landed on the site.

[10] Greencap (2017), *Demolition/Refurbishment Hazardous Building Materials Risk Assessment, UTS Lindfield Campus, Eton Road, Lindfield NSW 20701, Prepared for Designinc* (Report Ref: C120646:J142882, dated June 2017) (referred to as Greencap HAZMAT 2016).

G-tek Australia Pty Limited completed an Unexploded Ordnance Field Validation Survey[11] at the site in parallel with the EIS DSI. The G-tek Australia Pty Ltd report concluded that there was little to no risk of exposure to unexploded ordinance to receptors at the site.

3.1.6 Screen Australia (off-site)

The EIS DSI 2019 identified that remediation was in progress at a vacant property located approximately 100m to the north of the site (101 Eton Road, Lindfield). Anecdotal information suggested that a number of former underground storage tanks (USTs) and a liquid storage tank were removed from the former Screen Australia site. There was considered to be a potential risk for off-site migration of CoPC (including PFAS and Volatile Organic Compounds (VOCs)) from the remediation source area via groundwater/vapours within the fractured bedrock.

3.1.7 Charles Bean Reserve (off-site)

The EIS DSI 2019 identified a sports oval (Charles Bean Reserve) immediately to the north and up gradient of the gymnasium located in the north-west section of the site. The Charles Bean Reserve may have potentially been a former sandstone quarry and filled with landfill materials. EIS were unable to source any desktop information to support the above.

3.2 Identified Contaminants of Concern (CoPC)

The EIS DSI 2019 identified contaminants in soil, soil vapour and groundwater above the adopted Site Assessment Criteria (SAC). The exceedances were reviewed in the context of the CSM and potential valid source, pathway and receptors (SPR) linkages.

In summary, the following soil results were above the adopted Human Health Investigation Levels (HILs) for a 'residential with accessible soils' exposure scenario (HIL-A) and were considered to pose a potential SPR linkage if remediation was not undertaken:

- The EIS 2017b investigation identified ACM in the form a fibre cement fragment (FCF) in the fill soil sampled from one borehole (BH1) located in the south section of the site;
- The EIS DSI 2019 identified an elevated concentration of PCBs in fill sample TP123 (0-0.1m) located in the south-east section of the site. Additional testing was undertaken during the DSI at testpits TP151 to TP154 to further assess the extent of PCB contamination. The additional testing indicated that the PCB impacted fill extended to TP152, TP153, and TP154; and
- The EIS DSI 2019 identified an elevated lead concentration in fill sample TP115 (0-0.1m) located in the bushland in the south-east section of the site.

[11] G-tek Australia Pty Ltd (2018), *Unexploded Ordnance Field Survey Lindfield Learning Village NSW, prepared for Design Inc by G-tek Australia Pty Limited* (Ref: 18090ENIN, V1.01 dated 29 October 2018)

3.3 Soil Remediation Extent

Following discussions with the client and the Site Auditor, EIS prepared an Addendum Letter (EIS RAP Addendum 2018) to the EIS RAP 2018. The addendum to the EIS RAP 2018 proposed a remediation strategy to target the identified soil contaminated hotspot areas summarised below:

- Area A – ACM remediation area, nominated as 3m x 3m (9m^2) in the vicinity of the sampling locations BH1;
- Area B – PCB remediation area, nominated as 3m x 3m (9m^2) in the vicinity of the sampling locations TP123; and
- Area C – lead remediation area, nominated as 3m x 3m (9m^2) in the vicinity of the sampling locations TP115.

During a site landscaping works an unexpected find of ACM (surface fibre cement fragments) was identified in the north-east section of the site. The area (identified as Area D) was subsequently remediated generally in accordance with the methodologies described in the EIS RAP 2018 and EIS RAP Addendum 2018 (i.e. excavation of contaminated soils and disposal off-site to an appropriately licensed facility). Further information relating remediation and validation of the unexpected ACM find is provided in Section 5.5.

The above remediation areas are shown on Figure 2 attached in the appendices. The nominated vertical extent of remedial excavations was proposed to extend to the base of the fill material. The horizontal and vertical extent of remediation was to be confirmed by validation sampling and laboratory analysis.

3.4 Remediation Procedures

The adopted soil remediation approach for the site outlined in the EIS RAP 2018 and EIS RAP Addendum 2018, included the excavation of contaminated soils (classified in accordance with NSW EPA guidelines) and disposal off-site to an appropriately licensed facility.

The remediation approach was adopted for the remediation Areas A, B, C and D.

The remediation contractor has indicated that the Site Management Plan detailed in Section 11 of the EIS RAP 2018 was followed. Based on the information supplied and our periodic observations during remediation works, it appears that the remediation Site Management Plan was followed.

It is unclear to EIS weather the remediation works were considered Category 1 or Category 2, under State Environmental Planning Policy No.55 – Remediation of Land (1998)[12]. EIS note that School development was assessed as a State Significant Development (SSD) and development consent was granted by the NSW Department of Planning and Environment (SSD 8114). The SSD assessment process includes consultation with local Council.

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

Savills Australia Pty Ltd have indicated that Ku-ring-gai Council were notified of the development and Council have provided stamped plans confirming acceptance of external works associated with the development. EIS understand that Council representatives undertook several site inspections during construction and external works.

3.5 Summary of Waste Classification Assessments

As part of the EIS DSI 2019, soil laboratory results were assessed against the criteria presented in Part 1 of the NSW EPA Waste Classification Guidelines (2014)[13]. The results are presented in separate waste classification reports issued to the client as outlined below. Copies of the EIS waste classification reports prepared for the site are attached in the appendices:

- EIS (2018b) *Virgin Excavated Natural Material Assessment*[14], November 2018;
- EIS (2018d) *Waste Classification Assessment*[15], November 2018; and
- EIS (2019b) *Waste Classification Assessment - Addendum*[16], January 2019.

Based on the results, the fill was classified as outlined below:

- Area A (BH1) and Area D – Special Waste/General Solid Waste (non-putrescible), containing asbestos; and
- Remainder of site – General Solid Waste (non-putrescible).

Due to the detection of total PCBs at a concentration of 4.2mg/kg in the fill soil sample TP123 (0-0.1m), the fill material (identified as Area B) was considered as PCB contaminated soil (PCB waste) under the Polychlorinated Biphenyl (PCB) Chemical Control Order 1997.

The natural material outside the soil remediation Areas to the investigation depth of 1.5mBGL was classified as Virgin Excavated Natural Material (VENM).

The EIS waste classification reports were prepared following completion of the sampling/analysis of fill and natural soils for the EIS DSI 2019. Based on the site history, the sampling density, sampling pattern, sampling methods, selected CoPC and laboratory analysis (including TCLP), EIS consider that suitable information was obtained to appropriately classify the waste in accordance with the Waste Classification Guidelines 2014.

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

[14] EIS (2018b) *Virgin Excavated Material Assessment (VENM) for Proposed Lindfield Learning Village Development at 100 Eton Rd, Lindfield* (Ref: E30259KDlet dated 13 November 2018)

[15] EIS (2018d) *Waste Classification Assessment for Proposed Lindfield Learning Village Development at Eton Rd, 100 Lindfield* (Ref: E30259KDlet2-WC dated 26 November 2018)

[16] EIS (2019b) *Waste Classification Assessment-Addendum for Proposed Lindfield Learning Village Development at Eton Rd, 100 Lindfield* (Ref: E30259KDlet2-WC-Addendum dated 15 January 2019)

3.6 Waste Disposal

A summary of information relating to the contaminated waste disposed off-site to landfill from the site sourced from remediation excavated from Area's A, B, C and D is provided in Sections 5.1 to 5.5.

EIS has been informed by the remediation contactor that no other excavated materials were disposed of off-site during the remediation/validation works. However, EIS note that as a sustainable alternative to off-site disposal to landfill, some of the excavation spoil outside the remediation areas was re-used in the south section of the site for the purposes of construction of the fire truck access driveway and levelling of the area. Further information is provided in Section 5.8.

Other construction associated materials were disposed of off-site, including asbestos related materials from within the existing buildings. A summary of the relevant information provided by the remediation contractor is provided in Section 5.8.

3.7 Imported Materials

A summary of information relating to the importation of topsoil for landscaped works in the north section of the site is provided in Section 5.6.

EIS has been informed by the remediation contractor that no other imported materials as described in Section 9.3 of the EIS RAP 2018 were imported onto the site during the remediation/validation works.

4 VALIDATION PLAN

Validation is necessary to demonstrate that remedial measures described in the EIS RAP 2018 and EIS RAP Addendum 2018 (referred to as EIS RAPs) have been successful and that the site is suitable for the intended land use.

4.1 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)[17]. 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 5.7 and the detailed evaluation is provided in the appendices.

4.1.1 Step 1 - State the Problem

The EIS RAPs identified contamination issues at the site which pose a risk to the site receptors. Remediation of the site was undertaken to address these issues as outlined in this report.

Validation is necessary to demonstrate that remediation has been successful and that the site is suitable for the intended land use. The validation results are summarised in this report.

4.1.2 Step 2 - Identify the Decisions of the Study

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

1. Have the EIS RAPs been appropriately implemented by the Remediation Contractor?
2. Are any results above the Validation Assessment Criteria (VAC)?
3. Do potential risks associated with contamination exist, and if so, what are they?
4. Is further remediation required?
5. Is the site validation sufficient to provide adequate confidence in the above decisions?
6. Is the site suitable for occupation and intended landuse?

4.1.3 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;

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

- Information provided by the remediation contractor;
- Site information, including site observations;
- Sampling of soil and FCF;
- Observations of sub-surface variables such as soil type, photo-ionisation detector (PID) concentrations, odours and staining;
- Laboratory analysis of soils; and
- Field and laboratory QA/QC data.

4.1.4 Step 4 - Define the Study Boundary

The validation sampling will be confined to the remediation areas shown in Figure 2 (spatial boundary). The validation sampling was completed between 12 August 2018 and 16 January 2019 (temporal boundary). The assessment of potential risk to adjacent land users has been made based on data collected within the site boundary.

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

4.1.5.1 Tier 1 Screening Criteria

The laboratory data will be assessed against the VAC outlined in Section 4. Exceedances of the VAC 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 source-pathway-receptor (SPR) linkages.

If concentrations are measured above the adopted investigation levels on-property the following will be undertaken:

- Immediately report these results and propose recommended actions to the client for consideration and potential action;
- If concentrations are measured above the adopted investigation levels at property boundaries, report these results along with recommended actions to client for consideration and potential action; and
- If the extent of contamination has not been adequately delineated, then evaluate the need for step-out locations.

For this assessment, the individual results have been assessed as either above or below the VAC. Statistical evaluation of the dataset via calculation of mean values and/or 95% upper confidence limit (UCL) values has not been undertaken due to the limited number of samples obtained at each remediation area, limiting statistical calculations.

4.1.5.2 Field and Laboratory QA/QC

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

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

In the event that acceptable limits are not met by the laboratory analysis, other lines of evidence are reviewed (e.g. field observations of samples, preservation, handling etc) and, where required, consultation with the laboratory is undertaken in an effort to establish the cause of the non-conformance. Where uncertainty exists, EIS typically adopt the most conservative concentration reported (or in some cases, consider the data from the affected sample as an estimate).

4.1.5.3 Appropriateness of Practical Quantitation Limits (PQLs)

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

4.1.6 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 potential for decision errors are to be minimised by:

- Adopting a robust analytical QA/QC program, including data validation of laboratory-provided QA/QC results;
- Appropriate calibration of equipment to record field parameters;
- Undertaking data collection activities in accordance with the relevant guidance documents; and

- Additional sampling, or re-sampling of locations, if data obtained did not meet QA/QC requirements or were considered anomalous with the CSM.

4.1.7 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 targeted validation assessment, 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.

4.2 Roles and Responsibility

The key personnel involved in the remediation works are outlined in the table below.

Table 4-1: Roles and Responsibilities

Role	Responsibility
Project Manager	Savills Australia Pty Ltd Contact: Mr Chris Laity P: 02 8215 8993 A: Level 25, Governor Phillip Tower, 1 Farrer Place, Sydney, NSW 2000 E: claity@savills.com.au The Project Manager is required to provide all investigation reports including this plan to the remediation/construction contractor prior to commencement of remediation work. The Project Manager needs to ensure that the remediation contractor has understood the plan and will implement it in its totality. Further details are outlined in the sections below.
Site Auditor	Ian Swane & Associates Contact: Dr Ian Swane E: iswane@bigpond.com The SA was appointed by Savills Australia Pty Ltd to review the remediation and validation works undertaken at the site. The SA is to provide a final site audit statement (SAS) on the suitability of the site for the intended landuse.
Remediation Contractor	Taylor Pty Ltd Contact: Mr Dean Fondas P: 02-8736 9000 A: Level 13, 157 Walker Street, North Sydney, NSW 2060 E: deanf@taylorau.com.au

	The remediation contractor undertook the excavation and off-site disposal of fill material impacted by the CoPC as outlined in the EIS RAPs. The remediation contractor documented the excavation work and collected all necessary documentation outlined in the EIS RAPs.
Environmental Consultant	Environmental Investigation Services (EIS) Contact: Mr Mitch Delaney P: 02-9888 5000 A: PO Box 976, North Ryde BC, NSW 1670 E: mdelaney@jkgroup.net.au The environmental consultant was responsible for undertaking inspections and validation sampling as outlined in this report. The environmental consultant provided consulting advice on the ongoing remediation work at the site. The environmental consultant provided advice on any deviation to the EIS RAPs in the event of unexpected finds during the site work.

4.3 Sampling Program

4.3.1 Sampling Frequency and Methodology

The sampling program for the validation is outlined in Section 5. The validation sampling was based on the conditions encountered at the site during remediation works. Site observations and visual indicators were used as a validation tool to assess the extent of site contamination. The validation sampling was completed by the environmental consultant in accordance with the standard sampling procedures (SSP) outlined in the EIS RAPs.

As a minimum, validation samples were obtained from the following:

- Remediation areas outlined in the EIS RAPs;
- Validation of stockpile footprints after removal from the site (if applicable);
- Validation of unexpected finds encountered during remediation works; and
- Validation of material imported onto the site from external sources (if applicable).

4.3.2 Laboratory Analysis

All validation samples were analysed by NATA accredited laboratories as outlined in Section 5. The laboratories are required to meet the QA/QC requirements outlined in NEPM 2013. The analytical schedule is outlined in Section 5.

4.4 Validation Assessment Criteria (VAC)

The VAC adopted for the validation works is outlined in the table below. The VAC has been derived from the NEPM 2013 and other guidelines as applicable. The guideline values for individual contaminants is included in the laboratory summary tables attached in the appendices.

Table 4-2: VAC Adopted for this Investigation

Guideline	Applicability
Health Investigation Levels (HILs) (NEPM 2013)	Health Investigation Levels (HILs) for a 'residential with accessible soils' exposure scenario (HIL-A) will be adopted for the assessment.
Health Screening Levels (HSLs) (NEPM 2013)	Health Screening Levels (HSLs) for a 'low-high density residential' exposure scenario (HSL-A & HSL-B) will be adopted for the assessment.
Ecological Assessment Criteria (EAC) (NEPM 2013)	The EAC criteria for 'Urban residential and public open space' (URPOS) exposure setting will be adopted for the assessment. Heavy metal ambient background concentration (ABC) were calculated using average concentrations for natural soil/bedrock at the site presented in the EIS DSI 2019.
Asbestos in Soil	The 'presence/absence' of asbestos in soil will be adopted as the assessment criterion.

4.5 Material Importation Requirements

The importation criteria outlined below was used as a guide for the validation assessment. Marginal elevations of individual compounds if encountered were assessed on a case by case basis in consultation with the regulatory authorities.

4.5.1 Material for Landscaping

The proposed development includes importation of suitable material (topsoil, nutrient rich soil, etc.) for landscaping purposes. In our experience, this type of material generally does not meet the definition of VENM as outlined in the Waste Classification Guidelines 2014.

In order to minimise the risk of importing potentially contaminated material onto the site, the following measures are recommended:

- A reputable supplier of landscaped material should be contacted to identify suitable material for importation;
- Prior to the importation of the topsoil, the following documentation should be obtained from the supplier:
  - Documentation from the source site indicating that the topsoil is VENM or natural soil;

- Regular laboratory testing data indicating that the material is not contaminated. The laboratory testing results should be reviewed by the environmental consultant and as a minimum should meet the EAC outlined in the VAC;
- Product details and other documents;

- In the event the material is not from a reputed/licensed supplier, an inspection of the source material should be undertaken prior to importation onto the site. As a minimum, the stockpiled material should be sampled at a ratio of 3 samples per 75m^3 (as outlined in NEPM 2013) of material to be imported. The samples should be analysed for: heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc); TRH/BTEXN, PAHs, OCP/OPP/PCBs; and asbestos. A suitable field QA/QC procedure should be adopted;
- The environmental consultant may require imported materials to be sampled and analysed for the above CoPC on a case by case basis;
- The analytical data should be assessed against the site specific VAC;
- Provided that the analysis results do not exceed the VAC, the material can be imported onto the site and stockpiled away from the remediation area or any other stockpiles located on site;
- Fill material cannot be imported onto the site; and
- Upon importation, the material should be inspected to confirm that the material is the same as what was initially sampled/supplied and is 'free from evidence of contamination'.

4.5.2 Importation of Recycled Material

EIS have been informed by the remediation contractor that recycled material such as crushed concrete, bricks, road base, gravel etc. have not been imported for the development.

4.6 Aesthetic Criteria

Potential aesthetic issues are to be considered as part of the VAC, including the following:

- Significant soil staining or discolouration;
- Hydrocarbon, organic or offensive odours;
- Anthropogenic materials in the fill (e.g. building rubble) at concentrations above 5% of the fill composition; and
- Any potential ACM materials in soil.

5 VALIDATION ASSESSMENT

5.1 Validation of Area A – Round 1

EIS's NSW SafeWork Asbestos Assessor (Lic. No 001028) attended site on 13 November 2018 to observe the excavation of the ACM impacted soils (Area A), and to obtain validation soil samples. At the time of the inspection, Area A had been barricaded to prevent access to site workers and vehicles. The remediation area was progressively excavated with an excavator and the material placed on builder's plastic to the north of the excavation. The locations of the validation samples obtained are shown on Figure 3 attached in the appendices. EIS field notes and site photographs obtained during the remediation of Area A are attached in the appendices.

5.1.1 Sampling

The excavation dimensions measured by EIS at the time of sampling are as follows:

- 3m x 3m (9m^2); and
- 0.7-0.85m deep from the existing site surface.

Soil samples were obtained from the walls and base of the remediation excavation as detailed below (shown on Figure 3).

5.1.1.1 Excavation Walls

At the time of the inspection, natural soil was not encountered along the walls of the excavation. A total of four fill wall samples labelled as V1 to V4 (one sample at each wall location) were obtained as shown on Figure 3. A summary of the wall fill samples were obtained are outlined below:

- V1 (0.3m) – north wall;
- V2 (0.4m) – west wall;
- V3 (0.35m) – south wall; and
- V4 (0.4m) – east wall.

The sampling density was adequate to meet the rate of at least one (1) sample per 5m lineal.

5.1.1.2 Excavation Base

A single natural sandy clay sample V5 (0.85m) was obtained from the base of the excavation. The sampling density was adequate to meet the density of one (1) sample per 100m^2 (10m grid).

5.1.1.3 Stockpile Sampling

The stockpile comprised of fill soil excavated from the remediation area. The stockpile dimensions were approximately 5.8m*3.2m*1.1m with an estimated volume of approximately 20m^3. Three (3) samples SPV6 (0.35m), SPV7 (0.5m) and SPV8 (0.43m) were obtained from the stockpile. The stockpile

samples were obtained from depth within the stockpile. The stockpile sampling density exceeded the density of one sample per 25m^3.

5.1.1.4 Field Screening

Two (2) FCF were encountered during the remediation works, as summarised below:

- MDF1 was encountered on the site surface prior to excavation; and
- HLF1 was encountered within the fill material at approximately 0.1mBGL during excavation of the remediation area.

The above FCF samples were forwarded to the laboratory for analysis. No FCF was detected on completion of the remediation works.

The following observations were made in relation to aesthetics:

- Significant soil staining was not observed;
- Hydrocarbon odour were not encountered; and
- Significant amounts of building rubble were not encountered.

5.1.1.5 Sampling Equipment, Preservation, Decontamination and QA Sampling

5.1.1.5.1 Sampling Equipment and Decontamination

Soil samples were obtained directly by hand from the walls/base of the excavation and from the stockpile, therefore decontamination was not required.

5.1.1.5.2 Field QA Samples

Field QA samples were not obtained due to the following:

- The asbestos was non-friable in FCF; and
- The area was visually inspected by an Asbestos Assessor. The inspection did not show any visible FCF in the remediation excavation.

5.1.1.5.3 Sample Preservation and Transport

Sampling personnel used disposable nitrile gloves during sampling activities. The samples for asbestos analysis were placed in zip-lock plastic bags and were labelled with the job number, sample identification and date.

On completion of the fieldwork, the samples were delivered in the insulated sample container to a NATA registered laboratory for analysis under standard Chain of Custody (COC) procedures.

5.1.1.6 Laboratory Analysis

5.1.1.6.1 Analytical Schedule

All samples obtained were analysed for asbestos at the laboratory using the presence/absence method outlined below.

5.1.1.6.2 Laboratory Details

The samples were analysed for asbestos by the NATA Accredited laboratory, using stereo and polarising light microscopy methods with dispersion staining techniques (Australian Standard 4964-2004). Reference should be made to the laboratory report/s attached in the appendices for further details.

Table 5-1: Laboratory Details – Area A

Samples	Laboratory	Report Reference
All samples	Envirolab Services Pty Ltd NSW, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance).	205470

5.1.2 Summary of Laboratory Results

The laboratory results were compared to the relevant VAC as shown in the laboratory summary tables attached in the appendices. A summary of the results is presented below.

Table 5-2: Summary of Soil Laboratory Results – Area A

Validation Aspect	Results Compared to VAC
Validation of Area A Base	The validation base sample was below the VAC.
Validation of Area A Walls	All of the results for the validation wall samples were below the VAC.
Validation of Stockpile	Asbestos was encountered in the stockpile fill soil sample SPV7. A comment in the laboratory report stated that the asbestos was embedded in a single fragment of fibre cement. EIS did not observe any FCF within the excavated stockpile material during sampling activities. All of the remaining results for the stockpile samples were below the VAC.
FCF	Asbestos was encountered in the FCF fragments HLF1 and MDF1.

5.1.3 Remediation Contractor Documentation

5.1.3.1.1 Asbestos Related Controls

A subcontractor (Pure Contracting Pty Ltd) undertook the excavations works in Area A. Pure Contacting have prepared an Asbestos Removal Control Plan for the proposed development. The asbestos related controls were generally implemented for the remediation excavation works.

EIS note that the ACM (FCF) were assessed as non-friable for remediation purposes. As a precautionary measure, asbestos air fibre monitoring was undertaken by Airsafe on 13 November 2018. The results were below the reporting limit of 0.01 fibres/ml.

The results were below the reporting limit of 0.01 fibres/ml. The asbestos air fibre monitoring results are attached in the appendices.

5.1.4 Conclusion to Area A Validation

The validation sampling of the Area A excavation was in compliance with the EIS RAPs Validation sampling plan requirements. However, the excavated fill material stockpiled to the north of the excavation identified ACM in the sample SPV7.

EIS note that the remediation Area A, was located on the fire tail providing vehicle access to the southern portion of the site. At the time of the remediation works, potential ACM were not identified within the stockpiled fill material. Therefore, the excavation was backfilled with the stockpiled material to ensure vehicle access in the event of a fire.

Further ACM remediation (excavation and off-site site disposal) was required for Area A and is discussed below is Section 5.2

5.2 Validation of Area A – Round 2

EIS's NSW SafeWork Asbestos Assessor (Lic. No 001028) attended site on 15 December 2018 to observe the excavation of the ACM impacted soils backfilled in Area A (outlined above), and to obtain validation soil samples. At the time of the inspection Area A had been barricaded to prevent access to site workers and vehicles. The remediation area was progressively excavated with an excavator, with the excavated material placed directly into a plastic lined skip bin to be disposed of off-site as Special Waste/General Solid Waste (non-putrescible) in accordance with EIS waste classification report (see Section 3.4) . The locations of the validation samples obtained are shown in on Figure 4 attached in the appendices. EIS field notes and site photographs obtained during the remediation of Area A (round 2) are attached in the appendices.

5.2.1 Sampling

The excavation dimensions measured by EIS at the time of sampling are as follows:

- 3m x 3m ($9m^2$); and
- 0.7-0.95m deep from the existing site surface.

Soil samples were obtained from the walls and base of the remediation excavation as detailed below. Soil samples were obtained from the walls and base of the remediation excavation as detailed below (shown on Figure 4).

5.2.1.1 Excavation Walls

At the time of the inspection, natural soil was not encountered along the walls of the excavation. A total of four fill wall samples labelled as AV101 to AV104 (one sample at each wall location) were obtained as shown on the sampling plan attached in the appendices. A summary of the wall fill samples were obtained are outlined below:

- AV101 (0.4m) – north wall;
- AV102 (0.35m) – east wall;
- AV103 (0.55m) – south wall; and
- AV104 (0.4m) – west wall.

The sampling density was adequate to meet the rate of at least one (1) sample per 5m lineal.

5.2.1.2 Excavation Base

A single natural sandy clay sample AV105 (0.75m) was obtained from the base of the excavation. The sampling density was adequate to meet the density of one (1) sample per $100m^2$ (10m grid).

5.2.1.3 QA Sampling

Field QA samples were not obtained due to the following:

- The asbestos was non-friable in a FCF; and
- The area was visually inspected by an Asbestos Assessor. The inspection did not encounter any visible FCF in the remediation excavation.

5.2.1.4 Field Screening

The following observations were made in relation to aesthetics:

- Significant soil staining was not observed;
- Hydrocarbon odours were not encountered;
- Significant amounts of building rubble were not encountered; and
- Potential ACMs (e.g. FCF) were not identified.

5.2.1.5 Sampling Equipment, Preservation and Decontamination

5.2.1.5.1 Sampling Equipment and Decontamination

Soil samples were obtained directly by hand from the walls/base of the excavation and from the stockpile, therefore decontamination was not required.

5.2.1.5.2 Sample Preservation and Transport

Sampling personnel used disposable nitrile gloves during sampling activities. The samples for asbestos analysis were placed in zip-lock plastic bags and were labelled with the job number, sample identification and date.

On completion of the fieldwork, the samples were delivered in the insulated sample container to a NATA registered laboratory for analysis under standard Chain of Custody (COC) procedures.

5.2.1.6 Laboratory Analysis

5.2.1.6.1 Analytical Schedule

All samples obtained were analysed for asbestos at the laboratory (presence/absence).

5.2.1.6.2 Laboratory Details

The samples were analysed for asbestos by the NATA Accredited laboratory, using stereo and polarising light microscopy methods with dispersion staining techniques (Australian Standard 4964-2004). Reference should be made to the laboratory report/s attached in the appendices for further details.

Table 5-3: Laboratory Details – Area A (Round 2)

Samples	Laboratory	Report Reference
All samples	Envirolab Services Pty Ltd NSW, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	208211

5.2.2 Summary of Laboratory Results

The laboratory results were compared to the relevant VAC as shown in the laboratory summary tables attached in the appendices. A summary of the results is presented below.

Table 5-4: Summary of Soil Laboratory Results – Area A (Round 2)

Validation Aspect	Results Compared to VAC
Validation of Area A Base	The validation base sample was below the VAC.
Validation of Area A Walls	All of the results for the validation wall samples were below the VAC.

5.2.3 Remediation Contractor Documentation

5.2.3.1 Asbestos Related Controls

A subcontractor (Pure Contracting Pty Ltd) undertook the excavations works in Area A (round 2). Pure Contracting prepared an Asbestos Removal Control Plan for the proposed development.

EIS note that the ACM (FCF) were assessed as non-friable for remediation purposes. As a precautionary measure, asbestos air fibre monitoring was undertaken by Greencap during the on 15 December 2018. The results were below the reporting limit of 0.01 fibres/ml.

5.2.3.1.1 Soil Quantities and Disposal Documentation

Soil disposal documents issued by the remediation contactor are attached in the appendices. A review of the documents following clarification with the remediation contractor indicated the following:

- The proposed disposal of ACM from remediation Area A (stored in a skip bin) was registered with the NSW EPA WasteLocate system (Consignment ref: DBXW-RH4J-RUVV);
- The skip bin containing the fill material from remediation Area A was transported to the landfill facility 'Genesis Dial A Dump' as 'Asbestos Soils' on 20 December 2018; and
- The tip docket indicates that the net mass of the 'Asbestos Soils' was 13.18 tonnes.

EIS have estimated the volume of fill material from remediation Area A to be approximately 8.1m^3. Assuming a bulking factor of 1.8 for fill, the estimated tonnage was 14.5 tonnes. The difference in the estimated tonnage and reported tonnage was 1.3 tonnes. EIS are of the opinion that this difference is acceptable as the bulking factor used for the conversion is an estimate.

EIS have reviewed the NSW EPA Environmental Protection Licence (no: 13426) for the Dial-A-Dump Genesis facility located at Eastern Creek. A copy of the licence is attached in the appendices. Based on our review the facility appears suitably licenced to receive Asbestos Waste.

5.2.4 Conclusion to Area A Validation (Round 2)

The Area A (round 2) remediation and validation has been successfully completed to meet the requirements outlined in the EIS RAPs.

5.3 Validation of Area B

EIS's NSW SafeWork Asbestos Assessor (Lic. No 001028) attended site on 15 December 2018 to observe the excavation of the PCB impacted soils (Area B), and to obtain validation soil samples. At the time of the inspection, Area B had been barricaded to prevent access to site workers and vehicles. The remediation area was progressively excavated by hand tools and the soil was placed within a skip bin to be disposed of off-site as General Solid Waste (non-putrescible) in accordance with EIS waste classification report (see Section 3.4). The locations of the validation samples obtained are shown in Figure 5 attached in the appendices. EIS field notes and site photographs obtained during the remediation of Area B are attached in the appendices.

5.3.1 Sampling

The excavation dimensions measured by EIS at the time of sampling are as follows:

- 3m x 3m (9m^2); and
- 0.1-0.2m deep from the existing site surface.

Soil samples were obtained from the walls and base of the remediation excavation as detailed below. Soil samples were obtained from the walls and base of the remediation excavation as detailed below (shown on Figure 5).

5.3.1.1 Excavation Walls

At the time of the inspection, natural soil was not encountered along the walls of the excavation. A total of four fill wall samples labelled as BV101 to BV104 (one samples at each wall location) were obtained as shown on the sampling plan attached in the appendices. A summary of the wall fill samples that were obtained are outlined below:

- BV101 (0.1m) – north wall;
- BV102 (0.2m) – east wall;
- BV103 (0.2m) – south wall; and
- BV104 (0.41m) – west wall.

The sampling density was adequate to meet the rate of at least one (1) sample per 5m lineal.

5.3.1.2 Excavation Base

A single natural sandstone sample BV105 (0.1m) was obtained from the base of the excavation. The sampling density was adequate to meet the density of one (1) sample per 100m^2 (10m grid).

5.3.1.3 QA Sampling

Two field duplicate samples were obtained as follows:

- DupHLB1 – was a field duplicate of sample BV102 (0.2m); and

- DupHLB2 – was a field duplicate of sample BV103 (0.1m). This was not analysed for the validation assessment.

5.3.1.4 Field Screening

The following observations were made in relation to aesthetics:

- Significant soil staining was not observed;
- Hydrocarbon odours were not encountered;
- Significant amounts of building rubble were not encountered; and
- Potential ACMs (e.g. FCF) were not identified.

5.3.1.5 PID Screening for VOCs

A portable Photoionisation Detector (PID) was used to screen all samples for the presence of VOCs and to assist with selection of samples for laboratory analysis. The PID was calibrated before use by measurement of an isobutylene standard gas. All the PID measurements are quoted as parts per million (ppm) isobutylene equivalents. PID calibration records are attached in the appendices.

PID screening for VOCs was undertaken on soil samples using the soil sample headspace method. Data was obtained from partly filled zip-lock plastic bags following equilibration of the headspace gases. A summary of the PID data is presented on the COC documents. All results were 0ppm isobutylene equivalents which indicates a lack of PID detectable VOCs.

5.3.1.6 Sampling Equipment, Preservation and Decontamination

5.3.1.6.1 Sampling Equipment and Decontamination

Soil samples were obtained directly by hand from the walls/base of the excavation, therefore decontamination was not required.

5.3.1.6.2 Sample Preservation and Transport

Sampling personnel used disposable nitrile gloves during sampling activities. The samples were labelled with the job number, sample identification and date. Samples were placed in glass jars with plastic caps and Teflon seals with minimal headspace.

Soil samples were preserved by immediate storage in an insulated sample container with ice in accordance with the standard sampling procedures (SSP) attached in the appendices.

On completion of the fieldwork, the samples were delivered in the insulated sample container to a NATA registered laboratory for analysis under standard Chain of Custody (COC) procedures.

5.3.1.7 Laboratory Analysis

5.3.1.7.1 Analytical Schedule

The analytical schedule is outlined in the following table:

Table 5-5: Analytical Schedule – Area B Validation

CoPC	Base Samples	Wall Samples	QA
Total PCBs	1	4	1 (intra-laboratory duplicate)

5.3.1.7.2 Laboratory Details

The samples were analysed by the NATA Accredited laboratory/s using the analytical methods detailed in Schedule B(3) of NEPM 2013 and other standards. Reference should be made to the laboratory report/s attached in the appendices for further details.

Table 5-6: Laboratory Details – Area B Validation

Samples	Laboratory	Report Reference
All primary samples and field QA/QC samples including (intra-laboratory duplicate)	Envirolab Services Pty Ltd NSW, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	208211

5.3.2 Summary of Laboratory Results

The soil laboratory results were compared to the relevant VAC as shown in the laboratory summary tables attached in the appendices. A summary of the results is presented below.

Table 5-7: Summary of Soil Laboratory Results – Area B Validation

Validation Aspect	Results Compared to VAC
Validation of Area B Base	All of the results for the validation base samples were below the VAC.
Validation of Area B Base	All of the results for the validation wall samples were below the VAC.

5.3.3 Soil Quantities and Disposal Documentation

Soil disposal documents issued by the remediation contactor are attached in the appendices. A review of the documents following clarification with the remediation contractor indicated the following:

- The proposed disposal of PCB remediation Area A (stored in a skip bin) was registered with the NSW EPA WasteLocate system (Consignment ref: UB9B-NHVH-NFV4);
- The remediation contractor has indicated that "*there was originally one load for asbestos contaminated soil and it was meant to tip on 14/15 of December. Because of a Union issue, the tipping activity was stopped. It was raining that weekend, soil got rainwater into it and they divided it into two loads in order to transport them. Therefore, there are two loads for asbestos soils*";
- EIS understand that second skip bin was registered with the NSW EPA WasteLocate system (Consignment ref: PBZF-2ZHB-2Z7U);
- The skip bin containing 4.92 tonnes of fill material from remediation Area B and was transported to the landfill facility 'Genesis Dial A Dump' as 'Asbestos Soils' on 20 December 2018 (tip docket ref: GEN0076540-1). The NSW EPA WasteLocate system (Consignment ref: PBZF-2ZHB-2Z7U) was not shown on this tip docket;
- The second skip bin containing 2.2 tonnes of fill material from remediation Area B and was transported to the landfill facility 'Genesis Dial A Dump' as 'Asbestos Sheeting' on 21 December 2018 (tip docket ref: GEN0076892-1); and
- The tip dockets indicate that the net mass of the material disposed to landfill from remediation Area B was 7.12 tonnes.

EIS have estimated the volume of fill material from remediation Area B to be approximately 1.35m^3. Assuming a bulking factor of 1.8 for fill, the total estimated tonnage was 2.43 tonnes. The difference in the estimated tonnage and reported tonnage was 4.69 tonnes. EIS are of the opinion that this difference is acceptable as, the material was wet from rainfall, the bulking factor used for the conversion is an estimate and additional materials (e.g. asbestos sheeting) may have been added to the skip bins.

Although the fill material from remediation Area B was classified as General Solid Waste, based on the information provided by the remediation contractor it appears that the proposed disposal of this material was registered with the NSW EPA WasteLocate system.

EIS have reviewed the NSW EPA Environmental Protection Licence (no: 13426) for the Dial-A-Dump Genesis facility located at Eastern Creek. A copy of the licence is attached in the appendices. Based on our review the facility appears suitably licenced to receive Asbestos Waste. The facility is also licenced to receive General Solid Waste which is in accordance with waste classification provided to the in-situ PCB contaminated soil at remediation Area B.

5.3.4 Conclusion to Area B Validation

The Area B remediation and validation has been successfully completed to meet the requirements outlined in the EIS RAPs.

5.4 Validation of Area C

EIS's NSW SafeWork Asbestos Assessor (Lic. No 001028) attended site on 15 December 2018 to observe the excavation of the lead impacted soil (Area C), and to obtain validation soil samples. At the time of the inspection, Area C had been barricaded to prevent access to site workers and vehicles. The remediation area was progressively excavated by hand tools and placed within a skip bin to be disposed of off-site as General Solid Waste (non-putrescible) in accordance with EIS waste classification report (see Section 3.4) . The locations of the validation samples obtained are shown in on Figure 6 attached in the appendices. EIS field notes and site photographs obtained during the remediation of Area C are attached in the appendices.

5.4.1 Sampling

The excavation dimensions measured by EIS at the time of sampling are as follows:

- 3m x 3m (9m^2); and
- 0.1-0.15m deep from the existing site surface.

Soil samples were obtained from the walls and base of the remediation excavation as detailed below (shown on Figure 6).

5.4.1.1 Excavation Walls

At the time of the inspection, natural soil was not encountered along the walls of the excavation. A total of four fill wall samples labelled as CV101 to CV104 (one samples at each wall location) were obtained as shown on the sampling plan attached in the appendices. A summary of the wall fill samples that were obtained are outlined below:

- CV101 (0.05m) – north wall;
- CV102 (0.05m) – east wall;
- CV103 (0.05m) – south wall; and
- CV104 (0.15m) – west wall.

The sampling density was adequate to meet the rate of at least one (1) sample per 5m lineal.

5.4.1.2 Excavation Base

A single natural sandstone sample CV105 (0.15m) was obtained from the base of the excavation. The sampling density was adequate to meet the density of one (1) sample per 100m^2 (10m grid).

5.4.1.3 QA Sampling

Two field duplicate samples were obtained as follows:

- DupHLC1 – was a field duplicate of sample CV101 (0.05m); and
- DupHLC2 – was a field duplicate of sample CV102 (0.05m). This was not analysed for the validation assessment.

5.4.1.4 Field Screening

The following observations were made in relation to aesthetics:

- Significant soil staining was not observed;
- Hydrocarbon odours were not encountered;
- Significant amounts of building rubble were not encountered; and
- Potential ACM (e.g. FCF) were not identified.

5.4.1.5 PID Screening for VOCs

A portable PID was used to screen all samples for the presence of VOCs and to assist with selection of samples for laboratory analysis. The PID was calibrated before use by measurement of an isobutylene standard gas. All the PID measurements are quoted as ppm isobutylene equivalents. PID calibration records are attached in the appendices.

PID screening for VOCs was undertaken on soil samples using the soil sample headspace method. Data was obtained from partly filled zip-lock plastic bags following equilibration of the headspace gases. A summary of the PID data is presented on the COC documents. All results were 0ppm isobutylene equivalents which indicates a lack of PID detectable VOCs.

5.4.1.6 Sampling Equipment, Preservation and Decontamination

5.4.1.6.1 Sampling Equipment and Decontamination

Soil samples were obtained directly by hand from the walls/base of the excavation, therefore decontamination was not required.

5.4.1.6.2 Field QA Samples

A trip blank sample TBVA (15-12-18) was included in the batch to check for representativeness.

5.4.1.6.3 Sample Preservation and Transport

Sampling personnel used disposable nitrile gloves during sampling activities. The samples were labelled with the job number, sample identification and date. Samples were placed in glass jars with plastic caps and Teflon seals with minimal headspace.

Soil samples were preserved by immediate storage in an insulated sample container with ice in accordance with the standard sampling procedures (SSP) attached in the appendices.

On completion of the fieldwork, the samples were delivered in the insulated sample container to a NATA registered laboratory for analysis under standard Chain of Custody (COC) procedures.

5.4.1.7 Laboratory Analysis

5.4.1.7.1 Analytical Schedule

The analytical schedule is outlined in the following table:

Table 5-8: Analytical Schedule – Area C Validation

CoPC	Base Samples	Wall Samples	QA
Lead	1	4	1 (intra-laboratory duplicate) 1 (field blank)

5.4.1.7.2 Laboratory Details

The samples were analysed by the NATA Accredited laboratory/s using the analytical methods detailed in Schedule B(3) of NEPM 2013 and other standards. Reference should be made to the laboratory report/s attached in the appendices for further details.

Table 5-9: Laboratory Details – Area C Validation

Samples	Laboratory	Report Reference
All primary samples and field QA/QC samples including (intra-laboratory duplicate and field blank)	Envirolab Services Pty Ltd NSW, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	208211

5.4.2 Summary of Laboratory Results

The soil laboratory results were compared to the relevant VAC as shown in the laboratory summary tables attached in the appendices. A summary of the results is presented below.

Table 5-10: Summary of Soil Laboratory Results – Area C Validation

Validation Aspect	Results Compared to VAC
Validation of Area C Base	The result for the validation base sample was below the VAC.

Validation Aspect	Results Compared to VAC
Validation of Area C Base	All of the results for the validation wall samples were below the VAC. Lead concentrations ranging from 6 mg/kg to 130 mg/kg were detected in the validation samples. However, these concentrations were below the VAC.

5.4.3 Soil Quantities and Disposal Documentation

Soil disposal documents issued by the remediation contactor are attached in the appendices. A review of the documents following clarification with the remediation contractor indicated the following:

- The proposed disposal of lead contaminated soil from remediation Area C (stored in a skip bin) was registered with the NSW EPA WasteLocate system (Consignment ref: SBVJ-D93U-943Y);
- The skip bin containing the fill material from remediation Area C was transported to the landfill facility 'Genesis Dial A Dump' as 'Asbestos Waste' on 21 December 2018; and
- The tip docket recorded the net mass of the 'Asbestos Waste' as 1.44 tonnes.

EIS have estimated the volume of fill material from remediation Area A to be approximately 1.1m^3. Assuming a bulking factor of 1.8 for fill, the estimated tonnage was 1.98 tonnes. The difference in the estimated tonnage and reported tonnage was 0.4 tonnes. EIS are of the opinion that this difference is acceptable as the bulking factor used for the conversion is an estimate.

Although the fill material from remediation Area C was classified as General Solid Waste, based on the information provided by the remediation contractor it appears that the proposed disposal of this material was registered with the NSW EPA WasteLocate system. It is unclear to EIS if additional asbestos sheeting was placed in the skip bin with the fill material excavated from remediation Area C.

EIS have reviewed the NSW EPA Environmental Protection Licence (no: 13426) for the Dial-A-Dump Genesis facility located at Eastern Creek. A copy of the licence is attached in the appendices. Based on our review the facility appears suitably licenced to receive Asbestos Waste.

5.4.4 Conclusion to Area C Validation

The Area C remediation and validation has been successfully completed to meet the requirements outlined in the EIS RAPs.

5.5 Validation of Area D

Validation of imported topsoil was undertaken by EIS on 14 January 2019. Approximately five FCF were observed on the surface in the north-east section of the site. The FCF appeared to be partially buried within the fill material. Two representative FCF (HWF1 and HWF2) were obtained and analysed for

asbestos by the NATA Accredited laboratory, using stereo and polarising light microscopy methods with dispersion staining techniques (Australian Standard 4964-2004).

The laboratory results (lab report ref: 209410, attached in the appendices) indicated that the FCF HWF1 and HWF2 contained asbestos. The results have been included in the laboratory summary tables attached in the appendices. The ACM (FCF) sampling locations are shown on Figure 2 attached in the appendices. EIS field notes and site photographs obtained on 14 January 2019 are also attached in the appendices.

The detection of ACM in the north-east section of the site was considered to be an unexpected find. The source of the ACM is considered to be associated with a localised historically filled area or may be associated with a larger FCF that has broken up over time.

A similar remediation approach to Area A was implemented for Area D (i.e. excavation of a 3m x3m area down to natural soil and off-site disposal of asbestos impacted soils). The remediation area (Area D) is shown on Figure 2 attached in the appendices.

EIS's NSW SafeWork Asbestos Assessor (Lic. No 001028) attended site on 16 January 2019 to observe the excavation of the ACM impacted soils (Area D), and to obtain validation soil samples. At the time of the inspection, Area D had been barricaded to prevent access to site workers and vehicles. The remediation area was progressively excavated with an excavator, with the excavated material placed directly in a skip bin lined with plastic, to be disposed of off-site as Special Waste/General Solid Waste (non-putrescible) in accordance with EIS waste classification report (see Section 3.4). The locations of the validation samples obtained are shown in on Figure 7 attached in the appendices. EIS field notes and site photographs obtained during the remediation of Area D are attached in the appendices.

5.5.1 Sampling

The excavation dimensions measured by EIS at the time of sampling are as follows:

- 3.3m x 3m (10m^2); and
- 0.3-0.55m deep from the existing site surface.

Soil samples were obtained from the walls and base of the remediation excavation as detailed below (shown on Figure 7).

5.5.1.1 Excavation Walls

At the time of the inspection, natural soil was not encountered along the walls of the excavation. A total of four fill wall samples labelled as DV201 to DV204 (one samples at each wall location) were obtained as shown on the sampling plan attached in the appendices. A summary of the wall fill samples that were obtained are outlined below:

- DV201 (0.15m) – north wall;
- DV202 (0.1m) – east wall;

- DV203 (0.2m) – south wall; and
- DV204 (0.1m) – west wall.

The sampling density was adequate to meet the rate of at least one (1) sample per 5m lineal.

5.5.1.2 Excavation Base

Two natural sandstone samples DV205 (0.55m) and DV206 (0.3m) were obtained from the base of the excavation. The sampling density was adequate to meet the density of one (1) sample per 100m^2 (10m grid).

5.5.1.3 Field Screening

The following observations were made in relation to aesthetics:

- Significant soil staining was not observed;
- Hydrocarbon odours were not encountered;
- Significant amounts of building rubble were not encountered; and
- Some FCF were observed during excavation of the upper layer of the fill material. No FCF were observed in the wall and base following completion of the excavation.

5.5.1.4 Sampling Equipment, Preservation, Decontamination and QA Sampling

5.5.1.4.1 Sampling Equipment and Decontamination

Soil samples were obtained directly by hand from the walls/base of the excavation, therefore decontamination was not required.

5.5.1.4.2 Field QA Samples

Field QA samples were not obtained due to the following:

- The asbestos was non-friable in FCF; and
- The area was visually inspected by an Asbestos Assessor. The inspection did not encounter any visible FCF in the remediation excavation.

5.5.1.4.3 Sample Preservation and Transport

Sampling personnel used disposable nitrile gloves during sampling activities. The samples for asbestos analysis were placed in zip-lock plastic bags and were labelled with the job number, sample identification and date.

On completion of the fieldwork, the samples were delivered in the insulated sample container to a NATA registered laboratory for analysis under standard Chain of Custody (COC) procedures.

5.5.1.5 Laboratory Analysis

5.5.1.5.1 Analytical Schedule

All samples obtained were analysed for asbestos at the laboratory (presence/absence).

5.5.1.5.2 Laboratory Details

The samples were analysed for asbestos by the NATA Accredited laboratory, using stereo and polarising light microscopy methods with dispersion staining techniques (Australian Standard 4964-2004). Reference should be made to the laboratory report attached in the appendices for further details.

Table 5-11: Laboratory Details – Area D

Samples	Laboratory	Report Reference
All samples	Envirolab Services Pty Ltd NSW, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	209533

5.5.2 Summary of Laboratory Results

The laboratory results were compared to the relevant VAC as shown in the laboratory summary tables attached in the appendices. A summary of the results is presented below.

Table 5-12: Summary of Soil Laboratory Results – Area D

Validation Aspect	Results Compared to VAC
Validation of Area D Base	All of the results for the validation base samples were below the VAC.
Validation of Area D Walls	All of the results for the validation wall samples were below the VAC.

5.5.3 Remediation Contractor Documentation

5.5.3.1.1 Asbestos Related Controls

A subcontractor (Pure Contracting Pty Ltd) undertook the excavations works in Area D. Pure Contracting prepared an Asbestos Removal Control Plan for the proposed development.

EIS note that the ACM (FCF) were assessed as non-friable for remediation purposes. As a precautionary measure, asbestos air fibre monitoring was undertaken by Airsafe during the on 16 January 2019. The results were below the reporting limit of 0.01 fibres/ml.

5.5.3.1.2 Soil Quantities and Disposal Documentation

Soil disposal documents issued by the remediation contactor are attached in the appendices. A review of the documents following clarification with the remediation contractor indicate the following:

- The proposed disposal of ACM from remediation Area D (stored in a skip bin) was registered with the NSW EPA WasteLocate system (Consignment ref: H3V6-AJMM-E632);
- The skip bin containing the fill material from remediation Area A was transported to the landfill facility 'Suez Recycling & Recovery Pty Ltd' as 'Asbestos' on 17 January 2019; and
- The tip docket indicates that the net mass of the 'Asbestos Soils' was 7.22 tonnes.

EIS have estimated the volume of fill material from remediation Area D to be approximately 4.05m^3. Assuming a bulking factor of 1.8 for fill, the estimated tonnage was 7.29 tonnes. The difference in the estimated tonnage and reported tonnage was 0.07 tonnes. EIS are of the opinion that this difference is acceptable as the bulking factor used for the conversion is an estimate.

EIS have reviewed the NSW EPA Environmental Protection Licence (no: 4068) for the Sita Australia Pty Ltd – Elizabeth Drive Landfill Facility located at Kemps Creek. A copy of the licence is attached in the appendices. Based on our review the facility appears suitably licenced to receive Asbestos Waste.

5.5.4 Conclusion to Area D Validation

EIS Asbestos Assessor undertook a visual assessment of the northern site surface on 16 January 2019. No potential FCF or ACM were observed and a visual Asbestos Clearance Certificate was subsequently issued by EIS (Report Ref: E30259KDlet.Clr2, dated 17 January 2019[18]). The Asbestos Clearance Certificate is attached in the appendices.

The Area D remediation and validation has been successfully completed to meet the requirements outlined in the EIS RAPs.

5.6 Validation of Imported Topsoil

On 10 January 2019, EIS observed the importation of topsoil (dark brown/black and of high organic content) sourced from Australian Native Landscapes Pty Ltd (ANL). Minor amounts of topsoil appeared to have been placed and spread across the north-east site surface. EIS inspected the placed topsoil and did not observe any FCF. Site photographs obtained at the time of the inspection are attached in the appendices.

[18] EIS, (2018). *Report to Department of Education C/- Savills on Visual Asbestos Clearance Certificate for Proposed Lindfield Learning Village Development at 100 Eton Road, Lindfield, NSW.*

On 14 January 2019, EIS attended site to inspection the topsoil and to obtain validation soil samples of the imported materials. At the time of the inspection, delivery of topsoil from ANL was underway with the material stockpiled and progressively spread across the north-east section of the site. EIS inspected the placed/stockpiled topsoil and did not observe any FCF. Landscaping, including the placement of topsoil was yet to occur in the north-west section of the site. The locations of the topsoil validation samples obtained are shown on Figure 8 attached in the appendices. EIS field notes and site photographs obtained during the topsoil validation are attached in the appendices.

5.6.1 Sampling

Samples were obtained from the surface of the placed and stockpiled topsoil material located in the north-east section of the site as detailed below and shown on Figure 8).

5.6.1.1 Surface Topsoil

A total of four surface topsoil samples labelled as TOP2, TOP3, TOP4 and TOP6 were obtained.

5.6.1.2 Stockpiled Topsoil

Two topsoil samples labelled TOPSP1 and TOPSP5 were obtained from stockpile (approximately 22m^3) located in the north-east section of the site. One topsoil sample labelled TOPSP7 was obtained from stockpile (approximately 14m^3) located in the north-east section of the site.

5.6.1.3 QA Sampling

Three field duplicate samples were obtained as follows:

- DOPDUP1 – was a field duplicate of sample TOPSP1;
- TOPDUP2 – was a field duplicate of sample TOP3; and
- TOPDUP3 – was a field duplicate of sample TOP6. This sample was not analysed for the assessment.

A trip blank sample TOPTB (14-1-19) and a trip spike TOPTS1 (14-1-19) were included in the batch to check for representativeness.

5.6.1.4 Topsoil Field Screening

The following observations were made in relation to aesthetics of the topsoil:

- Significant soil staining was not observed;
- Hydrocarbon odours were not encountered;
- Significant amounts of building rubble were not encountered; and
- Potential ACM (e.g. FCF) were not identified.

5.6.1.5 Sampling Equipment, Preservation and Decontamination

5.6.1.5.1 Sampling Equipment and Decontamination

Soil samples were obtained directly by hand from the site surface and stockpile, therefore decontamination was not required.

5.6.1.5.2 Sample Preservation and Transport

Sampling personnel used disposable nitrile gloves during sampling activities. The samples were labelled with the job number, sample identification and date. Samples were placed in glass jars with plastic caps and Teflon seals with minimal headspace.

Soil samples were preserved by immediate storage in an insulated sample container with ice in accordance with the standard sampling procedures (SSP) attached in the appendices.

On completion of the fieldwork, the samples were delivered in the insulated sample container to a NATA registered laboratory for analysis under standard Chain of Custody (COC) procedures.

5.6.1.6 Laboratory Analysis

5.6.1.6.1 Analytical Schedule

The analytical schedule is outlined in the following table:

Table 5-13: Analytical Schedule – Topsoil Validation

CoPC	Surface Samples	Stockpile Samples	QA
8 Heavy Metals	5	3	1 (intra-laboratory duplicate) 1 (inter-laboratory duplicate)
TRH	5	3	1 (intra-laboratory duplicate) 1 (inter-laboratory duplicate)
TRH (silica gel)	1	Na	Na
BTEX	5	3	1 (intra-laboratory duplicate) 1 (inter-laboratory duplicate) 1 (trip blank) 1 (trip spike)
PAHs	5	3	1 (intra-laboratory duplicate) 1 (inter-laboratory duplicate)
OCP/OPP	5	3	1 (intra-laboratory duplicate) 1 (inter-laboratory duplicate)

CoPC	Surface Samples	Stockpile Samples	QA
PCBs	5	3	1 (intra-laboratory duplicate) 1 (inter-laboratory duplicate)
Asbestos in soil	4	3	Na

5.6.1.6.2 Laboratory Details

The samples were analysed by the NATA Accredited laboratory/s using the analytical methods detailed in Schedule B(3) of NEPM 2013 and other standards. Reference should be made to the laboratory report/s attached in the appendices for further details.

Table 5-14: Laboratory Details – Topsoil Validation

Samples	Laboratory	Report Reference
All primary samples and field QA/QC samples including (intra-laboratory duplicate and field blank)	Envirolab Services Pty Ltd NSW, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	209474 and 209474-A
Inter-laboratory duplicates	Envirolab Services Pty Ltd VIC, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	15795

5.6.2 Summary of Laboratory Results

The soil laboratory results were compared to the relevant VAC as shown in the laboratory summary tables attached in the appendices. A summary of the results is presented below.

Table 5-15: Summary of Soil Laboratory Results – Topsoil Validation

Validation Aspect	Results Compared to VAC
Validation of topsoil.	The copper results for the topsoil samples TOPSP1, DOPDUP1 (TOPSP1) and TOP3 detected elevated concentrations ranging from 100mg/kg to 120mg/kg above the ecological VAC. The zinc results for the topsoil samples TOPSP1, DOPDUP1 (TOPSP1), TOP3 and TOP4 detected elevated concentrations ranging from 83mg/kg to 150mg/kg above the ecological VAC. The TRH (F3) result for the topsoil sample TOPSP1 detected elevated concentration of 1,500mg/kg above the ecological VAC. Subsequent analysis of the above sample for TRH following silica gel clean-up, indicated that the TRH results were below the ecological VAC.

Validation Aspect	Results Compared to VAC
	All of the remaining results for the validation topsoil samples were below the VAC.

5.6.3 Remediation Contractor Topsoil Documentation and Quantities

The remediation contractor provided EIS with documentation relating to the topsoil imported by ANL. The topsoil documentation supplied by the remediation contractor is attached in the appendices. The topsoil comprised of two commercial available products identified as Native Soil Mix and Turf Underlay. Chemical nutrient data was also supplied and a letter from ANL which indicates that the Native Garden Mix and Turf underlay was VENM sourced, with the following information provided:

"*The compost content, (Greenlife Mulch and Compost), that's used in the manufacture of the Turf Underlay and Native Garden Mix - Low P mixes has been certified under AS4454 Compost Soil Conditioners and Mulches and complies with the NSW EPA Resource Recovery Compost Order 2016 and NSW EPA Resource Compost Exemption 2016. This compost material is blended with the mineral content. No fertilisers are added in the mixing process*".

Consent Condition No 29, requires that the applicant must ensure that only VENM, Excavated Natural Material (ENM), or other material approved in writing by the EPA is bought onto the site. The information above and associated documentation provided by the remediation contractor (care of ANL) should be considered in the assessment of whether Consent Conditions No 29 was met.

EIS's validation of the imported topsoil (sourced from ANL) was limited to the assessment of the topsoils chemical properties and the potential risks to the associated human and ecological receptors. The validation of the imported topsoil soil was not designed to assess compliance of the ANL supplied topsoil under the NSW EPA Resource Recovery Compost Order 2016. We note that the Compost Order sampling requirement for the supplier includes the requirement for analysis of Salmonella, E.Coli, faecal coliforms etc, however, laboratory data has not been supplied confirming this analysis. ANL have supplied documentation indicating that the supplied topsoil (Native Soil Mix and Turf Underlay) complies with the NSW EPA Compost Order 2016 and NSW EPA Resource Recovery Compost Exemption 2016. Therefore and based on the information supplied the topsoil has been accepted and applied to land under the Exemption.

Topsoil importation documentation issued by the remediation contactor suggests approximately 195 tonnes of topsoil described above was imported from ANL between 9 January 2019 and 23 January 2019 to the north section of the site for landscaping purposes.

5.6.4 Conclusion to Topsoil Validation

Section 10.3 of the EIS RAP 2018 indicates that should imported materials not meet the importation VAC, then the imported material should not be accepted and used on the site. However, Section 8.3 of the EIS RAP 2018 and Section 4.5 of this report indicates that the VAC for imported materials should be used as a guide for initial assessment and elevations should be assessed on a case by case basis.

Some of the topsoil copper and zinc results were above the ecological VAC, the risk to potential ecological receptors is considered to be low due to the following:

- The most conservative ACL values were adopted for the assessment as pH and CEC values were not calculated to derive specific ACL values;
- The topsoil was sourced from a reputable supplier in ANL. ANL have indicated that the supplied topsoil was sourced from VENM, is AS:4454 certified, complies with the NSW EPA Recovery Compost Order 2016 and the NSW EPA Recovery Compost exemption 2016;
- The topsoil is a commercially available product; and
- Heavy metals are often detected in imported topsoil.

EIS note that remediation of soil ecological evaluations encountered during the EIS DSI 2019 (outside of the areas where human health elevation were encountered) was not proposed in the EIS RAPs.

Although some of the heavy metal results exceeded the ecological VAC, based on the information supplied by the remediation contactor and results of the topsoil validation assessment, EIS are of the opinion that rejection (i.e. excavation and removal of the in-situ imported topsoil) is not warranted.

EIS are of the opinion that the topsoil validation has been successfully completed to meet the requirements outlined in the EIS RAPs.

5.7 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 validation objectives.

5.8 Summary of Other Waste Disposal and Other Excavated Materials

Other than the remediation associated excavations from remediation Area's A-D. EIS have been informed by the remediation contactor that no other excavated materials were disposed of off-site during the remediation/validation works.

The remediation contractor has provided EIS with waste summary Environmental Management Reports, prepared by Fresh Start Australia for October, November and December 2018. The provided reports are attached in the appendices. In summary, it appears that other construction associated materials including brick, metal, tiles, dirt, sand, soil, timber, green waste, cardboard, plastic, paper, were disposed of off-site. The total landfill waste between October and December 2018 was estimated

as 9.37 tonnes. The information provided indicates that 5.06 tonnes was disposed to landfill in December 2018. However, based on the tip dockets a total of 16.82 tonnes was disposed of off-site to landfill in December 2018 from remediation Area A, B and C. Remediation Area D was remediated on 16 January 2019, with approximately 7.22 tonnes disposed to landfill. EIS have not been provided with a waste summary report for January 2019.

Asbestos materials located within the building were removed and disposed of off-site to landfill by Taylor's sub-contractors. Documentation provided by the remediation contractor to EIS was not presented in a logical manner as requested by EIS. The documentation included duplication of information provided for the off-site disposal of soil from remediation Area's A-D. A summary of relevant documentation (i.e. not already discussed in Section 5) and based on our interpretation of the provided information is presented below:

- It appears that the internal asbestos containing materials were removed from the existing building between 8 August 2018 and 11 December 2018;
- It appears that the asbestos materials were placed in plastic lined skip bins and disposed of to the Dial-A-Dump Genesis facility located at Eastern Creek as either Asbestos Sheeting or Asbestos Waste;
- The provided tip dockets suggest that approximately 53.3 tonnes of Asbestos Sheeting/Asbestos Waste was disposed of to the Dial-A-Dump Genesis facility located at Eastern Creek;
- The NSW EPA WasteLocate Consignment reference number was not provided on some of the tip dockets provided. EIS have attempted to match the tip dockets to the presumed consignment reference number based on the pickup/delivery date and vehicle registration number; and
- The above information provided by the remediation contractor has been summarised by EIS in a table attached and in the appendices.

EIS have reviewed the NSW EPA Environmental Protection Licence (no: 13426) for the Dial-A-Dump Genesis facility located at Eastern Creek. A copy of the licence is attached in the appendices. Based on our review the facility appears suitably licenced to receive Asbestos Waste.

EIS note that as a sustainable alterative to off-site disposal to landfill, some of the excavation spoil outside the remediation Areas A-D was re-used in the south section of the site for the purposes of construction of the fire truck access driveway and levelling of the area. The stockpiled and placed soil (approximately 2,500m^3) was primarily VENM sourced from excavation trenches and other excavations, however some non-contaminated fill material sourced from the lower carpark extension, kerbs and gutter works and the removal of top soil from the landscape area. During the placement of soil the areas were regularly inspected by EIS as discussed in Section 5.9 below.

5.9 Additional Site Inspections

EIS undertook intermittent site inspections between 12 August 2018 and 22 January 2019. The site inspections were limited to visual assessment of site earthworks activities.

EIS note that as a sustainable alterative to off-site disposal to landfill, some of the excavation spoil outside the remediation areas was re-used in the south section of the site for the purposes of construction of the fire truck access driveway and levelling of the area.

The following observations were made in relation to aesthetics of the excavation, stockpiled/placed material in the south section of the site and exposed soil areas:

- Significant soil staining was not observed;
- Hydrocarbon odours were not encountered;
- Significant amounts of building rubble were not encountered; and
- Other than the ACM (FCF) identified in the north-east section of the site on 14 January 2019 (addressed via remediation of Area D), no other potential ACM were identified.

Site photographs obtained during the additional EIS site inspections are attached in the appendices.

6 DISCUSSION

6.1 Review of Site Validation

A review of the site validation undertaken for the proposed development is outlined in this section.

6.1.1 Validation of Area A

The Area A remediation and validation has been successfully completed to the requirements outlined in the EIS RAPs.

6.1.2 Validation of Area B

The Area B remediation and validation has been successfully completed to the requirements outlined in the EIS RAPs.

6.1.3 Validation of Area C

The Area C remediation and validation has been successfully completed to the requirements outlined in the EIS RAPs.

6.1.4 Validation of Area D

The Area D remediation and validation has been successfully completed to the requirements outlined in the EIS RAPs.

6.1.5 Validation of Imported Topsoil

The validation sampling density for the assessment of the imported topsoil did not meet that proposed in the EIS RAPs. However, EIS are of the opinion that validation data is reliable enough to conclude that the topsoil does not pose a significant contamination risk to the receptors.

6.2 Unexpected Finds

The discovery of ACM in the north-east of the site on 14 January 2019 by EIS was considered an unexpected find. However, the ACM impacted area (Area D) was subsequently remediated as discussed above.

No other unexpected finds were reported to EIS. The remediation contractor has confirmed that no other unexpected finds were encountered.

6.3 Decision Statements

A review of the decision statements are addressed below:

Table 6-1: Review of Decision Statements

Decision Statements	Decision Results
Have the EIS RAPs been appropriately implemented by the Remediation Contractor?	Yes. Based on EIS site observations and the information provided by the Remediation Contractor.
Are any results above the VAC?	Yes. The copper results for imported topsoil were above the ecological VAC. This is not considered to pose a risk to site receptors. All remaining results were below the VAC.
Do potential risks associated with contamination exist, and if so, what are they?	No. Although the copper results for the imported topsoil were above the ecological VAC, they were not considered to be a significant risk to the ecological receptors.
Is further remediation required?	No. Based on validation data, EIS site observations and the information provided by the Remediation Contractor.
Is the site Validation sufficient to provide adequate confidence in the above decisions?	Yes. Based on validation data, EIS site observations and the information provided by the Remediation Contractor.
Is the site suitable for occupation and intended landuse?	Yes.

7 CONCLUSION

EIS consider that the validation objectives outlined in Section 1.2 have been addressed.

The remediation works described in the EIS RAPs has been completed successfully. EIS understand that all required topsoil (sourced from ANL) has been imported and placed in the landscaped areas. As of 22 January 2019 the placement of turf cover in the north-west section of the site was pending as shown in a photograph attached in the appendices. EIS understand that this has now been completed.

Based on the available data and information provided by the Remediation Contractor, EIS are of the opinion that the site is suitable for the proposed development and landuse.

The NSW EPA Accredited Site Auditor has issued a Section A1, Site Audit Statement (No.279) on 25 January 2019, indicating that the site is suitable for "The school development specified by Partial Development Consent issued by the NSW Department of Planning for State Significant Development Application No:8114". This concurs with EIS's conclusion above.

8 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.

LIST OF IN-TEXT TABLES

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

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

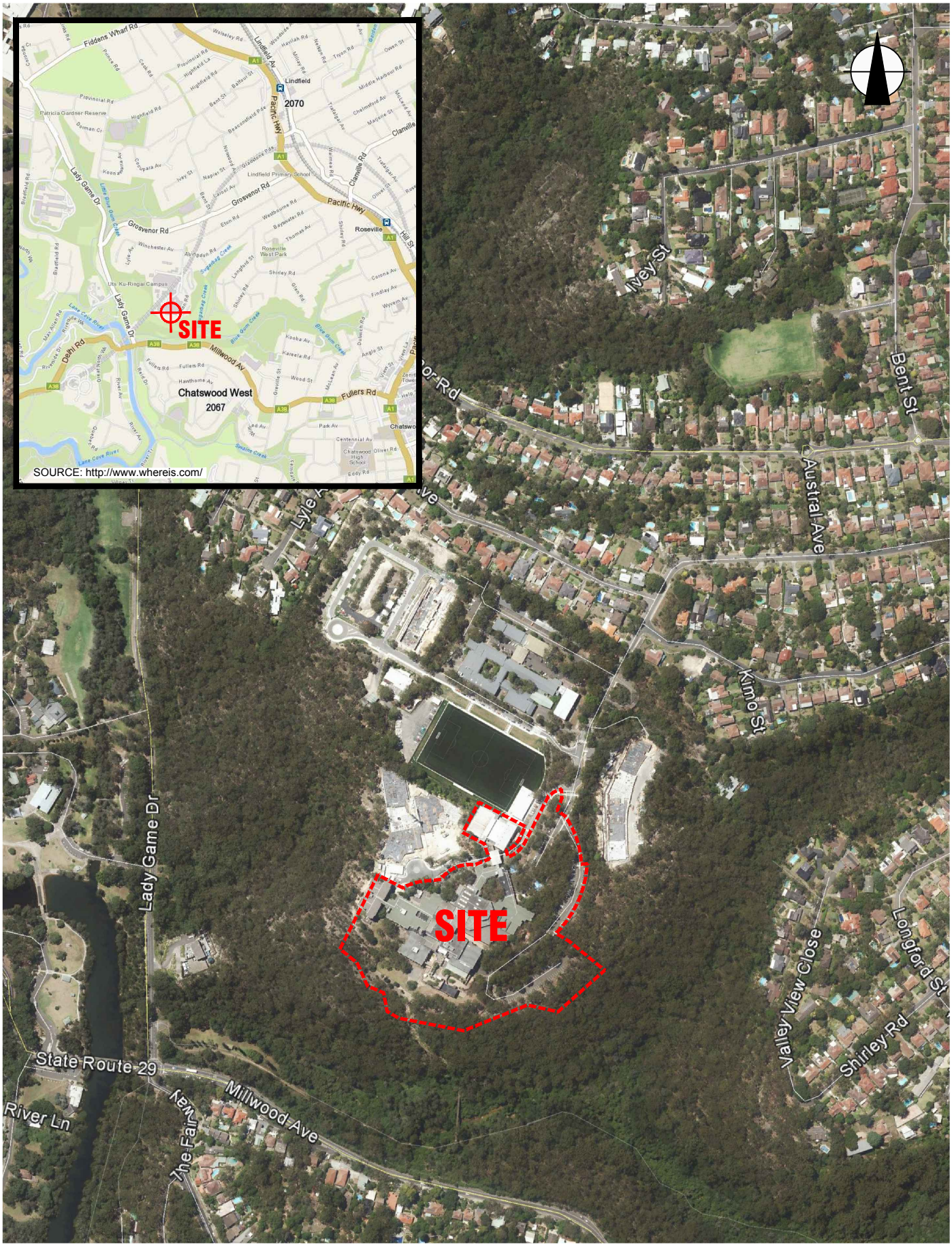
Borehole and test pit logs are prepared by environmental scientists, engineers or geologists based upon interpretation of field conditions and laboratory evaluation of field samples. Logs are normally provided in our reports and these should not be re-drawn for inclusion in site remediation or other 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.

REPORT FIGURES



AERIAL IMAGE SOURCE: GOOGLE EARTH PRO 7.1.5.1557
AERIAL IMAGE ©: 2015 GOOGLE INC.

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

Title: **SITE LOCATION PLAN**

Location: 100 ETON ROAD
LINDFIELD, NSW

Report No: E30259KDrpt_VAL

Figure No: 1

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

PLOT DATE: 17/01/2019 1:57:19 PM DWG FILE: S:\5 EIS\5C EIS JOBS\30000'S\E30259KM LINDFIELD\CAD\E30259KORPT_VAL.DWG

CHARLES BEAN SPORTS FIELD

TP150(0.2)
BH/MW156(1.1)
TP148(0.05)
TP149(0.1)
BH/MW145(0.3)
BH/MW157(0.4)
TP144(0.2)
TP146(0.1)
BH147(0.08)
BH/MW139(0.35)
TP142(0.1)
BH143(0.2)
TP140(0.2)
TP141(0.3)
AREA D
TP136(0.1)
TP135(0.15)
TP137(0.1)
BH138(0.1)
TP111(0.2)
TP133(0.3)
TP132(0.8)
BH134(0.2)
TP131(0.15)
TP126(0.65)
TP128(0.1)
TP129(0.95)
TP130(1.4)
TP127(0.4)
AREA B
TP154(0.15)
TP124(0.1)
TP125(0.15)
TP122(0.2)
BH118(0.2)
BH/MW155(0.4)
BH119(1.3)
BH/MW120(0.4)
TP121(0.2)
TP116(0.05)
TP117(0.2)
AREA C
AREA A
TP113(1.0)
TP115(0.1)
TP112(0.2)
TP114(0.2)
TP109(0.1)
TP110(1.4)
BH3(0.35)
BH1(0.3)
BH5(0.2)
BH/MW2(0.3)
BH/MW4(0.2)
TP104(0.15)
TP105(0.7)
TP106(0.8)
TP107(0.7)
TP108(0.9)
TP101(0.2)
TP102(0.3)
TP103(0.4)

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM, 23 OCT 2018.

AREA D - UNEXPECTED ACM FIND REMEDIATION

HWF1
HWF2

SCALE 1:100

AREA A - ACM REMEDIATION

BH1(0.3)

SCALE 1:100

AREA B - PCB REMEDIATION

TP151(0.15)
TP154(0.15)
TP123(0.4)
TP152(0.2)
TP153(0.2)

SCALE 1:100

AREA C - LEAD REMEDIATION

TP115(0.1)

SCALE 1:100

LEGEND

	APPROXIMATE SITE BOUNDARY
BH/MW(Fill Depth)	BOREHOLE AND GROUND WATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
BH (Fill Depth)	GROUND WATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
TP(Fill Depth)	TEST PIT LOCATION, NUMBER AND DEPTH OF FILL (m)
HWF1	FIBRE CEMENT FRAGMENT CONTAINING ASBESTOS LOCATION
	SOIL REMEDIATION AREAS

0 12 24 36 48 60
SCALE 1:1200 @A3 METRES

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

Title: **SOIL REMEDIATION AREAS**

Location: 100 ETON ROAD LINDFIELD, NSW

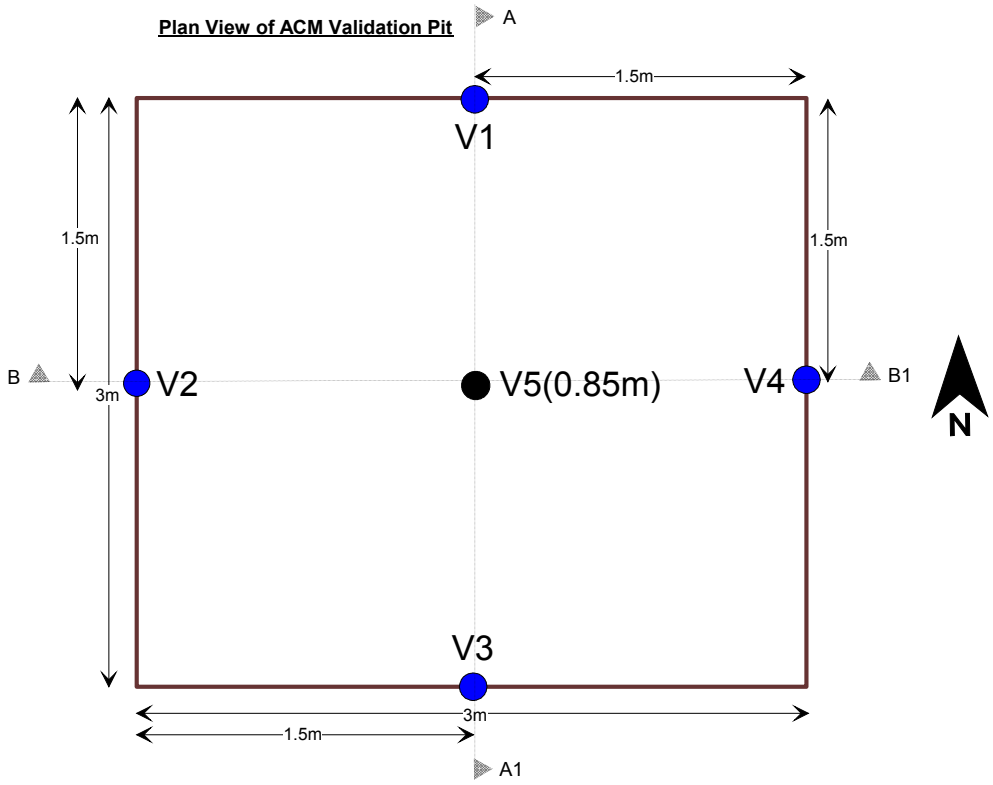
Report No: E30259KDrpt-VAL

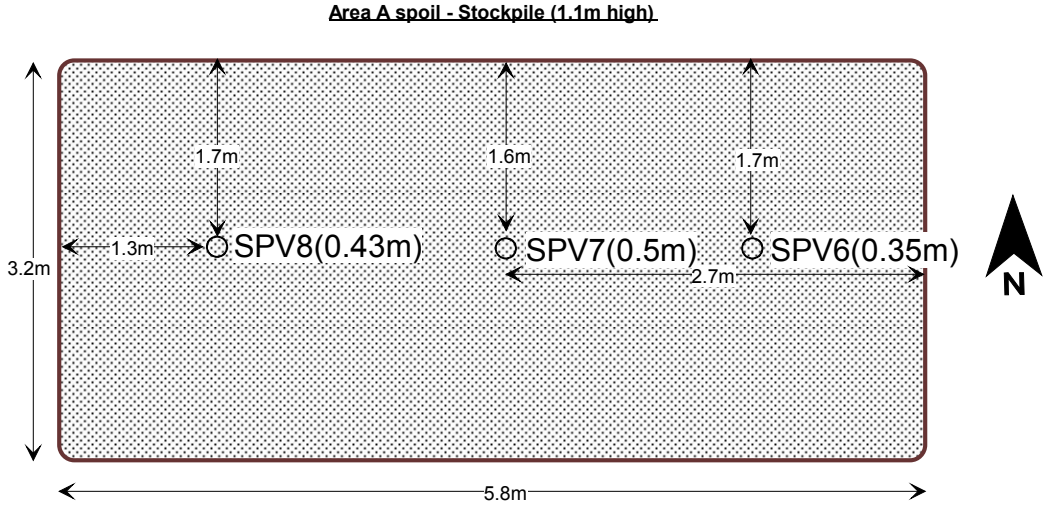
Figure No: 2

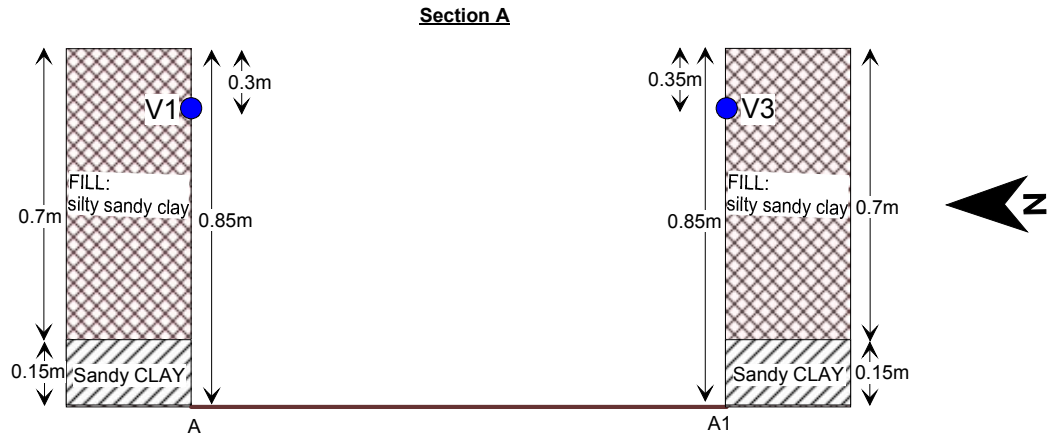
ENVIRONMENTAL INVESTIGATION SERVICES

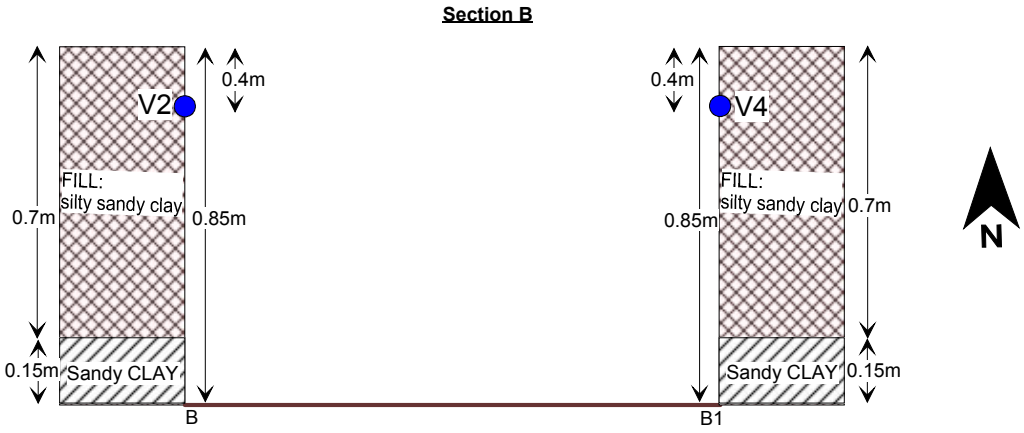
EIS

PLOT DATE: 22/01/2019 3:45:45 PM DWG FILE: S:\5 EIS\5C EIS JOBS\30000'S\E30259KM LINDFIELD\CAD\E30259KDRPT-VAL.DWG









Wall validation sample and identification

Base validation sample and idenfication, depth of sample(m)

Stockpile sample and identification, depth of sample(m)

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

ENVIRONMENTAL INVESTIGATION SERVICES
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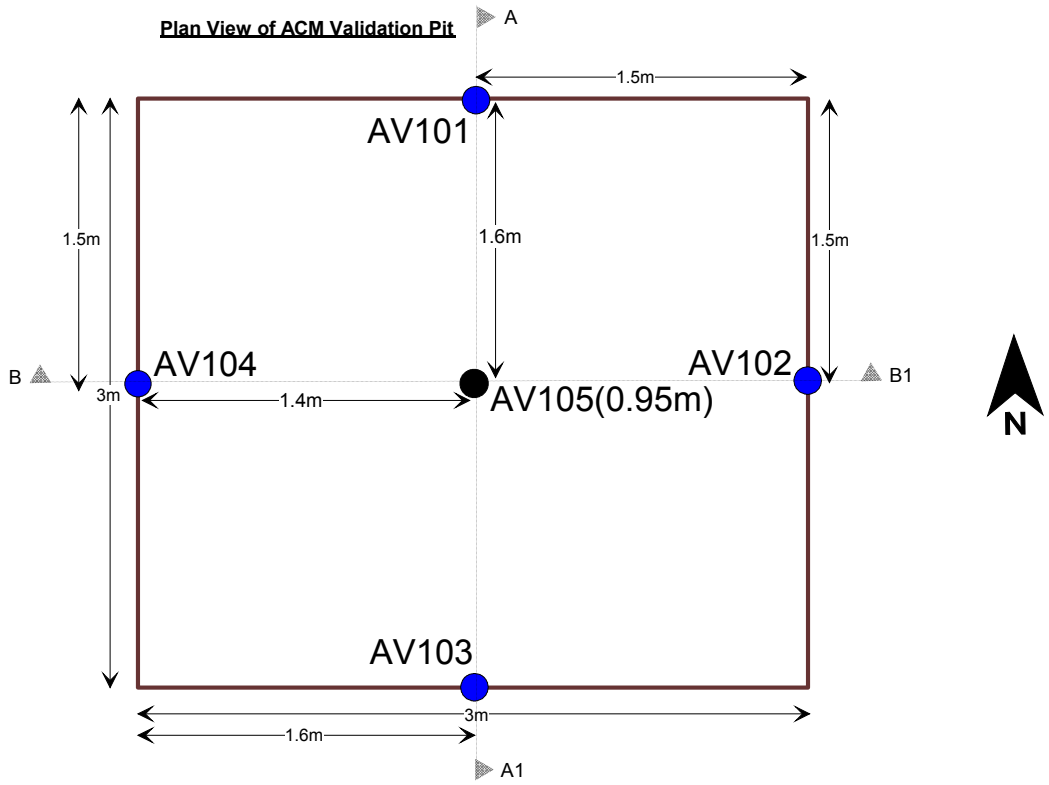
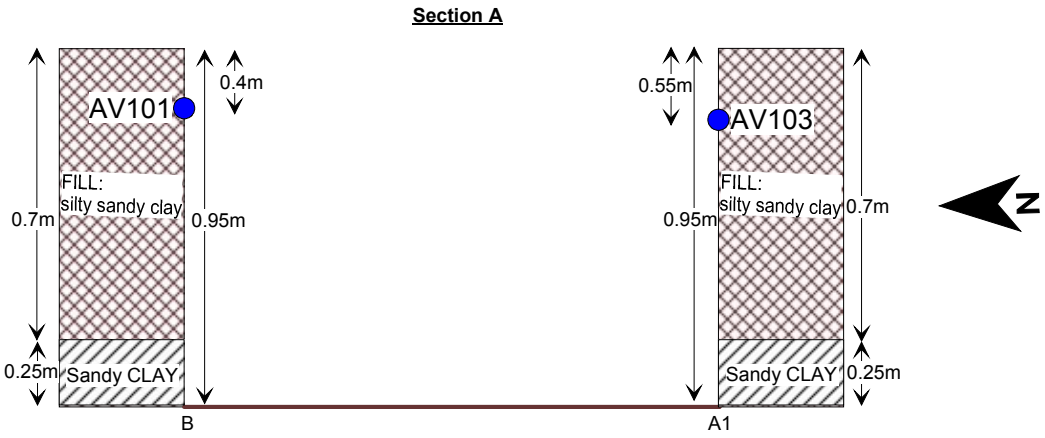
Area A ACM Validation Plan-Round 1

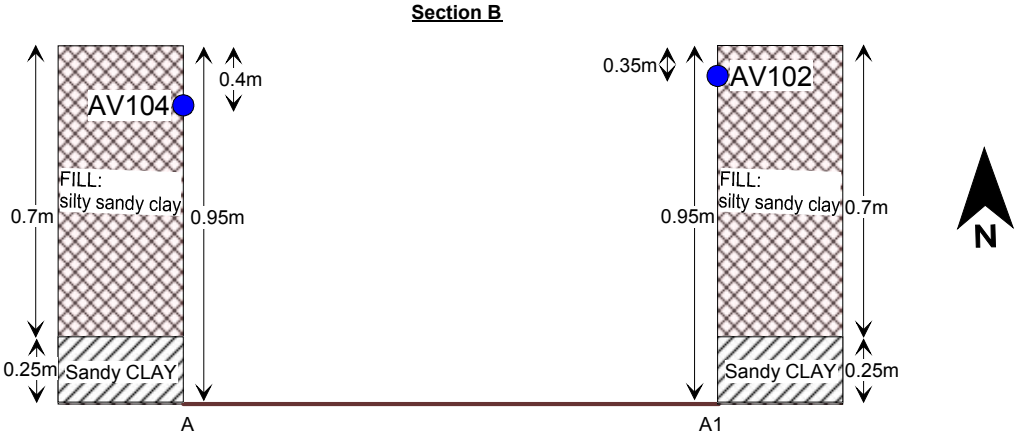
100 Eton Road Lindfield, NSW

PROJECT ID: E30259KD-VAL

Figure 3







Wall validation sample and identification

Base validation sample and idenfication, depth of sample(m)

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

ENVIRONMENTAL INVESTIGATION SERVICES
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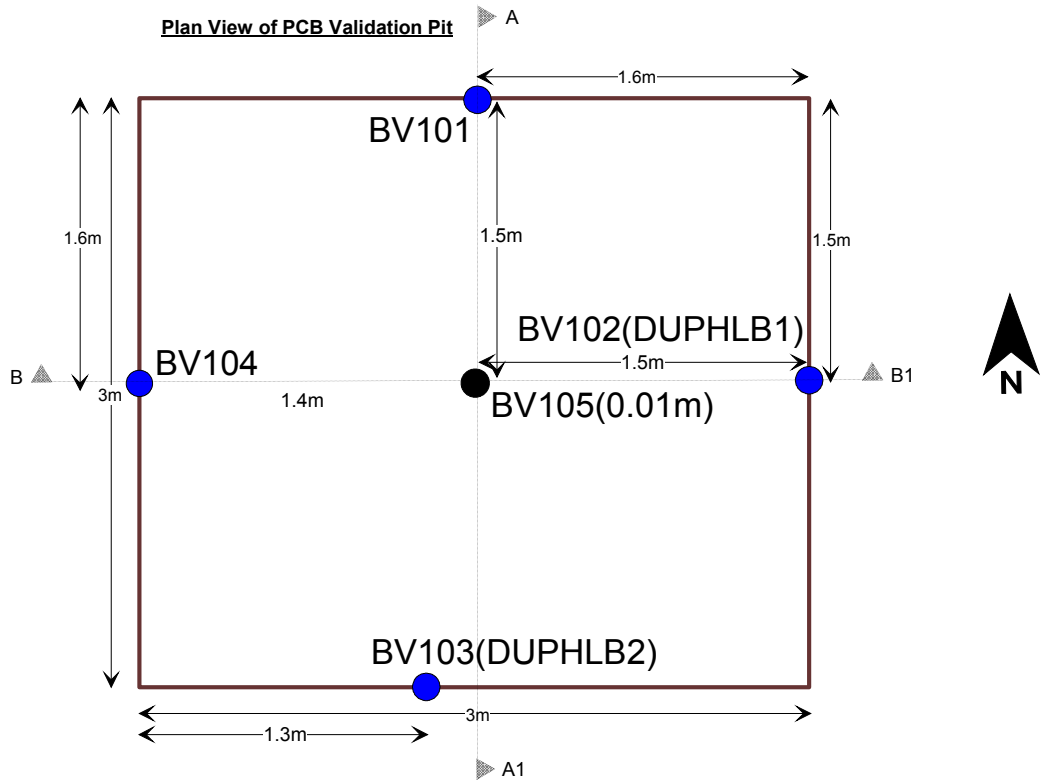
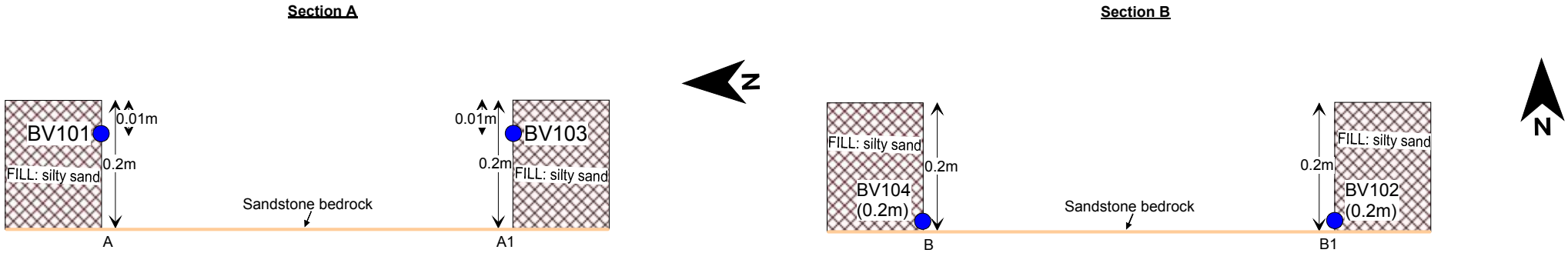
Area A ACM Validation Plan-Round 2

100 Eton Road Lindfield, NSW

PROJECT ID: E30259KD-VAL

Figure 4





Wall validation sample and identification, depth of sample(m)

Base validation sample and idenfication, depth of sample(m)

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

ENVIRONMENTAL INVESTIGATION SERVICES
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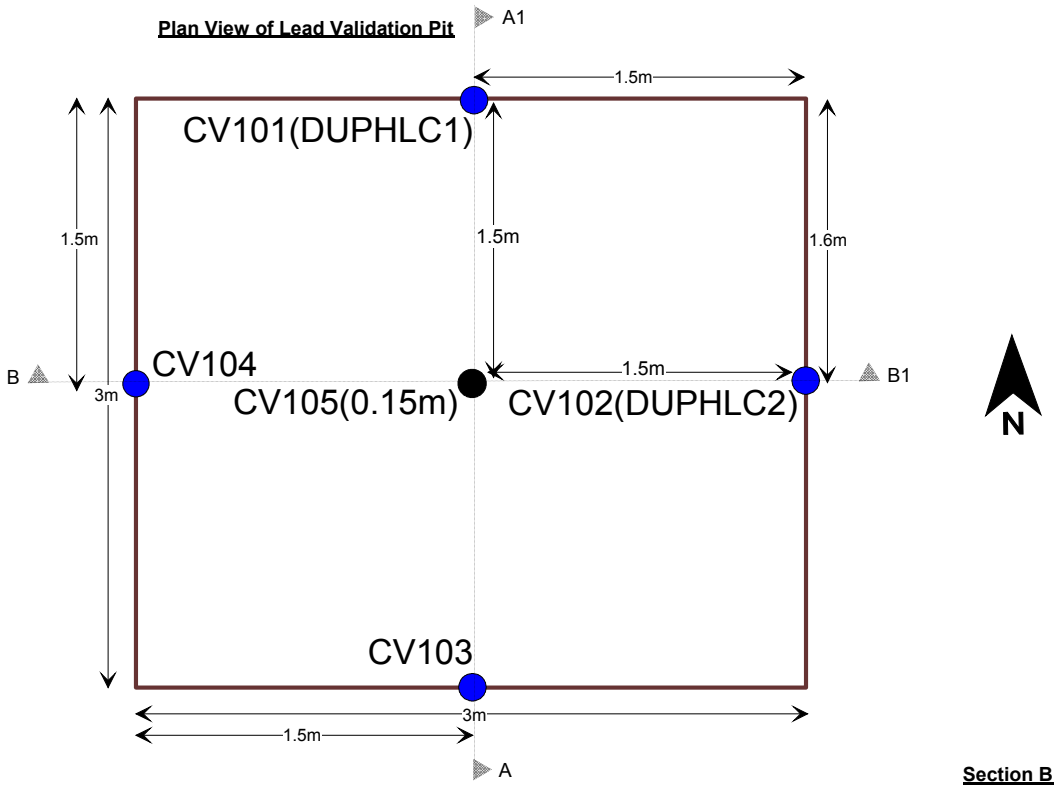
Area B PCB Validation Plan

100 Eton Road Lindfield, NSW

PROJECT ID: E30259KD-VAL

Figure 5



Section A

Section B

● Wall validation sample and identification

● Base validation sample and idenfication, depth of sample(m)

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

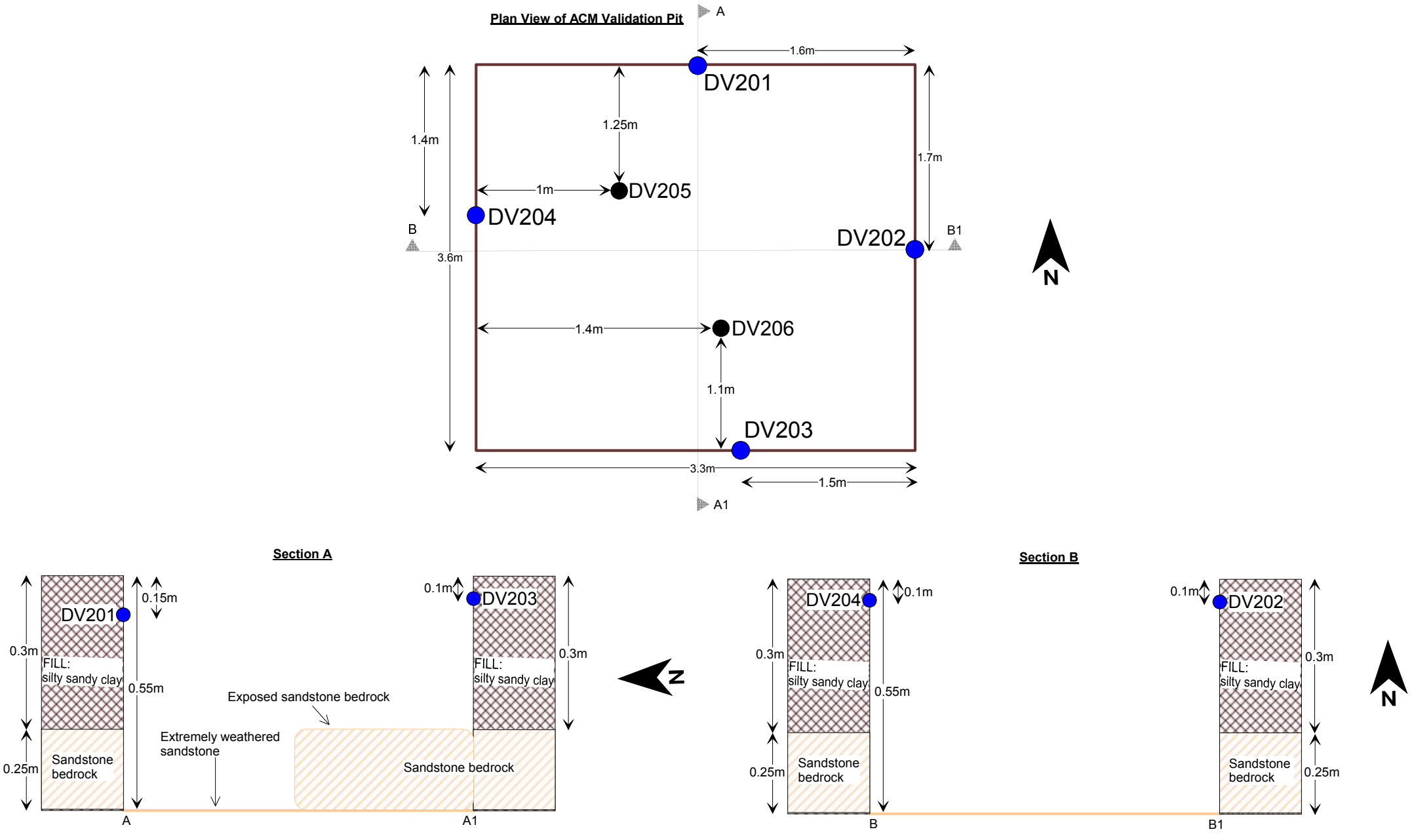
ENVIRONMENTAL INVESTIGATION SERVICES
www.jkgroup.net.au

Area C Lead Validation Plan

100 Eton Road Lindfield, NSW

PROJECT ID: E30259KD-VAL

Figure 6



Wall validation sample and identification

Base validation sample and idenfication, depth of sample(m)

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

ENVIRONMENTAL INVESTIGATION SERVICES
www.jkgroup.net.au

Area D ACM Validation Plan

100 Eton Road Lindfield, NSW

PROJECT ID: E30259KD-VAL

Figure 7

CHARLES BEAN SPORTS FIELD

TOP6
TOP2
TOPSP5
TOP3
TOPSP1
TOPSP7
TOP4

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM, 23 OCT 2018.

LEGEND

APPROXIMATE SITE BOUNDARY

TOP TOPSOIL SAMPLE LOCATION

0 8 16 24 32 40

SCALE 1:800 @A3 METRES

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

Title: **TOPSOIL VALIDATION PLAN**

Location: 100 ETON ROAD
LINDFIELD, NSW

Report No: E30259KDrpt-VAL

Figure No: 8

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

PLOT DATE: 17/01/2019 3:00:29 PM DWG FILE: S:\5 EIS\5C EIS JOBS\30000'S\SE30259KM LINDFIELD\CAD\E30259KDRPT-VAL.DWG

LABORATORY SUMMARY TABLES

TABLE A

SOIL LABORATORY RESULTS COMPARED TO NEPM 2013.

All data in mg/kg unless stated otherwise			Lead	TOTAL PCBs	ASBESTOS FIBRES
PQL - Envirolab Services			1	0.1	100
Validation Assessment Criteria (SAC)			300	1	Detected/Not detected
Sample Reference	**Sample Depth**	**Sample Description**			
Area A Validation Sample Results November 2018 - Round 1					
V1	0.3	Fill: Silty sandy clay	NA	NA	Not Detected
V2	0.4	Fill: Silty sandy clay	NA	NA	Not Detected
V3	0.35	Fill: Silty sandy clay	NA	NA	Not Detected
V4	0.4	Fill: Silty sandy clay	NA	NA	Not Detected
V5	0.85	Sandy clay	NA	NA	Not Detected
SPV6 (stockpile)	0.35	Fill: Silty sandy clay	NA	NA	Not Detected
SPV7 (stockpile)	0.5	Fill: Silty sandy clay	NA	NA	**Detected**
SPV8 (stockpile)	0.43	Fill: Silty sandy clay	NA	NA	Not Detected
HLF1	0.1	Material	NA	NA	**Detected**
MDF1	Suface	Material	NA	NA	**Detected**
Area A Validation Sample Results 15 December 2018 - Round 2					
AV101	0.4	Fill: Silty sandy clay	NA	NA	Not Detected
AV102	0.35	Fill: Silty sandy clay	NA	NA	Not Detected
AV103	0.55	Fill: Silty sandy clay	NA	NA	Not Detected
AV104	0.4	Fill: Silty sandy clay	NA	NA	Not Detected
AV105	0.75	Sandy clay	NA	NA	Not Detected
Area B Validation Sample Results 15 December 2018					
BV101	0.01	Fill: Silty sand	NA	<0.1	NA
BV102	0.2	Fill: Silty sand	NA	<0.1	NA
BV103	0.01	Fill: Silty sand	NA	<0.1	NA
BV104	0.2	Fill: Silty sand	NA	<0.1	NA
BV105	0.02	Sandstone	NA	<0.1	NA
Area C Validation Sample Results 15 December 2018					
CV101	0.05	Fill: Silty sand	62	NA	NA
CV102	0.05	Fill: Silty sand	130	NA	NA
CV103	0.05	Fill: Silty sand	41	NA	NA
CV104	0.05	Fill: Silty sand	71	NA	NA
CV105	0.15	Sandy clay	6	NA	NA
Area D Fibre Cement Fragment Sample Results 14 January 2019					
HWF1	Surface	Material	NA	NA	**Detected**
HWF2	Surace	Material	NA	NA	**Detected**
Area D Validation Sample Results 16 January 2019					
DV201	0.15	Fill: Silty sandy clay	NA	NA	Not Detected
DV202	0.1	Fill: Silty sandy clay	NA	NA	Not Detected
DV203	0.2	Fill: Silty sandy clay	NA	NA	Not Detected
DV204	0.1	Fill: Silty sandy clay	NA	NA	Not Detected
DV205	0.55	Sandstone	NA	NA	Not Detected
DV206	0.3	Sandstone	NA	NA	Not Detected
Total Number of Samples			5	5	23
Maximum Value			130	<PQL	NC

Concentration above the SAC **VALUE**

TABLE B

SOIL LABORATORY RESULTS COMPARED TO NEPM 2013.

HIL-A: 'Residential with garden/accessible soils; children's day care centers; preschools; and primary schools'

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	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
Validation Assessment Criteria (SAC)			100	20	100	6000	300	40	400	7400	300	3	10	270	300	6	50	240	6	160	1	Detected/Not Detected
Sample Reference	**Sample Depth**	**Sample Description**																				
TOPSP1	Surface	Topsoil-sourced from ANL	6	<0.4	16	100	27	0.2	8	180	2.4	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TOPSP1 (replicate)*	Surface	Topsoil-sourced from ANL	7	<0.4	19	120	29	0.3	9	150	2.6	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
TOP2	Surface	Topsoil-sourced from ANL	5	<0.4	6	7	13	<0.1	2	17	1.3	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TOP3	Surface	Topsoil-sourced from ANL	8	<0.4	17	120	43	0.2	7	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
TOP4	Surface	Topsoil-sourced from ANL	9	<0.4	15	55	22	0.2	5	83	0.84	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TOPSP5	Surface	Topsoil-sourced from ANL	4	<0.4	10	16	16	<0.1	6	55	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TOP6	Surface	Topsoil-sourced from ANL	5	<0.4	6	17	15	<0.1	2	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
TOPSP7	Surface	Topsoil-sourced from ANL	<4	<0.4	10	51	21	0.1	5	75	1.2	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
DOPDUP1	Surface	Topsoil-sourced from ANL	10	<0.4	31	120	27	0.3	9	150	17	2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
Total Number of Samples			9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	7
Maximum Value			10	<PQL	31	120	43	0.3	9	180	17	2.5	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	NC

Note: * Envirolab laboratory sample batch replicate/duplicate.

Concentration above the SAC **VALUE**

TABLE C
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-A/B:LOW/HIGH DENSITY RESIDENTIAL**							
Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**								
TOPSP1	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	NA
TOPSP1 (replicate)*	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	<25	53	<0.2	<0.5	<1	<3	<1	NA
TOP2	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	NA
TOP3	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	NA
TOP4	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	NA
TOPSP5	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	<25	57	<0.2	<0.5	<1	<3	<1	NA
TOP6	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	NA
TOPSP7	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	NA
DOPDUP1	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	NA
Total Number of Samples					9	9	9	9	9	9	9	NA
Maximum Value					<PQL	57	<PQL	<PQL	<PQL	<PQL	<PQL	NA

Note: * Envirolab laboratory sample batch replicate/duplicate.

Concentration above the SAC **VALUE**

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

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-A/B:LOW/HIGH DENSITY RESIDENTIAL**						
Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**							
TOPSP1	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	45	110	0.5	160	55	40	3
TOPSP1 (replicate)*	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	45	110	0.5	160	55	40	3
TOP2	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	45	110	0.5	160	55	40	3
TOP3	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	45	110	0.5	160	55	40	3
TOP4	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	45	110	0.5	160	55	40	3
TOPSP5	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	45	110	0.5	160	55	40	3
TOP6	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	45	110	0.5	160	55	40	3
TOPSP7	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	45	110	0.5	160	55	40	3
DOPDUP1	Surface	Topsoil-sourced from ANL	0m to < 1m	Sand	45	110	0.5	160	55	40	3

EIS

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

Land Use Category				URBAN RESIDENTIAL AND PUBLIC OPEN SPACE																	
							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)				-	-	-	0	7	3	8	2	8	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL
Sample Reference	**Sample Depth**	**Sample Description**	**Soil Texture**																				
TOPSP1	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	6	16	100	27	8	180	<0.1	<0.1	<25	<50	1500	450	<0.2	<0.5	<1	<3	0.2
TOP2	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	5	6	7	13	2	17	<0.1	<0.1	<25	<50	1100	340	<0.2	<0.5	<1	<3	0.1
TOP3	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	8	17	120	43	7	95	<0.1	<0.1	<25	<50	350	110	<0.2	<0.5	<1	<3	<0.05
TOP4	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	9	15	55	22	5	83	<0.1	<0.1	<25	<50	900	280	<0.2	<0.5	<1	<3	0.1
TOPSP5	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	4	10	16	16	6	55	<0.1	<0.1	<25	57	550	220	<0.2	<0.5	<1	<3	<0.05
TOP6	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	5	6	17	15	2	39	<0.1	<0.1	<25	<50	340	160	<0.2	<0.5	<1	<3	<0.05
TOPSP7	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	<4	10	51	21	5	75	<0.1	<0.1	<25	<50	350	140	<0.2	<0.5	<1	<3	0.1
DOPDUP1	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	10	31	120	27	9	150	<0.1	<0.1	<25	<50	1200	440	<0.2	<0.5	<1	<3	1.8
TOPSP1 (silica gel)	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<50	780	310	NA	NA	NA	NA	NA
Total Number of Samples				0	0	0	8	8	8	8	8	8	8	8	8	9	9	9	8	8	8	8	8
Maximum Value				<PQL	<PQL	<PQL	10	31	120	43	9	180	<PQL	<PQL	<PQL	57	1500	450	<PQL	<PQL	<PQL	<PQL	1.8

Concentration above the VAC — VALUE

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

EIL AND ESL ASSESSMENT CRITERIA

Land Use Category				URBAN RESIDENTIAL AND PUBLIC OPEN SPACE																	
							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)				-	-	-	0	7	3	8	2	8	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL
Sample Reference	**Sample Depth**	**Sample Description**	**Soil Texture**																				
TOPSP1	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	100	197	63	1108	32	78	170	180	180	120	1300	5600	60	105	125	45	33
TOP2	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	100	197	63	1108	32	78	170	180	180	120	1300	5600	60	105	125	45	33
TOP3	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	100	197	63	1108	32	78	170	180	180	120	1300	5600	60	105	125	45	33
TOP4	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	100	197	63	1108	32	78	170	180	180	120	1300	5600	60	105	125	45	33
TOPSP5	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	100	197	63	1108	32	78	170	180	180	120	1300	5600	60	105	125	45	33
TOP6	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	100	197	63	1108	32	78	170	180	180	120	1300	5600	60	105	125	45	33
TOPSP7	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	100	197	63	1108	32	78	170	180	180	120	1300	5600	60	105	125	45	33
DOPDUP1	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	100	197	63	1108	32	78	170	180	180	120	1300	5600	60	105	125	45	33
TOPSP1 (silica gel)	Surface	Topsoil-sourced from ANL	Fine	NA	NA	NA	--	--	--	--	--	--	--	--	--	120	1300	5600	--	--	--	--	--

TABLE E

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 = BV102						
Dup Ref = DUPHLB1						
	Total PCBs	0.1	<0.1	<0.1	NC	NC
Envirolab Report: 208211						

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

TABLE F

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 = CV101 (0.05m)						
Dup Ref = DUPHLC1						
	Lead	1	62	59	60.5	5
Envirolab Report: 208211						

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

TABLE G

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 = TOPSP1	Arsenic	4	6	10	8.0	50
Dup Ref = DOPDUP1	Cadmium	0.4	<0.4	<0.4	NC	NC
	Chromium	1	16	31	23.5	64
Envirolab Report: 209474	Copper	1	100	120	110.0	18
	Lead	1	27	27	27.0	0
	Mercury	0.1	0.2	0.3	0.3	40
	Nickel	1	8	9	8.5	12
	Zinc	1	180	150	165.0	18
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	0.2	0.1	120
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	0.2	0.6	0.4	100
	Anthracene	0.1	<0.1	0.2	0.1	120
	Fluoranthene	0.1	0.5	2.7	1.6	138
	Pyrene	0.1	0.4	2.8	1.6	150
	Benzo(a)anthracene	0.1	0.2	1.9	1.1	162
	Chrysene	0.1	0.2	1.8	1.0	160
	Benzo(b,j+k)fluoranthene	0.2	0.4	2.7	1.6	148
	Benzo(a)pyrene	0.05	0.2	1.8	1.0	160
	Indeno(123-cd)pyrene	0.1	0.1	0.7	0.4	150
	Dibenzo(ah)anthracene	0.1	<0.1	0.2	0.1	120
	Benzo(ghi)perylene	0.1	0.2	0.9	0.6	127
	Total OCPs	0.1	<0.1	<0.1	NC	NC
	Total OPPs	0.1	<0.1	<0.1	NC	NC
	Total PCBs	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	1500	1200	1350.0	22
	TRH >C34-C40 (F4)	100	450	440	445.0	2
	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

TABLE H

SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS

All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	Envirolab VIC PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TOP3	Arsenic	4	4	8	7	7.5	13
Dup Ref = TOPDUP2	Cadmium	0.4	0.4	<0.4	<0.4	NC	NC
	Chromium	1	1	17	10	13.5	52
Envirolab Report: 209474	Copper	1	1	120	57	88.5	71
Envirolab VIC Report: 15795	Lead	1	1	43	39	41.0	10
	Mercury	0.1	0.1	0.2	0.2	0.2	0
	Nickel	1	1	7	5	6.0	33
	Zinc	1	1	95	100	97.5	5
	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	0.2	0.1	120
	Anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.1	<0.1	0.3	0.2	143
	Pyrene	0.1	0.1	<0.1	0.3	0.2	143
	Benzo(a)anthracene	0.1	0.1	<0.1	0.1	0.1	67
	Chrysene	0.1	0.1	<0.1	0.2	0.1	120
	Benzo(b,j+k)fluoranthene	0.2	0.2	<0.2	0.3	0.2	100
	Benzo(a)pyrene	0.05	0.05	<0.05	0.15	0.1	143
	Indeno(123-cd)pyrene	0.1	0.1	<0.1	0.1	0.1	67
	Dibenzo(ah)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	0.1	<0.1	0.1	0.1	67
	Total OCPs	0.1	0.1	<0.1	<0.1	NC	NC
	Total OPPs	0.1	0.1	<0.1	<0.1	NC	NC
	Total PCBs	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	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	100	350	390	370.0	11
	TRH >C34-C40 (F4)	100	100	110	190	150.0	53
	Benzene	0.2	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	1	<1	<1	NC	NC
	m+p-xylene	2	2	<2	<2	NC	NC
	o-xylene	1	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

TABLE I

SUMMARY OF FIELD QA/QC RESULTS

ANALYSIS	Envirolab PQL		TBVAL[S]	TOPTB[S]	TOPTS1[S]
			15/12/2018	14/01/2019	14/01/2019
	mg/kg	µg/L	mg/kg	mg/kg	% Recovery
Lead	1	1	<1	NA	NA
Benzene	1	0.2	NA	<0.2	96
Toluene	1	0.5	NA	<0.5	96
Ethylbenzene	1	1	NA	<1	94
m+p-xylene	2	2	NA	<2	95
o-xylene	1	1	NA	<1	95

Explanation:

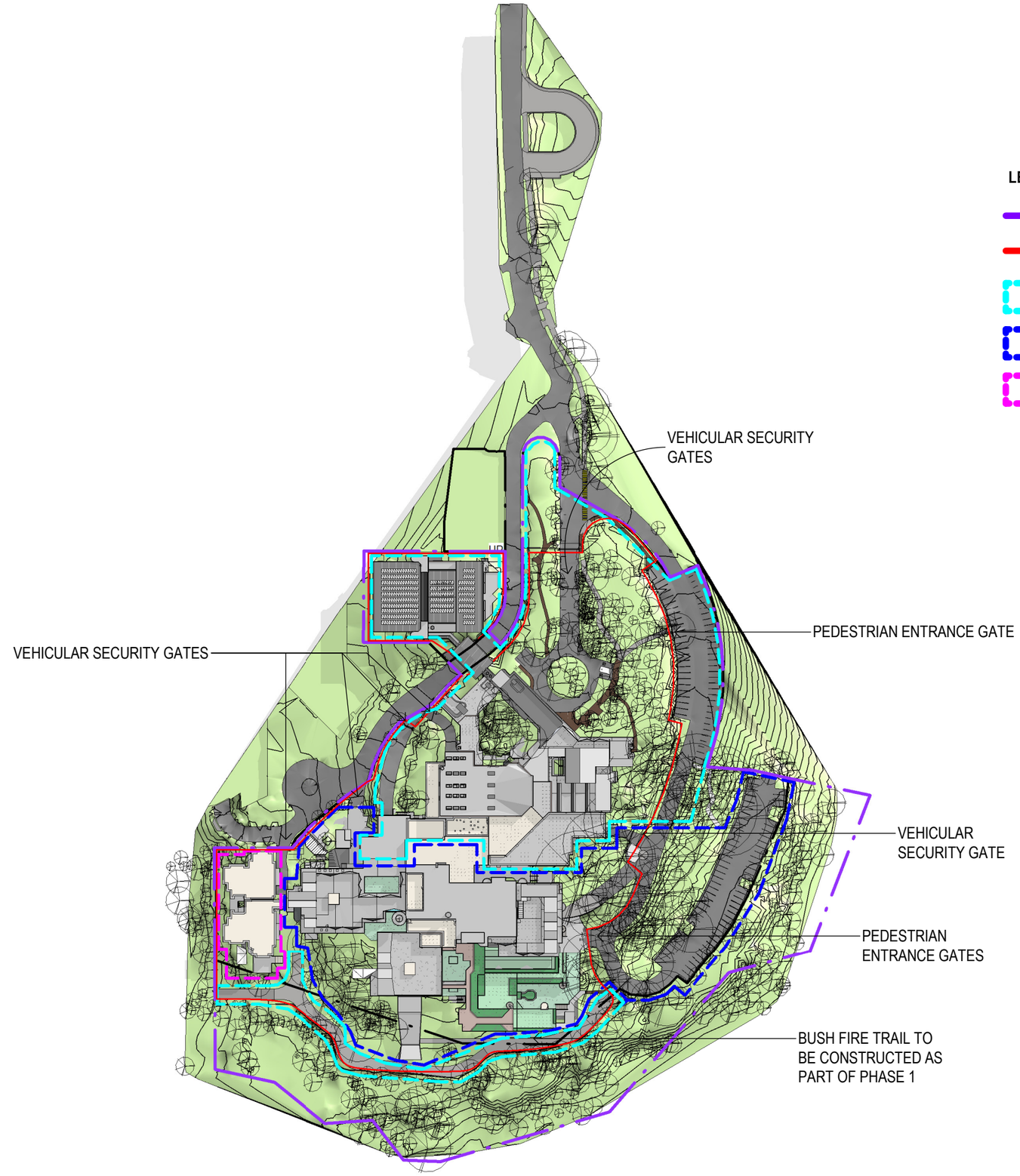
[W] Sample type (water)

[S] Sample type (sand)

BTEX concentrations in trip spikes are presented as % recovery

Values above PQLs/Acceptance criteria **VALUE**

Appendix A: Proposed Development Plans



LEGEND

- SITE BOUNDARY
- BOUNDARY FENCE
- PHASE 1
- PHASE 2
- PHASE 3

Please note

If the Status of this drawing is not signed off For Construction it may be subject to change, alteration or amendment at the discretion of DesignInc Sydney Pty Limited. If so, DesignInc Sydney Pty Limited is not liable for any loss, damage, harm or injury whether special, consequential, direct or indirect, suffered by you or any other person as a result of your use of this drawing for construction purposes.

Figured dimensions take preference to scale readings. Verify all dimensions on site.
Report any discrepancies to the Architect for decision before proceeding with the work.

Nominated Architects
Anthony Quan 5421 I Sandeep Amin 7337 I Ian Armstrong 7260 I Richard Does 8126

No	DATE	REVISIONS	BY
A	27/03/2017	PRELIMINARY ISSUE FOR REVIEW	HC
B	28/03/2017	PRELIMINARY ISSUE	HC
C	31/03/2017	ISSUED FOR APPROVAL	HC
D	07/04/2017	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	HC
E	29/05/2017	ISSUED FOR APPROVAL	CS
F	27/10/2017	SSD RESUBMISSION	TG
G	30/04/2018	ISSUED FOR REVIEW	HC
H	04/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG
J	08/06/2018	ADDED LOT BOUNDARY PLAN AND AMENDMENT TO SITE PLANS	RK
K	06/07/2018	REVISION TO PARTIAL SCHOOL AREA	TG

SCALE BAR - 1:2000 (0, 10, 20, 30, 40, 50 m)

ARCHITECT

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Architecture Urban Design Interiors

CLIENT

SCHOOL INFRASTRUCTURE NSW

PROJECT

Lindfield Learning Village - Partial School
Eton Road,
Lindfield NSW 2070

TITLE

SITE PLAN

DRAWN BY	TG, CS, HC, RK
SCALES	1 : 2000 @A3
PLOT DATE	21/03/2017
PROJECT Nº.	P18-023
REVISION	K
DRAWING Nº.	DA-100

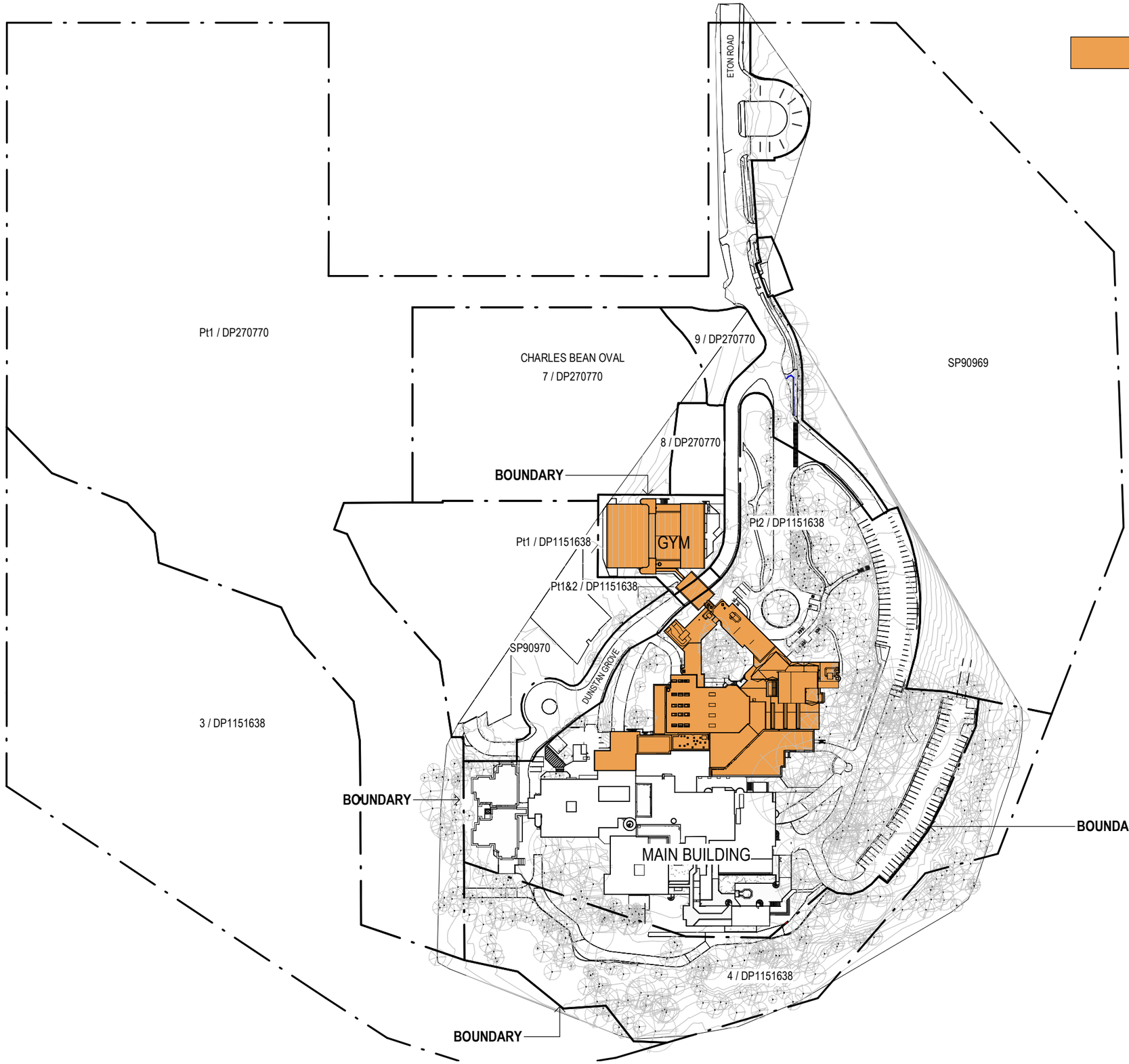
DRAWING STATUS	REVIEWED BY	SIGNATURE	DATE
FOR APPROVAL	RG		

QUALITY CERTIFIED ISO 9001

Completion of the Drawing Status is evidence the design has been verified as conforming to the requirements of the Project M.S. Plan. Initialling the "Drawn By" box confirms that this drawing has been prepared in conformity with DesignInc Sydney M.S. procedures.

DEVELOPMENT APPLICATION

PLOTTED 6/07/2018 11:32:05 AM C:\Users\tgarry\Documents\P18-023-AR-LLV-SHEETS_CENTRAL_R18_tgarry.rvt



LEGEND

EDUCATIONAL FACILITY REF
SCOPE OF WORKS

Nominated Architects

Anthony Quan 5421 I Sandeep Amin 7337 I Ian Armstrong 7260 I Richard Does 8126

No	DATE	REVISIONS	BY
A	04/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG
B	28/05/2018	ISSUED FOR INFORMATION	RK
C	01/06/2018	UPDATED SHEET NAMES	RK
D	08/06/2018	ADDED LOT BOUNDARY PLAN AND AMENDMENT TO SITE PLANS	RK
E	06/07/2018	REVISION TO PARTIAL SCHOOL AREA	TG
F	10/07/2018	UPDATED LEGEND	RK
G	01/08/2018	UPDATE TO DEVELOPMENT APPROVAL	TG
H	06/08/2018	UPDATED NOTES	DL

SCALE BAR - 1:2000 (0, 10, 20, 30, 40, 50 m)

ARCHITECT

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Architecture Urban Design Interiors

CLIENT

SCHOOL INFRASTRUCTURE NSW

PROJECT

100 ETON RD, LINDFIELD

NSW 2070

TITLE

EDUCATIONAL FACILITY REF - SITE PLAN

DRAWN BY	TG
SCALES	As indicated @A3
PLOT DATE	26/04/2020
PROJECT Nº.	P18-023
REVISION	H
DRAWING Nº.	DA-102

DRAWING STATUS	REVIEWED BY	SIGNATURE	DATE
FOR APPROVAL	RG		

QUALITY CERTIFIED ISO 9001

Completion of the Drawing Status is evidence the design has been verified as conforming to the requirements of the Project M.S. Plan. Initialling the "Drawn By" box confirms that this drawing has been prepared in conformity with DesignInc Sydney M.S. procedures.

DEVELOPMENT APPLICATION

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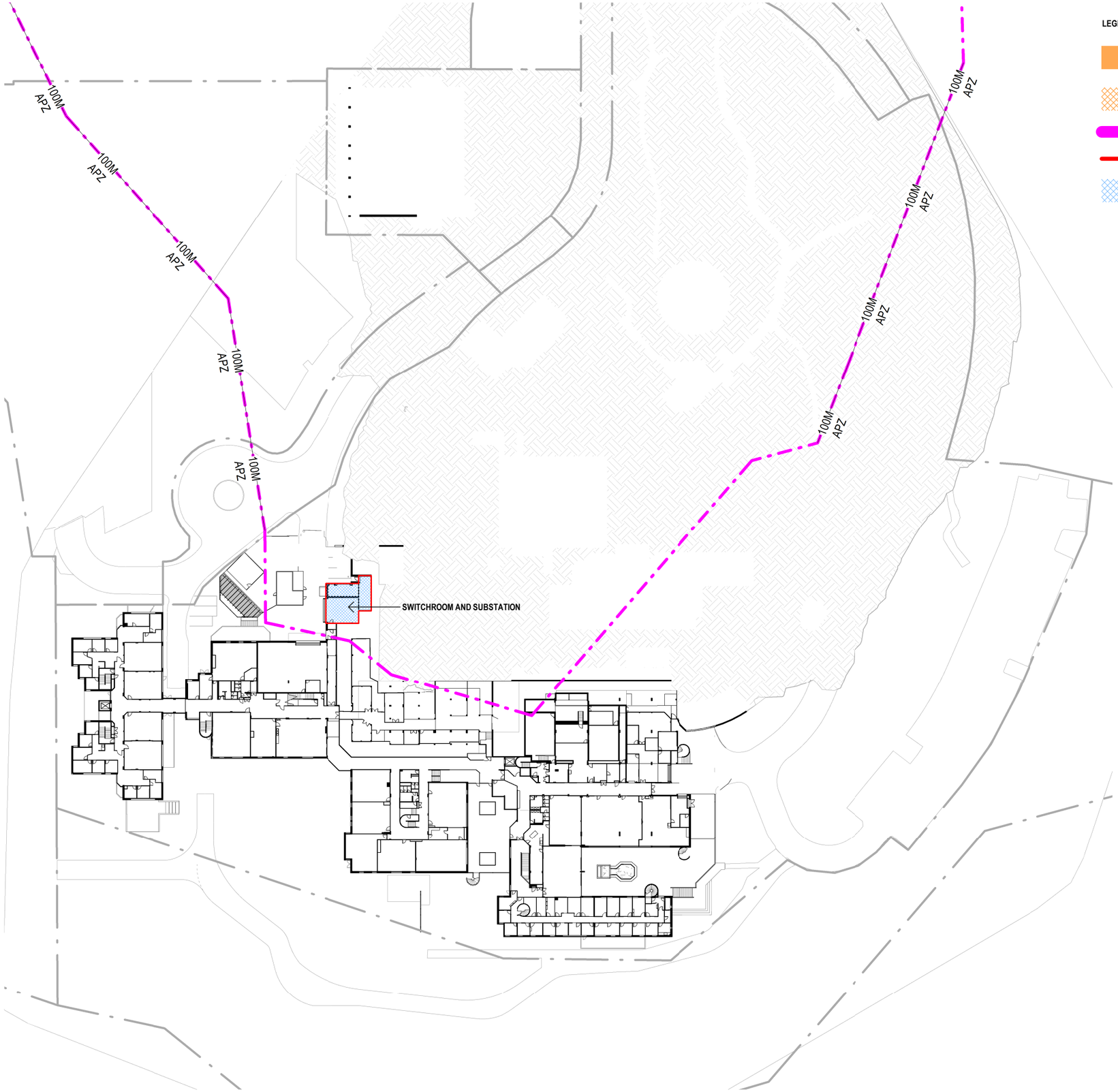

LEGEND:

- PHASE 1
- PHASE 1: ADMINISTRATIVE
- 100M APZ
- 2HR FIRE RATED WALL
- PHASE 1: PLANT ROOM

Nominated Architects

Anthony Quin 5421 I Sandeep Amin 7337 I Ian Armstrong 7260 I Richard Does 8126

No	DATE	REVISIONS	BY
A	06/06/2018	UPDATED TO SHOW EXISTING UNOCCUPIED PLANT SPACE	RK

0 500 1000 1500 2000 2500 mm

SCALE BAR - 1:100

ARCHITECT

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architects in association

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Architecture Urban Design Interiors

CLIENT

SCHOOL INFRASTRUCTURE NSW

PROJECT

Lindfield Learning Village

Eton Road,
Lindfield NSW 2070

TITLE

PHASE 1 PROPOSED
FLOOR PLAN LEVEL 2

DRAWN BY	TG, CS, HC, RK
SCALES	1 : 1000 @A3
PLOT DATE	06/06/18
PROJECT Nº.	P18-023
DRAWING Nº.	DA-112
REVISION	A

DRAWING STATUS	REVIEWED BY	SIGNATURE	DATE
	RG		

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DEVELOPMENT APPLICATION

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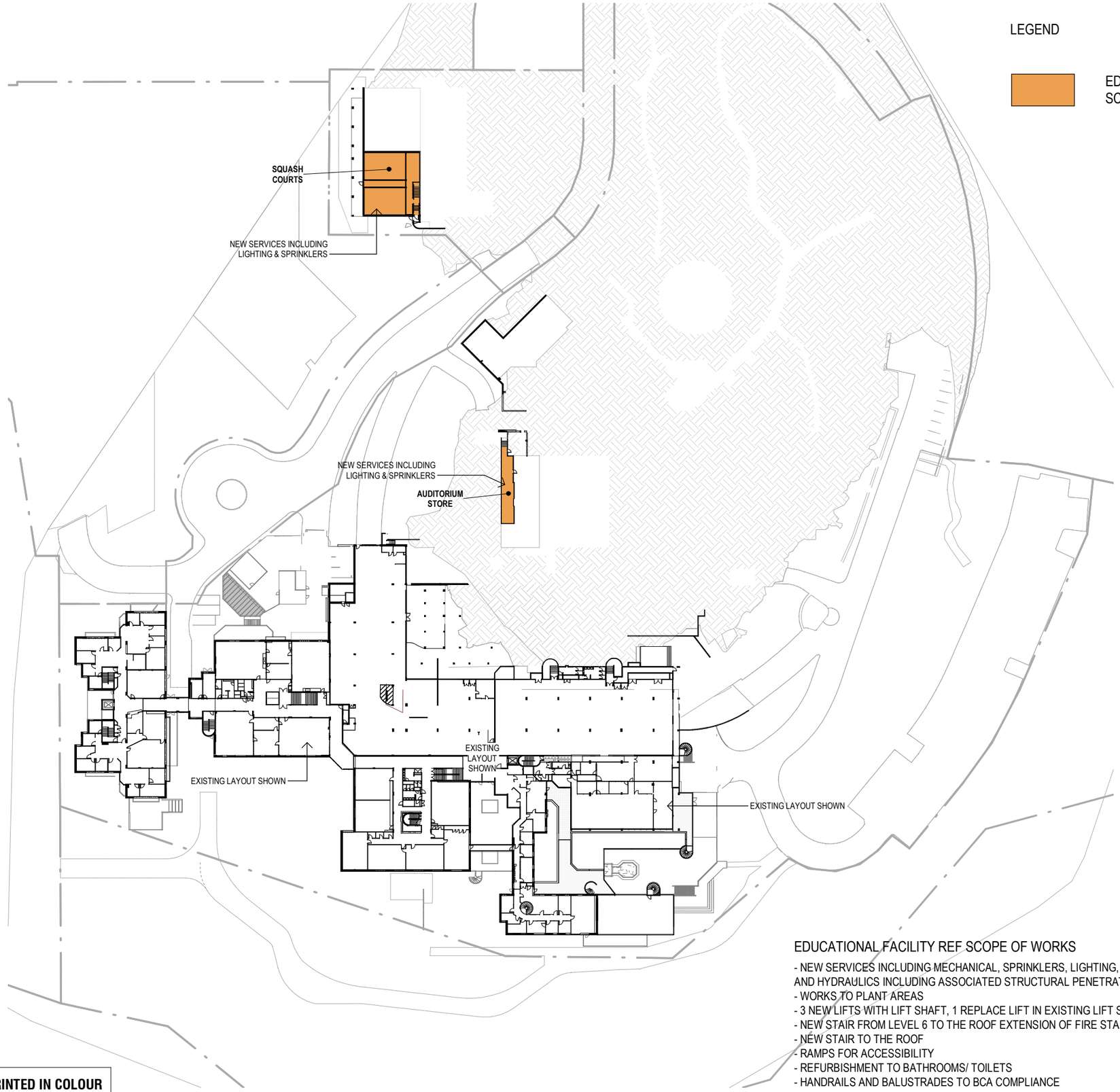

LEGEND

EDUCATIONAL FACILITY REF SCOPE OF WORKS

EDUCATIONAL FACILITY REF SCOPE OF WORKS

- NEW SERVICES INCLUDING MECHANICAL, SPRINKLERS, LIGHTING, ELECTRICAL AND HYDRAULICS INCLUDING ASSOCIATED STRUCTURAL PENETRATIONS TO ALL SCOPE AREAS
- WORKS TO PLANT AREAS
- 3 NEW LIFTS WITH LIFT SHAFT, 1 REPLACE LIFT IN EXISTING LIFT SHAFT
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- NEW STAIR TO THE ROOF
- RAMPS FOR ACCESSIBILITY
- REFURBISHMENT TO BATHROOMS/ TOILETS
- HANDRAILS AND BALUSTRADES TO BCA COMPLIANCE

0 5 10 15 20 25 m
SCALE BAR - 1:1000

DRAWING TO BE PRINTED IN COLOUR

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Nominated Architects
Anthony Quan 5421 I Sandeep Amin 7337 I Ian Armstrong 7260 I Richard Does 8126

No	DATE	REVISIONS	BY
A	04/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG
B	01/06/2018	UPDATED SHEET NAMES	RK
C	06/06/2018	UPDATED TO SHOW EXISTING UNOCCUPIED PLANT SPACE	RK
D	01/08/2018	UPDATE TO DEVELOPMENT APPROVAL	TG
E	03/08/2018	UPDATED NOTES	DL
F	06/08/2018	UPDATED NOTES	DL

ARCHITECT
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Architecture Urban Design Interiors

CLIENT
SCHOOL INFRASTRUCTURE NSW

PROJECT
100 ETON RD, LINDFIELD
NSW 2070

TITLE
EDUCATIONAL FACILITY REF - LEVEL 3

DRAWN BY	TG, CS, HC, RK
SCALES	As indicated @A3
PLOT DATE	26/04/2021
PROJECT Nº.	P18-023
REVISION	F
DRAWING Nº.	DA-113

DRAWING STATUS	REVIEWED BY	SIGNATURE	DATE
FOR APPROVAL	RG		

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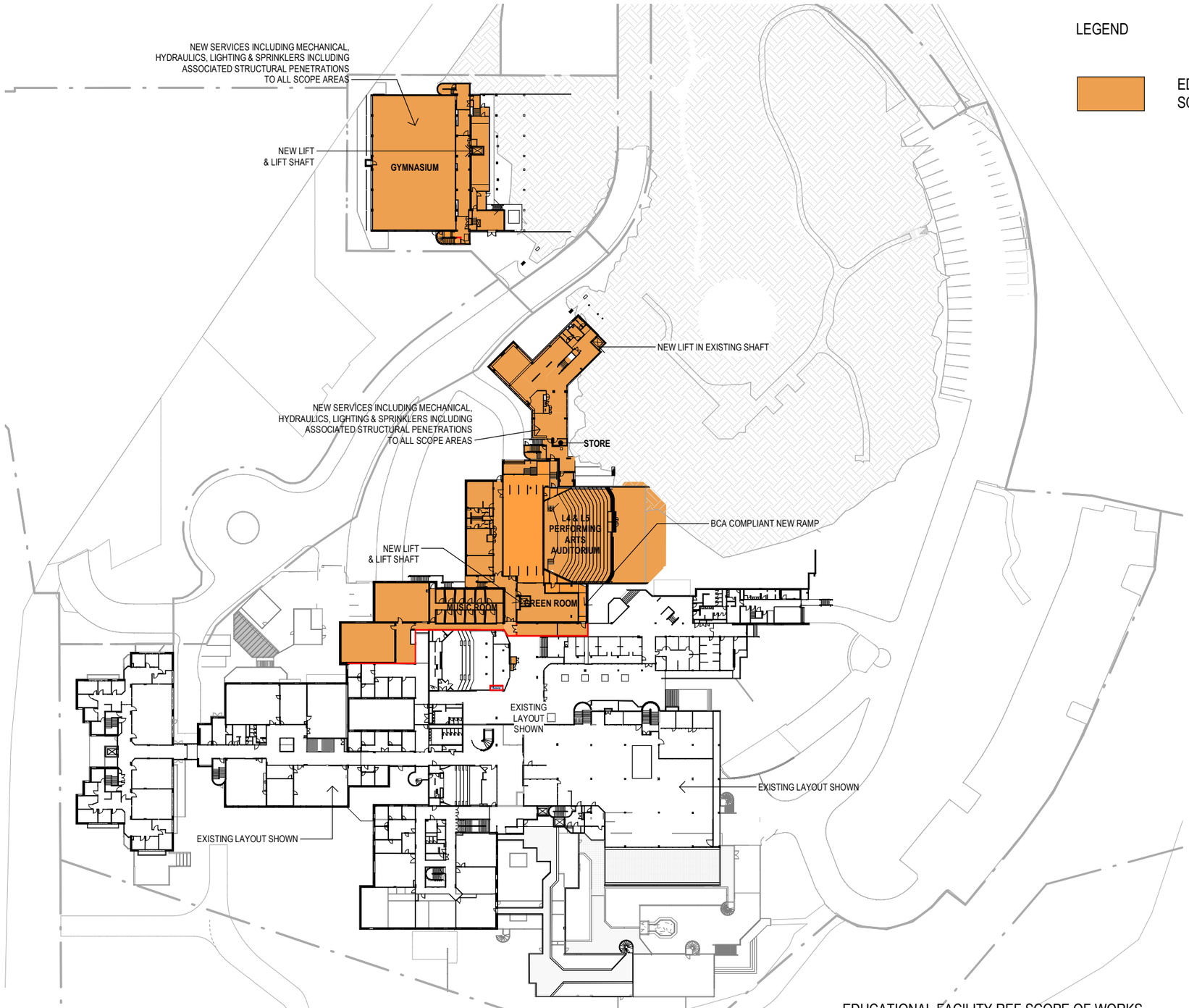

LEGEND

EDUCATIONAL FACILITY REF SCOPE OF WORKS

EDUCATIONAL FACILITY REF SCOPE OF WORKS

- NEW SERVICES INCLUDING MECHANICAL, SPRINKLERS, LIGHTING, ELECTRICAL AND HYDRAULICS INCLUDING ASSOCIATED STRUCTURAL PENETRATIONS TO ALL SCOPE AREAS
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- NEW STAIR TO THE ROOF
- RAMPS FOR ACCESSIBILITY
- REFURBISHMENT TO BATHROOMS/ TOILETS
- HANDRAILS AND BALUSTRADES TO BCA COMPLIANCE

0 5 10 15 20 25 m

SCALE BAR - 1:1000

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Nominated Architects

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No	DATE	REVISIONS	BY
A	04/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG
B	28/05/2018	ISSUED FOR INFORMATION	RK
C	01/06/2018	UPDATED SHEET NAMES	RK
D	06/06/2018	UPDATED TO SHOW EXISTING UNOCCUPIED PLANT SPACE	RK
E	01/08/2018	UPDATE TO DEVELOPMENT APPROVAL	TG
F	03/08/2018	UPDATED NOTES	DL
G	06/08/2018	UPDATED NOTES	DL

ARCHITECT

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Architecture Urban Design Interiors

CLIENT

SCHOOL INFRASTRUCTURE NSW

PROJECT

100 ETON RD, LINDFIELD

NSW 2070

TITLE

EDUCATIONAL FACILITY REF - LEVEL 4

DRAWN BY	TG, CS, HC, RK
SCALES	As indicated @A3
PLOT DATE	26/04/2018
PROJECT Nº.	P18-023
DRAWING Nº.	DA-114
REVISION	G

DRAWING STATUS	REVIEWED BY	SIGNATURE	DATE
FOR APPROVAL	RG		

QUALITY CERTIFIED ISO 9001

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DEVELOPMENT APPLICATION

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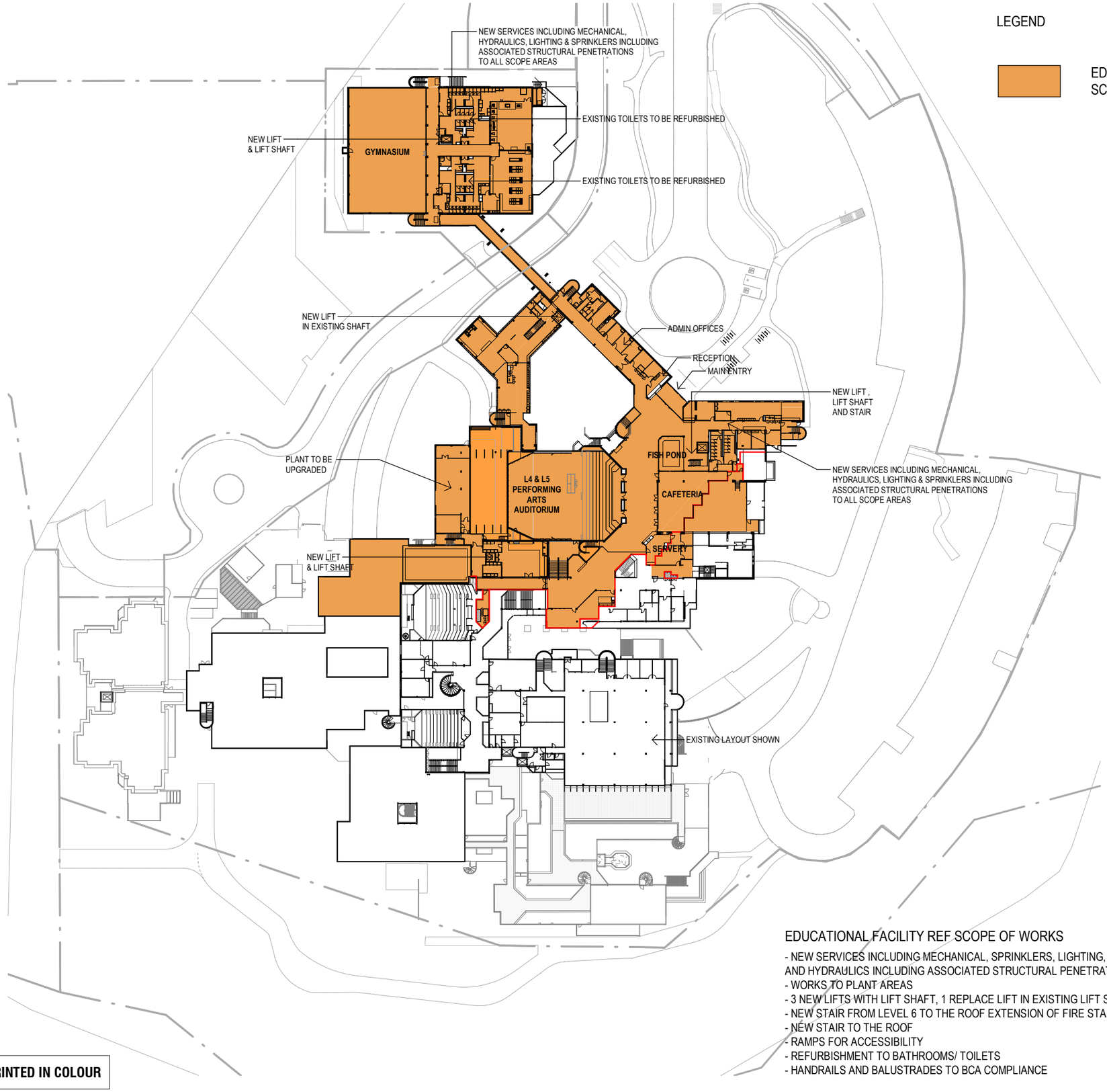

LEGEND

EDUCATIONAL FACILITY REF SCOPE OF WORKS

EDUCATIONAL FACILITY REF SCOPE OF WORKS

- NEW SERVICES INCLUDING MECHANICAL, SPRINKLERS, LIGHTING, ELECTRICAL AND HYDRAULICS INCLUDING ASSOCIATED STRUCTURAL PENETRATIONS TO ALL SCOPE AREAS
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- HANDRAILS AND BALUSTRADES TO BCA COMPLIANCE

SCALE BAR - 1:1000 (0, 5, 10, 15, 20, 25 m)

DRAWING TO BE PRINTED IN COLOUR

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No	DATE	REVISIONS	BY
A	04/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG
B	07/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG
C	28/05/2018	ISSUED FOR INFORMATION	RK
D	01/06/2018	UPDATED SHEET NAMES	RK
E	06/06/2018	UPDATED TO SHOW EXISTING UNOCCUPIED PLANT SPACE	RK
F	01/08/2018	UPDATE TO DEVELOPMENT APPROVAL	TG
G	03/08/2018	UPDATED NOTES	DL
H	06/08/2018	UPDATED NOTES	DL

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CLIENT

SCHOOL INFRASTRUCTURE NSW

PROJECT: 100 ETON RD, LINDFIELD

NSW 2070

TITLE: EDUCATIONAL FACILITY REF - LEVEL 5

DRAWN BY	TG, CS, HC, RK
SCALES	As indicated @A3
PLOT DATE	26/04/2018
PROJECT Nº.	P18-023
REVISION	H
DRAWING Nº.	DA-115

DRAWING STATUS	REVIEWED BY	SIGNATURE	DATE
FOR APPROVAL	RG		

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DEVELOPMENT APPLICATION

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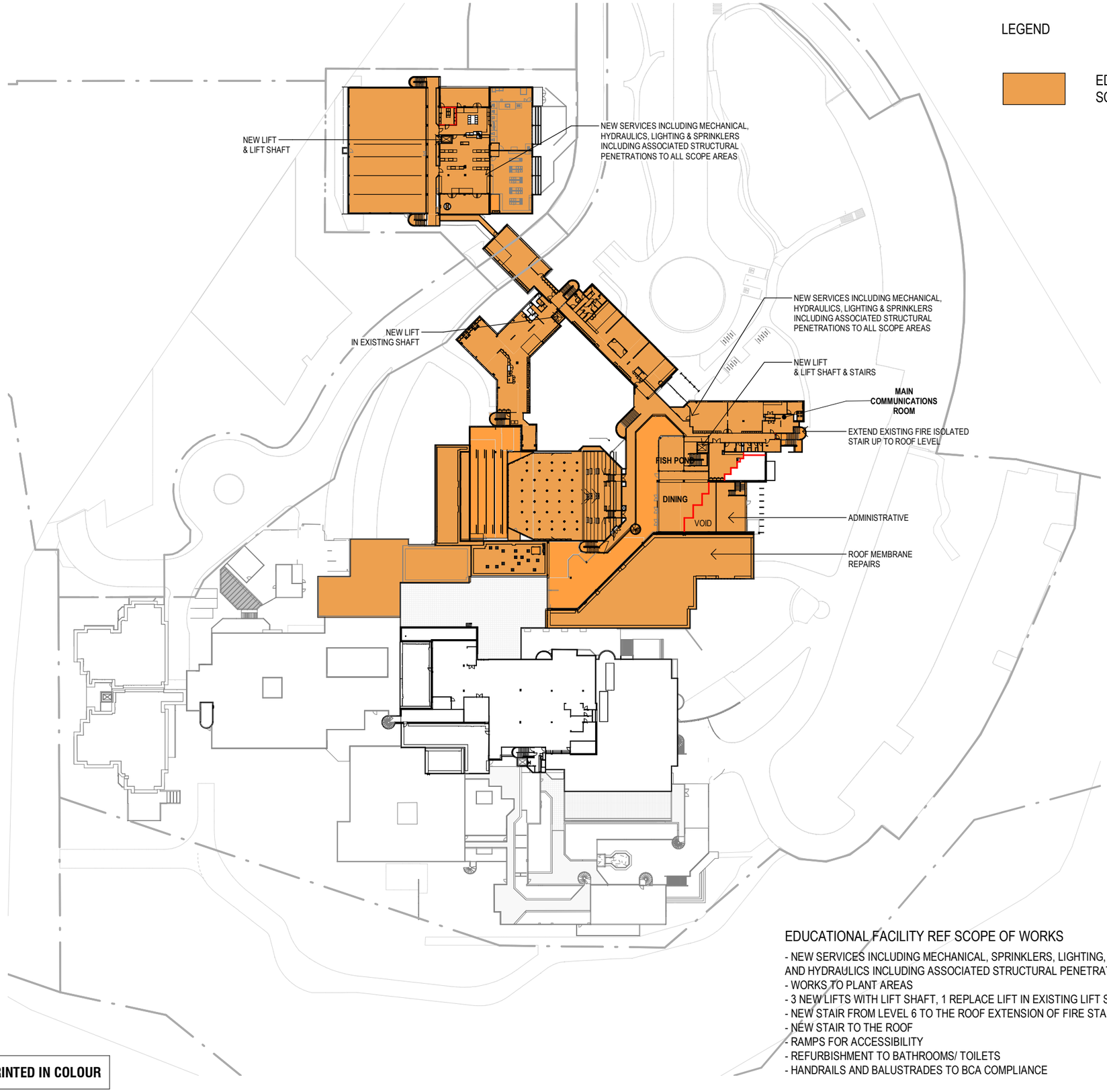

LEGEND

EDUCATIONAL FACILITY REF SCOPE OF WORKS

EDUCATIONAL FACILITY REF SCOPE OF WORKS

- NEW SERVICES INCLUDING MECHANICAL, SPRINKLERS, LIGHTING, ELECTRICAL AND HYDRAULICS INCLUDING ASSOCIATED STRUCTURAL PENETRATIONS TO ALL SCOPE AREAS
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No	DATE	REVISIONS	BY
A	04/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG
B	07/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG
C	28/05/2018	ISSUED FOR INFORMATION	RK
D	01/06/2018	UPDATED SHEET NAMES	RK
E	06/06/2018	UPDATED TO SHOW EXISTING UNOCCUPIED PLANT SPACE	RK
F	01/08/2018	UPDATE TO DEVELOPMENT APPROVAL	TG
G	03/08/2018	UPDATED NOTES	DL
H	06/08/2018	UPDATED NOTES	DL

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SCHOOL INFRASTRUCTURE NSW

PROJECT: 100 ETON RD, LINDFIELD

NSW 2070

TITLE: EDUCATIONAL FACILITY REF - LEVEL 6

DRAWN BY	TG, CS, HC, RK
SCALES	As indicated @A3
PLOT DATE	26/04/2018
PROJECT Nº.	P18-023
REVISION	H
DRAWING Nº.	DA-116

DRAWING STATUS	REVIEWED BY	SIGNATURE	DATE
FOR APPROVAL	RG		

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DEVELOPMENT APPLICATION

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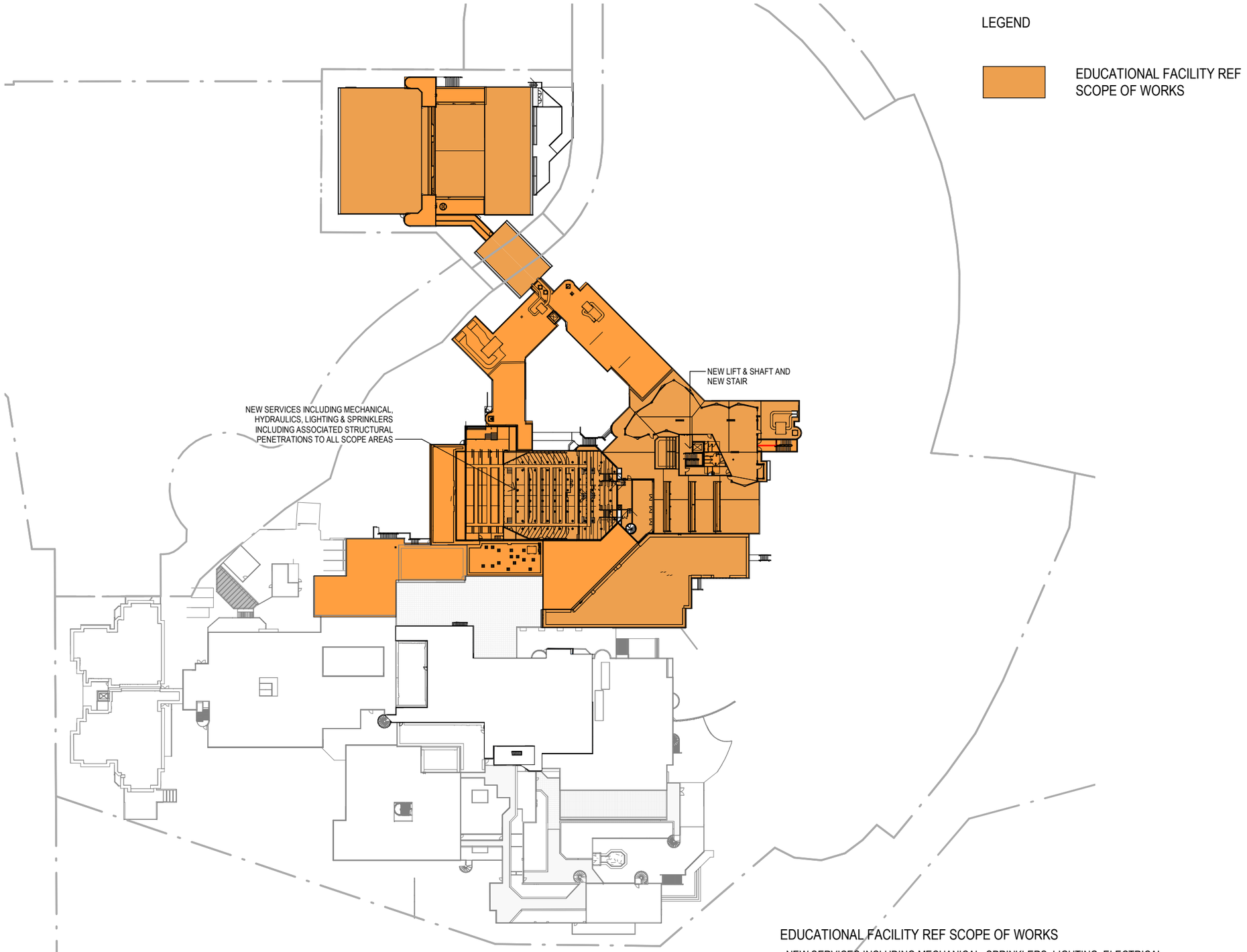

LEGEND

EDUCATIONAL FACILITY REF
SCOPE OF WORKS

DRAWING TO BE PRINTED IN COLOUR

EDUCATIONAL FACILITY REF SCOPE OF WORKS

- NEW SERVICES INCLUDING MECHANICAL, SPRINKLERS, LIGHTING, ELECTRICAL AND HYDRAULICS INCLUDING ASSOCIATED STRUCTURAL PENETRATIONS TO ALL SCOPE AREAS
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SCALE BAR - 1:1000 (0, 5, 10, 15, 20, 25 m)

Nominated Architects

Anthony Quan 5421 I Sandeep Amin 7337 I Ian Armstrong 7260 I Richard Does 8126

No	DATE	REVISIONS	BY
A	04/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG
B	01/06/2018	UPDATED SHEET NAMES	RK
C	01/08/2018	UPDATE TO DEVELOPMENT APPROVAL	TG
D	03/08/2018	UPDATED NOTES	DL
E	06/08/2018	UPDATED NOTES	DL

ARCHITECT

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Architecture Urban Design Interiors

CLIENT

SCHOOL INFRASTRUCTURE NSW

PROJECT

100 ETON RD, LINDFIELD

NSW 2070

TITLE

EDUCATIONAL FACILITY REF -LEVEL 7

DRAWN BY	TG, CS, HC, RK
SCALES	As indicated @A3
PLOT DATE	26/04/2018
PROJECT Nº.	P18-023
DRAWING Nº.	DA-117
REVISION	E

DRAWING STATUS	REVIEWED BY	SIGNATURE	DATE
FOR APPROVAL	RG		

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DEVELOPMENT APPLICATION

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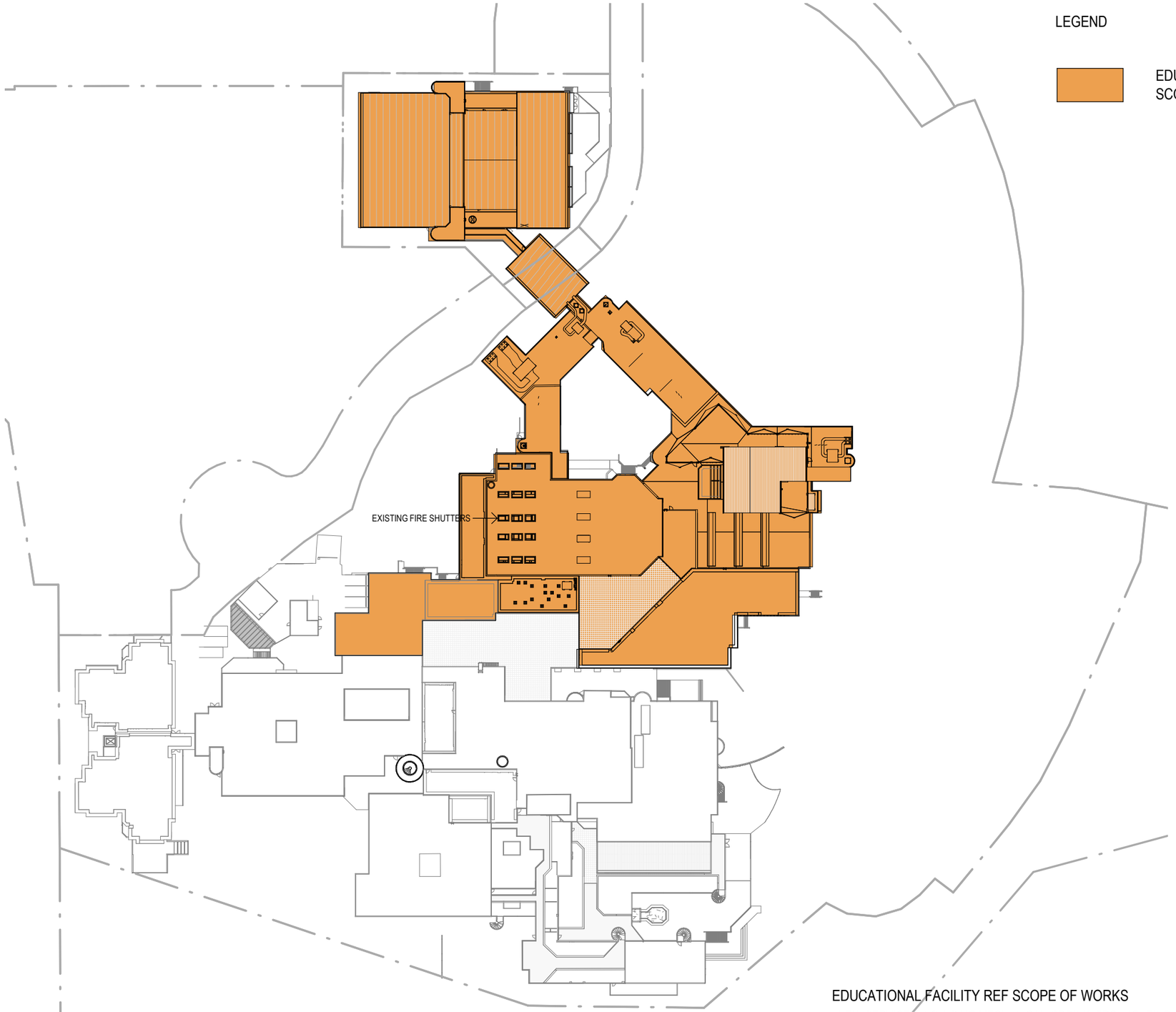

LEGEND

EDUCATIONAL FACILITY REF
SCOPE OF WORKS

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Nominated Architects
Anthony Quan 5421 I Sandeep Amin 7337 I Ian Armstrong 7260 I Richard Does 8126

No	DATE	REVISIONS	BY
A	04/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG
B	07/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG
C	01/08/2018	UPDATE TO DEVELOPMENT APPROVAL	TG
D	03/08/2018	UPDATED NOTES	DL
E	06/08/2018	UPDATED NOTES	DL

DRAWING TO BE PRINTED IN COLOUR

EDUCATIONAL FACILITY REF SCOPE OF WORKS

- NEW SERVICES INCLUDING MECHANICAL, SPRINKLERS, LIGHTING, ELECTRICAL AND HYDRAULICS INCLUDING ASSOCIATED STRUCTURAL PENETRATIONS TO ALL SCOPE AREAS
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- HANDRAILS AND BALUSTRADES TO BCA COMPLIANCE

SCALE BAR - 1:1000
0 5 10 15 20 25 m

ARCHITECT

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Architecture Urban Design Interiors

CLIENT

SCHOOL INFRASTRUCTURE NSW

PROJECT

100 ETON RD, LINDFIELD

NSW 2070

TITLE

EDUCATIONAL FACILITY
REF - ROOF LEVEL

DRAWN BY	TG, CS, HC, RK
SCALES	As indicated @A3
PLOT DATE	26/04/2022
PROJECT Nº.	P18-023
REVISION	E
DRAWING Nº.	DA-118

DRAWING STATUS	REVIEWED BY	SIGNATURE	DATE
FOR APPROVAL	RG		

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DEVELOPMENT APPLICATION

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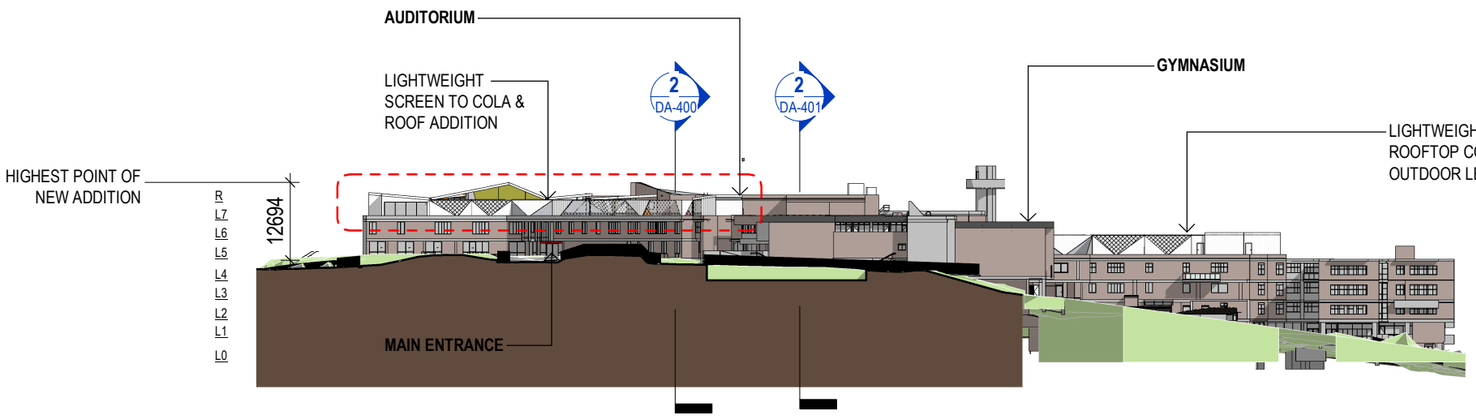
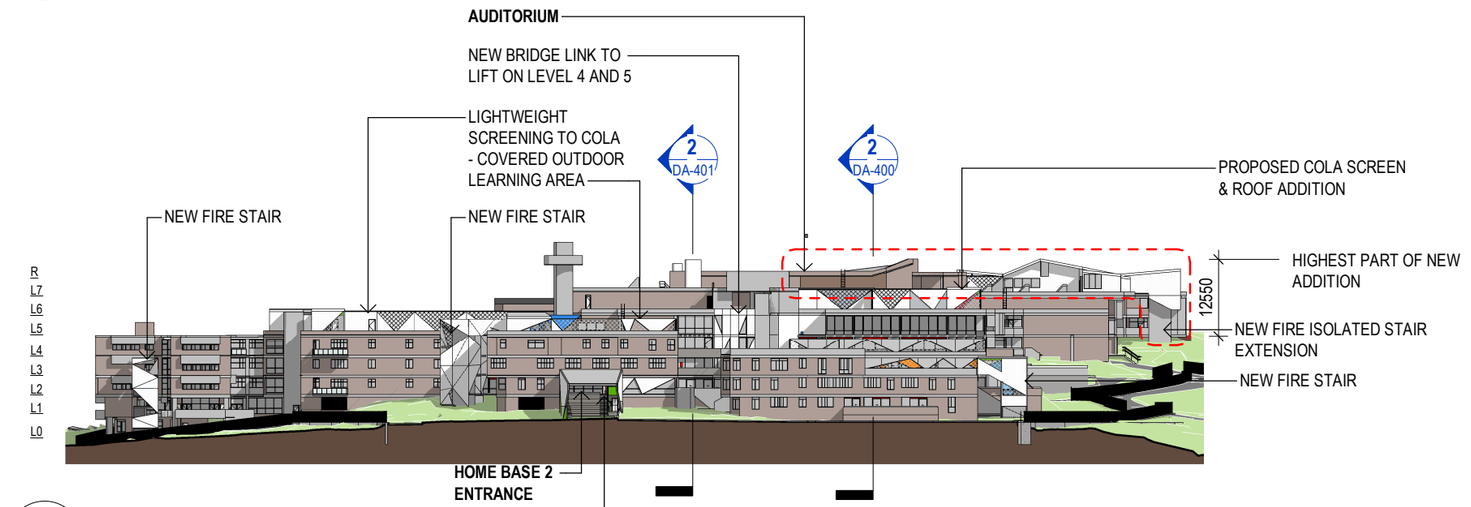


1 PROPOSED NORTH ELEVATION



2 PROPOSED SOUTH ELEVATION

NOTES

- REPLACE ALL ASBESTOS AFFECTED WINDOWS AND GLASS DOORS WITH NEW ALUMINIUM FRAMED TOUGHENED GLASS WINDOWS AND DOORS.
- NEW GREY COLOURED SCREENS TO COLA ARE TO BE FABRICATED POWDERCOATED ALUMINIUM OR PRE-PAINTED FIBRE CEMENT OR STEEL. SOME PANELS ARE FIXED TO PARTS OF THE BUILDING EXTERIOR AS INDICATED.
- NEW BRIDGE LINK WITH GREY LONGLINE CLADDING
- NEW EXTERNAL FIRE ISOLATED STAIRS TO BE CLAD WITH GREY LONGLINE METAL CLADDING

PHASE 1 & 2B EXTERNAL WORKS

NOTE: PHASE 2B REPURPOSING OF PHASE 1 DOES NOT REQUIRE ADDITIONAL EXTERNAL ALTERATIONS

DRAWING TO BE PRINTED IN COLOUR

SCALE BAR - 1:1000 (0, 5, 10, 15, 20, 25 m)

Nominated Architects

Anthony Quin 5421 I Sandeep Amin 7337 I Ian Armstrong 7260 I Richard Does 8126

No	DATE	REVISIONS	BY
A	27/03/2017	PRELIMINARY ISSUE FOR REVIEW	HC
B	28/03/2017	PRELIMINARY ISSUE	HC
C	31/03/2017	ISSUED FOR APPROVAL	HC
D	06/04/2017	ISSUED FOR HERITAGE REVIEW	NT
E	07/04/2017	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	HC
F	29/05/2017	ISSUED FOR APPROVAL	CS
G	27/10/2017	SSD RESUBMISSION	TG
H	30/04/2018	ISSUED FOR REVIEW	HC
J	04/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG

ARCHITECT

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Architecture Urban Design Interiors

CLIENT

SCHOOL INFRASTRUCTURE NSW

PROJECT

Lindfield Learning Village -

Eton Road,
Lindfield NSW 2070

TITLE

NORTH & SOUTH BUILDING ELEVATION

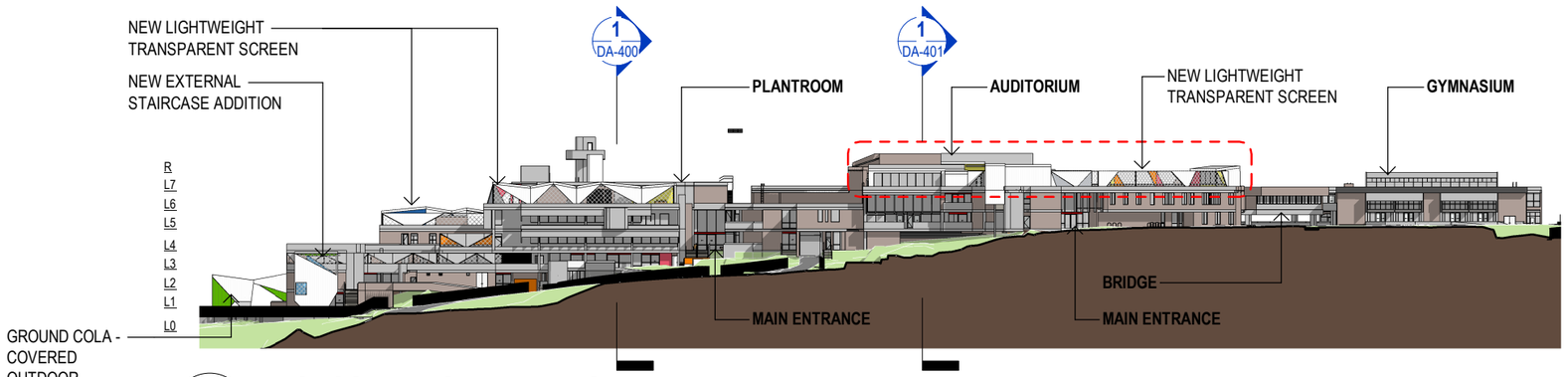
DRAWN BY	TG, CS, HC, RK
SCALES	As indicated @A3
PLOT DATE	21/03/2017
PROJECT Nº.	P18-023
REVISION	J
DRAWING Nº.	DA-300

DRAWING STATUS	REVIEWED BY	SIGNATURE	DATE
FOR APPROVAL	RG		

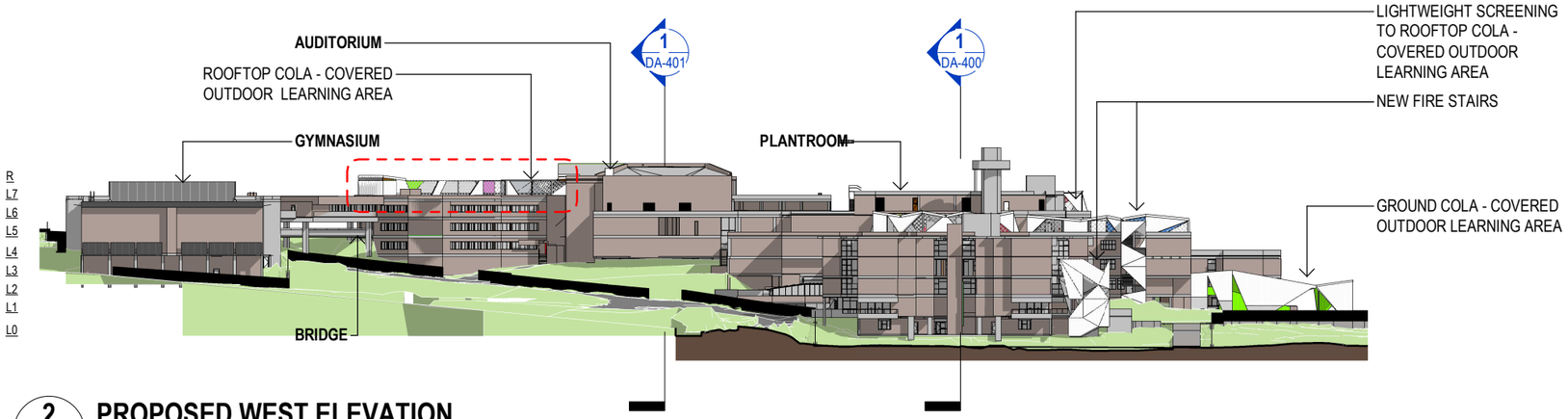
QUALITY CERTIFIED ISO 9001 — Completion of the Drawing Status is evidence the design has been verified as conforming to the requirements of the Project M.S. Plan. Initialling the "Drawn By" box confirms that this drawing has been prepared in conformity with DesignInc Sydney M.S. procedures.

DEVELOPMENT APPLICATION

PLOTTED 1/06/2018 10:39:42 AM C:\Users\rkwok\Documents\P18-023-AR-LLV-SHEETS_CENTRAL_R18_rkwok.rvt



1 PROPOSED EAST ELEVATION



2 PROPOSED WEST ELEVATION

NOTES

- REPLACE ALL ASBESTOS AFFECTED WINDOWS AND GLASS DOORS WITH NEW ALUMINIUM FRAMED TOUGHENED GLASS WINDOWS AND DOORS.
- NEW GREY COLOURED SCREENS TO COLA ARE TO BE FABRICATED POWDERCOATED ALUMINIUM OR PRE-PAINTED FIBRE CEMENT OR STEEL. SOME PANELS ARE FIXED TO PARTS OF THE BUILDING EXTERIOR AS INDICATED.
- NEW BRIDGE LINK WITH GREY LONGLINE CLADDING
- NEW EXTERNAL FIRE ISOLATED STAIRS TO BE CLAD WITH GREY LONGLINE METAL CLADDING

PHASE 1 & 2B EXTERNAL WORKS

NOTE: PHASE 2B REPURPOSING OF PHASE 1 DOES NOT REQUIRE ADDITIONAL EXTERNAL ALTERATIONS

DRAWING TO BE PRINTED IN COLOUR

SCALE BAR - 1:1000 (0, 5, 10, 15, 20, 25 m)

Nominated Architects
Anthony Quin 5421 I Sandeep Amin 7337 I Ian Armstrong 7260 I Richard Does 8126

No	DATE	REVISIONS	BY
A	27/03/2017	PRELIMINARY ISSUE FOR REVIEW	HC
B	28/03/2017	PRELIMINARY ISSUE	HC
C	31/03/2017	ISSUED FOR APPROVAL	HC
D	06/04/2017	ISSUED FOR HERITAGE REVIEW	NT
E	07/04/2017	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	HC
F	29/05/2017	ISSUED FOR APPROVAL	CS
G	27/10/2017	SSD RESUBMISSION	TG
H	30/04/2018	ISSUED FOR REVIEW	HC
J	04/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG

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E sydney@sydney.designinc.com.au www.designinc.com.au
Architecture Urban Design Interiors

CLIENT
SCHOOL INFRASTRUCTURE NSW

PROJECT
Lindfield Learning Village -
Eton Road,
Lindfield NSW 2070

TITLE
EAST & WEST BUILDING ELEVATION

DRAWN BY	TG, CS, HC, RK
SCALES	As indicated @A3
PLOT DATE	21/03/2017
PROJECT Nº.	P18-023
DRAWING Nº.	DA-301
REVISION	J

DRAWING STATUS	REVIEWED BY	SIGNATURE	DATE
FOR APPROVAL	RG		

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DEVELOPMENT APPLICATION

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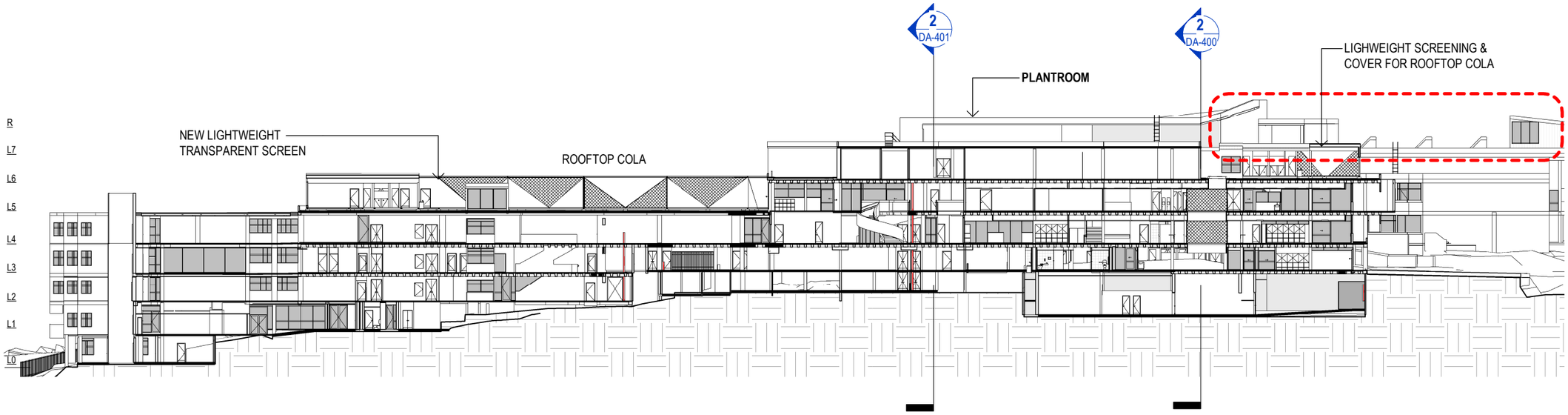
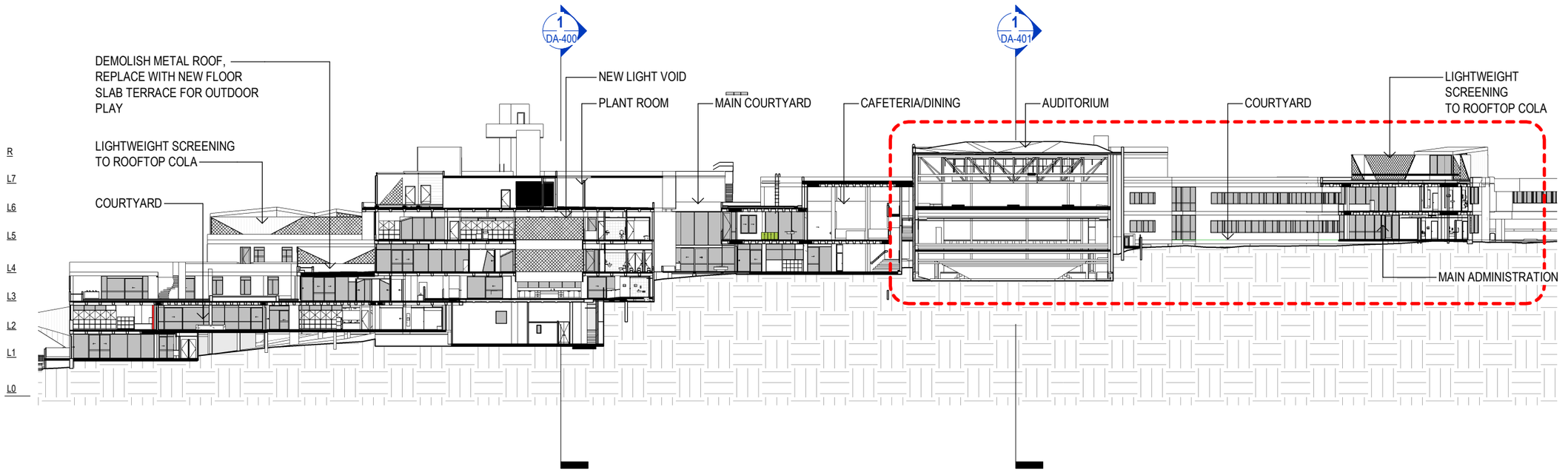


1 SECTION 1



2 SECTION 2

0 2.5 5 7.5 10 12.5 m
SCALE BAR - 1:500

LEGEND

PHASE 1 & 2B
EXTERNAL WORKS

Nominated Architects
Anthony Quin 5421 I Sandeep Amin 7337 I Ian Armstrong 7260 I Richard Does 8126

No	DATE	REVISIONS	BY
A	27/03/2017	PRELIMINARY ISSUE FOR REVIEW	HC
B	28/03/2017	PRELIMINARY ISSUE	HC
C	31/03/2017	ISSUED FOR APPROVAL	HC
D	07/04/2017	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	HC
E	29/05/2017	ISSUED FOR APPROVAL	CS
F	27/10/2017	SSD RESUBMISSION	TG
G	30/04/2018	ISSUED FOR REVIEW	HC
H	04/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG

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E sydney@sydney.designinc.com.au www.designinc.com.au
Architecture Urban Design Interiors

CLIENT
SCHOOL INFRASTRUCTURE NSW

PROJECT
LINDFIELD LEARNING VILLAGE
Eton Road,
Lindfield NSW 2070

TITLE
BUILDING SECTIONS - SHEET 1

DRAWN BY	TG, CS, HC, RK
SCALES	1 : 500 @A3
PLOT DATE	21/03/2017
PROJECT Nº.	S151441
REVISION	H
DRAWING Nº.	DA-400

DRAWING STATUS	REVIEWED BY	SIGNATURE	DATE
FOR APPROVAL	RG		

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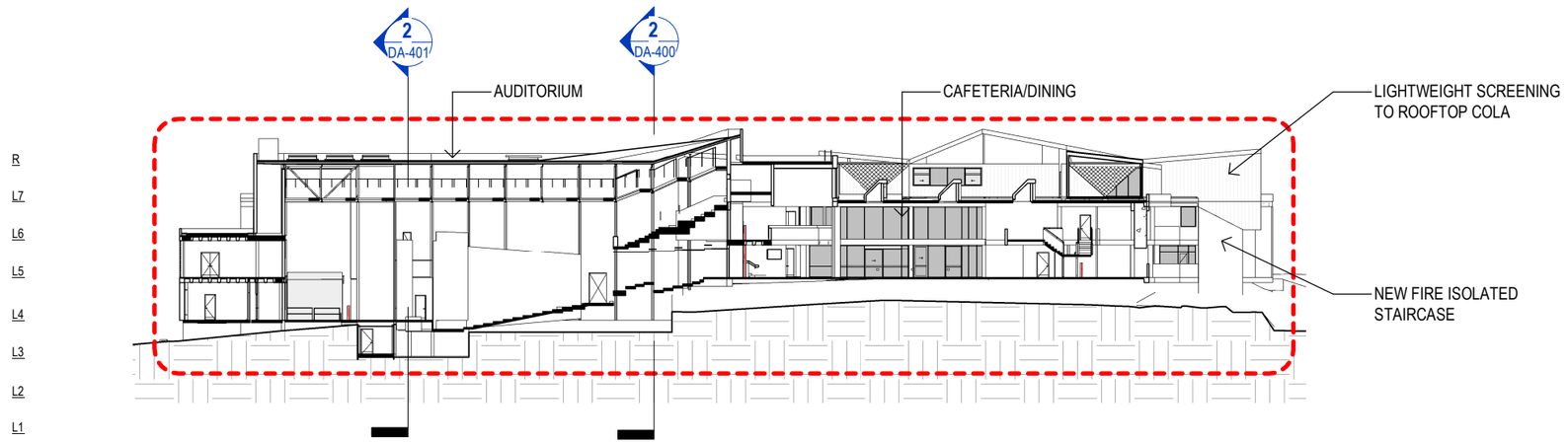
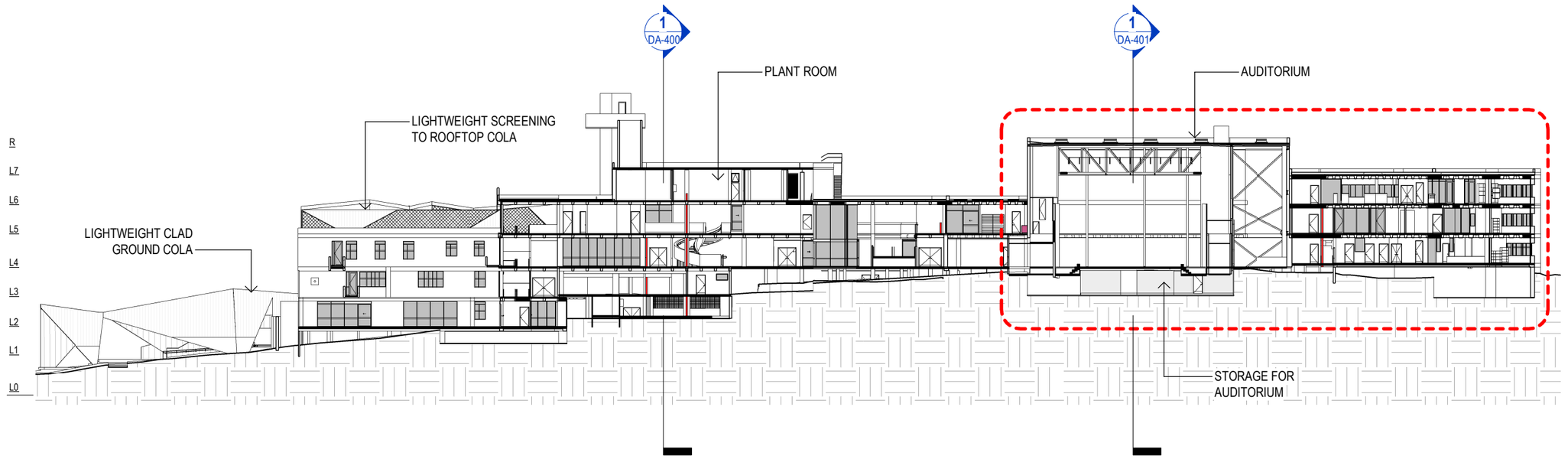
Completion of the Drawing Status is evidence the design has been verified as conforming to the requirements of the Project M.S. Plan. Initialling the 'Drawn By' box confirms that this drawing has been prepared in conformity with DesignInc Sydney M.S. procedures.

DEVELOPMENT APPLICATION

PLOTTED 8/05/2018 9:49:08 AM C:\Users\rkwok\Documents\S151441-AR-LLV-SHEETS_CENTRAL_R18_rkwok.rvt
:



1 SECTION 3



2 SECTION 4

0 2.5 5 7.5 10 12.5
SCALE BAR - 1:500 m

Nominated Architects
Anthony Quin 5421 I Sandeep Amin 7337 I Ian Armstrong 7260 I Richard Does 8126

No	DATE	REVISIONS	BY
A	27/03/2017	PRELIMINARY ISSUE FOR REVIEW	HC
B	28/03/2017	PRELIMINARY ISSUE	HC
C	31/03/2017	ISSUED FOR APPROVAL	HC
D	07/04/2017	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	HC
E	29/05/2017	ISSUED FOR APPROVAL	CS
F	27/10/2017	SSD RESUBMISSION	TG
G	30/04/2018	ISSUED FOR REVIEW	HC
H	04/05/2018	ISSUED FOR DEVELOPMENT APPROVAL	TG

LEGEND
PHASE 1 & 2B
EXTERNAL WORKS

ARCHITECT
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E sydney@sydney.designinc.com.au www.designinc.com.au
Architecture Urban Design Interiors

CLIENT
SCHOOL INFRASTRUCTURE NSW

PROJECT
LINDFIELD LEARNING VILLAGE
Eton Road,
Lindfield NSW 2070

TITLE
BUILDING SECTIONS - SHEET 2

DRAWN BY	TG, CS, HC, RK
SCALES	1 : 500 @A3
PLOT DATE	21/03/2017
PROJECT Nº.	S151441
REVISION	H
DRAWING Nº.	DA-401

DRAWING STATUS	REVIEWED BY	SIGNATURE	DATE
FOR APPROVAL	RG		

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DEVELOPMENT APPLICATION

PLOTTED 8/05/2018 9:49:48 AM C:\Users\rkwok\Documents\S151441-AR-LLV-SHEETS_CENTRAL_R18_rkwok.rvt

Appendix B: Laboratory Report/s & COC Documents

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

CERTIFICATE OF ANALYSIS 205470

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KD, Lindfield**
Number of Samples	8 Soil, 2 Material
Date samples received	13/11/2018
Date completed instructions received	13/11/2018

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	14/11/2018
Date of Issue	14/11/2018
Reissue Details	This report replaces R00 created on 14/11/2018 due to: extra information requested (report comment).

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

Asbestos Approved By
Analysed by Asbestos Approved Identifier: Aida Marner
Authorised by Asbestos Approved Signatory: Matt Tang
Results Approved By
Matthew Tang, Asbsestos Analyst

Authorised By

Jacinta Hurst, Laboratory Manager

Asbestos ID - soils						
Our Reference		205470-1	205470-2	205470-3	205470-4	205470-5
Your Reference	UNITS	V1	V2	V3	V4	V5
Depth		0.3	0.4	0.35	0.4	0.85
Date Sampled		13/11/2018	13/11/2018	13/11/2018	13/11/2018	13/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	14/11/2018	14/11/2018	14/11/2018	14/11/2018	14/11/2018
Sample mass tested	g	Approx. 25g	Approx. 30g	Approx. 40g	Approx. 45g	Approx. 20g
Sample Description	-	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy 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		205470-6	205470-7	205470-8
Your Reference	UNITS	SPV6	SPV7	SPV8
Depth		0.35	0.5	0.43
Date Sampled		13/11/2018	13/11/2018	13/11/2018
Type of sample		Soil	Soil	Soil
Date analysed	-	14/11/2018	14/11/2018	14/11/2018
Sample mass tested	g	Approx. 40g	29.31g	Approx. 35g
Sample Description	-	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	Chrysotile asbestos detected 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

Asbestos ID - materials			
Our Reference		205470-9	205470-10
Your Reference	UNITS	HLF1	MDF1
Depth		0.1	-
Date Sampled		13/11/2018	13/11/2018
Type of sample		Material	Material
Date analysed	-	14/11/2018	14/11/2018
Mass / Dimension of Sample	-	90x60x5mm	40x35x5mm
Sample Description	-	Beige fibre cement material	Beige fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Organic fibres detected	Chrysotile asbestos detected Organic fibres 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.

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

Report Comments

Sample 205470-7 ; Chrysotile asbestos identified embedded in a single fragment of fibre cement, it is estimated to be 14.46g/kg in 29.31g of soil (i.e. > reporting limit for the method of 0.1g/kg).

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

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

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KD, Lindfield
Envirolab Reference	205470
Date Sample Received	13/11/2018
Date Instructions Received	13/11/2018
Date Results Expected to be Reported	14/11/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	8 Soil, 2 Material
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	25.5
Cooling Method	None
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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

Sample ID	Asbestos ID - soils	Asbestos ID - materials
V1-0.3	✓	
V2-0.4	✓	
V3-0.35	✓	
V4-0.4	✓	
V5-0.85	✓	
SPV6-0.35	✓	
SPV7-0.5	✓	
SPV8-0.43	✓	
HLF1-0.1		✓
MDF1		✓

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

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E30259KD	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: 24Hrs	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: V1	Attention: Mitchell Delaney
Attention: Aileen		

Location: Lindfield

Sampler: HL

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 (detection)			
13.11.18	1	V1	0.3	A	–	Silty Sandy Fill: Clay									X			
	2	V2	0.4		–										X			
	3	V3	0.35		–										X			
	4	V4	0.4		–										X			
	5	V5	0.85		–	Sandy Clay									X			
	6	SPV6	0.35		–	Silty Sandy F: Clay									X			
	7	SPV7	0.5		–										X			
	8	SPV8	0.43		–										X			
	9	HLF1	0.1		–	Fragment									X			
	10	MDF1	Surface		–	Fragment									X			

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

ENVIROLAB GROUP

Job No: 205470

Date Received: 13/11/18

Time Received: 15:50

Received By: LN

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

Remarks (comments/detection limits required):

ASB Presence/Absence

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
	13/7/18		ELS LILLY NOTT	13/11/18 15:50

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

CERTIFICATE OF ANALYSIS 208211

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KD, Lindfield**
Number of Samples	20 Soil
Date samples received	17/12/2018
Date completed instructions received	17/12/2018

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	18/12/2018
Date of Issue	18/12/2018

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

Results Approved By
Jeremy Faircloth, Organics Supervisor
Long Pham, Team Leader, Metals
Lucy Zhu, Asbestos Analyst

Authorised By

Jacinta Hurst, Laboratory Manager

PCBs in Soil						
Our Reference		208211-6	208211-7	208211-8	208211-9	208211-10
Your Reference	UNITS	BV101	BV102	BV103	BV104	BV105
Depth		0.01	0.2	0.01	0.2	0.02
Date Sampled		15/12/2018	15/12/2018	15/12/2018	15/12/2018	15/12/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/12/2018	17/12/2018	17/12/2018	17/12/2018	17/12/2018
Date analysed	-	17/12/2018	17/12/2018	17/12/2018	17/12/2018	17/12/2018
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	%	100	100	100	100	98

PCBs in Soil		
Our Reference		208211-16
Your Reference	UNITS	DUPHLB1
Depth		-
Date Sampled		15/12/2018
Type of sample		Soil
Date extracted	-	17/12/2018
Date analysed	-	17/12/2018
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate TCLMX	%	100

Acid Extractable metals in soil						
Our Reference		208211-11	208211-12	208211-13	208211-14	208211-15
Your Reference	UNITS	CV101	CV102	CV103	CV104	CV105
Depth		0.05	0.05	0.05	0.05	0.15
Date Sampled		15/12/2018	15/12/2018	15/12/2018	15/12/2018	15/12/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/12/2018	17/12/2018	17/12/2018	17/12/2018	17/12/2018
Date analysed	-	17/12/2018	17/12/2018	17/12/2018	17/12/2018	17/12/2018
Lead	mg/kg	62	130	41	71	6

Acid Extractable metals in soil			
Our Reference		208211-18	208211-20
Your Reference	UNITS	DUPHLC1	TBVAL
Depth		-	-
Date Sampled		15/12/2018	15/12/2018
Type of sample		Soil	Soil
Date prepared	-	17/12/2018	17/12/2018
Date analysed	-	17/12/2018	17/12/2018
Lead	mg/kg	59	<1

Moisture						
Our Reference		208211-6	208211-7	208211-8	208211-9	208211-10
Your Reference	UNITS	BV101	BV102	BV103	BV104	BV105
Depth		0.01	0.2	0.01	0.2	0.02
Date Sampled		15/12/2018	15/12/2018	15/12/2018	15/12/2018	15/12/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/12/2018	17/12/2018	17/12/2018	17/12/2018	17/12/2018
Date analysed	-	18/12/2018	18/12/2018	18/12/2018	18/12/2018	18/12/2018
Moisture	%	1.7	3.0	4.1	2.7	6.0

Moisture						
Our Reference		208211-11	208211-12	208211-13	208211-14	208211-15
Your Reference	UNITS	CV101	CV102	CV103	CV104	CV105
Depth		0.05	0.05	0.05	0.05	0.15
Date Sampled		15/12/2018	15/12/2018	15/12/2018	15/12/2018	15/12/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/12/2018	17/12/2018	17/12/2018	17/12/2018	17/12/2018
Date analysed	-	18/12/2018	18/12/2018	18/12/2018	18/12/2018	18/12/2018
Moisture	%	14	10	12	11	15

Moisture				
Our Reference		208211-16	208211-18	208211-20
Your Reference	UNITS	DUPHLB1	DUPHLC1	TBVAL
Depth		-	-	-
Date Sampled		15/12/2018	15/12/2018	15/12/2018
Type of sample		Soil	Soil	Soil
Date prepared	-	17/12/2018	17/12/2018	17/12/2018
Date analysed	-	18/12/2018	18/12/2018	18/12/2018
Moisture	%	3.0	11	<0.1

Asbestos ID - soils						
Our Reference		208211-1	208211-2	208211-3	208211-4	208211-5
Your Reference	UNITS	AV101	AV102	AV103	AV104	AV105
Depth		0.4	0.35	0.55	0.4	0.75
Date Sampled		15/12/2018	15/12/2018	15/12/2018	15/12/2018	15/12/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	18/12/2018	18/12/2018	18/12/2018	18/12/2018	18/12/2018
Sample mass tested	g	Approx. 20g	Approx. 20g	Approx. 25g	Approx. 25g	Approx. 20g
Sample Description	-	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
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.

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			17/12/2018	[NT]	[NT]	[NT]	[NT]	17/12/2018	[NT]
Date analysed	-			17/12/2018	[NT]	[NT]	[NT]	[NT]	17/12/2018	[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]	102	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			17/12/2018	20	17/12/2018	17/12/2018		17/12/2018	[NT]
Date analysed	-			17/12/2018	20	17/12/2018	17/12/2018		17/12/2018	[NT]
Lead	mg/kg	1	Metals-020	<1	20	<1	<1	0	94	[NT]

Result Definitions

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

Quality Control Definitions

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

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

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

Asbestos: Excessive sample volume was provided for asbestos analysis. A portion of the supplied sample was sub-sampled according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.
Note: Samples 208211-1 to 5 were sub-sampled from bags provided by the client.

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

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KD, Lindfield
Envirolab Reference	208211
Date Sample Received	17/12/2018
Date Instructions Received	17/12/2018
Date Results Expected to be Reported	18/12/2018

Sample Condition

Samples received in appropriate condition for analysis	
No. of Samples Provided	20 Soil
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	5.3
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:

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Sample ID	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils	On Hold
AV101-0.4			✓	
AV102-0.35			✓	
AV103-0.55			✓	
AV104-0.4			✓	
AV105-0.75			✓	
BV101-0.01	✓			
BV102-0.2	✓			
BV103-0.01	✓			
BV104-0.2	✓			
BV105-0.02	✓			
CV101-0.05		✓		
CV102-0.05		✓		
CV103-0.05		✓		
CV104-0.05		✓		
CV105-0.15		✓		
DUPHLB1	✓			
DUPHLB2				✓
DUPHLC1		✓		
DUPHLC2				✓
TBVAL		✓		

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

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E30259KD	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067		MACQUARIE PARK, NSW 2113
P: (02) 99106200	Date Results Required: 24HTA	P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201		
Attention: Aileen	Page: 1 of 1	Attention: Mitch Delaney

Location:	Lindfield	Sample Preserved In Esky on Ice
Sampler:	HL	Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Lead	PCBs	Asbestos
15/12/2018	1	AV101	0.4	A	0	Fill			x
15/12/2018	2	AV102	0.35	A	0	Fill			x
15/12/2018	3	AV103	0.55	A	0	Fill			x
15/12/2018	4	AV104	0.4	A	0	Fill			x
15/12/2018	5	AV105	0.75	A	0	Sandy clay			x
15/12/2018	6	BV101	0.01	G	0	Fill		x	
15/12/2018	7	BV102	0.2	G	0	Fill		x	
15/12/2018	8	BV103	0.01	G	0	Fill		x	
15/12/2018	9	BV104	0.2	G	0	Fill		x	
15/12/2018	10	BV105	0.02	G	0	sandstone		x	
15/12/2018	11	CV101	0.05	G	0	Fill	x		
15/12/2018	12	CV102	0.05	G	0	Fill	x		
15/12/2018	13	CV103	0.05	G	0	Fill	x		
15/12/2018	14	CV104	0.05	G	0	Fill	x		
15/12/2018	15	CV105	0.15	G	0	Sandy clay	x		
15/12/2018	16	DUPHLB1	na	G	0	Fill	Pb	X	
15/12/2018	17	DUPHLB2	na	G	0	Fill			
15/12/2018	18	DUPHLC1	na	G	0	Fill	x		
15/12/2018	19	DUPHLC2	na	G	0	Fill			
15/12/2018	20	TBVAL	na	G	na	Sand	x		

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

Job No: 208211

Date Received: 17.12.18

Time Received: 9:06

Received By: MD

Temp: Cool/Ambient 5.3°C

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: MD	Date: 17-12-18	Time:	Received By:	Date: 17.12.18 9:06

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www.envirolab.com.au

CERTIFICATE OF ANALYSIS 209410

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KD, Lindfield**
Number of Samples	2 Material
Date samples received	14/01/2019
Date completed instructions received	14/01/2019

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	14/01/2019
Date of Issue	14/01/2019

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Asbestos Approved By
Analysed by Asbestos Approved Identifier: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu
Results Approved By
Lucy Zhu, Asbestos Analyst

Authorised By

Jacinta Hurst, Laboratory Manager

Asbestos ID - materials			
Our Reference		209410-1	209410-2
Your Reference	UNITS	HWF1	HWF2
Date Sampled		14/01/2019	14/01/2019
Type of sample		Material	Material
Date analysed	-	14/01/2019	14/01/2019
Mass / Dimension of Sample	-	135x80x5mm	40x30x5mm
Sample Description	-	Grey fibre cement material	Grey fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected	Chrysotile 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.

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

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SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KD, Lindfield
Envirolab Reference	209410
Date Sample Received	14/01/2019
Date Instructions Received	14/01/2019
Date Results Expected to be Reported	14/01/2019

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	2 Material
Turnaround Time Requested	Same day
Temperature on Receipt (°C)	NA
Cooling Method	None
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:

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12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	Asbestos ID - materials
HWF1	✓
HWF2	✓

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

TO:		FROM:
ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E30259KD Date Results Required: ~~STANDARD~~ AS AD Page: 1 of 1	ENVIRONMENTAL INVESTIGATION SERVICES REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitch Delaney mdelaney@jkgeotechnics.com.au

Location:	Lindfield	Sample Preserved in Esky on Ice
Sampler:	HW	Tests Required

Date Sampled	Lab Ref:	Sample Number	Sample Container	Sample Description	Asbestos								
14.1.2019	1	HWF1	P	Material	X								
↓	2	HWF2	P	Material	X								

ENVIROLAB

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

Job No: 209416

Date Received: 14-1-19
Time Received: 15:40
Received by: KG
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Remarks (comments/detection limits required):	Sample Containers:
PLEASE REPORT LEAD IN PAINT AS mg/kg	G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
MD	14/1/19	15:40	KG EJS	14-1-19

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customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 209533

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KD, Lindfield**
Number of Samples	6 Soil
Date samples received	16/01/2019
Date completed instructions received	16/01/2019

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	16/01/2019
Date of Issue	16/01/2019

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Asbestos Approved By
Analysed by Asbestos Approved Identifier: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu
Results Approved By
Lucy Zhu, Asbestos Analyst

Authorised By

Jacinta Hurst, Laboratory Manager

Asbestos ID - soils						
Our Reference		209533-1	209533-2	209533-3	209533-4	209533-5
Your Reference	UNITS	DV201	DV202	DV203	DV204	DV205
Date Sampled		16/01/2019	16/01/2019	16/01/2019	16/01/2019	16/01/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/01/2019	16/01/2019	16/01/2019	16/01/2019	16/01/2019
Sample mass tested	g	Approx. 20g	Approx. 30g	Approx. 25g	Approx. 30g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils		
Our Reference		209533-6
Your Reference	UNITS	DV206
Date Sampled		16/01/2019
Type of sample		Soil
Date analysed	-	16/01/2019
Sample mass tested	g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

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

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customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KD, Lindfield
Envirolab Reference	209533
Date Sample Received	16/01/2019
Date Instructions Received	16/01/2019
Date Results Expected to be Reported	16/01/2019

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	6 Soil
Turnaround Time Requested	Same day
Temperature on Receipt (°C)	28.6
Cooling Method	None
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
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Sample ID	Asbestos ID - soils
DV201	✓
DV202	✓
DV203	✓
DV204	✓
DV205	✓
DV206	✓

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

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E30259KD	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: ~~STANDARD~~ ASAP.	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201		Attention: Mitch Delaney
Attention: Aileen	Page: 1 of 1	mdelaney@jkgeotechnics.com.au

Location:	Lindfield	Sample Preserved in Esky on Ice
Sampler:	HL/HW	Tests Required

Date Sampled	Lab Ref:	Sample Number	Sample Container	Sample Description	Asbestos	Lead (mg/kg)	Lead (µg/swab)						
16.01.2018	1	DV201	A	F: Silty clayey Sand	X								
	2	DV202			X								
	3	DV203			X								
	4	DV204			X								
	5	DV205		Extremely Weathered Sls	X								
	6	DV206		Sandstone	X								

ENVIROLAB

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

Job No: 209533

Date Received: 16.01.19
Time Received: 10:02
Received by: TB
Temp: Cool/Ambient Warm 28.6°C
Cooling: Ice/Icepack
Security: Intact/Broken/None

Remarks (comments/detection limits required):	Sample Containers:
PLEASE REPORT LEAD IN PAINT AS mg/kg	G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
	16/1/19	10:02	Tony D EIS	16.01.19 10:02

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12 Ashley St Chatswood NSW 2067
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customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 209474

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KD, Lindfield**
Number of Samples	11 Soil
Date samples received	15/01/2019
Date completed instructions received	15/01/2019

Analysis Details

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

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

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

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

Report Details

Date results requested by	16/01/2019
Date of Issue	16/01/2019

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Asbestos Approved By
Analysed by Asbestos Approved Identifier: Aida Marner
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Jeremy Faircloth, Organics Supervisor
Ken Nguyen, Senior Chemist
Lucy Zhu, Asbestos Analyst
Steven Luong, Senior Chemist

Authorised By

Jacinta Hurst, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		209474-1	209474-2	209474-3	209474-4	209474-5
Your Reference	UNITS	TOPSP1	TOP2	TOP3	TOP4	TOPSP5
Depth		Surface	Surface	Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	15/01/2019	15/01/2019	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	16/01/2019	16/01/2019	16/01/2019	16/01/2019	16/01/2019
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	%	90	94	90	92	86

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		209474-6	209474-7	209474-8	209474-10	209474-11
Your Reference	UNITS	TOP6	TOPSP7	DOPDUP1	TOPTB1	TOPTS1
Depth		Surface	Surface	Surface	-	-
Date Sampled		14/01/2019	14/01/2019	14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	15/01/2019	15/01/2019	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	16/01/2019	16/01/2019	16/01/2019	16/01/2019	16/01/2019
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	[NA]
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	[NA]
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	[NA]
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	96%
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	96%
Ethylbenzene	mg/kg	<1	<1	<1	<1	94%
m+p-xylene	mg/kg	<2	<2	<2	<2	95%
o-Xylene	mg/kg	<1	<1	<1	<1	95%
naphthalene	mg/kg	<1	<1	<1	<1	[NA]
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	[NA]
Surrogate aaa-Trifluorotoluene	%	94	94	85	96	90

svTRH (C10-C40) in Soil						
Our Reference		209474-1	209474-2	209474-3	209474-4	209474-5
Your Reference	UNITS	TOPSP1	TOP2	TOP3	TOP4	TOPSP5
Depth		Surface	Surface	Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	15/01/2019	15/01/2019	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	16/01/2019	16/01/2019	16/01/2019	16/01/2019	16/01/2019
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	800	520	180	430	250
TRH C_{29} - C_{36}	mg/kg	910	670	220	590	420
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	57
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	57
TRH >C_{16} -C_{34}	mg/kg	1,500	1,100	350	900	550
TRH >C_{34} -C_{40}	mg/kg	450	340	110	280	220
Total +ve TRH (>C10-C40)	mg/kg	2,000	1,400	460	1,200	830
Surrogate o-Terphenyl	%	101	99	84	92	92

svTRH (C10-C40) in Soil				
Our Reference		209474-6	209474-7	209474-8
Your Reference	UNITS	TOP6	TOPSP7	DOPDUP1
Depth		Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	16/01/2019	16/01/2019	16/01/2019
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	110	120	550
TRH C_{29} - C_{36}	mg/kg	300	290	780
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	340	350	1,200
TRH >C_{34} -C_{40}	mg/kg	160	140	440
Total +ve TRH (>C10-C40)	mg/kg	490	490	1,600
Surrogate o-Terphenyl	%	78	78	92

PAHs in Soil						
Our Reference		209474-1	209474-2	209474-3	209474-4	209474-5
Your Reference	UNITS	TOPSP1	TOP2	TOP3	TOP4	TOPSP5
Depth		Surface	Surface	Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	15/01/2019	15/01/2019	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	16/01/2019	16/01/2019	16/01/2019	16/01/2019	16/01/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.2	0.1	<0.1	0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.5	0.3	<0.1	0.2	<0.1
Pyrene	mg/kg	0.4	0.2	<0.1	0.2	<0.1
Benzo(a)anthracene	mg/kg	0.2	0.1	<0.1	0.1	<0.1
Chrysene	mg/kg	0.2	0.2	<0.1	0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.4	0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.2	0.1	<0.05	0.1	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	2.4	1.3	<0.05	0.84	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	110	105	102	104	102

PAHs in Soil				
Our Reference		209474-6	209474-7	209474-8
Your Reference	UNITS	TOP6	TOPSP7	DOPDUP1
Depth		Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	16/01/2019	16/01/2019	16/01/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	0.2
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	0.6
Anthracene	mg/kg	<0.1	<0.1	0.2
Fluoranthene	mg/kg	<0.1	0.3	2.7
Pyrene	mg/kg	<0.1	0.2	2.8
Benzo(a)anthracene	mg/kg	<0.1	0.1	1.9
Chrysene	mg/kg	<0.1	0.1	1.8
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.2	2.7
Benzo(a)pyrene	mg/kg	<0.05	0.1	1.8
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	0.7
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	0.2
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	0.9
Total +ve PAH's	mg/kg	<0.05	1.2	17
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	2.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	2.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	2.5
Surrogate p-Terphenyl-d14	%	104	102	108

Organochlorine Pesticides in soil						
Our Reference		209474-1	209474-2	209474-3	209474-4	209474-5
Your Reference	UNITS	TOPSP1	TOP2	TOP3	TOP4	TOPSP5
Depth		Surface	Surface	Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	15/01/2019	15/01/2019	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	15/01/2019	15/01/2019	15/01/2019	15/01/2019	15/01/2019
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	%	124	98	93	106	88

Organochlorine Pesticides in soil				
Our Reference		209474-6	209474-7	209474-8
Your Reference	UNITS	TOP6	TOPSP7	DOPDUP1
Depth		Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	15/01/2019	15/01/2019	15/01/2019
HCB	mg/kg	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	114	113

Organophosphorus Pesticides						
Our Reference		209474-1	209474-2	209474-3	209474-4	209474-5
Your Reference	UNITS	TOPSP1	TOP2	TOP3	TOP4	TOPSP5
Depth		Surface	Surface	Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	15/01/2019	15/01/2019	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	15/01/2019	15/01/2019	15/01/2019	15/01/2019	15/01/2019
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	%	124	98	93	106	88

Organophosphorus Pesticides				
Our Reference		209474-6	209474-7	209474-8
Your Reference	UNITS	TOP6	TOPSP7	DOPDUP1
Depth		Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	15/01/2019	15/01/2019	15/01/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	114	113

PCBs in Soil						
Our Reference		209474-1	209474-2	209474-3	209474-4	209474-5
Your Reference	UNITS	TOPSP1	TOP2	TOP3	TOP4	TOPSP5
Depth		Surface	Surface	Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	15/01/2019	15/01/2019	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	15/01/2019	15/01/2019	15/01/2019	15/01/2019	15/01/2019
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	%	124	98	93	106	88

PCBs in Soil				
Our Reference		209474-6	209474-7	209474-8
Your Reference	UNITS	TOP6	TOPSP7	DOPDUP1
Depth		Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	15/01/2019	15/01/2019	15/01/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCLMX	%	93	114	113

Acid Extractable metals in soil						
Our Reference		209474-1	209474-2	209474-3	209474-4	209474-5
Your Reference	UNITS	TOPSP1	TOP2	TOP3	TOP4	TOPSP5
Depth		Surface	Surface	Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	15/01/2019	15/01/2019	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	15/01/2019	15/01/2019	15/01/2019	15/01/2019	15/01/2019
Arsenic	mg/kg	6	5	8	9	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	6	17	15	10
Copper	mg/kg	100	7	120	55	16
Lead	mg/kg	27	13	43	22	16
Mercury	mg/kg	0.2	<0.1	0.2	0.2	<0.1
Nickel	mg/kg	8	2	7	5	6
Zinc	mg/kg	180	17	95	83	55

Acid Extractable metals in soil				
Our Reference		209474-6	209474-7	209474-8
Your Reference	UNITS	TOP6	TOPSP7	DOPDUP1
Depth		Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil
Date prepared	-	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	15/01/2019	15/01/2019	15/01/2019
Arsenic	mg/kg	5	<4	10
Cadmium	mg/kg	<0.4	<0.4	<0.4
Chromium	mg/kg	6	10	31
Copper	mg/kg	17	51	120
Lead	mg/kg	15	21	27
Mercury	mg/kg	<0.1	0.1	0.3
Nickel	mg/kg	2	5	9
Zinc	mg/kg	39	75	150

Moisture						
Our Reference		209474-1	209474-2	209474-3	209474-4	209474-5
Your Reference	UNITS	TOPSP1	TOP2	TOP3	TOP4	TOPSP5
Depth		Surface	Surface	Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	15/01/2019	15/01/2019	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	16/01/2019	16/01/2019	16/01/2019	16/01/2019	16/01/2019
Moisture	%	36	12	19	27	21

Moisture				
Our Reference		209474-6	209474-7	209474-8
Your Reference	UNITS	TOP6	TOPSP7	DOPDUP1
Depth		Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil
Date prepared	-	15/01/2019	15/01/2019	15/01/2019
Date analysed	-	16/01/2019	16/01/2019	16/01/2019
Moisture	%	13	20	36

Asbestos ID - soils						
Our Reference		209474-1	209474-2	209474-3	209474-4	209474-5
Your Reference	UNITS	TOPSP1	TOP2	TOP3	TOP4	TOPSP5
Depth		Surface	Surface	Surface	Surface	Surface
Date Sampled		14/01/2019	14/01/2019	14/01/2019	14/01/2019	14/01/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/01/2019	16/01/2019	16/01/2019	16/01/2019	16/01/2019
Sample mass tested	g	Approx. 15g	Approx. 20g	Approx. 20g	Approx. 15g	Approx. 15g
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		209474-6	209474-7
Your Reference	UNITS	TOP6	TOPSP7
Depth		Surface	Surface
Date Sampled		14/01/2019	14/01/2019
Type of sample		Soil	Soil
Date analysed	-	16/01/2019	16/01/2019
Sample mass tested	g	Approx. 15g	Approx. 20g
Sample Description	-	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
Trace Analysis	-	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-8	[NT]
Date extracted	-			15/01/2019	1	15/01/2019	15/01/2019		15/01/2019	[NT]
Date analysed	-			16/01/2019	1	16/01/2019	16/01/2019		16/01/2019	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	<25	1	<25	<25	0	111	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	1	<25	<25	0	111	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	1	<0.2	<0.2	0	116	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	1	<0.5	<0.5	0	113	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	1	<1	<1	0	110	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	1	<2	<2	0	108	[NT]
o-Xylene	mg/kg	1	Org-016	<1	1	<1	<1	0	110	[NT]
naphthalene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	103	1	90	86	5	104	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			15/01/2019	1	15/01/2019	15/01/2019		15/01/2019	[NT]
Date analysed	-			16/01/2019	1	16/01/2019	16/01/2019		16/01/2019	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	1	<50	<50	0	97	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	1	800	990	21	89	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	1	910	1400	42	130	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	1	<50	53	6	97	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	1	1500	2000	29	89	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	1	450	740	49	130	[NT]
Surrogate o-Terphenyl	%		Org-003	99	1	101	107	6	97	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			15/01/2019	1	15/01/2019	15/01/2019		15/01/2019	[NT]
Date analysed	-			16/01/2019	1	16/01/2019	16/01/2019		16/01/2019	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	96	[NT]
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	97	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	1	0.2	0.3	40	97	[NT]
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	0.5	0.6	18	100	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	1	0.4	0.5	22	98	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	1	0.2	0.2	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	1	0.2	0.3	40	111	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	1	0.4	0.4	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	1	0.2	0.2	0	103	[NT]
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	0.2	0.1	67	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	104	1	110	106	4	135	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			15/01/2019	1	15/01/2019	15/01/2019		15/01/2019	[NT]
Date analysed	-			15/01/2019	1	15/01/2019	15/01/2019		15/01/2019	[NT]
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	130	[NT]
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	94	[NT]
Heptachlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	98	[NT]
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	88	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	92	[NT]
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	99	[NT]
Dieldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	106	[NT]
Endrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	96	[NT]
pp-DDD	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	88	[NT]
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	100	[NT]
Methoxychlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	101	1	124	95	26	115	[NT]

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			15/01/2019	1	15/01/2019	15/01/2019		15/01/2019	[NT]
Date analysed	-			15/01/2019	1	15/01/2019	15/01/2019		15/01/2019	[NT]
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	92	[NT]
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	89	[NT]
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	94	[NT]
Fenitrothion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	115	[NT]
Malathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	94	[NT]
Parathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	100	[NT]
Ronnel	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	98	[NT]
Surrogate TCMX	%		Org-008	101	1	124	95	26	92	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			15/01/2019	1	15/01/2019	15/01/2019		15/01/2019	[NT]
Date analysed	-			15/01/2019	1	15/01/2019	15/01/2019		15/01/2019	[NT]
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	120	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	101	1	124	95	26	92	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date prepared	-			15/01/2019	1	15/01/2019	15/01/2019		15/01/2019	[NT]
Date analysed	-			15/01/2019	1	15/01/2019	15/01/2019		15/01/2019	[NT]
Arsenic	mg/kg	4	Metals-020	<4	1	6	7	15	108	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	98	[NT]
Chromium	mg/kg	1	Metals-020	<1	1	16	19	17	106	[NT]
Copper	mg/kg	1	Metals-020	<1	1	100	120	18	107	[NT]
Lead	mg/kg	1	Metals-020	<1	1	27	29	7	99	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	1	0.2	0.3	40	104	[NT]
Nickel	mg/kg	1	Metals-020	<1	1	8	9	12	99	[NT]
Zinc	mg/kg	1	Metals-020	<1	1	180	150	18	100	[NT]

Result Definitions

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

Quality Control Definitions

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

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

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

Asbestos: Excessive sample volumes were provided for asbestos analysis.
A portion of the supplied samples were sub-sampled according to Envirolab procedures.
We cannot guarantee that these sub-samples are indicative of the entire sample.
Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.
Note: Samples 209474-2 to 7 were sub-sampled from bags provided by the client.

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

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KD, Lindfield
Envirolab Reference	209474
Date Sample Received	15/01/2019
Date Instructions Received	15/01/2019
Date Results Expected to be Reported	16/01/2019

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	11 Soil
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	7.7
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils	On Hold
TOPSP1-Surface	✓	✓	✓	✓	✓	✓	✓	✓	
TOP2-Surface	✓	✓	✓	✓	✓	✓	✓	✓	
TOP3-Surface	✓	✓	✓	✓	✓	✓	✓	✓	
TOP4-Surface	✓	✓	✓	✓	✓	✓	✓	✓	
TOPSP5-Surface	✓	✓	✓	✓	✓	✓	✓	✓	
TOP6-Surface	✓	✓	✓	✓	✓	✓	✓	✓	
TOPSP7-Surface	✓	✓	✓	✓	✓	✓	✓	✓	
DOPDUP1-Surface	✓	✓	✓	✓	✓	✓	✓		
TOPDUP3-Surface									✓
TOPTB1	✓								
TOPTS1	✓								

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

TO:		FROM:
ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E30259KD Date Results Required: ~~STANDARD~~ ASAP Page: 1 of 1	ENVIRONMENTAL INVESTIGATION SERVICES REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitch Delaney mdelaney@jkgeotechnics.com.au

Location: Lindfield

Sampler: HW

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			
14.1.19	1	TOPSP1	Surface	G, A	-	F:SI'HYSand				X								
	2	TOP2			-					X								
	3	TOP3			-					X								
	4	Top 4			-					X								
	5	TOPSP5			-					X								
	6	TOP6			-					X								
	7	TOPSP7		↓	-					X								
	8	TOPDUP1		G	-				X									
	\	TOPDUP2			-				X	Please Send to UTC								
↓	9	TOPDUP3	↓	↓	-	↓												
	10	TOPTB1	-	G	-	Sand								X				
↓	11	TOPTS1	-	Vial	-	Sand.								X				

ENVIROLAB

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

Job No: 209474

Date Received: 15/01/19

Time Received: 13:06

Received by: [illegible]

Temp: Cool/Ambient 7.7°C

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:	Date:	Time:	Received By:	Date:
MD	15/1/18.		Tanya Doherty	15.01.19 13:06

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12 Ashley St Chatswood NSW 2067
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customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 209474-A

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KD, Lindfield**
Number of Samples	11 Soil
Date samples received	15/01/2019
Date completed instructions received	16/01/2019

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	17/01/2019
Date of Issue	17/01/2019

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Results Approved By
Steven Luong, Senior Chemist

Authorised By

Jacinta Hurst, Laboratory Manager

sTPH in Soil (C10-C40)-Silica		
Our Reference		209474-A-1
Your Reference	UNITS	TOPSP1
Depth		Surface
Date Sampled		14/01/2019
Type of sample		Soil
Date extracted	-	17/01/2019
Date analysed	-	17/01/2019
TPH C_{10} - C_{14}	mg/kg	<50
TPH C_{15} - C_{28}	mg/kg	330
TPH C_{29} - C_{36}	mg/kg	600
TPH >C_{10} -C_{16}	mg/kg	<50
TPH >C_{16} -C_{34}	mg/kg	780
TPH >C_{34} -C_{40}	mg/kg	310
Surrogate o-Terphenyl	%	78

Method ID	Methodology Summary
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.

QUALITY CONTROL: sTPH in Soil (C10-C40)-Silica						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			17/01/2019	1	17/01/2019	17/01/2019		17/01/2019	[NT]
Date analysed	-			17/01/2019	1	17/01/2019	17/01/2019		17/01/2019	[NT]
TPH C_{10} - C_{14}	mg/kg	50	Org-003	<50	1	<50	<50	0	82	[NT]
TPH C_{15} - C_{28}	mg/kg	100	Org-003	<100	1	330	350	6	88	[NT]
TPH C_{29} - C_{36}	mg/kg	100	Org-003	<100	1	600	600	0	111	[NT]
TPH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	1	<50	<50	0	82	[NT]
TPH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	1	780	800	3	88	[NT]
TPH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	1	310	280	10	111	[NT]
Surrogate o-Terphenyl	%		Org-003	79	1	78	88	12	98	[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.

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SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KD, Lindfield
Envirolab Reference	209474-A
Date Sample Received	15/01/2019
Date Instructions Received	16/01/2019
Date Results Expected to be Reported	17/01/2019

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	11 Soil
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	7.7
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:

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www.envirolab.com.au

Sample ID	sTPH in Soil (C10-C40)-Silica	On Hold
TOPSP1-Surface	✓	
TOP2-Surface		✓
TOP3-Surface		✓
TOP4-Surface		✓
TOPSP5-Surface		✓
TOP6-Surface		✓
TOPSP7-Surface		✓
DOPDUP1-Surface		✓
TOPDUP3-Surface		✓
TOPTB1		✓
TOPTS1		✓

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.

Andrew Fitzsimons

From: Mitchell Delaney <MDelaney@jkgeotechnics.com.au>
Sent: Wednesday, 16 January 2019 6:18 PM
To: Samplereceipt
Subject: Additional analysis request 209474

Follow Up Flag: Follow up
Flag Status: Flagged

Hi,

Can I please schedule TRH analysis with silica gel clean up on the EIS sampleTOPSP1 (your sample ref: 209474-1) on 24 H TA.

Many thanks.

Ref: 209474-A
TAT: 1 day
Due: 17/1/19

Regards,

Mitchell Delaney
Senior Associate | Environmental Scientist

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melbourne@envirolab.com.au
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CERTIFICATE OF ANALYSIS 15795

Client Details

Client	Environmental Investigation Services
Attention	Mitch Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KD**
Number of Samples	1 Soil
Date samples received	17/01/2019
Date completed instructions received	17/01/2019

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	18/01/2019
Date of Issue	18/01/2019

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Results Approved By
Chris De Luca, Senior Chemist

Authorised By

Pamela Adams, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		15795-1
Your Reference	UNITS	TOPDUP2
Type of sample		Soil
Date Sampled		14/01/2019
Date extracted	-	17/01/2019
Date analysed	-	17/01/2019
vTRH C_6 - C_9	mg/kg	<25
vTRH C_6 - C_{10}	mg/kg	<25
TRH 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

TRH Soil C10-C40 NEPM		
Our Reference		15795-1
Your Reference	UNITS	TOPDUP2
Type of sample		Soil
Date Sampled		14/01/2019
Date extracted	-	17/01/2019
Date analysed	-	17/01/2019
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	150
TRH C_{29} - C_{36}	mg/kg	370
Total +ve TRH (C10-C36)	mg/kg	530
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	390
TRH >C_{34} -C_{40}	mg/kg	190
Total +ve TRH (>C10-C40)	mg/kg	580
Surrogate o-Terphenyl	%	85

PAHs in Soil		
Our Reference		15795-1
Your Reference	UNITS	TOPDUP2
Type of sample		Soil
Date Sampled		14/01/2019
Date extracted	-	17/01/2019
Date analysed	-	17/01/2019
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	0.2
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	0.3
Pyrene	mg/kg	0.3
Benzo(a)anthracene	mg/kg	0.1
Chrysene	mg/kg	0.2
Benzo(b,j&k)fluoranthene	mg/kg	0.3
Benzo(a)pyrene	mg/kg	0.15
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	1.7
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-d_{14}	%	106

OCP in Soil		
Our Reference		15795-1
Your Reference	UNITS	TOPDUP2
Type of sample		Soil
Date Sampled		14/01/2019
Date extracted	-	17/01/2019
Date analysed	-	17/01/2019
alpha-BHC	mg/kg	<0.1
Hexachlorobenzene	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Total +ve reported DDT+DDD+DDE	mg/kg	<0.1
Surrogate p-Terphenyl-d_{14}	%	106

OP in Soil		
Our Reference		15795-1
Your Reference	UNITS	TOPDUP2
Type of sample		Soil
Date Sampled		14/01/2019
Date extracted	-	17/01/2019
Date analysed	-	17/01/2019
Azinphos-methyl	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Chlorpyrifos	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Dichlorovos	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Ethion	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Surrogate p-Terphenyl-d_{14}	%	106

PCBs in Soil		
Our Reference		15795-1
Your Reference	UNITS	TOPDUP2
Type of sample		Soil
Date Sampled		14/01/2019
Date extracted	-	17/01/2019
Date analysed	-	17/01/2019
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate p-Terphenyl-d_{14}	%	106

Acid Extractable metals in soil		
Our Reference		15795-1
Your Reference	UNITS	TOPDUP2
Type of sample		Soil
Date Sampled		14/01/2019
Date digested	-	17/01/2019
Date analysed	-	17/01/2019
Arsenic	mg/kg	7
Cadmium	mg/kg	<0.4
Chromium	mg/kg	10
Copper	mg/kg	57
Lead	mg/kg	39
Mercury	mg/kg	0.2
Nickel	mg/kg	5
Zinc	mg/kg	100

Moisture		
Our Reference		15795-1
Your Reference	UNITS	TOPDUP2
Type of sample		Soil
Date Sampled		14/01/2019
Date prepared	-	17/01/2019
Date analysed	-	18/01/2019
Moisture	%	18

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 12 hours.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Org-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	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Note, For OCs the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-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-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.

Method ID	Methodology Summary
Org-012	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD or GC-MS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-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. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			17/01/2019	[NT]	[NT]	[NT]	[NT]	17/01/2019	[NT]
Date analysed	-			17/01/2019	[NT]	[NT]	[NT]	[NT]	17/01/2019	[NT]
vTRH C_6 - C_9	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	94	[NT]
vTRH C_6 - C_{10}	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	94	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	[NT]	[NT]	96	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	[NT]	[NT]	95	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	93	[NT]
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	104	[NT]	[NT]	[NT]	[NT]	105	[NT]

QUALITY CONTROL: TRH Soil C10-C40 NEPM						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			17/01/2019	[NT]	[NT]	[NT]	[NT]	17/01/2019	[NT]
Date analysed	-			17/01/2019	[NT]	[NT]	[NT]	[NT]	17/01/2019	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	91	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	95	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	91	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	95	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
Surrogate o-Terphenyl	%		Org-003	80	[NT]	[NT]	[NT]	[NT]	73	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			17/01/2019	[NT]	[NT]	[NT]	[NT]	17/01/2019	[NT]
Date analysed	-			17/01/2019	[NT]	[NT]	[NT]	[NT]	17/01/2019	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[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]	108	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[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]	80	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	92	[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]	116	[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]	84	[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-d_{14}	%		Org-012	90	[NT]	[NT]	[NT]	[NT]	80	[NT]

QUALITY CONTROL: OCP in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			17/01/2019	[NT]	[NT]	[NT]	[NT]	17/01/2019	[NT]
Date analysed	-			17/01/2019	[NT]	[NT]	[NT]	[NT]	17/01/2019	[NT]
alpha-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Hexachlorobenzene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
gamma-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
delta-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
gamma-Chlordane	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
alpha-chlordane	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Dieldrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Endrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	60	[NT]
Methoxychlor	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-012	90	[NT]	[NT]	[NT]	[NT]	80	[NT]

QUALITY CONTROL: OP in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	15795-1
Date extracted	-			17/01/2019	1	17/01/2019	17/01/2019		17/01/2019	17/01/2019
Date analysed	-			17/01/2019	1	17/01/2019	17/01/2019		17/01/2019	17/01/2019
Azinphos-methyl	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	100	112
Chlorpyrifos-methyl	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dichlorovos	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	80	136
Fenitrothion	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	64	#
Malathion	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-012	90	1	106	92	14	80	98

QUALITY CONTROL: PCBs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			17/01/2019	[NT]	[NT]	[NT]	[NT]	17/01/2019	[NT]
Date analysed	-			17/01/2019	[NT]	[NT]	[NT]	[NT]	17/01/2019	[NT]
Aroclor 1016	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Aroclor 1260	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-012	90	[NT]	[NT]	[NT]	[NT]	80	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date digested	-			17/01/2019	[NT]	[NT]	[NT]	[NT]	17/01/2019	[NT]
Date analysed	-			17/01/2019	[NT]	[NT]	[NT]	[NT]	17/01/2019	[NT]
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	[NT]	[NT]	102	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	[NT]	[NT]	111	[NT]
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	[NT]	[NT]	118	[NT]
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	107	[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

OP_S: # Percent recovery not available due to sample matrix interference.

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitch Delaney

Sample Login Details

Your reference	E30259KD
Envirolab Reference	15795
Date Sample Received	17/01/2019
Date Instructions Received	17/01/2019
Date Results Expected to be Reported	18/01/2019

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	1 Soil
Turnaround Time Requested	24hr
Temperature on Receipt (°C)	18
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Pamela Adams	Analisa Mathrick
Phone: 03 9763 2500	**Phone: 03 9763 2500**
Fax: 03 9763 2633	**Fax: 03 9763 2633**
Email: padams@envirolab.com.au	**Email: amathrick@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	OCP in Soil	OP in Soil	PCBsin Soil	Acid Extractable metalsin soil
TOPDUP2	✓	✓	✓	✓	✓	✓	✓

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

TO:
ENVIROLAB SERVICES PTY LTD
12 ASHLEY STREET
CHATSWOOD NSW 2067
P: (02) 99106200
F: (02) 99106201

Attention: Aileen

EIS Job Number: E30259KD

Date Results Required: ~~STANDARD~~ ASAP

Page: 1 of 1

FROM:
ENVIRONMENTAL INVESTIGATION SERVICES
REAR OF 115 WICKS ROAD
MACQUARIE PARK, NSW 2113
P: 02-9888 5000 F: 02-9888 5001
Attention: Mitch Delaney
mdelaney@jkgeotechnics.com.au

Location: Lindfield
Sampler: HW

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
14.1.19	1	TOPSP1	Surface	G, A	-	F:SiH/Sand				X					
	2	TOP2			-					X					
	3	TOP3			-					X					
	4	TOP4			-					X					
	5	TOPSP5			-					X					
	6	TOP6			-					X					
	7	TOPSP7			-					X					
	8	TOPDUP1		G	-				X						
1	1	TOPDUP2			-				X	Please send to UTC					
	9	TOPDUP3			-										
	10	TOPTB1	-	G	-	Sand								X	
	11	TOPTS1	-	Vial	-	Sand								X	

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

Job No: 15795
Date Received: 17/1/19
Time Received: 13.00
Received by:
Temp: Cool/Ambient 18°C
Cooling: Ice/Icepack
Security: Intact/Broken/None

ENVIROLAB

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

Job No: 209474
Date Received: 15/01/19
Time Received: 13:06
Received by: TB
Temp: Cool/Ambient 7.7°C
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:	Date:	Time:	Received By:	Date:
MD	15/1/18.		Tanya Doherty	15.01.19 13:06

Relinquished: Tanya Doherty
16.01.19
11:25

Appendix C: EIS Remediation and Validation Documentation

EIS Visual Asbestos Clearance Certificates

ENVIRONMENTAL INVESTIGATION SERVICES

17 January 2019
Ref: E30259KDlet.Clr2

Department of Education
C/- Savills Australia

Attention: Chris Laity
Email: claity@savills.com.au

VISUAL ASBESTOS CLEARANCE CERTIFICATE
PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
100 ETON ROAD, LINDFIELD, NSW

1 INTRODUCTION

The Department of Education c/- Savills Australia ('the client') commissioned Environmental Investigation Services (EIS), a division of Jeffery & Katauskas Pty Ltd (J&K), to undertake a visual asbestos clearance inspection associated with the proposed development of the northern landscaped area of the site located at 100 Eton Road, Lindfield, NSW ('the site').

1.1 Background

The site was previously occupied by the University of Technology Sydney (UTS). EIS understand the proposed development includes the construction of a new Learning Village which will include use of the existing buildings.

EIS has previously prepared the following reports for various stages of the development:

- EIS (2017a) *Preliminary Environmental Site Assessment*[1], March 2017;
- EIS (2017b) *Preliminary Stage 2 Environmental Site Assessment*[2], October 2017;
- EIS (2018a) *Remediation Action Plan*[3], August 2018; and
- EIS (2018b) *Remediation Action Plan –Addendum letter*[4], August 2018.

[1] EIS (2017a) *Preliminary Environmental Site Assessment for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt dated 15 March 2017)

[2] EIS (2017b) *Preliminary Stage 2 Environmental Site Assessment for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt2 dated 16 October 2017)

[3] EIS (2018a) *Remediation Action Plan for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt3 dated 16 August 2018)

[4] EIS (2018b) *Remediation Action Plan- Addendum for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt3_Addendum, dated 21 November 2018)

Postal Address: PO Box 976, North Ryde BC NSW 1670
Tel: 02 9888 5000 • Fax: 9888 5004
EIS is a division of Jeffery and Katauskas Pty Ltd • ABN 17 003 550 801

Asbestos containing fibre cement fragments were identified within the fill material in the southern section of the site during the previous investigations. The area (referred to as Area A in the EIS 2018b) has been remediated in previous works.

During a site walkover conducted on 14 January 2019, additional asbestos fibre cement fragments were identified on the surface of the site immediately to the north-east of the roundabout within the northern landscaped area of the site. The area was subsequently barricaded off with appropriate signage until the remediation could take place.

1.2 Scope

The scope included a visual walkover clearance inspection of the northern landscaped area of the site for the presence of asbestos containing materials, following completion of removal of the asbestos impacted soil. Soil/material sampling or air monitoring was not undertaken at the site as part of this clearance inspection.

2 ASSESSMENT CRITERIA AND METHODOLOGY

The clearance inspection for asbestos containing materials was generally undertaken in accordance with Section 3 of the National Code of Practice How to Safely Remove Asbestos, Safe Work Australia 2011.

The inspection included a systematic walkover and visual inspection of the surface of the site undertaken by a NSW Licensed Asbestos Assessor.

3 SITE INSPECTION / AREA INSPECTED

The inspection was undertaken by Harry Leonard of EIS on 16 January 2019. The site was identified at as the northern landscaped area of Lots 2 in DP1151638 covered an area of approximately 6,000m^2.

At the time of the inspection a large portion of the site was covered by an asphaltic concrete road and concrete footpaths along the southern and western portions of the site. Recently landscaped grassed areas were located in the eastern portion of the site and garden beds containing large trees with bark chip ground cover were located across the site. Sandstone block features had been installed in a number of areas of the site.

Generally, the visual inspection was limited across the majority of the site due to pavement, bark chips and grass covering the surface of the site. Limited areas of exposed soil were un-obscured and were visually inspected for the clearance.

4 RESULTS

It is the opinion of the Inspector that, as far as reasonably practicable, no visible, accessible ACM was observed at the site during the inspection.

The visual inspection indicates that with respect to ACM the site is considered safe for normal work to proceed.

5 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;
- 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;
- 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 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;
- 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;
- Copyright in this report is the property of EIS. EIS has used a degree of care, skill and diligence normally exercised by consulting professionals in similar circumstances and locality. No other warranty expressed or implied is made or intended. Subject to payment of all fees due for the investigation, the client alone shall have a licence to use this report;
- If the client, or any person, provides a copy of this report to any third party, such third party must not rely on this report except with the express written consent of EIS; and

- Any third party who seeks to rely on this report without the express written consent of EIS does so entirely at their own risk and to the fullest extent permitted by law, EIS accepts no liability whatsoever, in respect of any loss or damage suffered by any such third party.

If you have any questions concerning the contents of this letter please do not hesitate to contact us.

Yours faithfully
ENVIRONMENTAL INVESTIGATION SERVICES

Harry Leonard
Senior Environmental Scientist
Asbestos Assessor A (Lic. No. 001028)

Mitchell Delaney
Senior Associate

Attachments

1) Site Photographs
2) Figures

SITE PHOTOGRAPHS 16.01.2019

Project Ref: E30259KDlet.Clr2

Site Address: 100 Eton Road, Lindfield, NSW
Selected Site Photos Dated: 16 January 2019

Photograph 1: Taken showing part of the eastern portion of the site, facing north. Note the dense recently laid grass turf covering the ground and imported topsoil beneath.

Photograph 2: Taken showing the central portion of the site, facing north-west. Note the paved footpath and topsoil covering the ground surface.

Photograph 3: Taken showing the eastern portion of the site, facing north-west. Note the sandstone features around the tree with topsoil and partial bark chip cover.

Photograph 4: Taken showing the eastern boundary of the site, facing north-west. Note the recently laid turf and bark chip cover.

Photograph 5: Taken showing the central roundabout within the site, facing west. Note the asphaltic concrete road covering a large portion of the site.

Photograph 6: Taken showing the remediation area where asbestos cement fragments were identified, facing north-west. Note the excavated area and the imported topsoil in the immediate vicinity.

FIGURES

Image Sources: https://maps.six.nsw.gov.au/	Title: **SITE LOCATION PLAN**	
	Location: ETON ROAD, LINDFIELD, NSW	
	Report No: E30259KDlet.Clr2	Figure No: 1
	ENVIRONMENTAL INVESTIGATION SERVICES	

ENVIRONMENTAL INVESTIGATION SERVICES

17 October 2018
Ref: E30259KDlet.Clr

Department of Education
C/- Savills Australia

Attention: Stephanie Edmondson
Email: sedmondson@savills.com.au

VISUAL ASBESTOS CLEARANCE CERTIFICATE
PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
100 ETON ROAD, LINDFIELD, NSW

1 INTRODUCTION

The Department of Education c/- Savills Australia ('the client') commissioned Environmental Investigation Services (EIS), a division of Jeffery & Katauskas Pty Ltd (J&K), to undertake a visual asbestos clearance inspection associated with the proposed development of the site located at 100 Eton Road, Lindfield, NSW ('the site').

1.1 Background

The site was previously occupied by the University of Technology Sydney (UTS). EIS understand the proposed development includes the construction of a new Learning Village which will include use of the existing buildings.

EIS has previously prepared the following reports for various stages of the development:

- EIS (2017a) *Preliminary Environmental Site Assessment*[1], March 2017;
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- EIS (2018) *Remediation Action Plan*[3], August 2018.

Asbestos containing fibre cement fragments were identified within the fill material in the southern section of the site during the previous investigations.

[1] EIS (2017a) *Preliminary Environmental Site Assessment for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt dated 15 March 2017)

[2] EIS (2017b) *Preliminary Stage 2 Environmental Site Assessment for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt2 dated 16 October 2017)

[3] EIS (2018) *Remediation Action Plan for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt3 dated 16 August 2018)

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1.2 Scope

The scope included a visual walkover clearance inspection for the presence of asbestos containing materials. Soil/material sampling or air monitoring was not undertaken at the site as part of this clearance inspection.

2 ASSESSMENT CRITERIA AND METHODOLOGY

The clearance inspection for asbestos containing materials was generally undertaken in accordance with Section 3 of the National Code of Practice How to Safely Remove Asbestos, Safe Work Australia 2011.

The inspection included a systematic walkover and visual inspection of the surface of the site undertaken by a NSW Licensed Asbestos Assessor.

3 SITE INSPECTION / AREA INSPECTED

The inspection was undertaken by Harry Leonard of EIS on 17 October 2017. The site was identified at Lots 2 and 4 in DP1151638 covered an area of approximately 50,000m^2.

At the time of the inspection the majority of the site was fenced off as a construction zone for the start of the development works. The majority of the site was covered by the existing buildings, hardstand and paved areas. Grassed areas were located in the northern and southern portions of the site and garden beds containing large trees and shrubs were located across the site. Sandstone bedrock outcropping was evident in a number of areas of the site.

Generally, the visual inspection was limited across the majority of the site due to pavement, hardstand, dense leaf litter and grass covering the surface of the site. Limited areas of exposed soil were un-obscured and were visually inspected for the clearance.

4 RESULTS

It is the opinion of the Inspector that, as far as reasonably practicable, no visible, accessible ACM was observed at the site during the inspection.

The visual inspection indicates that with respect to ACM the site is considered safe for normal work to proceed.

5 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;

- 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;
- 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 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;
- 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;
- Copyright in this report is the property of EIS. EIS has used a degree of care, skill and diligence normally exercised by consulting professionals in similar circumstances and locality. No other warranty expressed or implied is made or intended. Subject to payment of all fees due for the investigation, the client alone shall have a licence to use this report;
- If the client, or any person, provides a copy of this report to any third party, such third party must not rely on this report except with the express written consent of EIS; and
- Any third party who seeks to rely on this report without the express written consent of EIS does so entirely at their own risk and to the fullest extent permitted by law, EIS accepts no liability whatsoever, in respect of any loss or damage suffered by any such third party.

If you have any questions concerning the contents of this letter please do not hesitate to contact us.

Yours faithfully
ENVIRONMENTAL INVESTIGATION SERVICES

Harry Leonard
Senior Environmental Scientist
Asbestos Assessor A (Lic. No. 001028)

Mitchell Delaney
Senior Associate

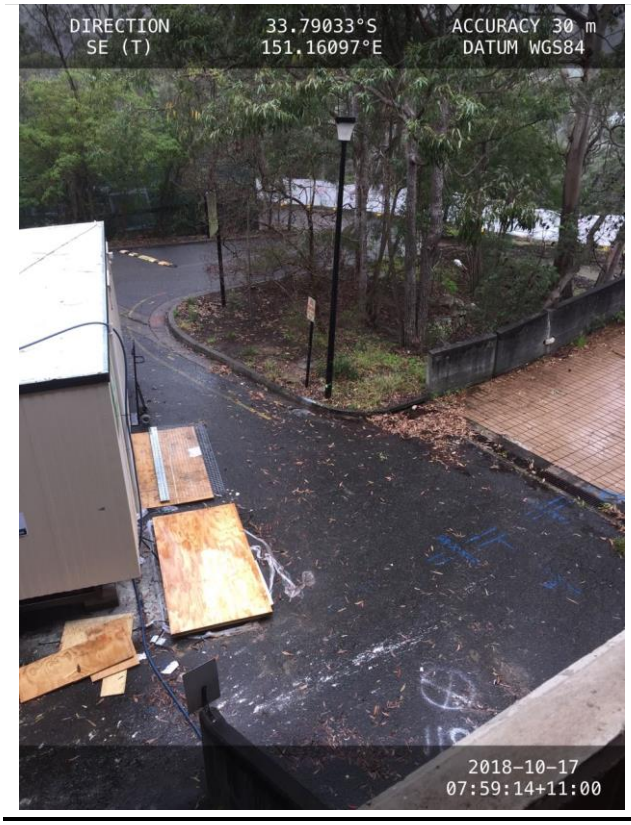
Attachments

1) Site Photographs
2) Figures

SITE PHOTOGRAPHS 17.10.2018

Project Ref: E30259KD
Site Address: 100 Eton Road, Lindfield, NSW
Selected Site Photos Dated: 17 October 2018

Photograph 1: Taken showing part of the northern portion of the site, facing west. Note the dense leaf litter covering the ground and exposed sandstone outcropping at the surface.



Photograph 2: Taken showing the central portion of the site, facing south-east. Note the paved roads and driveway covering the surface.

Photograph 3: Taken showing the southern portion of the site, facing west. Note the grass cover and dense leaf litter covering the ground. Some areas of exposed soil are visible.

Photograph 4: Taken showing the southern boundary of the site, facing south-east. Note the area of exposed soil at the surface.

Photograph 5: Taken showing the southern portion of the site, facing east. Some excavations have commenced in this area. Note the sandstone outcropping adjacent the excavation.

Photograph 6: Taken showing the southern portion of the site, facing south. Note the grass cover, vegetation and exposed sandstone outcropping visible at the site.

Photograph 7: Taken showing the garden bed adjacent the southern carpark, facing north-east. Note the dense leaf litter covering the ground and exposed sandstone outcropping at the surface.

Photograph 8: Taken showing the south-east corner of the site beyond the temporary fence line, facing north. Note the dense leaf litter covering the ground and exposed sandstone outcropping at the surface.

Photograph 9: Taken showing a corner garden bed adjacent the southern carpark, facing east. Note the dense leaf litter and vegetation cover.

Photograph 10: Taken showing the central portion of the site adjacent the site office, facing east. Note the paved footpath, dense leaf litter covering the ground and exposed sandstone outcropping at the surface.

FIGURES

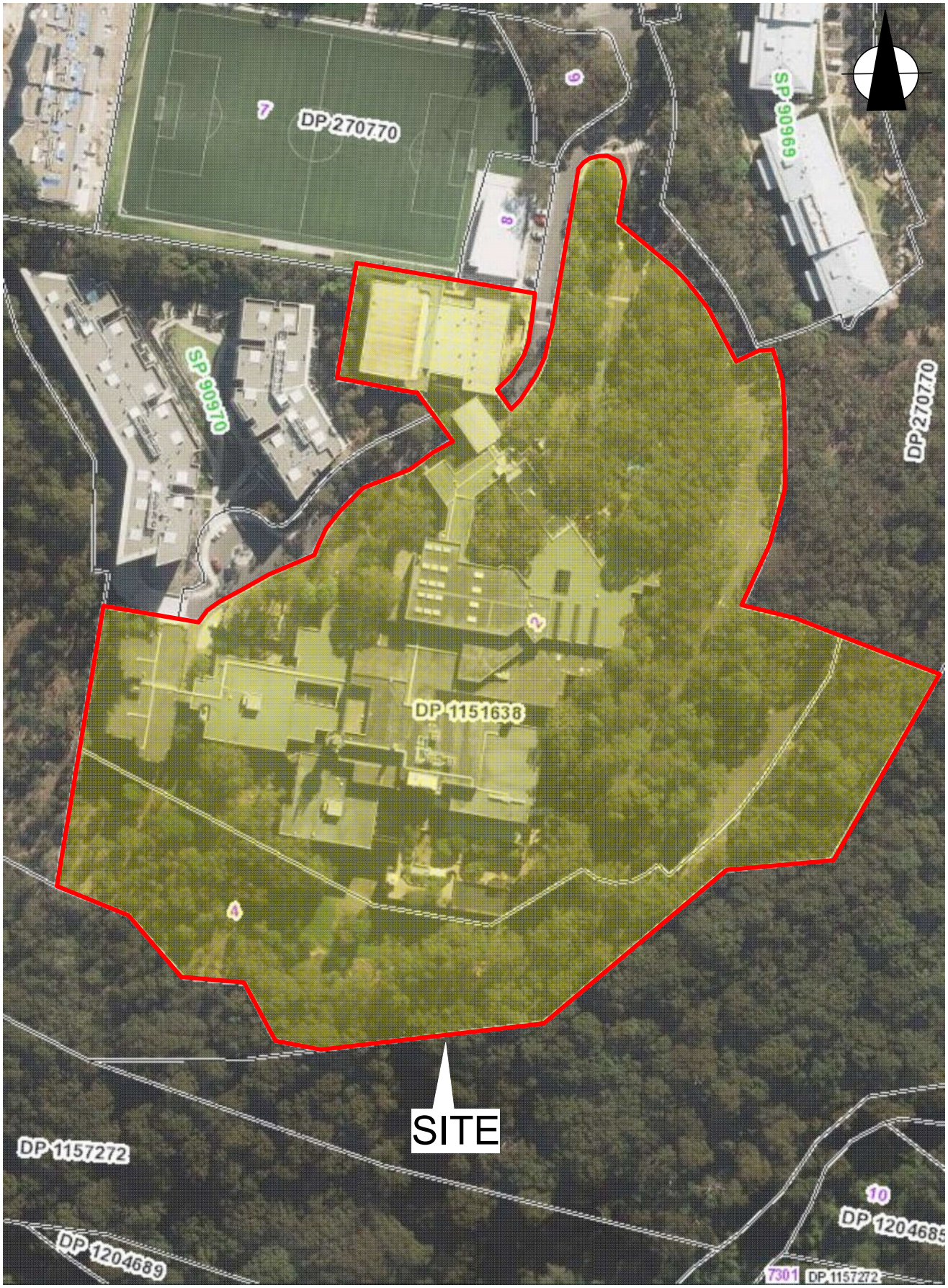


Image Sources:
https://maps.six.nsw.gov.au/

Title: **SITE LOCATION PLAN**

Location: ETON ROAD, LINDFIELD, NSW

Report No: E30259KD

Figure No: 1

ENVIRONMENTAL INVESTIGATION SERVICES

EIS field Notes – Remediation Area A

EIS
ENVIRONMENTAL INVESTIGATION SERVICES

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Tel: 02 9888 5000 Fax: 02 9888 5001
www.jkgroup.net.au

PURPOSE: Asbestos Area Validation
LOCATION: Eton Road, Lindfield, NSW
GIVEN TO: MD
OF:

EIS JOB No: E30259KD
DATE: 13/11/2018
PAGE: 1 **OF** 1
INSP BY: HL

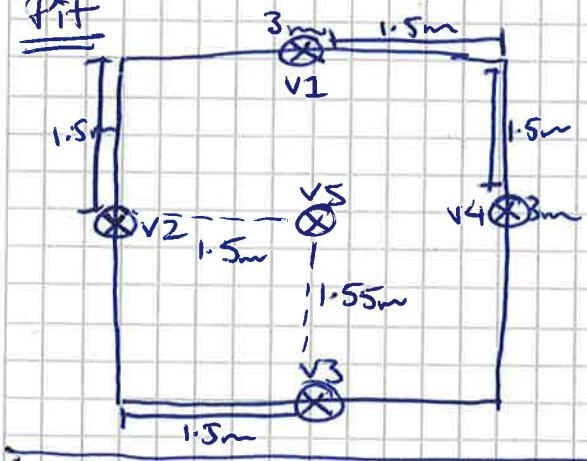
INSPECTION REPORT No .....

- Area marked around asbestos material location.
- Dimensions of 3m x 3m for excavation and validation.
- Excavated material placed in a stockpile on builder's plastic adjacent the pit.

Fill:- silty sandy clay l-m plast brown traces f-c ss gravel, roots, f-c is gravel to a maximum depth of 0.70m.

Natural:- sandy clay l-m plast brown and orange brown (0.70-0.85m)

Pit

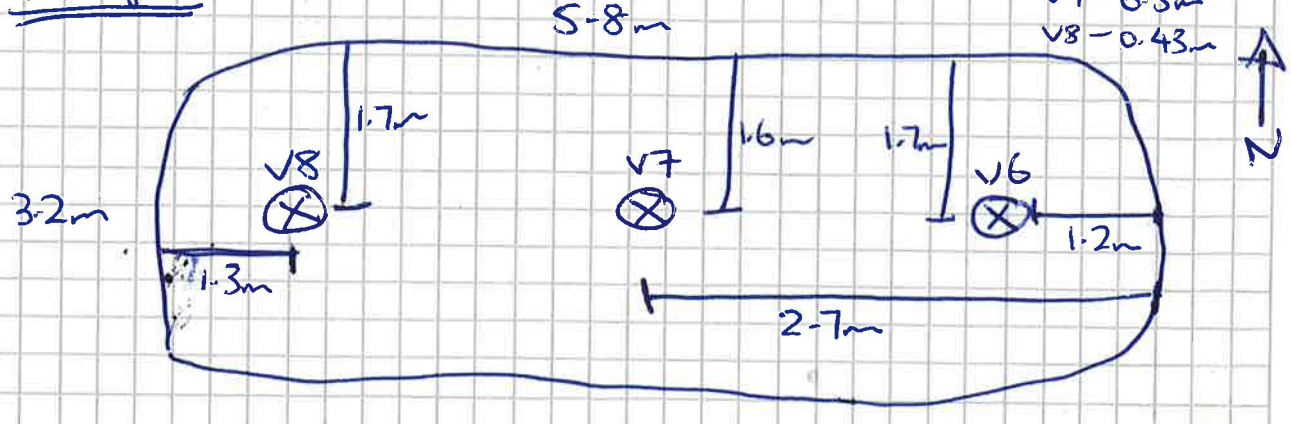


Depths
V1 - 0.3m
V2 - 0.4m
V3 - 0.35m
V4 - 0.4m
V5 (base - 0.85m)

N

Stockpile

Dimensions = 5.8m x 3.2m x 1.1m



Depths
V6 - 0.35m
V7 - 0.5m
V8 - 0.43m

N

Given by: HL
Received by: .....

Time Arrive: 1025 AM
Time Depart: 11:55 AM

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www.jkgroup.net.au

PURPOSE: Area A validation
LOCATION: Eton Rd, Lindfield.
GIVEN TO: MD.
OF:

EIS JOB No: E30259KD
DATE: 15/12/18
PAGE: 2 **OF** 3
INSP BY: HL

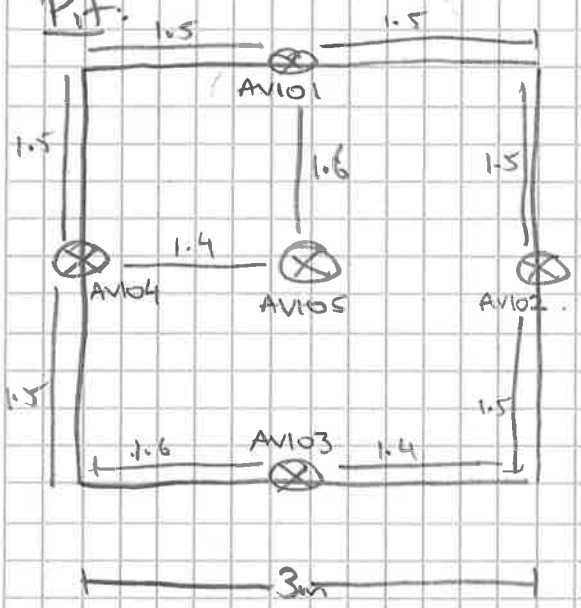
INSPECTION REPORT No .....

- Area marked out with Approx. 3m x 3m dimension
- Excavated material placed directly into a plastic lined skip bin, an covered.

Fill: silty sandy clay low plast brown trace f-c ss gravel, roots, f-c is gravel.
- Max depth 0.7m

Natural: sandy clay low plast brown and orange brown (0.7 - 0.95)

Pit:



Depth:

AV101 - 0.4
AV102 - 0.35
AV103 - 0.55
AV104 - 0.4
AV105 - 0.95

~~DUPE~~
~~DUPE~~

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Time Arrive: ..... Time Depart: .....

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EIS field Notes – Remediation Area B

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Tel: 02 9888 5000 Fax: 02 9888 5001
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PURPOSE: Area B Validation
LOCATION: Eton Rd, Lindfield
GIVEN TO: MD
OF:

EIS JOB No: E30259KD
DATE: 15/12/2018
PAGE: 1 **OF** 3
INSP BY: HL

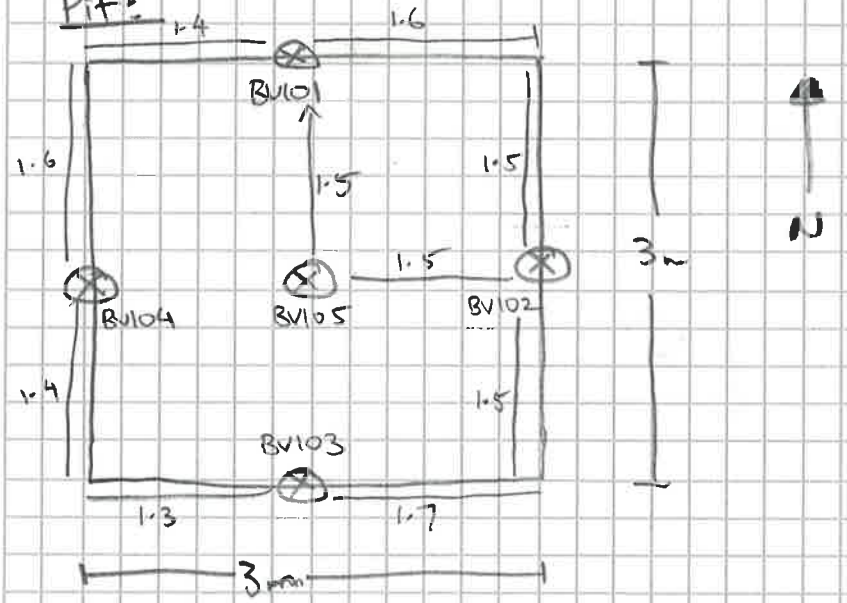
INSPECTION REPORT No .....

- Area marked out with approx. 3x3m dimension.
- Exposed sandstone outcropping visible.
- Fill material excavated by hand and placed directly into a plastic lined skip bin

Fill: Silty sand fine grain brown traces organic material, root fibres & fine sub angular gravels.
- Max depth 0.2m.

Natural: sandstone bedrock SE sand fine grain light yellow brown.

Pit:



Depths

BV101 – 0.01
BV102 – 0.2
BV103 – 0.01
BV104 – 0.2
BV105 – 0.01

DUPHILB1 – 102
DUPHILB2 – 103

Given by: ..... Received by: .....

Time Arrive: 0800 Time Depart: 12:30

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EIS field Notes – Remediation Area C

EIS
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115 Wicks Rd, Macquarie Park NSW 2113
Tel: 02 9888 5000 Fax: 02 9888 5001
www.jkgroup.net.au

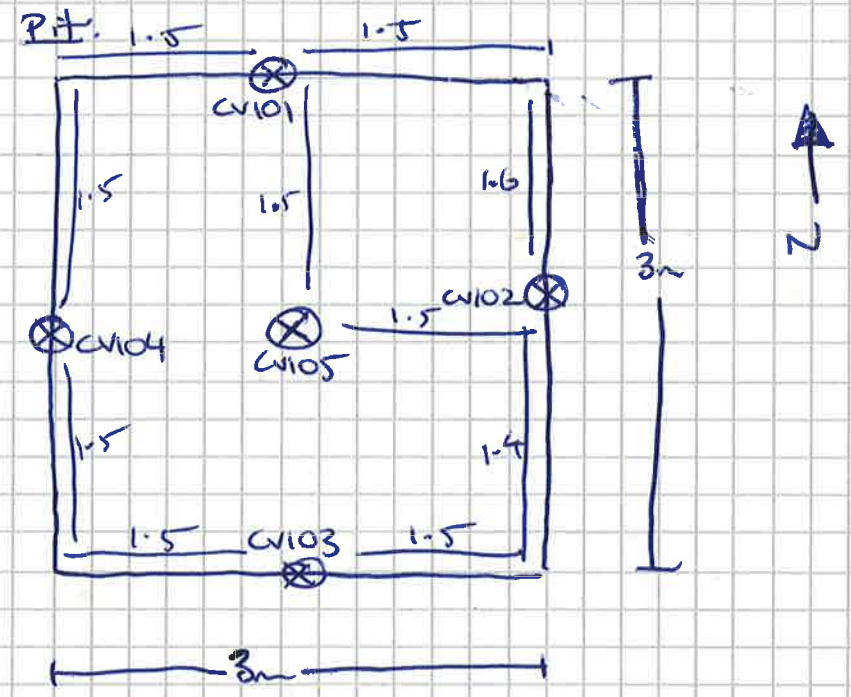
PURPOSE: Area C Validation
LOCATION: Eton Rd, Lindfield
GIVEN TO: MD
OF:

EIS JOB No: E30259KD
DATE: 15/12/2018
PAGE: 3 **OF** 3
INSP BY:

INSPECTION REPORT No

- Area marked by EIS approx 3m x 3 around TP115.
- Excavated by hand tools and placed in plastic bulk bags to be deposited in plastic lined skip bin.

Fill: silty sand f-m grain brown trace, organic matter, roots, f-c s/s gravel max depth 0.1m
Natural: sandy clay l-m plast yellow brown (0.1-0.15)



Depths

CV101 – 0.05
CV102 – 0.05
CV103 – 0.05
CV104 – 0.05
CV105 – 0.15

DUPHLC1 – CV101
DUPHLC2 – CV102

Given by: ..... Received by: .....

Time Arrive: ..... Time Depart: .....

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EIS field Notes – Remediation Area D

EIS
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Tel: 02 9888 5000 Fax: 02 9888 5001
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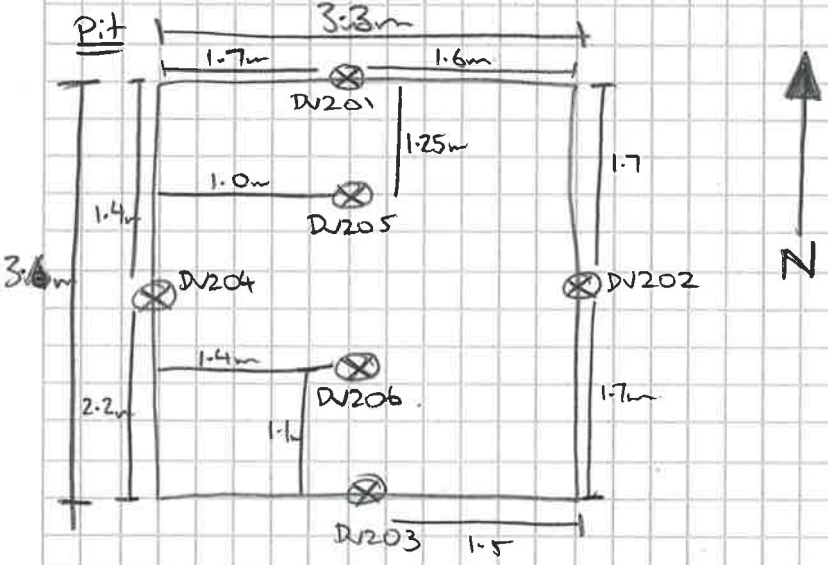
PURPOSE: Asbestos Area D Validation
LOCATION: Eton Road, Lindfield
GIVEN TO: MD
OF:

EIS JOB No: E30259KD
DATE: 16/1/2019
PAGE: 1 **OF** 1
INSP BY: HL

INSPECTION REPORT No .....

- Area D excavation of 3x3m area where asbestos cement fragments were identified.
- Initially wrong area was barricaded off.
- Some top soil was spread across the surface of Area D.
- Large sandstone blocks present within Area D.
- Pure Contracting present on site and asbestos air fibre monitoring was set up.

Fill: silty sandy clay low plast dark brown, f-m grain sand, trace organic matter and f-c ig gravel (max depth 0.3m)
Natural: sandstone, orange and red (0.3 – 0.55m).



Depths:

DV201 – 0.15m
DV202 – 0.1m
DV203 – 0.2m
DV204 – 0.1m
DV205 – base (0.55)
DV206 – base (0.3)

* HL conducted visual walkover clearance inspection of the northern area following Area D validation.

→ Excavated material was placed directly into a skip bin lined with black builders plastic.

Given by: ..... Received by: .....

Time Arrive: 0700 Time Depart: .....

DISTRIBUTION: Original EIS file, Copy to Client

EIS field Notes – Imported Topsoil

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Tel: 02 9888 5000 Fax: 02 9888 5001
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PURPOSE: Validation of Imported Topsoil
LOCATION: 100 Eton Road, Lindfield, NSW.
GIVEN TO:
OF:

JKE JOB No: E30259K0
DATE: 14/1/2019
PAGE: 1 **OF** 5
INSP BY: HW

INSPECTION REPORT No 1

EIS inspected the landscaping works within the northern section of the site. During the time of the inspection, the investigation area was undergoing filling and levelling of the landscape areas with a turf underlay for proposed open grassed areas and a low nutrient topsoil mix for filling of garden beds and planted areas.

Information from the landscape contractor supervisor (Precision Landscapes) indicated the following:

- Approximately 5 truck loads of topsoil and turf underlay will be delivered per day;
- The soil material will be stockpiled and distributed using wheelbarrows and;
- The western side of the entrance road is yet to be filled.

During the inspection, the eastern section of the landscape area was partially filled by turf underlay. A stockpile of topsoil was located at the centre of the investigation area near the road verge.

The stockpiled topsoil typically consisted of silty sand, fine to med grain, with organic material, ~~[illegible]~~ brown, trace of plastic. Appears moderately graded.

The turf underlay typically consisted of silty sand, fine to medium grain, brown, trace of wood and root fibres.

The topsoil within the garden beds were of the same topsoil material as to the stockpile described above.

Given by: ..... Received by: .....

Time Arrive: 9:30am Time Depart: .....

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PURPOSE: Validation of Imported topsoil.

LOCATION: 100 Eton Road, Lindfield, NSW

GIVEN TO:

OF:

JKE JOB No: E30259KD

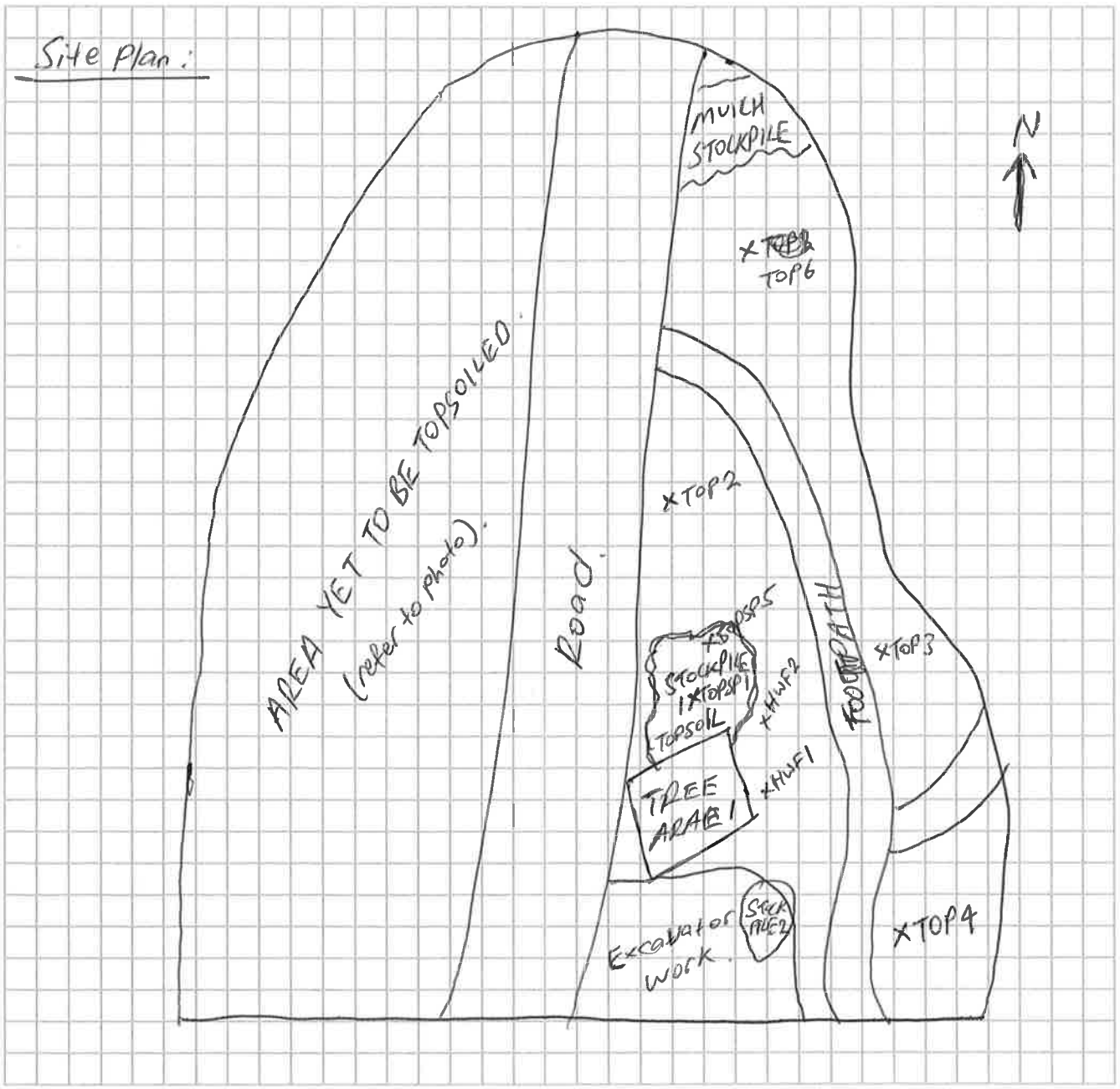
DATE: 14/1/2019

PAGE: 2 **OF** 5

INSP BY: HW

INSPECTION REPORT No .....

Site Plan:



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PURPOSE: Validation of Imported Topsoil
LOCATION: 100 Eton Road, Lindfield, NSW.
GIVEN TO:
OF:

JKE JOB No: E30259KD
DATE: 14/1/2019
PAGE: 3 **OF** 5
INSP BY: HW

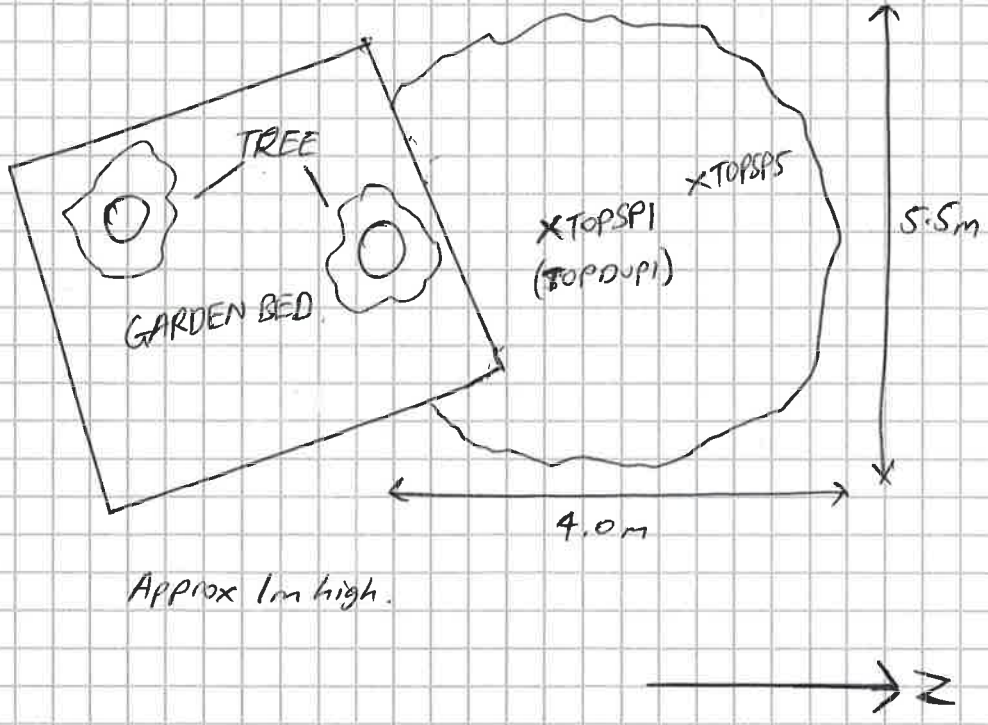
INSPECTION REPORT No .....

A total of six representative samples were obtained of the stockpiled topsoil (TOPSP1 and TOPSP5) and in-situ turf underlay material (TOP2, TOP3, TOP4 and TOP6 ~~deleted~~). Three field duplicate samples were obtained for TOPSP1 (TOP DUP1), TOP3 (TOP DUP2) and TOP#6 (TOP DUP3).

The above sampling rationale was based on site coverage.

Turf underlay was approximately 150mm across open areas.

Stockpile 1:



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PURPOSE: Validation of Imported ~~Stock~~ Topsoil.

LOCATION: 100 Eton Road, Lindfield, NSW.

GIVEN TO:

OF:

JKE JOB No: E30259KD

DATE: 14/1/2019

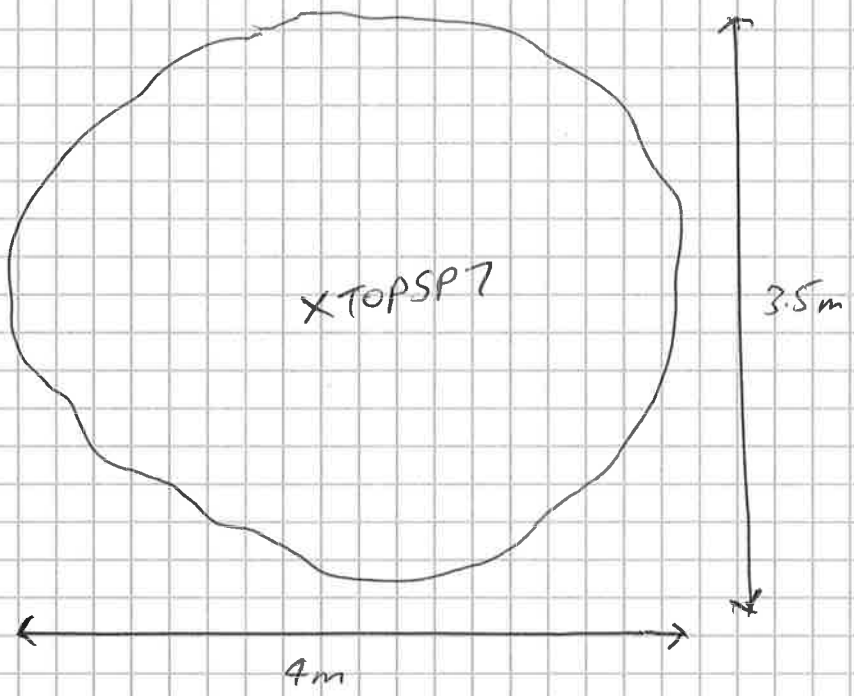
PAGE: 4 **OF** 5

INSP BY: HW

INSPECTION REPORT No .....

Stockpile 2:

A new stockpile was created (stockpile 2) of the same topsoil material. One sample (TOPSP7) was obtained from this stockpile. The stockpile was located at the southern section of the investigation area.



Approx 1m high.

Given by: ..... Received by: .....

Time Arrive: ..... Time Depart: .....

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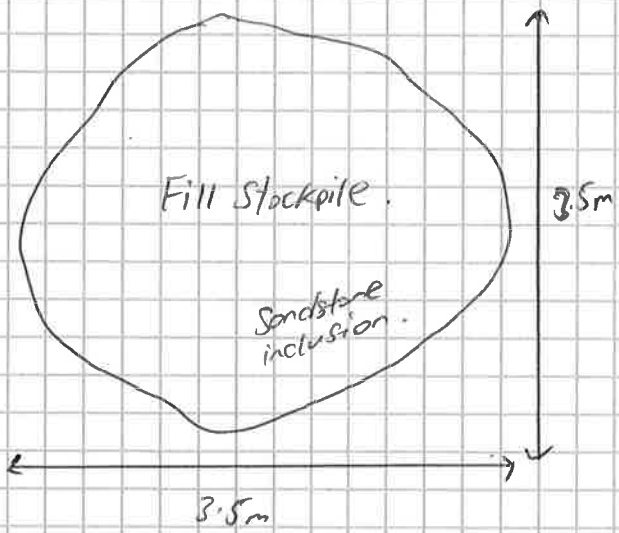
PURPOSE: Validation of Imported Topsoil.
LOCATION: 100 Eton Road, Lindfield, NSW
GIVEN TO:
OF:

JKE JOB No: E30259KD
DATE: 14/1/2019
PAGE: 5 **OF** 5
INSP BY: HW

INSPECTION REPORT No .....

A surface inspection using a 10x10m grid walkover identified numerous fragments of FCF located at the eastern section of the investigation area adjacent to the stockpile / garden bed area. Two representative samples of the FCF were obtained (HWF1 and HWF2). No other material of anthropogenic origin was identified at the ground surface.

A stockpile of fill material typically consisted of silty sand, fine to medium grained, orange brown, with sandstone gravel and wood, trace of concrete fragments was located adjacent to stockpile 1 in the southern section of the investigation area. The landscape contractor indicated that this stockpile was to be disposed off-site.



Given by: ..... Received by: .....

Time Arrive: ..... Time Depart: .....

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Site Photographs

General photographs obtained during Remediation/Validation at 100 Eton Road Lindfield

Showing remediation Area A (round 1) marked out with builder's plastic to the north. Photograph taken 13/11/18.

Showing remediation Area A (round 1) and raking of stockpiled excavated fill material by EIS Asbestos Assessor for assessment of potential ACM. Photograph taken 13/11/18.

General photographs obtained during Remediation/Validation at 100 Eton Road Lindfield

Showing remediation Area A (round 1) completed excavation and fill soil stockpiled on builder's plastic. Photograph taken 13/11/18.

Showing remediation Area A (round 2) excavation. Photograph taken 15/12/18.

General photographs obtained during Remediation/Validation at 100 Eton Road Lindfield

Showing remediation Area A (round 2) excavation spoil placed directly into skip bin. Photograph taken 15/12/18.

Showing barricaded and hand excavation works at remediation Area B. Photograph taken 15/12/18.

General photographs obtained during Remediation/Validation at 100 Eton Road Lindfield

Showing remediation Area B completed excavation. Photograph taken 15/12/18.

Showing hand excavation works at remediation Area C. Photograph taken 15/12/18.

General photographs obtained during Remediation/Validation at 100 Eton Road Lindfield

Showing remediation Area C completed excavation. Photograph taken 15/12/18.

Showing delivery of topsoil from ANL. Photograph taken 10/1/19.

General photographs obtained during Remediation/Validation at 100 Eton Road Lindfield

Showing spreading of topsoil in the far north-east section of the site. Photograph taken 10/1/19.

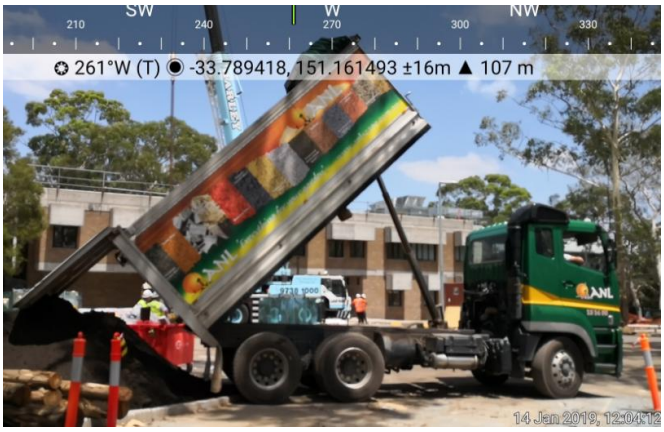
Showing the north-east section of the site during imported topsoil validation sampling. Photograph taken 14/1/19.

Note: Approximate location of unexpected FCF find (see below photograph).

Showing FCF encountered on the surface in the north-east section of the site. Representative FCF samples HWF1 and HWF2 were confirmed by the laboratory to contain asbestos. Photograph taken 14/1/19.

General photographs obtained during Remediation/Validation at 100 Eton Road Lindfield

Showing stockpiled topsoil. Stockpile 1. Validation samples TOPSP1 and TOPSP5 were obtained from this stockpile. Photograph taken 14/1/19.



Showing delivery of topsoil from ANL. Stockpile 2. Photograph taken 14/1/19.

Stockpile 2. Validation sample TOPSP7 was obtained from this stockpile. Photograph taken 14/1/19.

General photographs obtained during Remediation/Validation at 100 Eton Road Lindfield

Showing placed topsoil in the far north-east section of the site. Validation samples TOP6 was obtained from this areas. Photograph taken 14/1/19.

Showing remediation Area D completed excavation. Photograph taken 16/1/19.

Showing south section of the site filled with no contaminated fill and natural soil/bedrock sourced from excavation in the north and east section of the site. A fire truck access trial was also filled along the souths section of the site. Photograph taken 10/1/19.

General photographs obtained during Remediation/Validation at 100 Eton Road Lindfield

Showing excavation for fire hydrant services installation in the north-west section of the site. Photograph taken 13/11/18.

Showing excavation for electrical services installation in the north-east section of the site. Photograph taken 1/11/18.

General photographs obtained during Remediation/Validation at 100 Eton Road Lindfield

Showing stockpiled natural material in south section of the site, sourced from fire hydrant tank excavation located in the north-wests section of the site. Photograph taken 23/11/18.

Showing stockpiled natural material in south section of the site. Photograph taken 5/12/18.

General photographs obtained during Remediation/Validation at 100 Eton Road Lindfield

Showing south section of the site filled with no contaminated fill and natural soil/bedrock sourced from excavation in the north and east section of the site. Photograph taken 5/12/18.

Showing south section of the site Photograph taken 22/1/19.

Showing completed landscaped area in the north-east section of the site. Remediation Area D formerly located in the foreground. Photograph taken 22/1/19.

General photographs obtained during Remediation/Validation at 100 Eton Road Lindfield

Showing north-west section of the site and ANL topsoil in place and awaiting turf cover. Photograph taken 22/1/19.

Appendix D: Remediation and Validation Documentation supplied by the Remediation Contractor

Remediation Area A

Consignment DBXW-RH4J-RUVV

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: DBXW-RH4J-RUVV

Transport details

Delivered

Perfect Contracting

Daniel Green

Perfect Contracting

Robertas Klimasauskas

CP89ZP

Thu 20th Dec 2018

Mon 14th Jan 2019 15:17 PM

Mon 14th Jan 2019 15:18 PM

UTS Campus
100 Eton Rd
Lindfield NSW 2070

UTS Campus
100 Eton Rd
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Asbestos Contaminated Soil	8000.0 kg		8000.0 kg		8000.0 kg
	8000.0 kg	**0**	**8000.0 kg**	**0**	**8000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

Document generated on 14 Jan 2019 15:19

Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75131565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0076546-1

Date: 20/12/18

Time In: 11:57:08 AM | Time Out: 12:48:48 PM

Customer

Bingo Bins Pty Ltd

100 Eton Rd

LINDFIELD

DBXW-RH4J-RUVV

Vehicle: CP89ZP

Type	UOM	Qty.
Gross:	Tonne	27.26
Tare:	Tonne	14.08
Net: Incoming: Asbestos Soils	Tonne	13.18
	Bin Size: 10 m3	

Printed: 20/12/2018 12:49:07 PM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.

Asbestos material is only permitted to be disposed of in the Landfill Facility

Quote Contract Reference No. A949 for faster service

AIRSAFE

93 Beattie Street Balmain NSW 2041 Australia
T. 02 9555 9034 | F. 02 9555 9035
info@airsafe.net.au | www.airsafe.net.au
ABN 36 609 424 946

TEST REPORT

November 14, 2018

Perfect Contracting Pty Ltd
4/8 Lilian Fowler Place
MARRICKVILLE NSW 2204

Your Reference: 100 Eton Road, Lindfield
Job Number: 43121

Attention: Shuli Liu

Dear Shuli,

In accordance with your instructions, Airsafe conducted air monitoring for airborne asbestos fibres at the above site.

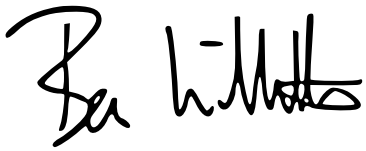
The following samples were processed on the dates indicated.

Samples:	8 Filters
Date of Sampling:	13/11/18
Date of Analysis:	14/11/18
Date of Preliminary Report Sent:	Not Issued

The results are contained in the following pages of this report.

Should you have any queries regarding this report please contact the undersigned.

Yours faithfully
AIRSAFE OHC PTY LTD



Benjamin Willetts
Approved Counter and Signatory

PROJECT: **100 Eton Road, Lindfield** **JOB NO: 43121**

Sample No	Location/Reference	Time		Total Time [min]	Air Flow Average [L/min]	Fields	Fibres	Concentration (Fibres/mL)
		On	Off					
43121-01	Rooftop Area – Guard rail – East of rubbish shoot	0830	1630	480	2.0	100	0	<0.01
43121-02	Rooftop Area – Guard rail – West of rubbish shoot	0831	1631	480	2.0	100	0	<0.01
43121-03	Rooftop Area – Electrical power box	0832	1632	480	2.0	100	0	<0.01
43121-04	Rooftop Area – Inside roof access door	0833	1633	480	2.0	100	0	<0.01
43121-05	Level 1 – Ceiling drilling works area	0845	1645	480	2.0	100	0	<0.01
43121-06	Level 1 – Ceiling drilling works area	0846	1646	480	2.0	100	0	<0.01
43121-07	Level 1 – Ceiling drilling works area	0847	1647	480	2.0	100	0	<0.01
43121-08	Ground floor – Site office area	0848	1648	480	2.0	100	0	<0.01

Method: Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres [NOHSC: 3003 (2005)] and in-house method AS101 – Membrane Filter Method for Estimating Airborne Asbestos Fibres.

Sampling: All samples have been taken by Airsafe personnel in accordance with the sampling plan detailed in method AS101.

Quality Control: A field blank is taken and analysed for each batch of samples.

Note: Times are provided for customer reference only and do not form part of the facility's accreditation for volume measurement.

The results relate only to the samples tested. The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Environmental Conditions: Air monitoring during the removal of asbestos containing materials from various locations at the above stated address.

Comment: These calculated concentrations are less than the reporting limit of 0.01 fibres/mL for control and exposure monitoring as stated in the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres [NOHSC: 3003 (2005)].

Disclaimer: N/A

Greencap Pty Ltd
ABN: 76 006 318 010
Level 2 / 11 Khartoum Road
North Ryde NSW 2113 Australia
T: 02 9889 1800

Asbestos Fibre Air Sampling & Analysis Report

Our Ref: C123461:J159655.030 100 Eton Rd Lindfield NSW AIR 2018-12-15
Client: Perfect Contracting Pty Ltd
Client Address: 4/8 Lilian Fowler Place Marrickville NSW 2204
Attention: Shuli Liu – Site Engineer
Job Location: 100 Eton Road Lindfield NSW 2070
Report Date: Monday, 17 December 2018
Analysis Date: Saturday, 15 December 2018
Sampling Date: Saturday, 15 December 2018
Sampling Type: Control
Sampled By: **Start:** Steve Braiding **Finish:** Sienna Xue
Location of Analysis: Base laboratory - Level 2, 11 Khartoum Road, North Ryde NSW 2113
Licenced Asbestos Removal Contractor: Perfect Contracting Pty Ltd **Notification No.:** 94312-00205168-01

Method: Filters examined in accordance with Safe Work Australia's Guidance Note on the Membrane Filter Method for the Estimation of Airborne Asbestos Fibres, 2nd Edition, 2005 [NOHSC:3003: (2005)] and as described in supplementary work instruction in-house method LAB03.

Any and all services carried out by Greencap for the Client are subject to the Terms and Conditions listed on the Greencap website at www.greencap.com.au/about-greencap/terms-and-conditions and are governed by our statements of limitation available at www.greencap.com.au/about-greencap/statements-of-limitation.

Sample Filter No.	Test Type Sample Location	Sample Time Start-Finish	Sampling Rate (avg) (L/min)	Fibres/ Fields	Result(s) Fibres/mL
C006644794	Field Blank	–	–	2.0/100	–
Asbestos fibre air monitoring during demolition and re-construction of former UTS Campus					
C006644930	Exterior, Ground Level, Front Gate Security Office, North – On fence	0802 – 1611	1.60	3.0/100	< 0.01
C006644686	Exterior, Building 1, Level 5, Northwest Corner, Adjacent to Link Bridge – On fence	0807 – 1614	1.60	0.0/100	< 0.01
C006442476	Exterior, Building 1, Level 5, Main Entrance, North – On wire mesh security door	0812 – 1616	1.60	4.0/100	< 0.01
C006644762	Exterior, Building 1, Level 5, East Corner, Adjacent to Construction Corridor – On scaffolding	0818 – 1617	1.60	3.0/100	< 0.01
C006644873	Exterior, Building 1, Level 5, East, Back Side of Building, Adjacent to Side Entrance – On wall	0825 – 1621	1.60	2.0/100	< 0.01
C006442457	Exterior, Building 2, Level 5, External Movement, East, Adjacent to Site Female Toilet – On fence	0829– 1623	1.55	1.0/100	< 0.01

Note: In accordance with p26 of NOHSC 3003 (2005), if the fibre count is less than 10 fibres/100 graticule areas (fields), then the count is not considered significantly above that of background.

Approved Counter: Lulu Scott

Approved Signatory: Lulu Scott

Remediation Area B

Consignment PBZF-2ZHB-2Z7U

ASBESTOS

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: PBZF-2ZHB-2Z7U

Transport details

Delivered

Perfect Contracting

Robertas Klimasauskas

Perfect Contracting

Robertas Klimasauskas

CN91HR

Thu 20th Dec 2018

Tue 22nd Jan 2019 08:42 AM

Tue 22nd Jan 2019 08:42 AM

UTS Campus
100 Eton Rd
Lindfield NSW 2070

UTS Campus
100 Eton Rd
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Asbestos Contaminated Soil	9000.0 kg		19000.0 kg		19000.0 kg
	9000.0 kg	**0**	**19000.0 kg**	**0**	**19000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emma.keogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzine.walters@dadi.com.au - 0418103008

Genesis Eastern Creek

Dial A Dump Industries P/L

ABN [illegible]

[illegible] NSW 1460

Phone [illegible] 9519 9999

Docket GEN0076540-1

Date: 20/12/18

Time In: 11:55:51 AM | Time Out: 12:47:08 PM

Customer

Bingo Bins Pty Ltd

100 Eton Rd

LINDFIELD

LINDFIELD

Vehicle: CN91HR

Type	UOM	Qty.
Gross:	Tonne	18.78
Tare:	Tonne	13.86
Net: Incoming Asbestos Soils	Tonne	4.92
	Bin Size	8 m3

Printed: 20/12/2018 12:47:19 PM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.

Asbestos material is only permitted to be disposed of in the Landfill Facility.

Quote Contract Reference No. A949 for faster service.

Consignment PBZF-2ZHB-2Z7U

ASBESTOS

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit Wastelocate and enter the Consignment Number: PBZF-2ZHB-2Z7U

Transport details

Delivered

Perfect Contracting

Robertas Klimasauskas

Perfect Contracting

Robertas Klimasauskas

CN91HR

Thu 20th Dec 2018

Tue 22nd Jan 2019 08:42 AM

Tue 22nd Jan 2019 08:42 AM

UTS Campus
100 Eton Rd
Lindfield NSW 2070

UTS Campus
100 Eton Rd
Lindfield NSW 2070

Waste

Description	Nominated	Collected	Delivered
Asbestos Contaminated Soil	9000.0 kg	19000.0 kg	19000.0 kg
	9000.0 kg 0	**19000.0 kg 0**	**19000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418609068

Genesis Eastern Creek

Dial A Dump Industries P/L

ABN 75 111 965 583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0076892-1

Date: 21/12/18

Time In: 8:48:47 AM | Time Out: 9:32:08 AM

Customer

Perfect Contracting

UB9B-NHVH-NFV4

Vehicle: CN91HR

Type	UOM	Qty.
Gross:	Tonne	15.20
Tare:	Tonne	13.00
Net: Incoming: Asbestos Sheeting	Tonne	2.20
	Bin Size: 10 m3	

Printed: 21/12/2018 9:32:19 AM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.
Asbestos material is only permitted to be disposed of in the Landfill Facility

Remediation Area C

Consignment SBVJ-D93U-943Y

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: SBVJ-D93U-943Y

Transport details

Delivered

Perfect Contracting

Daniel Green

Perfect Contracting

Robertas Klimasauskas

CP89ZP

Thu 20th Dec 2018

Mon 14th Jan 2019 15:21 PM

Mon 14th Jan 2019 15:21 PM

UTS Campus
100 Eton RD
100 Eton RD
Lindfield NSW 2070

UTS Campus
100 Eton RD
100 Eton RD
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Mixed Asbestos Waste	8000.0 kg		8000.0 kg		8000.0 kg
	8000.0 kg	**0**	**8000.0 kg**	**0**	**8000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

Document generated on 14 Jan 2019 15:22

Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75131565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0076991-1

Date: 21/12/18

Time In: 10:43:55 AM | Time Out: 11:59:19 AM

Customer

Perfect Contracting

SBVJ-D93U-943Y

Vehicle: CP89ZP

Type	UOM	Qty.
Gross:	Tonne	14.54
Tare:	Tonne	13.10
Net: Incoming: Asbestos Waste	Tonne	1.44
	Bin Size: 8 m3	

Printed: 21/12/2018 11:59:33 AM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.
Asbestos material is only permitted to be disposed of in the Landfill Facility

Remediation Area D

Consignment H3V6-AJMM-E632

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: H3V6-AJMM-E632

Transport details

Delivered

Brown Bros Skip Bins

Wayne Brown

Brown Bros Skip Bins

Wayne Brown

XN11DE

Thu 17th Jan 2019

Thu 17th Jan 2019 07:35 AM

Thu 17th Jan 2019 10:18 AM

Pure Contracting
100 Eton Rd
Lindfield NSW 2070

Pure Contracting
100 Eton Rd
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Asbestos Contaminated Soil	5000.0 kg		7220.0 kg		7220.0 kg
	5000.0 kg	**0**	**7220.0 kg**	**0**	**7220.0 kg**

Planned Destination: WMF4448

SUEZ Elizabeth Drive Landfill
1725 Elizabeth Drive
Kemps Creek NSW 2178
Phone: (02) 9826 3100
LC Chiang - lc.chiang@sita.com.au - 0408 998 292

Actual Destination WMF4448

SUEZ Elizabeth Drive Landfill
1725 Elizabeth Drive
Kemps Creek NSW 2178
LC Chiang - lc.chiang@sita.com.au - 0408 998 292

Document generated on 23 Jan 2019 10:49

SUEZ Recycling & Recovery Pty Ltd

Elizabeth Drive Waste Management Centre
1725 Elizabeth Drive
Kemps Creek NSW 2178

Phone: 1300 651 116
ABN: 70 002 902 650

Delivery Docket

Ticket No: ED310577539.0
Time In: 17/01/2019 8:16:27 AM
Time Out: 17/01/2019 8:54:20 AM
Vehicle Rego: XN11DE

700715 - BROWN BROS WASTE CONTRACTORS PTY LTD
Cust ref: I101

Asbestos - 8016 cont soil
7.22t@
Source: External
Dest: Elizabeth Drive General Waste
GROSS 20.66t
TARE 13.44t
NET Weight: 7.22t

Chargeable Weight: 7.22t
Each Item Weight: 0.00t

Total (ex GST):
GST :

Total Price:

INV 84777

------ Payment Details ------

Docket 57243

Temporary Acc:

Total Price:

Total Amount Tendered:

AIRSAFE

93 Beattie Street Balmain NSW 2041 Australia
T. 02 9555 9034 | F. 02 9555 9035
info@airsafe.net.au | www.airsafe.net.au
ABN 36 609 424 946

TEST REPORT

January 17, 2019

Pure Contracting Pty Ltd
Unit 4 / 31-33 Nyrang Street
LIDCOMBE NSW 2141

Your Reference: 100 Eton Road, Lindfield
Job Number: 43664

Attention: James Low

Dear James,

In accordance with your instructions, Airsafe conducted air monitoring for airborne asbestos fibres at the above site.

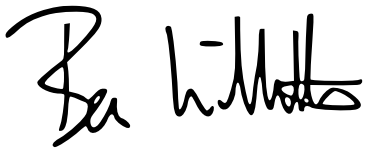
The following samples were processed on the dates indicated.

Samples:	4 Filters
Date of Sampling:	16/01/19
Date of Analysis:	17/01/19
Date of Preliminary Report Sent:	Not Issued

The results are contained in the following pages of this report.

Should you have any queries regarding this report please contact the undersigned.

Yours faithfully
AIRSAFE OHC PTY LTD



Benjamin Willetts
Approved Counter and Signatory

PROJECT: **100 Eton Road, Lindfield** **JOB NO: 43664**

Sample No	Location/Reference	Time		Total Time [min]	Air Flow Average [L/min]	Fields	Fibres	Concentration (Fibres/mL)
		On	Off					
43664-43	Decon unit – Second floor library	0700	1330	390	2.0	100	0	<0.01
43664-44	Auditorium adjacent upper room	0701	1331	390	2.0	100	0	<0.01
43664-45	Adjacent external doorway to lower hall/auditorium	0702	1332	390	2.0	100	0	<0.01
43664-46	Front driveway adjacent excavation works	0703	1333	390	2.0	100	0	<0.01

Method: Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres [NOHSC: 3003 (2005)] and in-house method AS101 – Membrane Filter Method for Estimating Airborne Asbestos Fibres.

Sampling: All samples have been taken by Airsafe personnel in accordance with the sampling plan detailed in method AS101.

Quality Control: A field blank is taken and analysed for each batch of samples.

Note: Times are provided for customer reference only and do not form part of the facility's accreditation for volume measurement.

The results relate only to the samples tested. The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Environmental Conditions: Background air monitoring during ACM remediation works at multiple locations.

Comment: These calculated concentrations are less than the reporting limit of 0.01 fibres/mL for control and exposure monitoring as stated in the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres [NOHSC: 3003 (2005)].

Disclaimer: N/A

Imported Topsoil

Australian Native Landscapes Pty Ltd

HEAD OFFICE: PH 02 9450 1444 **FAX** 02 9450 2428
317 Mona Vale Road, Terrey Hills NSW 2084 P O Box 113, Terrey Hills NSW 2084
ACN: 001 749 980 **ABN**: 42 001 749 980
Website: www.anlscape.com.au

13/02/2019

Attention: Martin Saunders
Precision Landscapes Pty Ltd
10 Sydney Road
Hornsby Heights 2077

Via email: martin@precisionlandscapes.biz

RE: SUPPLY OF NATIVE GARDEN MIX - LOW P & TURF UNDERLAY FROM AUSTRALIAN NATIVE LANDSCAPES PTY LTD

Martin,

I am writing to inform you that mineral content that's used in the manufacture of the Native Garden Mix Low P and Turf Underlay is VENM sourced

The compost content, (Greenlife Mulch and Compost), that's used in the manufacture of the Turf Underlay and Native Garden Mix - Low P mixes has been certified under AS4454 Compost Soil Conditioners and Mulches and complies with the NSW EPA Resource Recovery Compost Order 2016 and NSW EPA Resource Compost Exemption 2016.This compost material is blended with the mineral content. No fertilisers are added in the mixing process.

Please see attached Native Garden Mix Low P and Turf Underlay Specification Sheet.

Kind Regards

Steve Johnson
Metro Sales
0408 602 102
stevej@anlscape.com.au

AUSTRALIAN NATIVE LANDSCAPES PTY LTD
'Everything for your garden'

Specification S11. – Turf Underlay

Product Category	**Landscape Soil Mixes – Turf Products**		
Quality system	ANL – QM - BC		
Formulation	Botany Humus® Fines Double Washed Sand Sandy Loam		
Analysis			
Physical	Organic Matter	%w/w	20-27
	Bulk Density	Kg/l	1.0-1.2
Chemical	pH in water (1:5)	pH units	6.3-7.0
	Electrical Conductivity – (1:1.5)	dS/m	0.6-1.1
	Ammonium N – (NH_4)	mg/L	<35
	Ammonium N + Nitrate N (NH4 + N	mg/L	<55
	Phosphorus (P)	mg/L	4-10
	Potassium (K)	mg/L	40-90
	Calcium (Ca)	mg/L	65-80
	Magnesium (Mg)	mg/L	16-31
	Iron (Fe)	mg/L	13-27

General Information

This turf underlay is a moderately organic product designed for installation on grade, above free draining sub straight or where the subgrade gradient is set with a minimum 1% fall where the subgrade contains high clay content or is poorly draining.

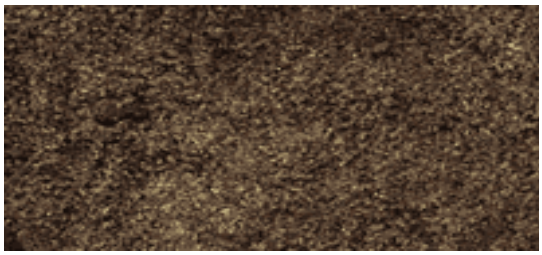
Where this product is used in applications with limited sunlight, reduced irrigation rates should be considered until turf is fully established.

Disclaimer

Relatively low nutrient and free draining, for sustained vigorous turf growth we recommend applying a specialist turf grass fertiliser within 4 weeks of laying.

NB: Material Safety Data Sheets are available on request.
The information contained in this technical specification is current at the time of publication and applies to this specification manufactured by Australian Native Landscapes. We reserve the right to vary the specification without notice.

AUSTRALIAN NATIVE LANDSCAPES PTY LTD
'Everything for your garden'



Specification S5. – Native Mix 'Low P'™

Product Category	Native Soil Mix		
Quality system	ANL – QM - BC		
Formulation	Greenlife® 'Mulch & Compost' Double Washed Sand (5mm minus) ANL Sandy Loam		
Analysis			
Physical	Organic Matter	% w/w	9-12
	Bulk Density	Kg/L	1.1-1.3
Hydrological	Hydraulic Conductivity (32 drops)	mm/hr	>250
Chemical	pH in water (1:5)	pH units	6.0-6.5
	Electrical Conductivity – (1:1.5)	dS/m	0.4-0.8
	Ammonium N – (NH_4)	mg/L	<50
	Ammonium N + Nitrate N (NH4 + NO_3)	mg/L	<50
	Phosphorus (P)	mg/L	1-5
	Potassium (K)	mg/L	50-75
	Calcium (Ca)	mg/L	40-80
	Magnesium (Mg)	mg/L	30-50
	Iron (Fe)	mg/L	50-125

General Information

This is a very free-draining on-grade garden mix suited to a broad range of Australian native plants. Designed with a moderate to low nutrient load, consideration should be given to the application of zero or low P slow release fertilisers at the time of planting.

Where highly P-sensitive or water sensitive species are intended in the planting schedule, mixes with very low levels of organic matter may be preferable.

We recommend mulching to a depth of 75mm with mulch suitable for native gardens such as Forest Fines®. Avoiding mulch placement close to plant trunk.

NB: Material Safety Data Sheets are available on request.

Disclaimer

The information contained in this technical specification is current at the time of publication and applies to this specification manufactured by Australian Native Landscapes. We reserve the right to vary the specification without notice.

SESL AUSTRALIA
Environment & Soil Sciences

Soil Chemistry Profile

Mehlich 3 - Multi-nutrient Extractant

Sample Drop Off: 16 Chilvers Road, Thornleigh NSW 2120
Mailing Address: PO Box 357, Pennant Hills NSW 1715
Tel: 1300 30 40 80
Fax: 1300 64 46 89
Em: info@sesl.com.au
Web: www.sesl.com.au

Batch N°: 50340	Sample N°: 2	Date Received: 7/11/18	Report Status: Final

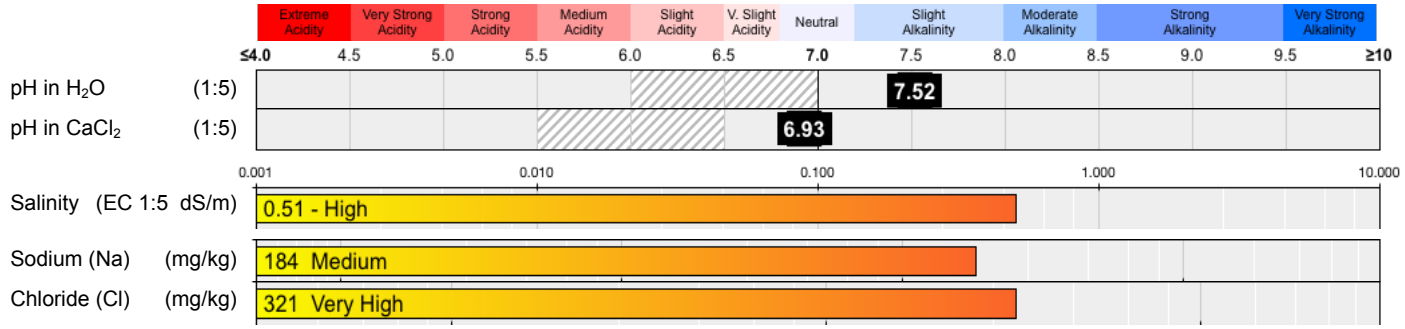
Client Name:	**Australian Native Landscapes Pty Limited (ANL)**	Project Name:	**Full Soil Chemistry Testing**
		SESL Quote N°:	
Client Contact:	**Rob Niccol**	Sample Name:	**STU**
Client Order N°:		Description:	**Soil**
Address:	**PO Box 113** **Terry Hills NSW 2084**	Test Type:	**FSC_Plus_ANL**

RECOMMENDATIONS

Soil sample 'STU' is very slightly acidic in CaCl2 with high salinity due to the high nutrient status and high sodium chloride levels. Avoid planting saline sensitive plants. The soil is slightly sodic which may lead to some dispersion issues but can be easily corrected with gypsum. The eCEC is low. Nutritionally the soil has high P, K and S levels. N and Ca requires increasing. Organic matter is high at 9.5%
The media is a sandy loam with a weak crumb structure and rapid permeability.
This soil is suitable for plants with high fertility requirements. Avoid planting phosphorus sensitive natives.

Amendment Strategy
Add 100g/m2 or 1kg/m3 gypsum to help overcome any dispersive tendencies and increase the low calcium. Irrigate well.
Add urea at 20g/m2 or 200g/m3 to raise nitrogen levels.

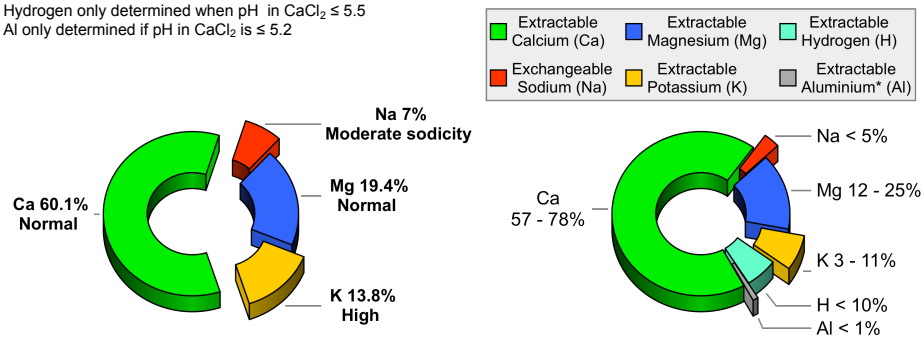
pH and ELECTRICAL CONDUCTIVITY



CATION BALANCE

EXCHANGEABLE CATION PERCENTAGE

Note: Hydrogen only determined when pH in $CaCl_2$ ≤ 5.5
Al only determined if pH in $CaCl_2$ is ≤ 5.2



EFFECTIVE CATION EXCHANGE CAPACITY (eCEC) (cmol(+)/kg)

CATION RATIOS

Ratio	Result	Target Range
Ca:Mg	**3.1**	4.1 – 6.0
Comment: Calcium low		
Mg:K	**1.4**	2.6 – 5.0
Comment: Magnesium low		
K/(Ca+Mg)	**0.17**	< 0.07
Comment: High		
K:Na	**2**	N/A

EXCHANGEABLE CATIONS (cmol(+)/kg)

Na:	K:	Ca:	Mg:	H:	Al:
0.80	1.57	6.85	2.21		

eCEC does not include correction for soluble salts as standard. Where exchangeable calcium exceeds 80 % of eCEC and/or salinity exceeds 0.75 dS/m, alternative methods are recommended to determine true eCEC.

The units of eCEC *cmol(+)/kg* are the SI unit and are equivalent to *meq/100g*.

SESL AUSTRALIA
Environment & Soil Sciences

Soil Chemistry Profile

Mehlich 3 - Multi-nutrient Extractant

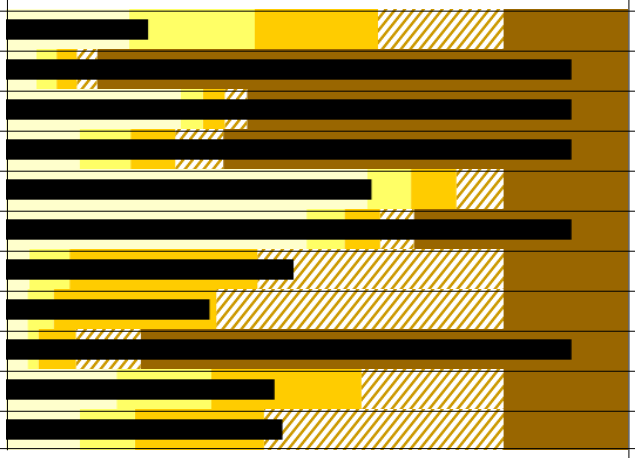
Sample Drop Off: 16 Chilvers Road, Thornleigh NSW 2120
Mailing Address: PO Box 357, Pennant Hills NSW 1715
Tel: 1300 30 40 80
Fax: 1300 64 46 89
Em: info@sesl.com.au
Web: www.sesl.com.au

Batch N°: 50340 | **Sample N°: 2** | **Date Received: 7/11/18** | **Report Status: Final**

PLANT AVAILABLE NUTRIENTS

EFFECTIVE AMELIORATION DEPTH (mm): ◉ 100 ○ 150 ○ 200 **DESIRED FERTILITY CLASS:** ○ Low ◉ Moderate ○ High

Major Nutrients	Unit	Result	Very Low / Low / Marginal / Adequate / High	Result (g/sqm)	Desirable (g/sqm)	Adjustment (g/sqm)
Nitrate-N (NO_3)	mg N/kg	6		0.8	4	3.2
Phosphorus (P)	mg P/kg	391		52	8.4	Drawdown
Potassium (K)	mg/kg	615		81.8	34.8	Drawdown
Sulfur (S)	mg S/kg	177		23.5	9	Drawdown
Calcium (Ca)	mg/kg	1370		182.2	248	65.8
Magnesium (Mg)	mg/kg	269		35.8	25.8	Drawdown
Iron (Fe)	mg/kg	319		42.4	73.4	31
Manganese (Mn)	mg/kg	18		2.4	5.9	3.5
Zinc (Zn)	mg/kg	21		2.8	0.7	Drawdown
Copper (Cu)	mg/kg	3.4		0.5	0.8	0.3
Boron (B)	mg/kg	1.5		0.2	0.4	0.2



Explanation of graph ranges:

Very Low
Growth is likely to be severely depressed and deficiency symptoms present. Large applications for soil building purposes are usually recommended. Potential response to nutrient addition is >90 %.

Low
Potential "hidden hunger", or sub-clinical deficiency. Potential response to nutrient addition is 60 to 90 %.

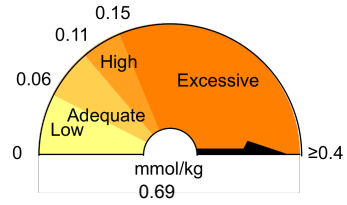
Marginal
Supply of this nutrient is barely adequate for the plant, and build-up is still recommended. Potential response to nutrient addition is 30 to 60 %.

Adequate
Supply of this nutrient is adequate for the plant, and and only maintenance application rates are recommended. Potential response to nutrient addition is 5 to 30 %.

High
The level is excessive and may be detrimental to plant growth (i.e. phytotoxic) and may contribute to pollution of ground and surface waters. Drawdown is recommended. Potential response to nutrient addition is <2 %.

NOTES: Adjustment recommendation calculates the elemental application to shift the soil test level to within the **Adequate** band, which maximises growth/yield, and economic efficiency, and minimises impact on the environment.
Drawdown: The objective nutrient management is to utilise residual soil nutrients. There is no agronomic reason to apply fertiliser when soil test levels exceed **Adequate**.
• g/sqm measurements are based on soil bulk density of 1.33 tonne/m^3 and effective amelioration depth.

Phosphorus Saturation Index



Excessive. Exceeds environmental threshold. Implement improved P management to reduce potential for nonpoint P pollution.

Exchangeable Acidity

Adams-Evans Buffer pH (BpH):	-
Sum of Base Cations (cmol(+)/kg):	**11.4**
Eff. Cation Exch. Capacity (eCEC):	**11.4**
Base Saturation (%):	**100**
Exchangeable Acidity (cmol(+)/kg):	-
Exchangeable Acidity (%):	-

Lime Application Rate (g/sqm)

– to achieve pH 6.0:	**0**
– to neutralise Al:	-

Calculated Gypsum Application Rate (CGAR)
(g/sqm) to achieve 67.5 % exch. Ca: **97**

The CGAR is corrected for the selected effective amelioration depth (100 mm) and any Lime addition to achieve pH 6.0.

PHYSICAL DESCRIPTION

Texture:	**Sandy Loam**	Munsell Colour:	-	Organic Carbon (OC %):	**Very High - 4.3**
Estimated clay content:	**10 - 20%**	Structure Size:	**Fine (1 - 10mm)**	Organic Matter (OM %):	**9.5**
Tactually gravelly:	**Gravelly**	Structural Organisation:	**Pedal - Weak**	Est. Field Capacity (% water):	**26**
Tactually organic:	**Not Organic**	Structural Unit:	**Crumb**	Est. Permanent Wilting Point (% water):	**9**
Calculated EC_{SE} (dS/m):	**7.1**	Potential infiltration rate:	**Rapid**	Est. Plant Available Water (% water):	**17**
– Moderate saline. Growth on many plant species is affected.		Est. Permeability Class (mm/hr):	**>120**	Est. Plant Available Water (mm/m):	**170**
		Additional comments:			

Date Report Generated 8/01/2019

Consultant: Chantal Milner

Authorised Signatory: Simon Leake

METHOD REFERENCES:
pH (1:5 H_2O) - SESL CM0002; Rayment & Lyons 4A1-2011
pH (1:5 $CaCl_2$) - SESL CM0002; Rayment & Lyons 4B4-2011
EC (1:5) - SESL CM0001; Rayment & Lyons 3A1-2011
Chloride - Rayment & Lyons 5A2a-2011
Nitrate - Rayment & Lyons 7B1a-2011
Aluminium - SESL CM0007; Rayment & Lyons 15A1-2011
P, K, S, Ca, Mg, Na, Fe, Mn, Zn, Cu, B - SESL CM0007; Rayment & Lyons 18F1-2011
Buffer pH and Hydrogen - SSSA Methods of Soil Analysis 2007, Pt 3, Ch 17; Adams-Evans (1962)
Texture/Structure/Colour - PM0003 (Texture- "Northcote" (1992), Structure* - "Murphy" (1991), Colour- "Munsell" (2000))

*Structure analysed in the laboratory is conducted on a disturbed sample, therefore is only a representation of the macro-structures that may be present in the field, which provide an indication of the soil physical characteristics and behaviours that may exist.

Soil Chemistry Profile

Mehlich 3 - Multi-nutrient Extractant

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Tel: 1300 30 40 80
Fax: 1300 64 46 89
Em: info@sesl.com.au
Web: www.sesl.com.au

Batch N°: 50340	Sample N°: 3	Date Received: 7/11/18	Report Status: Final

Client Name:	**Australian Native Landscapes Pty Limited (ANL)**	Project Name:	**Full Soil Chemistry Testing**
		SESL Quote N°:	
Client Contact:	**Rob Niccol**	Sample Name:	**SNMLP**
Client Order N°:		Description:	**Soil**
Address:	**PO Box 113 Terry Hills NSW 2084**	Test Type:	**FSC_Plus_ANL**

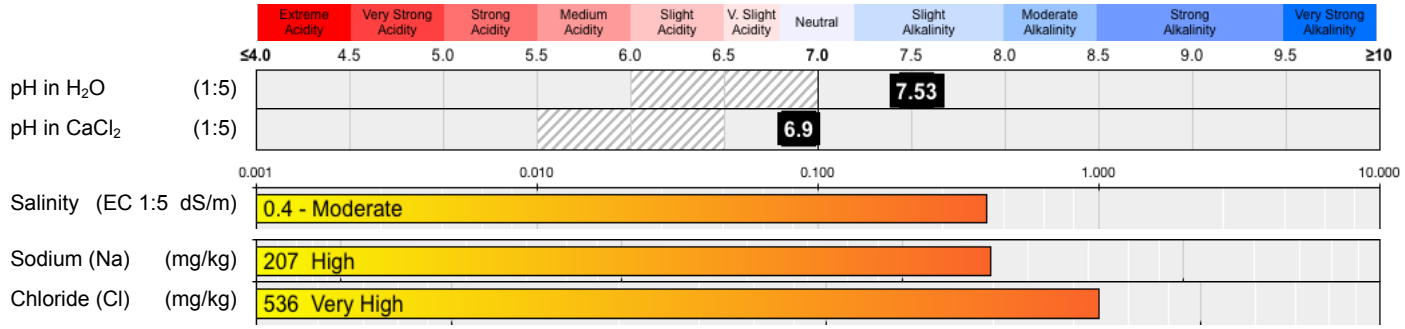
RECOMMENDATIONS

Soil sample 'SNMLP' is very slightly acidic in CaCl2 with moderate salinity and high sodium chloride levels.The soil is slightly sodic which may lead to some dispersion issues but can be easily corrected with gypsum. The eCEC is low. Nutritionally the soil has high P, K and Mg levels. N, S and Ca requires increasing. Organic matter is high at 10.5%
The media is a sandy loam with a weak crumb structure and rapid permeability.
Avoid planting phosphorus sensitive natives.

Amendment Strategy

Add 180g/m2 or 1.8kg/m3 gypsum to help overcome any dispersive tendencies and increase the low sulphur and calcium. Irrigate well.
Add urea at 20g/m2 or 200g/m3 to raise nitrogen levels.
The low copper will be released slowly from the organic matter.

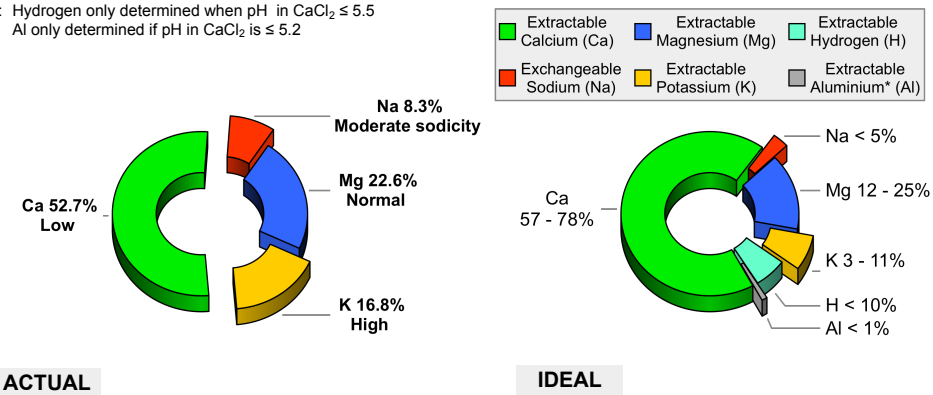
pH and ELECTRICAL CONDUCTIVITY



CATION BALANCE

EXCHANGEABLE CATION PERCENTAGE

Note: Hydrogen only determined when pH in $CaCl_2$ ≤ 5.5
Al only determined if pH in $CaCl_2$ is ≤ 5.2



EFFECTIVE CATION EXCHANGE CAPACITY (eCEC) (cmol(+)/kg)

CATION RATIOS

Ratio	Result	Target Range
Ca:Mg	**2.3**	4.1 – 6.0
Comment: Calcium low		
Mg:K	**1.3**	2.6 – 5.0
Comment: Magnesium low		
K/(Ca+Mg)	**0.22**	< 0.07
Comment: High		
K:Na	**2**	N/A

EXCHANGEABLE CATIONS (cmol(+)/kg)

Na:	K:	Ca:	Mg:	H:	Al:
0.90	1.81	5.69	2.44		

eCEC does not include correction for soluble salts as standard. Where exchangeable calcium exceeds 80 % of eCEC and/or salinity exceeds 0.75 dS/m, alternative methods are recommended to determine true eCEC.

The units of eCEC *cmol(+)/kg* are the SI unit and are equivalent to *meq/100g*.

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Environment & Soil Sciences

Soil Chemistry Profile

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Batch N°: 50340 | **Sample N°: 3** | **Date Received: 7/11/18** | **Report Status: Final**

PLANT AVAILABLE NUTRIENTS

EFFECTIVE AMELIORATION DEPTH (mm): ◉ 100 ○ 150 ○ 200 **DESIRED FERTILITY CLASS:** ○ Low ◉ Moderate ○ High

Major Nutrients	Unit	Result	Very Low / Low / Marginal / Adequate / High	Result (g/sqm)	Desirable (g/sqm)	Adjustment (g/sqm)
Nitrate-N (NO_3)	mg N/kg	4.5		0.6	4	3.4
Phosphorus (P)	mg P/kg	87.4		11.6	8.4	Drawdown
Potassium (K)	mg/kg	707		94	34.8	Drawdown
Sulfur (S)	mg S/kg	24		3.2	9	5.8
Calcium (Ca)	mg/kg	1140		151.6	248	96.4
Magnesium (Mg)	mg/kg	296		39.4	25.8	Drawdown
Iron (Fe)	mg/kg	176		23.4	73.4	50
Manganese (Mn)	mg/kg	35		4.7	5.9	1.2
Zinc (Zn)	mg/kg	10		1.3	0.7	Drawdown
Copper (Cu)	mg/kg	0.9		0.1	0.8	0.7
Boron (B)	mg/kg	1.2		0.2	0.4	0.2

Explanation of graph ranges:

Very Low — Growth is likely to be severely depressed and deficiency symptoms present. Large applications for soil building purposes are usually recommended. Potential response to nutrient addition is >90 %.

Low — Potential "hidden hunger", or sub-clinical deficiency. Potential response to nutrient addition is 60 to 90 %.

Marginal — Supply of this nutrient is barely adequate for the plant, and build-up is still recommended. Potential response to nutrient addition is 30 to 60 %.

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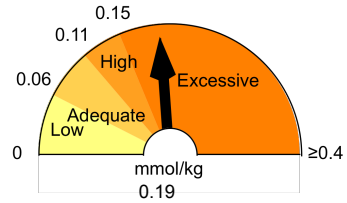
High — The level is excessive and may be detrimental to plant growth (i.e. phytotoxic) and may contribute to pollution of ground and surface waters. Drawdown is recommended. Potential response to nutrient addition is <2 %.

NOTES: Adjustment recommendation calculates the elemental application to shift the soil test level to within the **Adequate** band, which maximises growth/yield, and economic efficiency, and minimises impact on the environment.
Drawdown: The objective nutrient management is to utilise residual soil nutrients. There is no agronomic reason to apply fertiliser when soil test levels exceed **Adequate**.
• g/sqm measurements are based on soil bulk density of 1.33 tonne/m^3 and effective amelioration depth.

Phosphorus Saturation Index



Excessive. Exceeds environmental threshold. Implement improved P management to reduce potential for nonpoint P pollution.

Exchangeable Acidity

Adams-Evans Buffer pH (BpH):	-
Sum of Base Cations (cmol(+)/kg):	**10.8**
Eff. Cation Exch. Capacity (eCEC):	**10.8**
Base Saturation (%):	**100**
Exchangeable Acidity (cmol(+)/kg):	-
Exchangeable Acidity (%):	-

Lime Application Rate (g/sqm)

– to achieve pH 6.0:	**0**
– to neutralise Al:	-

Calculated Gypsum Application Rate (CGAR)
(g/sqm) to achieve 67.5 % exch. Ca: **183**

The CGAR is corrected for the selected effective amelioration depth (100 mm) and any Lime addition to achieve pH 6.0.

PHYSICAL DESCRIPTION

Texture:	**Sandy Loam**	Munsell Colour:	-	Organic Carbon (OC %):	**Very High - 4.8**
Estimated clay content:	**10 - 20%**	Structure Size:	**Fine (1 - 10mm)**	Organic Matter (OM %):	**10.5**
Tactually gravelly:	**Gravelly**	Structural Organisation:	**Pedal - Weak**	Est. Field Capacity (% water):	**26**
Tactually organic:	**Not Organic**	Structural Unit:	**Crumb**	Est. Permanent Wilting Point (% water):	**9**
Calculated EC_{SE} (dS/m):	**5.6**	Potential infiltration rate:	**Rapid**	Est. Plant Available Water (% water):	**17**
– Moderate saline. Growth on many plant species is affected.		Est. Permeability Class (mm/hr):	**>120**	Est. Plant Available Water (mm/m):	**170**
		Additional comments:			

Date Report Generated 8/01/2019

Consultant: Chantal Milner

Authorised Signatory: Simon Leake

METHOD REFERENCES:
pH (1:5 H_2O) - SESL CM0002; Rayment & Lyons 4A1-2011
pH (1:5 $CaCl_2$) - SESL CM0002; Rayment & Lyons 4B4-2011
EC (1:5) - SESL CM0001; Rayment & Lyons 3A1-2011
Chloride - Rayment & Lyons 5A2a-2011
Nitrate - Rayment & Lyons 7B1a-2011
Aluminium - SESL CM0007; Rayment & Lyons 15A1-2011
P, K, S, Ca, Mg, Na, Fe, Mn, Zn, Cu, B - SESL CM0007; Rayment & Lyons 18F1-2011
Buffer pH and Hydrogen - SSSA Methods of Soil Analysis 2007, Pt 3, Ch 17; Adams-Evans (1962)
Texture/Structure/Colour - PM0003 (Texture- "Northcote" (1992), Structure* - "Murphy" (1991), Colour- "Munsell" (2000))

*Structure analysed in the laboratory is conducted on a disturbed sample, therefore is only a representation of the macro-structures that may be present in the field, which provide an indication of the soil physical characteristics and behaviours that may exist.

AUSTRALIAN NATIVE LANDSCAPES PTY LTD
'Everything for your garden'

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

Address all correspondence to: PO Box 113, TERREY HILLS NSW 2084
Email: accounts@anlscape.com.au Web site: www.anlscape.com.au

HEAD OFFICE	NORTH RYDE	SEVEN HILLS	WESTERN DIVISION	CENTRAL COAST	ORANGE	BROWNS CREEK	BATHURST
317 Mona Vale Road TERREY HILLS 2084 Ph (02) 9450 1444 Fx (02) 9450 2428	Cnr Wicks & Waterloo Roads NORTH RYDE 2113 Ph (02) 9887 2788 Fx (02) 9888 2614	6 Tollis Place (off Station Road) SEVEN HILLS 2147 Ph (02) 9674 4899 Fx (02) 9674 5199	Martin Road BADGERYS CREEK 2555 Ph (02) 4774 8484 Fx (02) 4774 8537	Hue Hue Road WYONG 2259 Ph (02) 4353 8088 Fx (02) 4353 7011	94 Peisley Street ORANGE 2800 Ph (02) 6361 2224 Fx (02) 6361 9164	755 Browns Creek Rd Blayney NSW 2799 Ph (02) 6366 5205 Fx (02) 6366 5282	9 Lambert St Bathurst NSW 2795 Ph (02) 6331 7455 Fx (02) 63329849

Tax Invoice

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2214374 Date: 10/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: NORTH RYDE
DELIVERY INSTRUCTIONS: DELIVER DATE: 11/01/2019 SALES PERSON: S. ROBSON	DELIVER TO: **PRECISION LANDSCAPES P/L** **100 ETON ROAD** **LINDFIELD** **ALBERT Le ROUX - 0407 293 304**

Code	Description	Qty	Unit Price Inc GST	GST	Gross Amount
SNMLP	NATIVE MIX LOW P *AS PER QUOTE NUMBER "SJ0312183"*	13 M3	46.20	54.60	600.60

This is a payment claim made under the Building and Construction Industry Security of Payment Act 1999 NSW, Revised 2001.

***** PLEASE ENSURE YOUR LOAD IS SAFE & COVERED *** AUSTRALIAN STANDARD WARNING (Effective as of August 2001)**
This product may affect your health For your personal safety, please ensure you read the following warning note If this product is made from organic material which may contain living micro-organisms, including bateria, fungi and protozoa *** RISK: Direct contact with this material or its dust or moisture droplets may cause skin irritation and may irritate, inflame or sensitise the nose, throat and lungs resulting in illnesses ranging from hay fever and asthma to pneumonia (legionella) or pneumonia-like illnesses Wash hands thoroughly after handling For further information, ask for our material safety data sheet

Conditions

The supplier's responsibility for delivery of materials **will cease at the kerbside** of the job address stated, if it is necessary for a vehicle to cross the footpath or to enter upon private property in the course of effecting delivery, the purchaser will provide safe and adequate access and notwithstanding will pay for all damage to any public or private property and every injury or wrong

For all products delivered on pallets, if an exchange of pallets does not occur and therefore pallets are owed, pallets not returned within 14 days will incur a $35 00 charge

Conditions signed and acknowledged by property owner or representation.

Print Name: _____

Signature: _____

Date: _____

Terms Payment is due by 28/02/2019

Total Ex GST	546.00
Total GST	54.60
Total Amount Due:	600.60

Please EFT Payments to:
BSB: 012-298
Account No. 8376 70217 - ANZ Belrose NSW
Please email remittance to accounts@anlscape.com.au
or Fax to 02 9450 2428

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

Address all correspondence to: PO Box 113, TERREY HILLS NSW 2084

Email: accounts@anlscape.com.au Web site: www.anlscape.com.au

HEAD OFFICE	NORTH RYDE	SEVEN HILLS	WESTERN DIVISION	CENTRAL COAST	ORANGE	BATHURST
317 Mona Vale Road TERREY HILLS 2084 Ph (02) 9450 1444 Fx (02) 9450 2428	Cnr Wicks & Waterloo Roads NORTH RYDE 2113 Ph. (02) 9887 2788 Fx (02) 9888 2614	6 Tollis Place (off Station Road) SEVEN HILLS 2147 Ph (02) 9674 4899 Fx (02) 9674 5199	Martin Road BADGERYS CREEK 2555 Ph: (02) 4774 8484 Fx: (02) 4774 8537	Hue Hue Road WYONG 2259 Ph: (02) 4353 8088 Fx: (02) 4353 7011	94 Peisley Street ORANGE 2800 Ph: (02) 6361 2224 Fx. (02) 6361 9164	9 Lambert St Bathurst NSW 2795 Ph (02) 6331 7455 Fx (02) 63329849

Delivery Docket

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2214374 Date: 10/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: NORTH RYDE
DELIVERY INSTRUCTIONS: DELIVER DATE: 11/01/2019	DELIVER TO: PRECISION LANDSCAPES P/L 100 ETON ROAD LINDFIELD ALBERT Le ROUX - 0407 293 304

Code	Description	Qty	
SNMLP	NATIVE MIX LOW P	13	M3

Congratulations! Your choice of Re-Carb® greenhouse friendly products has offset the emissions of the average Australian car for 789 days
www.carbongardening.com.au

Conditions

The supplier's responsibility for delivery of materials will cease at the kerbside of the job address stated. if it is necessary for a vehicle to cross the footpath or to enter upon private property in the course of effecting delivery. the purchaser will provide safe and adequate access and notwithstanding will pay for all damage to any public or private property and

Conditions signed and acknowledged by property owner or representation.

Print Name: Brad

Signature:

Date: 11-1-19

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

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AUSTRALIAN NATIVE LANDSCAPES PTY LTD

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317 Mona Vale Road TERREY HILLS 2084 Ph (02) 9450 1444 Fx (02) 9450 2428	Cnr Wicks & Waterloo Roads NORTH RYDE 2113 Ph (02) 9887 2788 Fx (02) 9888 2614	6 Tollis Place (off Station Road) SEVEN HILLS 2147 Ph (02) 9674 4899 Fx (02) 9674 5199	Martin Road BADGERYS CREEK 2555 Ph (02) 4774 8484 Fx (02) 4774 8537	Hue Hue Road WYONG 2259 Ph (02) 4353 8088 Fx (02) 4353 7011	94 Peisley Street ORANGE 2800 Ph (02) 6361 2224 Fx (02) 6361 9164	755 Browns Creek Rd Blayney NSW 2799 Ph (02) 6366 5205 Fx (02) 6366 5282	9 Lambert St Bathurst NSW 2795 Ph (02) 6331 7455 Fx (02) 63329849

Tax Invoice

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2214894 Date: 14/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: NORTH RYDE
DELIVERY INSTRUCTIONS: DELIVER DATE: 14/01/2019 SALES PERSON: S. ROBSON	DELIVER TO: PRECISION LANDSCAPES P/L 100 ETON ROAD LINDFIELD ALBERT Le ROUX - 0407 293 304

Code	Description	Qty	Unit Price Inc GST	GST	Gross Amount
SNMLP	NATIVE MIX LOW P *AS PER QUOTE NUMBER "SJ0312183"*	13 M3	46.20	54.60	600.60

This is a payment claim made under the Building and Construction Industry Security of Payment Act 1999 NSW, Revised 2001.

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Conditions

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For all products delivered on pallets, if an exchange of pallets does not occur and therefore pallets are owed, pallets not returned within 14 days will incur a $35 00 charge.

Conditions signed and acknowledged by property owner or representation.

Print Name: KEEGAN SAMUEL

Signature:

Date:

Terms Payment is due by 28/02/2019

Total Ex GST	546.00
Total GST	54.60
Total Amount Due:	600.60

Please EFT Payments to:
BSB: 012-298
Account No. 8376 70217 - ANZ Belrose NSW
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	Out	Delivered	Returned	Owing
Loscam				
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Plain				
Blue				
SIGN				

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'Everything for your garden'

HEAD OFFICE	NORTH RYDE	SEVEN HILLS	WESTERN DIVISION	CENTRAL COAST	ORANGE	BROWNS CREEK	BATHURST
317 Mona Vale Road TERREY HILLS 2084 Ph (02) 9450 1444 Fx (02) 9450 2428	Cnr Wicks & Waterloo Roads NORTH RYDE 2113 Ph: (02) 9887 2788 Fx (02) 9888 2614	6 Tollis Place (off Station Road) SEVEN HILLS 2147 Ph. (02) 9674 4899 Fx (02) 9674 5199	Martin Road BADGERYS CREEK 2555 Ph: (02) 4774 8484 Fx: (02) 4774 8537	Hue Hue Road WYONG 2259 Ph: (02) 4353 8088 Fx (02) 4353 7011	94 Peisley Street ORANGE 2800 Ph (02) 6361 2224 Fx (02) 6361 9164	755 Browns Creek Rd Blayney NSW 2799 Ph (02) 6366 5205 Fx: (02) 6366 5282	9 Lambert St Bathurst NSW 2795 Ph (02) 6331 7455 Fx (02) 63329849

Tax Invoice

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2214895 Date: 14/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: NORTH RYDE
DELIVERY INSTRUCTIONS: DELIVER DATE: 14/01/2019 SALES PERSON: S. ROBSON	DELIVER TO: **PRECISION LANDSCAPES P/L** **100 ETON ROAD** **LINDFIELD** **ALBERT Le ROUX - 0407 293 304**

Code	Description	Qty	Unit Price Inc GST	GST	Gross Amount
STU	TURF UNDERLAY *AS PER QUOTE NUMBER "SJ0312183"*	13 M3 ✓	46.20	54.60	600.60

This is a payment claim made under the Building and Construction Industry Security of Payment Act 1999 NSW, Revised 2001.

***** PLEASE ENSURE YOUR LOAD IS SAFE & COVERED *** AUSTRALIAN STANDARD WARNING (Effective as of August 2001)**

This product may affect your health. For your personal safety, please ensure you read the following warning note. If this product is made from organic material which may contain living micro-organisms, including bateria, fungi and protozoa *** RISK: Direct contact with this material or its dust or moisture droplets may cause skin irratation and may irritate, inflame or sensitise the nose, throat and lungs resulting in illnesses ranging from hay fever and asthma to pneumonia (legionella) or pneumonia-like illnesses. Wash hands thoroughly after handling. For further information, ask for our material safety data sheet.

Conditions

The supplier's responsibility for delivery of materials **will cease at the kerbside** of the job address stated, if it is necessary for a vehicle to cross the footpath or to enter upon private property in the course of effecting delivery, the purchaser will provide safe and adequate access and notwithstanding will pay for all damage to any public or private property and every injury or wrong

For all products delivered on pallets, if an exchange of pallets does not occur and therefore pallets are owed, pallets not returned within 14 days will incur a $35 00 charge.

Conditions signed and acknowledged by property owner or representation.

Print Name: REAGAN SAMUEL

Signature: [signature]

Date: 14/01/19

Terms Payment is due by 28/02/2019

Total Ex GST	546.00
Total GST	54.60
Total Amount Due:	600.60

Please EFT Payments to:
BSB: 012-298
Account No. 8376 70217 - ANZ Belrose NSW
Please email remittance to accounts@anlscape.com.au or Fax to 02 9450 2428

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

Address all correspondence to: PO Box 113, TERREY HILLS NSW 2084

Email: accounts@anlscape.com.au Web site: www.anlscape.com.au

AUSTRALIAN NATIVE LANDSCAPES PTY LTD

'Everything for your garden'

HEAD OFFICE	NORTH RYDE	SEVEN HILLS	WESTERN DIVISION	CENTRAL COAST	ORANGE	BROWNS CREEK	BATHURST
317 Mona Vale Road TERREY HILLS 2084 Ph: (02) 9450 1444 Fx: (02) 9450 2428	Cnr Wicks & Waterloo Roads NORTH RYDE 2113 Ph: (02) 9887 2788 Fx: (02) 9888 2614	6 Tollis Place (off Station Road) SEVEN HILLS 2147 Ph: (02) 9674 4899 Fx: (02) 9674 5199	Martin Road BADGERYS CREEK 2555 Ph: (02) 4774 8484 Fx: (02) 4774 8537	Hue Hue Road WYONG 2259 Ph: (02) 4353 8088 Fx: (02) 4353 7011	94 Peisley Street ORANGE 2800 Ph: (02) 6361 2224 Fx: (02) 6361 9164	755 Browns Creek Rd Blayney NSW 2799 Ph: (02) 6366 5205 Fx: (02) 6366 5282	9 Lambert St Bathurst NSW 2795 Ph: (02) 6331 7455 Fx: (02) 63329849

Tax Invoice

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2215874 Date: 17/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: NORTH RYDE
DELIVERY INSTRUCTIONS: DELIVER DATE: 18/01/2019 SALES PERSON: S. ROBSON	DELIVER TO: PRECISION LANDSCAPES P/L 100 ETON ROAD LINDFIELD ALBERT Le ROUX - 0407 293 304

Code	Description	Qty	Unit Price Inc GST	GST	Gross Amount
STU	TURF UNDERLAY *AS PER QUOTE NUMBER "SJ0312183"*	13 M3	46.20	54.60	600.60

This is a payment claim made under the Building and Construction Industry Security of Payment Act 1999 NSW, Revised 2001.

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Conditions

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Conditions signed and acknowledged by property owner or representation.

Print Name: _____

Signature: _____

Date: _____

Terms Payment is due by 28/02/2019

Total Ex GST	546.00
Total GST	54.60
Total Amount Due:	600.60

Please EFT Payments to:
BSB: 012-298
Account No. 8376 70217 - ANZ Belrose NSW
Please email remittance to accounts@anlscape.com.au or Fax to 02 9450 2428

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

AUSTRALIAN NATIVE LANDSCAPES PTY LTD

'Everything for your garden'

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

Address all correspondence to: PO Box 113, TERREY HILLS NSW 2084

Email: accounts@anlscape.com.au Web site: www.anlscape.com.au

HEAD OFFICE	NORTH RYDE	SEVEN HILLS	WESTERN DIVISION	CENTRAL COAST	ORANGE	BROWNS CREEK	BATHURST
317 Mona Vale Road TERREY HILLS 2084 Ph: (02) 9450 1444 Fx: (02) 9450 2428	Cnr Wicks & Waterloo Roads NORTH RYDE 2113 Ph: (02) 9887 2788 Fx: (02) 9888 2614	6 Tollis Place (off Station Road) SEVEN HILLS 2147 Ph: (02) 9674 4899 Fx: (02) 9674 5199	Martin Road BADGERYS CREEK 2555 Ph: (02) 4774 8484 Fx: (02) 4774 8537	Hue Hue Road WYONG 2259 Ph: (02) 4353 8088 Fx: (02) 4353 7011	94 Peisley Street ORANGE 2800 Ph: (02) 6361 2224 Fx: (02) 6361 9164	755 Browns Creek Rd Blayney NSW 2799 Ph: (02) 6366 5205 Fx: (02) 6366 5282	9 Lambert St Bathurst NSW 2795 Ph: (02) 6331 7455 Fx: (02) 63329849

Tax Invoice

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2215876 Date: 17/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: NORTH RYDE
DELIVERY INSTRUCTIONS: DELIVER DATE: 18/01/2019 SALES PERSON: S. ROBSON	DELIVER TO: **PRECISION LANDSCAPES P/L** **100 ETON ROAD** **LINDFIELD** **ALBERT Le ROUX - 0407 293 304**

Code	Description	Qty	Unit Price Inc GST	GST	Gross Amount
STU	TURF UNDERLAY *AS PER QUOTE NUMBER "SJ0312183"*	13 M3	46.20	54.60	600.60

This is a payment claim made under the Building and Construction Industry Security of Payment Act 1999 NSW, Revised 2001.

***** PLEASE ENSURE YOUR LOAD IS SAFE & COVERED *** AUSTRALIAN STANDARD WARNING (Effective as of August 2001)**

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Conditions

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For all products delivered on pallets, if an exchange of pallets does not occur and therefore pallets are owed, pallets not returned within 14 days will incur a $35.00 charge.

Conditions signed and acknowledged by property owner or representation.

Print Name: _____

Signature: _____

Date: _____

Terms Payment is due by 28/02/2019

Total Ex GST	546.00
Total GST	54.60
Total Amount Due:	600.60

Please EFT Payments to:
BSB: 012-298
Account No. 8376 70217 - ANZ Belrose NSW
Please email remittance to accounts@anlscape.com.au or Fax to 02 9450 2428

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

Address all correspondence to: PO Box 113, TERREY HILLS NSW 2084

Email: accounts@anlscape.com.au Web site: www.anlscape.com.au

HEAD OFFICE	NORTH RYDE	SEVEN HILLS	WESTERN DIVISION	CENTRAL COAST	ORANGE	BROWNS CREEK	BATHURST
317 Mona Vale Road TERREY HILLS 2084 Ph: (02) 9450 1444 Fx: (02) 9450 2428	Cnr Wicks & Waterloo Roads NORTH RYDE 2113 Ph: (02) 9887 2788 Fx: (02) 9888 2614	6 Tollis Place (off Station Road) SEVEN HILLS 2147 Ph: (02) 9674 4899 Fx: (02) 9674 5199	Martin Road BADGERYS CREEK 2555 Ph: (02) 4774 8484 Fx: (02) 4774 8537	Hue Hue Road WYONG 2259 Ph: (02) 4353 8088 Fx: (02) 4353 7011	94 Peisley Street ORANGE 2800 Ph: (02) 6361 2224 Fx: (02) 6361 9164	755 Browns Creek Rd Blayney NSW 2799 Ph: (02) 6366 5205 Fx: (02) 6366 5282	9 Lambert St Bathurst NSW 2795 Ph: (02) 6331 7455 Fx: (02) 63329849

Tax Invoice

INVOICE TO: PRECISION LANDSCAPES P/L
10 SYDNEY ROAD
HORNSBY HEIGHTS NSW 2077

Ph: 9940 4868

Invoice No:	2217233
Date:	23/01/2019
Account Number :	PRECISIONLANDSCA
Your Order Number:	LINDFIELD
Depot:	NORTH RYDE

DELIVERY INSTRUCTIONS:

DELIVER DATE: 23/01/2019 SALES PERSON: LENTON

DELIVER TO:

PRECISION LANDSCAPES P/L
100 ETON ROAD
LINDFIELD
ALBERT Le ROUX - 0407 293 304

Code	Description	Qty	Unit Price inc GST	GST	Gross Amount
STU	TURF UNDERLAY *AS PER QUOTE NUMBER "SJ0312183"*	13 M3	46.20	54.60	600.60

This is a payment claim made under the Building and Construction Industry Security of Payment Act 1999 NSW, Revised 200

***** PLEASE ENSURE YOUR LOAD IS SAFE & COVERED *** AUSTRALIAN STANDARD WARNING (Effective as of August 2001)**
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Conditions

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Conditions signed and acknowledged by property owner or representation .

Print Name: _____

Signature: _____

Date: 23-1-19

Terms Payment is due by 28/02/2019

Total Ex GST	546.00
Total GST	54.60
Total Amount Due:	**600.60**

Please EFT Payments to:
BSB: 012-298
Account No. 8376 70217 - ANZ Belrose NSW
Please email remittance to accounts@anlscape.com.au
or Fax to 02 9450 2428

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

Address all correspondence to: PO Box 113, TERREY HILLS NSW 2084

Email: accounts@anlscape.com.au Web site: www.anlscape.com.au

HEAD OFFICE	NORTH RYDE	SEVEN HILLS	WESTERN DIVISION	CENTRAL COAST	ORANGE	BROWNS CREEK	BATHURST
317 Mona Vale Road TERREY HILLS 2084 Ph (02) 9450 1444 Fx (02) 9450 2428	Cnr Wicks & Waterloo Roads NORTH RYDE 2113 Ph (02) 9887 2788 Fx (02) 9888 2614	6 Tollis Place (off Station Road) SEVEN HILLS 2147 Ph (02) 9674 4899 Fx (02) 9674 5199	Martin Road BADGERYS CREEK 2555 Ph (02) 4774 8484 Fx (02) 4774 8537	Hue Hue Road WYONG 2259 Ph (02) 4353 8088 Fx (02) 4353 7011	94 Peisley Street ORANGE 2800 Ph (02) 6361 2224 Fx (02) 6361 9164	755 Browns Creek Rd Blayney NSW 2799 Ph (02) 6366 5205 Fx (02) 6366 5282	9 Lambert St Bathurst NSW 2795 Ph (02) 6331 7455 Fx (02) 63329849

Tax Invoice

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: Z099144 Date: 14/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: NORTH RYDE
DELIVERY INSTRUCTIONS: DELIVER DATE: 10/01/2019 SALES PERSON: S. ROBSON	DELIVER TO: **PRECISION LANDSCAPES P/L** **100 ETON ROAD** **LINDFIELD** **ALBERT Le ROUX - 0407 293 304**

Code	Description	Qty	Unit Price Inc GST	GST	Gross Amount
STU	TURF UNDERLAY *AS PER QUOTE NUMBER "SJ0312183"*	13 M3	46.20	54.60	600.60

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Conditions

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Conditions signed and acknowledged by property owner or representation.

Print Name: _____

Signature: _____

Date: _____

Terms Payment is due by 28/02/2019

Total Ex GST	546.00
Total GST	54.60
Total Amount Due:	600.60

Please EFT Payments to:
BSB: 012-298
Account No. 8376 70217 - ANZ Belrose NSW
Please email remittance to accounts@anlscape.com.au or Fax to 02 9450 2428

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

Australian Native Landscapes Pty. Ltd.

ABN 42 001 749 980

HEAD OFFICE: TEL: (02) 9450 1444 FAX: (02) 9450 2428 317 MONA VALE ROAD TERREY HILLS 2084
NORTH RYDE: TEL: (02) 9887 2788 FAX: (02) 9888 2614 WICKS ROAD (CNR WATERLOO ROAD) NORTH RYDE 2113
WESTERN DIVISION: TEL: (02) 4774 8484 FAX: (02) 4774 8537 MARTIN ROAD BADGERYS CREEK 2171
SEVEN HILLS: TEL: (02) 9674 4899 FAX: (02) 9674 5199 6 TOLLIS PLACE SEVEN HILLS 2147
CENTRAL COAST: TEL: (02) 4353 8088 FAX: (02) 4353 7011 HUE HUE ROAD WYONG 2259
ORANGE: TEL: (02) 6361 9135 FAX: (02) 6361 9164 PEISLEY STREET ORANGE 2800
TUMUT: TEL: (02) 6947 4704 FAX: (02) 6947 4153 KILLARNEY ROAD TUMUT 2720

HORTICULTURAL PRODUCTS DIVISION

Date: 16/1/19

M Precision Scapes
100 Eaton Rd
Lindfield. Albert 0407 293 304

PH:

Tax Invoice

Z 099144

ACCOUNT No/COD	DELIVERY DAY	DELIVERED BY	BOOKED BY	ORDER No		
QUANTITY	**GOODS**			**UNIT PRICE**		
13	TURF UNDERLAY					
				DELIVERY FEE		
				TOTAL		

Address Correspondence to:
PO Box 113, Terrey Hills NSW 2084

Email: mail@anlscape.com.au OR accounts@anlscape.com.au
Website: www.anlscape.com.au

PC 220/0396

Total Price Includes GST

CONDITIONS

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DELIVERY INSTRUCTIONS:

SIGNED:

AUSTRALIAN NATIVE LANDSCAPES PTY LTD

'Everything for your garden'

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

Address all correspondence to: PO Box 113, TERREY HILLS NSW 2084

Email: accounts@anlscape.com.au Web site: www.anlscape.com.au

HEAD OFFICE	NORTH RYDE	SEVEN HILLS	WESTERN DIVISION	CENTRAL COAST	ORANGE	BROWNS CREEK	BATHURST
317 Mona Vale Road TERREY HILLS 2084 Ph (02) 9450 1444 Fx (02) 9450 2428	Cnr Wicks & Waterloo Roads NORTH RYDE 2113 Ph (02) 9887 2788 Fx (02) 9888 2614	6 Tollis Place (off Station Road) SEVEN HILLS 2147 Ph (02) 9674 4899 Fx (02) 9674 5199	Martin Road BADGERYS CREEK 2555 Ph (02) 4774 8484 Fx (02) 4774 8537	Hue Hue Road WYONG 2259 Ph (02) 4353 8088 Fx (02) 4353 7011	94 Peisley Street ORANGE 2800 Ph (02) 6361 2224 Fx (02) 6361 9164	755 Browns Creek Rd Blayney NSW 2799 Ph (02) 6366 5205 Fx (02) 6366 5282	9 Lambert St Bathurst NSW 2795 Ph (02) 6331 7455 Fx (02) 63329849

Tax Invoice

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: Z099145 Date: 14/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: NORTH RYDE
DELIVERY INSTRUCTIONS: DELIVER DATE: 10/01/2019 SALES PERSON: S. ROBSON	DELIVER TO: **PRECISION LANDSCAPES P/L** **100 ETON ROAD** **LINDFIELD** **ALBERT Le ROUX - 0407 293 304**

Code	Description	Qty	Unit Price Inc GST	GST	Gross Amount
SNMLP	NATIVE MIX LOW P *AS PER QUOTE NUMBER "SJ0312183"*	13 M3	46.20	54.60	600.60

This is a payment claim made under the Building and Construction Industry Security of Payment Act 1999 NSW, Revised 2001.

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Conditions signed and acknowledged by property owner or representation.

Print Name: _____

Signature: _____

Date: _____

Terms Payment is due by 28/02/2019

Total Ex GST	546.00
Total GST	54.60
Total Amount Due:	600.60

Please EFT Payments to:
BSB: 012-298
Account No. 8376 70217 - ANZ Belrose NSW
Please email remittance to accounts@anlscape.com.au or Fax to 02 9450 2428

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

Australian Native Landscapes Pty. Ltd.

ABN 42 001 749 980

HEAD OFFICE: TEL: (02) 9450 1444 FAX: (02) 9450 2428 317 MONA VALE ROAD TERREY HILLS 2084
NORTH RYDE: TEL: (02) 9887 2788 FAX: (02) 9888 2614 WICKS ROAD (CNR WATERLOO ROAD) NORTH RYDE 2113
WESTERN DIVISION: TEL: (02) 4774 8484 FAX: (02) 4774 8537 MARTIN ROAD BADGERYS CREEK 2171
SEVEN HILLS: TEL: (02) 9674 4899 FAX: (02) 9674 5199 6 TOLLIS PLACE SEVEN HILLS 2147
CENTRAL COAST: TEL: (02) 4353 8088 FAX: (02) 4353 7011 HUE HUE ROAD WYONG 2259
ORANGE: TEL: (02) 6361 9135 FAX: (02) 6361 9164 PEISLEY STREET ORANGE 2800
TUMUT: TEL: (02) 6947 4704 FAX: (02) 6947 4153 KILLARNEY ROAD TUMUT 2720

HORTICULTURAL PRODUCTS DIVISION

Date: 10-1-19

Tax Invoice

z 099145

M Precision Landscapes

100 Eaton Rd

Lindfield Albert 0407293304

PH:

ACCOUNT No/COD	DELIVERY DAY	DELIVERED BY	BOOKED BY	ORDER No		
QUANTITY	GOODS			UNIT PRICE		
13 m	~~Organic~~ grn Mix					
	NATIVE					
				DELIVERY FEE		
				TOTAL		

Address Correspondence to:
PO Box 113, Terrey Hills NSW 2084

Email: mail@anlscape.com.au OR accounts@anlscape.com.au
Website: www.anlscape.com.au

Total Price Includes GST

PC 220/0396

CONDITIONS

The supplier's responsibility for delivery of materials will cease at the kerbside of the job address stated, if it is necessary for a vehicle to cross the footpath or to enter upon private property in the course of effecting delivery, the purchaser will provide safe and adequate access and notwithstanding will pay for all damage to any public or private property and every injury or wrong which may result therefrom.

DELIVERY INSTRUCTIONS:

SIGNED: Rev

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

Address all correspondence to: PO Box 113, TERREY HILLS NSW 2084

Email: accounts@anlscape.com.au Web site: www.anlscape.com.au

HEAD OFFICE	NORTH RYDE	SEVEN HILLS	WESTERN DIVISION	CENTRAL COAST	ORANGE	BROWNS CREEK	BATHURST
317 Mona Vale Road TERREY HILLS 2084 Ph (02) 9450 1444 Fx (02) 9450 2428	Cnr Wicks & Waterloo Roads NORTH RYDE 2113 Ph (02) 9887 2788 Fx (02) 9888 2614	6 Tollis Place (off Station Road) SEVEN HILLS 2147 Ph (02) 9674 4899 Fx (02) 9674 5199	Martin Road BADGERYS CREEK 2555 Ph (02) 4774 8484 Fx (02) 4774 8537	Hue Hue Road WYONG 2259 Ph (02) 4353 8088 Fx (02) 4353 7011	94 Peisley Street ORANGE 2800 Ph (02) 6361 2224 Fx (02) 6361 9164	755 Browns Creek Rd Blayney NSW 2799 Ph (02) 6366 5205 Fx (02) 6366 5282	9 Lambert St Bathurst NSW 2795 Ph (02) 6331 7455 Fx (02) 63329849

Tax Invoice

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: Z099146 Date: 14/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: NORTH RYDE
DELIVERY INSTRUCTIONS: DELIVER DATE: 10/01/2019 SALES PERSON: S. ROBSON	DELIVER TO: **PRECISION LANDSCAPES P/L** **100 ETON ROAD** **LINDFIELD** **ALBERT Le ROUX - 0407 293 304**

Code	Description	Qty	Unit Price Inc GST	GST	Gross Amount
SNMLP	NATIVE MIX LOW P *AS PER QUOTE NUMBER "SJ0312183"*	13 M3	46.20	54.60	600.60

This is a payment claim made under the Building and Construction Industry Security of Payment Act 1999 NSW, Revised 2001.

***** PLEASE ENSURE YOUR LOAD IS SAFE & COVERED *** AUSTRALIAN STANDARD WARNING (Effective as of August 2001)**

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Conditions

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For all products delivered on pallets, if an exchange of pallets does not occur and therefore pallets are owed, pallets not returned within 14 days will incur a $35.00 charge

Conditions signed and acknowledged by property owner or representation.

Print Name: _____

Signature: _____

Date: _____

Terms Payment is due by 28/02/2019

Total Ex GST	546.00
Total GST	54.60
Total Amount Due:	600.60

Please EFT Payments to:
BSB: 012-298
Account No. 8376 70217 - ANZ Belrose NSW
Please email remittance to accounts@anlscape.com.au or Fax to 02 9450 2428

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

Australian Native Landscapes Pty. Ltd.

ABN 42 001 749 980

HEAD OFFICE: TEL: (02) 9450 1444 FAX: (02) 9450 2428 317 MONA VALE ROAD TERREY HILLS 2084
NORTH RYDE: TEL: (02) 9887 2788 FAX: (02) 9888 2614 WICKS ROAD (CNR WATERLOO ROAD) NORTH RYDE 2113
WESTERN DIVISION: TEL: (02) 4774 8484 FAX: (02) 4774 8537 MARTIN ROAD BADGERYS CREEK 2171
SEVEN HILLS: TEL: (02) 9674 4899 FAX: (02) 9674 5199 6 TOLLIS PLACE SEVEN HILLS 2147
CENTRAL COAST: TEL: (02) 4353 8088 FAX: (02) 4353 7011 HUE HUE ROAD WYONG 2259
ORANGE: TEL: (02) 6361 9135 FAX: (02) 6361 9164 PEISLEY STREET ORANGE 2800
TUMUT: TEL: (02) 6947 4704 FAX: (02) 6947 4153 KILLARNEY ROAD TUMUT 2720

HORTICULTURAL PRODUCTS DIVISION

Date: 10.1.19

M Precision L/S
100 EDEN RD
LINDFIELD

PH:

Tax Invoice

Z 099146

ACCOUNT No/COD	DELIVERY DAY	DELIVERED BY	BOOKED BY	ORDER No		
		Robbo				
QUANTITY	GOODS			UNIT PRICE		
13 m	~~NATIVE organic~~ garden mix					
				DELIVERY FEE		
				TOTAL		

Address Correspondence to:
PO Box 113, Terrey Hills NSW 2084

Email: mail@anlscape.com.au OR accounts@anlscape.com.au
Website: www.anlscape.com.au

PC 220/0396

Total Price Includes GST

CONDITIONS

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DELIVERY INSTRUCTIONS:

SIGNED:

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

Address all correspondence to: PO Box 113, TERREY HILLS NSW 2084

Email: accounts@anlscape.com.au Web site: www.anlscape.com.au

AUSTRALIAN NATIVE LANDSCAPES PTY LTD

'Everything for your garden'

HEAD OFFICE	NORTH RYDE	SEVEN HILLS	WESTERN DIVISION	CENTRAL COAST	ORANGE	BROWNS CREEK	BATHURST
317 Mona Vale Road TERREY HILLS 2084 Ph: (02) 9450 1444 Fx: (02) 9450 2428	Cnr Wicks & Waterloo Roads NORTH RYDE 2113 Ph: (02) 9887 2788 Fx: (02) 9888 2614	6 Tollis Place (off Station Road) SEVEN HILLS 2147 Ph: (02) 9674 4899 Fx: (02) 9674 5199	Martin Road BADGERYS CREEK 2555 Ph: (02) 4774 8484 Fx: (02) 4774 8537	Hue Hue Road WYONG 2259 Ph: (02) 4353 8088 Fx: (02) 4353 7011	94 Peisley Street ORANGE 2800 Ph: (02) 6361 2224 Fx: (02) 6361 9164	755 Browns Creek Rd Blayney NSW 2799 Ph: (02) 6366 5205 Fx: (02) 6366 5282	9 Lambert St Bathurst NSW 2795 Ph: (02) 6331 7455 Fx: (02) 63329849

Tax Invoice

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077	Invoice No: 2213914 Date: 9/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD
Ph: 9940 4868	Depot: TERREY HILLS
DELIVERY INSTRUCTIONS: DELIVER DATE: 10/01/2019 SALES PERSON: JES	DELIVER TO: **PRECISION LANDSCAPES P/L** **100 ETON ROAD** **LINDFIELD NSW (UTS CAMPUS)** **ALBERT 0407 293 304**

Code	Description	Qty	Unit Price Inc GST	GST	Gross Amount
SNMLP	NATIVE MIX LOW P	13 M3	63.00	74.45	819.00
DD45	DELIVERY FEE	1 Each	45.00	4.09	45.00

This is a payment claim made under the Building and Construction Industry Security of Payment Act 1999 NSW, Revised 2001.

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Conditions signed and acknowledged by property owner or representation.

Print Name: _____

Signature: _____

Date: _____

Terms Payment is due by 28/02/2019

Total Ex GST	785.46
Total GST	78.54
Total Amount Due:	864.00

Please EFT Payments to:
BSB: 012-298
Account No. 8376 70217 - ANZ Belrose NSW
Please email remittance to accounts@anlscape.com.au or Fax to 02 9450 2428

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

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Email: accounts@anlscape.com.au Web site: www.anlscape.com.au

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SEVEN HILLS 2147
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Fx: (02) 9674 5199

WESTERN DIVISION
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BADGERYS CREEK 2555
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Fx: (02) 4774 8537

CENTRAL COAST
Hue Hue Road
WYONG 2259
Ph: (02) 4353 8088
Fx: (02) 4353 7011

ORANGE
94 Peisley Street
ORANGE 2800
Ph: (02) 6361 2224
Fx: (02) 6361 9164

BATHURST
9 Lambert St
Bathurst NSW 2795
Ph: (02) 6331 7455
Fx: (02) 63329849

Delivery Docket

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2213914 Date: 9/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: TERREY HILLS
DELIVERY INSTRUCTIONS: DELIVER DATE: 10/01/2019	DELIVER TO: PRECISION LANDSCAPES P/L 100 ETON ROAD LINDFIELD NSW (UTS CAMPUS) ALBERT 0407 293 304

Code	Description	Qty	
SNMLP	NATIVE MIX LOW P	13	M3
DD45	DELIVERY FEE	1	Each

Congratulations! Your choice of Re-Carb® greenhouse friendly products has offset the emissions of the average Australian car for 789 days
www.carbongardening.com.au

Conditions

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Conditions signed and acknowledged by property owner or representation.

Print Name: _____

Signature: _____

Date: _____

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

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Email: accounts@anlscape.com.au Web site: www.anlscape.com.au

AUSTRALIAN NATIVE LANDSCAPES PTY LTD

'Everything for your garden'

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317 Mona Vale Road TERREY HILLS 2084 Ph: (02) 9450 1444 Fx: (02) 9450 2428	Cnr Wicks & Waterloo Roads NORTH RYDE 2113 Ph: (02) 9887 2788 Fx: (02) 9888 2614	6 Tollis Place (off Station Road) SEVEN HILLS 2147 Ph: (02) 9674 4899 Fx: (02) 9674 5199	Martin Road BADGERYS CREEK 2555 Ph: (02) 4774 8484 Fx: (02) 4774 8537	Hue Hue Road WYONG 2259 Ph: (02) 4353 8088 Fx: (02) 4353 7011	94 Peisley Street ORANGE 2800 Ph: (02) 6361 2224 Fx: (02) 6361 9164	755 Browns Creek Rd Blayney NSW 2799 Ph: (02) 6366 5205 Fx: (02) 6366 5282	9 Lambert St Bathurst NSW 2795 Ph: (02) 6331 7455 Fx: (02) 63329849

Tax Invoice

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2213915 Date: 9/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: TERREY HILLS
DELIVERY INSTRUCTIONS: DELIVER DATE: 10/01/2019 SALES PERSON: JES	DELIVER TO: **PRECISION LANDSCAPES P/L** **100 ETON ROAD** **LINDFIELD NSW (UTS CAMPUS)** **ALBERT 0407 293 304**

Code	Description	Qty	Unit Price Inc GST	GST	Gross Amount
STU	TURF UNDERLAY	13 M3	56.00	66.18	728.00
DD45	DELIVERY FEE	1 Each	45.00	4.09	45.00

This is a payment claim made under the Building and Construction Industry Security of Payment Act 1999 NSW, Revised 2001.

***** PLEASE ENSURE YOUR LOAD IS SAFE & COVERED *** AUSTRALIAN STANDARD WARNING (Effective as of August 2001)**

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Conditions signed and acknowledged by property owner or representation.

Print Name: _____

Signature: _____

Date: _____

Terms Payment is due by 28/02/2019

Total Ex GST	702.73
Total GST	70.27
Total Amount Due:	773.00

Please EFT Payments to:
BSB: 012-298
Account No. 8376 70217 - ANZ Belrose NSW
Please email remittance to accounts@anlscape.com.au or Fax to 02 9450 2428

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

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Fx: (02) 9674 5199

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Fx: (02) 6361 9164

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Bathurst NSW 2795
Ph: (02) 6331 7455
Fx: (02) 63329849

Delivery Docket

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2213915 Date: 9/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: TERREY HILLS
DELIVERY INSTRUCTIONS: DELIVER DATE: 10/01/2019	DELIVER TO: PRECISION LANDSCAPES P/L 100 ETON ROAD LINDFIELD NSW (UTS CAMPUS) ALBERT 0407 293 304

Code	Description	Qty	
STU	TURF UNDERLAY	13	M3
DD45	DELIVERY FEE	1	Each

Congratulations! Your choice of Re-Carb® greenhouse friendly products has offset the emissions of the average Australian car for 657 days
www.carbongardening.com.au

Conditions

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	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

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Tax Invoice

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2213917 Date: 9/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: TERREY HILLS
DELIVERY INSTRUCTIONS: DELIVER DATE: 10/01/2019 SALES PERSON: JES	DELIVER TO: **PRECISION LANDSCAPES P/L** **100 ETON ROAD** **LINDFIELD NSW (UTS CAMPUS)** **ALBERT 0407 293 304**

Code	Description	Qty	Unit Price Inc GST	GST	Gross Amount
STU	TURF UNDERLAY	13 M3	56.00	66.18	728.00
DD45	DELIVERY FEE	1 Each	45.00	4.09	45.00

This is a payment claim made under the Building and Construction Industry Security of Payment Act 1999 NSW, Revised 2001.

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Conditions signed and acknowledged by property owner or representation.

Print Name: _____

Signature: _____

Date: _____

Terms Payment is due by 28/02/2019

Total Ex GST	702.73
Total GST	70.27
Total Amount Due:	773.00

Please EFT Payments to:
BSB: 012-298
Account No. 8376 70217 - ANZ Belrose NSW
Please email remittance to accounts@anlscape.com.au or Fax to 02 9450 2428

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

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ORANGE 2800
Ph: (02) 6361 2224
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BATHURST
9 Lambert St
Bathurst NSW 2795
Ph: (02) 6331 7455
Fx: (02) 63329849

Delivery Docket

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2213917 Date: 9/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: TERREY HILLS
DELIVERY INSTRUCTIONS: DELIVER DATE: 10/01/2019	DELIVER TO: PRECISION LANDSCAPES P/L 100 ETON ROAD LINDFIELD NSW (UTS CAMPUS) ALBERT 0407 293 304

Code	Description	Qty	
STU	TURF UNDERLAY	13	M3
DD45	DELIVERY FEE	1	Each

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Conditions signed and acknowledged by property owner or representation.

Print Name: Brad

Signature:

Date:

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

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Tax Invoice

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2213918 Date: 9/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: TERREY HILLS
DELIVERY INSTRUCTIONS: DELIVER DATE: 10/01/2019 SALES PERSON: JES	DELIVER TO: **PRECISION LANDSCAPES P/L** **100 ETON ROAD** **LINDFIELD NSW (UTS CAMPUS)** **ALBERT 0407 293 304**

Code	Description	Qty	Unit Price Inc GST	GST	Gross Amount
STU	TURF UNDERLAY	13 M3	56.00	66.18	728.00
DD45	DELIVERY FEE	1 Each	45.00	4.09	45.00

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Print Name: _____

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Terms Payment is due by 28/02/2019

Total Ex GST	702.73
Total GST	70.27
Total Amount Due:	773.00

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Account No. 8376 70217 - ANZ Belrose NSW
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Delivery Docket

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2213918 Date: 9/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: TERREY HILLS
DELIVERY INSTRUCTIONS: DELIVER DATE: 10/01/2019	DELIVER TO: PRECISION LANDSCAPES P/L 100 ETON ROAD LINDFIELD NSW (UTS CAMPUS) ALBERT 0407 293 304

Code	Description	Qty	
STU	TURF UNDERLAY	13	M3
DD45	DELIVERY FEE	1	Each

Congratulations! Your choice of Re-Carb® greenhouse friendly products has offset the emissions of the average Australian car for 657 days

www.carbongardening.com.au

Conditions

The supplier's responsibility for delivery of materials **will cease at the kerbside** of the job address stated, if it is necessary for a vehicle to cross the footpath or to enter upon private property in the course of effecting delivery, the purchaser will provide safe and adequate access and notwithstanding will pay for all damage to any public or private property and

Conditions signed and acknowledged by property owner or representation.

Print Name: Brad

Signature:

Date:

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

AUSTRALIAN NATIVE LANDSCAPES PTY LTD

'Everything for your garden'

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

Address all correspondence to: PO Box 113, TERREY HILLS NSW 2084

Email: accounts@anlscape.com.au Web site: www.anlscape.com.au

HEAD OFFICE	NORTH RYDE	SEVEN HILLS	WESTERN DIVISION	CENTRAL COAST	ORANGE	BROWNS CREEK	BATHURST
317 Mona Vale Road TERREY HILLS 2084 Ph (02) 9450 1444 Fx (02) 9450 2428	Cnr Wicks & Waterloo Roads NORTH RYDE 2113 Ph. (02) 9887 2788 Fx (02) 9888 2614	6 Tollis Place (off Station Road) SEVEN HILLS 2147 Ph. (02) 9674 4899 Fx (02) 9674 5199	Martin Road BADGERYS CREEK 2555 Ph: (02) 4774 8484 Fx: (02) 4774 8537	Hue Hue Road WYONG 2259 Ph: (02) 4353 8088 Fx: (02) 4353 7011	94 Peisley Street ORANGE 2800 Ph. (02) 6361 2224 Fx: (02) 6361 9164	755 Browns Creek Rd Blayney NSW 2799 Ph: (02) 6366 5205 Fx: (02) 6366 5282	9 Lambert St Bathurst NSW 2795 Ph (02) 6331 7455 Fx (02) 63329849

Tax Invoice

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2214372 Date: 10/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: NORTH RYDE
DELIVERY INSTRUCTIONS: DELIVER DATE: 11/01/2019 SALES PERSON: S. ROBSON	DELIVER TO: PRECISION LANDSCAPES P/L 100 ETON ROAD LINDFIELD ALBERT Le ROUX - 0407 293 304

Code	Description	Qty	Unit Price Inc GST	GST	Gross Amount
SNMLP	NATIVE MIX LOW P *AS PER QUOTE NUMBER "SJ0312183"*	13 M3	46.20	54.60	600.60

This is a payment claim made under the Building and Construction Industry Security of Payment Act 1999 NSW, Revised 2001.

***** PLEASE ENSURE YOUR LOAD IS SAFE & COVERED *** AUSTRALIAN STANDARD WARNING (Effective as of August 2001)**

This product may affect your health. For your personal safety, please ensure you read the following warning note. If this product is made from organic material which may contain living micro-organisms, including bateria, fungi and protozoa *** RISK: Direct contact with this material or its dust or moisture droplets may cause skin irratation and may irritate, inflame or sensitise the nose, throat and lungs resulting in illnesses ranging from hay fever and asthma to pneumonia (legionella) or pneumonia-like illnesses. Wash hands thoroughly after handling. For further information, ask for our material safety data sheet

Conditions

The supplier's responsibility for delivery of materials **will cease at the kerbside** of the job address stated, if it is necessary for a vehicle to cross the footpath or to enter upon private property in the course of effecting delivery, the purchaser will provide safe and adequate access and notwithstanding will pay for all damage to any public or private property and every injury or wrong

For all products delivered on pallets, if an exchange of pallets does not occur and therefore pallets are owed, pallets not returned within 14 days will incur a $35.00 charge

Conditions signed and acknowledged by property owner or representation.

Print Name: _____

Signature: _____

Date: _____

Terms Payment is due by 28/02/2019

Total Ex GST	546.00
Total GST	54.60
Total Amount Due:	600.60

Please EFT Payments to:
BSB: 012-298
Account No. 8376 70217 - ANZ Belrose NSW
Please email remittance to accounts@anlscape.com.au
or Fax to 02 9450 2428

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

Australian Native Landscapes Pty Ltd

ABN. 42 001 749 980

Address all correspondence to: PO Box 113, TERREY HILLS NSW 2084

Email: accounts@anlscape.com.au Web site: www.anlscape.com.au

AUSTRALIAN NATIVE LANDSCAPES PTY LTD

'Everything for your garden'

HEAD OFFICE	NORTH RYDE	SEVEN HILLS	WESTERN DIVISION	CENTRAL COAST	ORANGE	BATHURST
317 Mona Vale Road TERREY HILLS 2084 Ph: (02) 9450 1444 Fx: (02) 9450 2428	Cnr Wicks & Waterloo Roads NORTH RYDE 2113 Ph: (02) 9887 2788 Fx: (02) 9888 2614	6 Tollis Place (off Station Road) SEVEN HILLS 2147 Ph: (02) 9674 4899 Fx: (02) 9674 5199	Martin Road BADGERYS CREEK 2555 Ph: (02) 4774 8484 Fx: (02) 4774 8537	Hue Hue Road WYONG 2259 Ph: (02) 4353 8088 Fx: (02) 4353 7011	94 Peisley Street ORANGE 2800 Ph: (02) 6361 2224 Fx: (02) 6361 9164	9 Lambert St Bathurst NSW 2795 Ph: (02) 6331 7455 Fx: (02) 63329849

Delivery Docket

INVOICE TO: PRECISION LANDSCAPES P/L 10 SYDNEY ROAD HORNSBY HEIGHTS NSW 2077 Ph: 9940 4868	Invoice No: 2214372 Date: 10/01/2019 Account Number : PRECISIONLANDSCA Your Order Number: LINDFIELD Depot: NORTH RYDE
DELIVERY INSTRUCTIONS: DELIVER DATE: 11/01/2019	DELIVER TO: PRECISION LANDSCAPES P/L 100 ETON ROAD LINDFIELD ALBERT Le ROUX - 0407 293 304

Code	Description	Qty	
SNMLP	NATIVE MIX LOW P	13	M3

Congratulations! Your choice of Re-Carb® greenhouse friendly products has offset the emissions of the average Australian car for 789 days
www.carbongardening.com.au

Conditions

The supplier's responsibility for delivery of materials **will cease at the kerbside** of the job address stated, if it is necessary for a vehicle to cross the footpath or to enter upon private property in the course of effecting delivery, the purchaser will provide safe and adequate access and notwithstanding will pay for all damage to any public or private property and

Conditions signed and acknowledged by property owner or representation.

Print Name: Brad

Signature: _____

Date: 11-1-19

	Out	Delivered	Returned	Owing
Loscam				
Chep				
Plain				
Blue				
SIGN				

Additional Waste Disposal Documentation (including EIS summary table)

Consignment No	Delivery Docket No, Delivery Location and Delivery Date	Delivery Material on Docket	Match to Consignment (Y/N)	Quantity (T) Delivered to Landfill
XBB7-NJ4S-YJNB	GEN0046830-1, Genesis Eastern Creek and 28/09/18	Asbestos Sheeting	Y	3.5
C3AV-KM27-RAC7	GEN0054107-1, Genesis Eastern Creek and 24/10/18	Asbestos Sheeting	Y	1
MUBY-WBHU-CRWF	GEN0061088-1, Genesis Eastern Creek and 12/11/18	Asbestos Sheeting	Y	2.54
MBPH-SJW3-NYM3	GEN0061174-1, Genesis Eastern Creek and 12/11/18	Asbestos Sheeting	N -no consignment number on Docket	4.06
RCET-FTRM-XL9K	GEN0063087-1, Genesis Eastern Creek and 16/11/18	Asbestos Waste	Y	1.42
TXYB-F9VW-W4P3	GEN0068547-1, Genesis Eastern Creek and 30/11/18	Asbestos Waste	N -minor discrepecy in quatities	8.76
47WM-3PNL-4D82	GEN0068909-1, Genesis Eastern Creeek and 3/12/18	Asbestos Sheeting	Y	6.16
TVEW-HD4Y-7BWV	GEN0069613-1, Genesis Eastern Creek and 4/12/18	Asbestos Sheeting	Y	7.28
73MR-2EA2-44M2	GEN0070173-1, Genesis Eastern Creek and 5/12/18	Asbestos Waste	N -minor discrepecy in quatities	8.56
FBBF-WK3K-N9VK	GEN0069843-1, Genesis Eastern Creek and 5/12/18	Asbestos Sheeting	N -minor discrepecy in quatities	1.96
7BMT-XX7W-7VHK	GEN0070636-1, Genesis Eastern Creek and 6/12/18	Asbestos Waste	Y	5.06
UB9B-NHVH-NFV4	GEN0076892-1, Genesis Eastern Creek and 21/12/18	Asbestos Sheeting	N -minor discrepecy in quatities	2.2
XBUM-7CAK-BPEF	GEN0071208-1, Genesis Eastern Creek and 7/12/18	Asbestos Sheeting	N -no consignment number on Docket	0.8
				Total Tonnes
				53.3

Note: This Table presents EIS's summary of documentation provided by the remediation contractor relating to the off-site disposal of Asbestos sourced from the building to landfill.

PERFECT CONTRACTING
We get it done

Perfect Contracting PTY Ltd
4/8 Lilian Fowler Place, Marrickville, 2204

ABN: 64 146 561 453
Phone: (02) 8021 1784
Fax: (02) 9517 1555

Date of completion	Activity description	PERFORMED BY	SUPERVISORED BY	Hygienist	Air Monitoring Y/N	Air Clearance Y/N	Priced or Hourly
28/09/2018	Ducting at level 6 Zone D	Perfect Contracting	Perfect Contracting	Airsafe	Y	Y	Priced
28/09/2018	Piping at level 5 Zone F	Perfect Contracting	Perfect Contracting	Airsafe	Y	Y	Priced
28/09/2018	Woven Rope(Plant Room) at level 5 Zone F	Pure Contracting	Pure Contracting	Airsafe	Y	Y	Priced
26/10/18 - 31/10/18	Background Monitoring for Music room and Piano room	Perfect Contracting	Perfect Contracting	Airsafe	Y	Y	Priced
24/11/2018	Ceilings drilling Stage 1 Drilling in the waffle slab	Pure & Perfect Concrete Care	Pure Contracting	Airsafe	Y	Y	Hourly
8/08/2018	Core sampling roof Stage 1	Perfect Concrete Care & pure	Pure Contracting	Risktech	Y	Y	Hourly

PERFECT CONTRACTING
We get it done

Perfect Contracting PTY Ltd
4/8 Lilian Fowler Place, Marrickville, 2204

ABN: 64 146 561 453
Phone: (02) 8021 1784
Fax: (02) 9517 1555

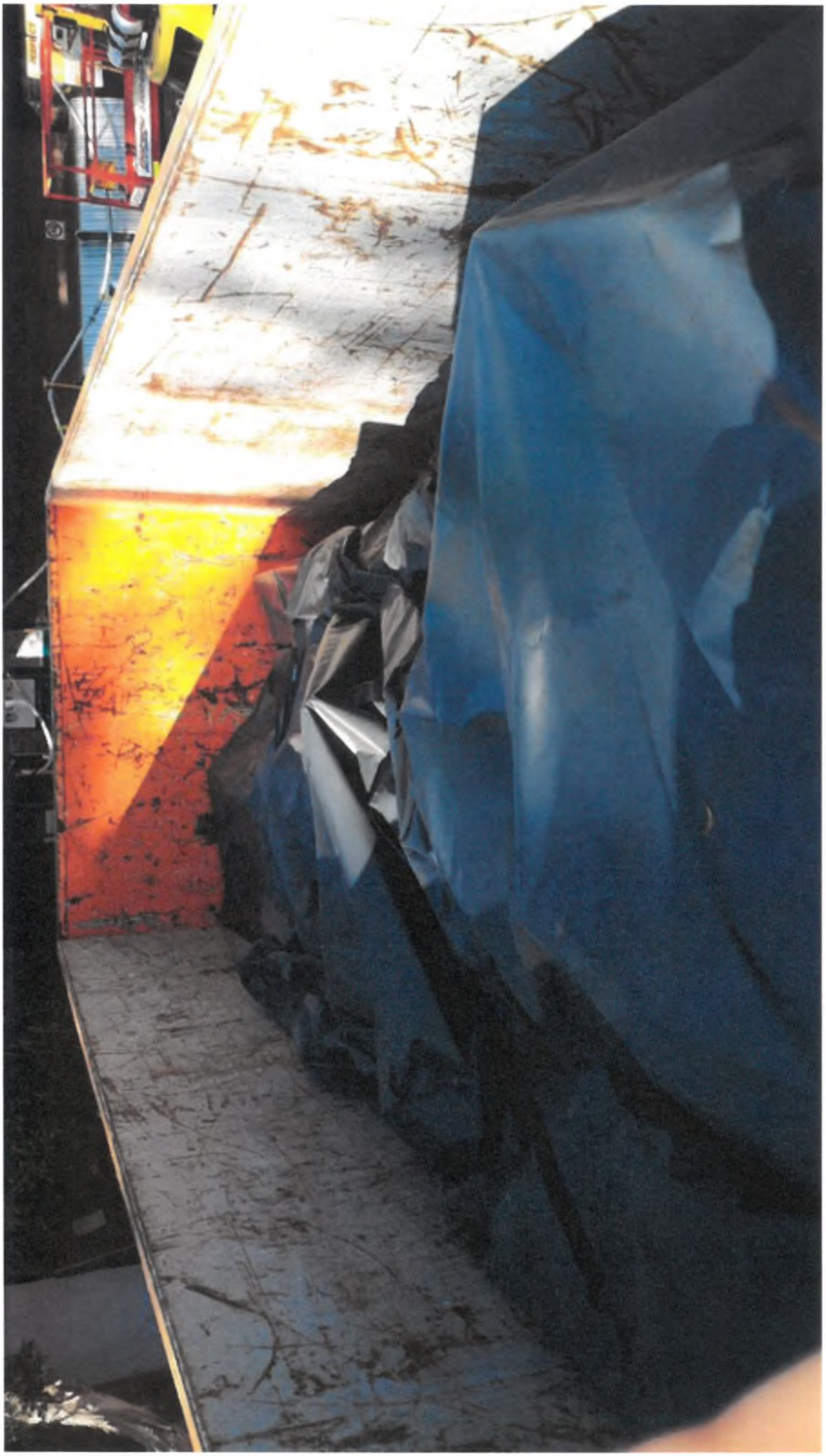
23/11/18 - 24/11/18	High Level Windows	Perfect Contracting	Perfect Contracting	Airsafe	Y	Y	Priced
24/11/2018	High Level Windows on the roof	Perfect Contracting	Perfect Contracting	Airsafe	Y	Y	Priced
11/11/2018	Glazing near the fish pond	Perfect Contracting	Perfect Contracting	Airsafe	y	y	N
20/11/2018	Floor tiles near fish pond	Perfect Contracting	Perfect Contracting	Airsafe	y	y	Priced
14/11/2018	Windows in Level 2 Zone A	Perfect Contracting	Perfect Contracting	Airsafe	y	y	N
11/11/2018	Entrance Glazing L5 near round about	Perfect Contracting	Perfect Contracting	Airsafe	Y	Y	N
11/11/2018	Broken windows in the stage 1 building	Perfect Contracting	Perfect Contracting	Airsafe	y	y	N
7/12/2018	Roof tiles Stage 1 zone G	Perfect Contracting	Perfect Contracting	Airsafe	y		Priced
11/12/2018	Windows in Level 6 Zone A	Perfect Contracting	Perfect Contracting	Airsafe	y	y	N

PERFECT CONTRACTING
We get it done

Perfect Contracting PTY Ltd
4/8 Lilian Fowler Place, Marrickville, 2204

ABN: 64 146 561 453
Phone: (02) 8021 1784
Fax: (02) 9517 1555

7/12/2018 - 10/12/18	waterproofing painting on the asbestos glue	Perfect Contracting	Perfect Contracting	Risktech	y	y	Hourly
21/11/18 and 28/11/18	Core sampling roof Stage 2	PCC	Tim Lowery Perfect	Risktech Paul Brown	y	N	Hourly




PERFE
CONTRACT
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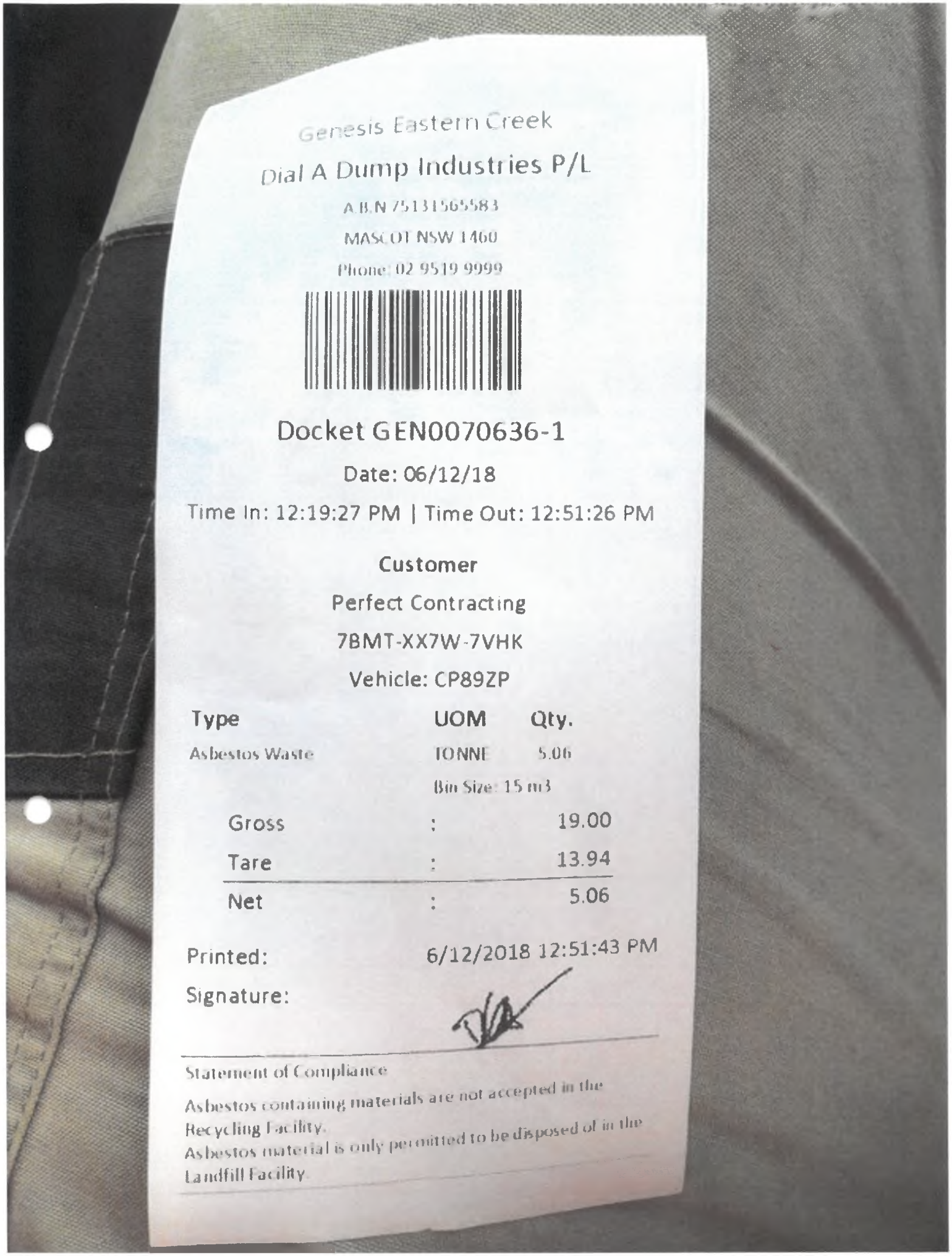
DEMOLITIO
1300 737


PERFE
CONTRACT
We get
DEMOLITIO
1300 737


KAZIBAG


PERFECT



Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75131565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0070636-1

Date: 06/12/18

Time In: 12:19:27 PM | Time Out: 12:51:26 PM

Customer

Perfect Contracting

7BMT-XX7W-7VHK

Vehicle: CP89ZP

Type	UOM	Qty.
Asbestos Waste	TONNE	5.06
	Bin Size: 15 m3	

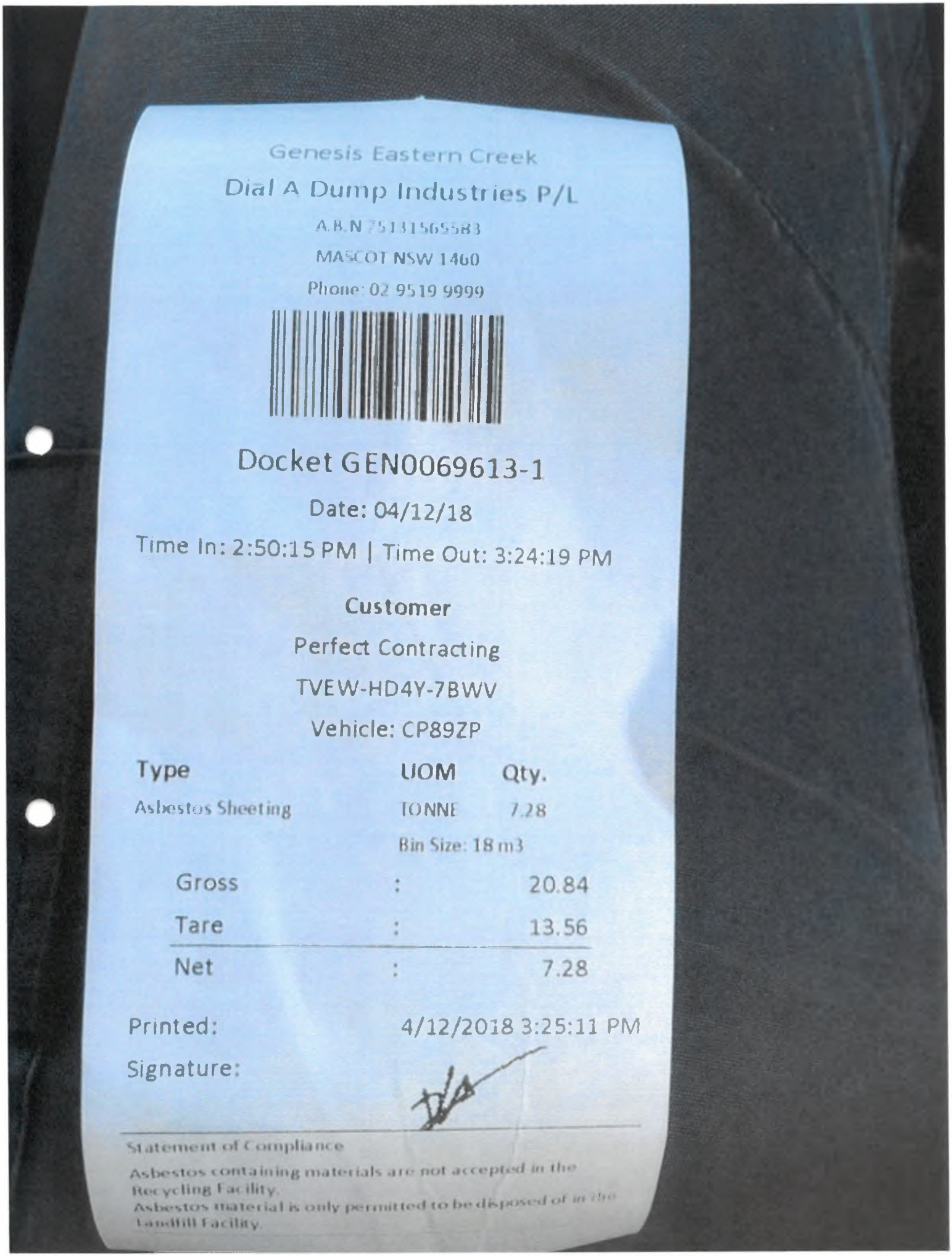
Gross	:	19.00
Tare	:	13.94
Net	:	5.06

Printed: 6/12/2018 12:51:43 PM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.
Asbestos material is only permitted to be disposed of in the Landfill Facility.



Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75131565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0069613-1

Date: 04/12/18

Time In: 2:50:15 PM | Time Out: 3:24:19 PM

Customer

Perfect Contracting

TVEW-HD4Y-7BWV

Vehicle: CP89ZP

Type	UOM	Qty.
Asbestos Sheeting	TONNE	7.28
	Bin Size: 18 m3	

Gross	:	20.84
Tare	:	13.56
Net	:	7.28

Printed: 4/12/2018 3:25:11 PM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.
Asbestos material is only permitted to be disposed of in the Landfill Facility.

Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75131565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0069843-1

Date: 05/12/18

Time In: 9:26:24 AM | Time Out: 9:54:18 AM

Customer

Perfect Contracting

FBBF-WK3K-N9VK

Vehicle: CN91HR

Type	UOM	Qty.
Asbestos Sheeting	TONNE	1.96
	Bin Size: 15 m3	

Gross	:	15.82
Tare	:	13.86
Net	:	1.96

Printed: 5/12/2018 9:54:41 AM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.
Asbestos material is only permitted to be disposed of in the Landfill Facility.

Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75111565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0076892-1

Date: 21/12/18

Time In: 8:48:47 AM | Time Out: 9:32:08 AM

Customer

Perfect Contracting

UB9B-NHVH-NFV4

Vehicle: CN91HR

Type	UOM	Qty.
Gross:	Tonne	15.20
Tare:	Tonne	13.00
Net: Incoming: Asbestos Sheeting	Tonne	2.20
	Bin Size: 10 m3	

Printed: 21/12/2018 9:32:19 AM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.
Asbestos material is only permitted to be disposed of in the Landfill Facility

Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75131565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0046830-1

Date: 28/09/18

Time In: 10:33:57 AM | Time Out: 11:04:20 AM

Customer

Perfect Contracting

XBB7-NJ4S-YJNB

Vehicle: CN91HR

Type	UOM	Qty.
Asbestos Sheeting	TONNE	3.50
	Bin Size: 30 m3	

Gross	:	18.16
Tare	:	14.66
Net	:	3.50

Printed: 28/09/2018 11:05:08 AM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.
Asbestos material is only permitted to be disposed of in the Landfill Facility.

Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75131565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0063087-1

Date: 16/11/18

Time In: 10:29:28 AM | Time Out: 10:53:40 AM

Customer

Perfect Contracting

RCET-FTRM-XL9K

Vehicle: CP89ZP

Type	UOM	Qty.
Asbestos Waste	TONNE	1.42
	Bin Size: 18 m3	

Gross	:	14.84
Tare	:	13.42
Net	:	1.42

Printed: 16/11/2018 10:54:10 AM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.
Asbestos material is only permitted to be disposed of in the Landfill Facility.

Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75141565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0068547-1

Date: 30/11/18

Time In: 12:51:56 PM | Time Out: 1:22:20 PM

Customer

Perfect Contracting

TXYB-F9VW-W4P3

Vehicle: CN91HR

Type	UOM	Qty.
Asbestos Waste	TONNE	8.76
	Bin Size: 30 m3	

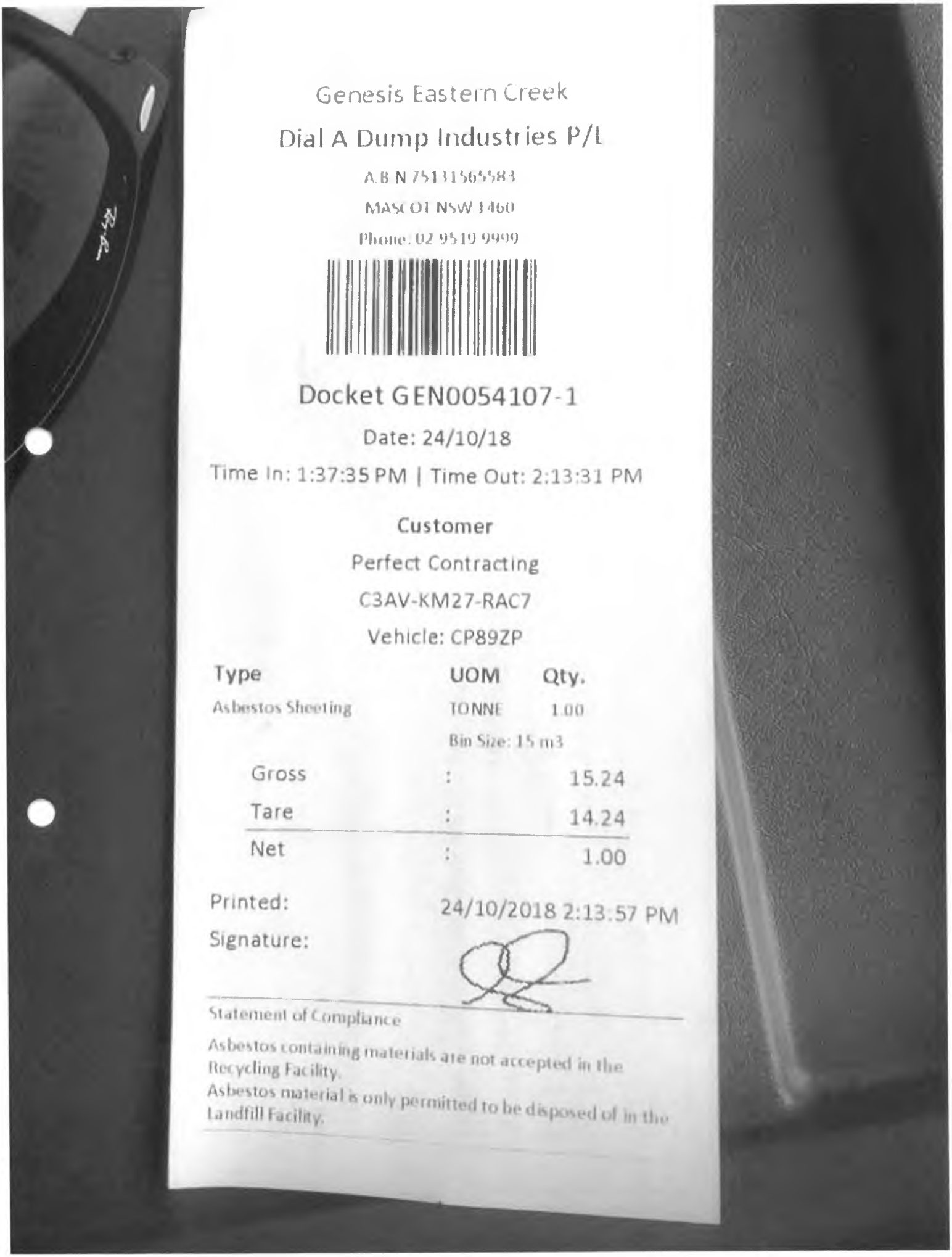
Gross	:	23.32
Tare	:	14.56
Net	:	8.76

Printed: 30/11/2018 1:22:38 PM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.
Asbestos material is only permitted to be disposed of in the Landfill Facility.



Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75131565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0054107-1

Date: 24/10/18

Time In: 1:37:35 PM | Time Out: 2:13:31 PM

Customer

Perfect Contracting

C3AV-KM27-RAC7

Vehicle: CP89ZP

Type	UOM	Qty.
Asbestos Sheeting	TONNE	1.00
	Bin Size: 15 m3	

Gross	:	15.24
Tare	:	14.24
Net	:	1.00

Printed: 24/10/2018 2:13:57 PM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.
Asbestos material is only permitted to be disposed of in the Landfill Facility.

Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75131565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0061088-1

Date: 12/11/18

Time In: 9:18:10 AM | Time Out: 9:44:57 AM

Customer

Perfect Contracting

MUBY-WBHU-CRWF

Vehicle: CN91HR

Type	UOM	Qty.
Asbestos Sheeting	TONNE	2.54
	Bin Size: 8 m3	

Gross	:	17.28
Tare	:	14.74
Net	:	2.54

Printed: 12/11/2018 9:46:17 AM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.
Asbestos material is only permitted to be disposed of in the Landfill Facility.

Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75131565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0061174-1

Date: 12/11/18

Time In: 10:40:20 AM | Time Out: 11:04:18 AM

Customer

Perfect Contracting

LINFIELD

Vehicle: CP89ZP

Type	UOM	Qty.
Asbestos Sheeting	TONNE	4.06
	Bin Size: 10 m3	

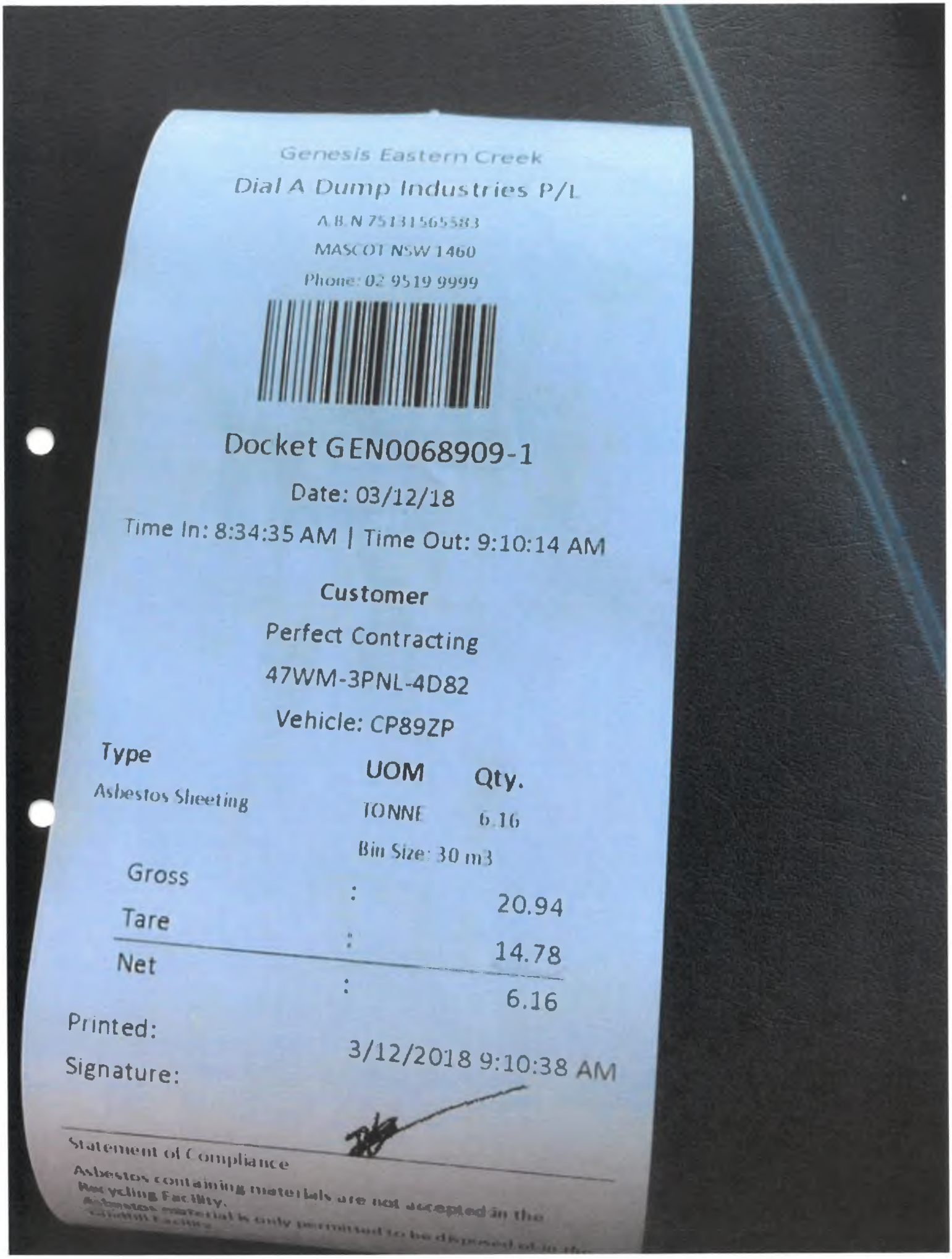
Gross	:	17.46
Tare	:	13.40
Net	:	4.06

Printed: 12/11/2018 11:04:38 AM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.
Asbestos material is only permitted to be disposed of in the Landfill Facility.



Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75131565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0068909-1

Date: 03/12/18

Time In: 8:34:35 AM | Time Out: 9:10:14 AM

Customer

Perfect Contracting

47WM-3PNL-4D82

Vehicle: CP89ZP

Type	UOM	Qty.
Asbestos Sheeting	TONNE	6.16

Bin Size: 30 m3

Gross	:	20.94
Tare	:	14.78
Net	:	6.16

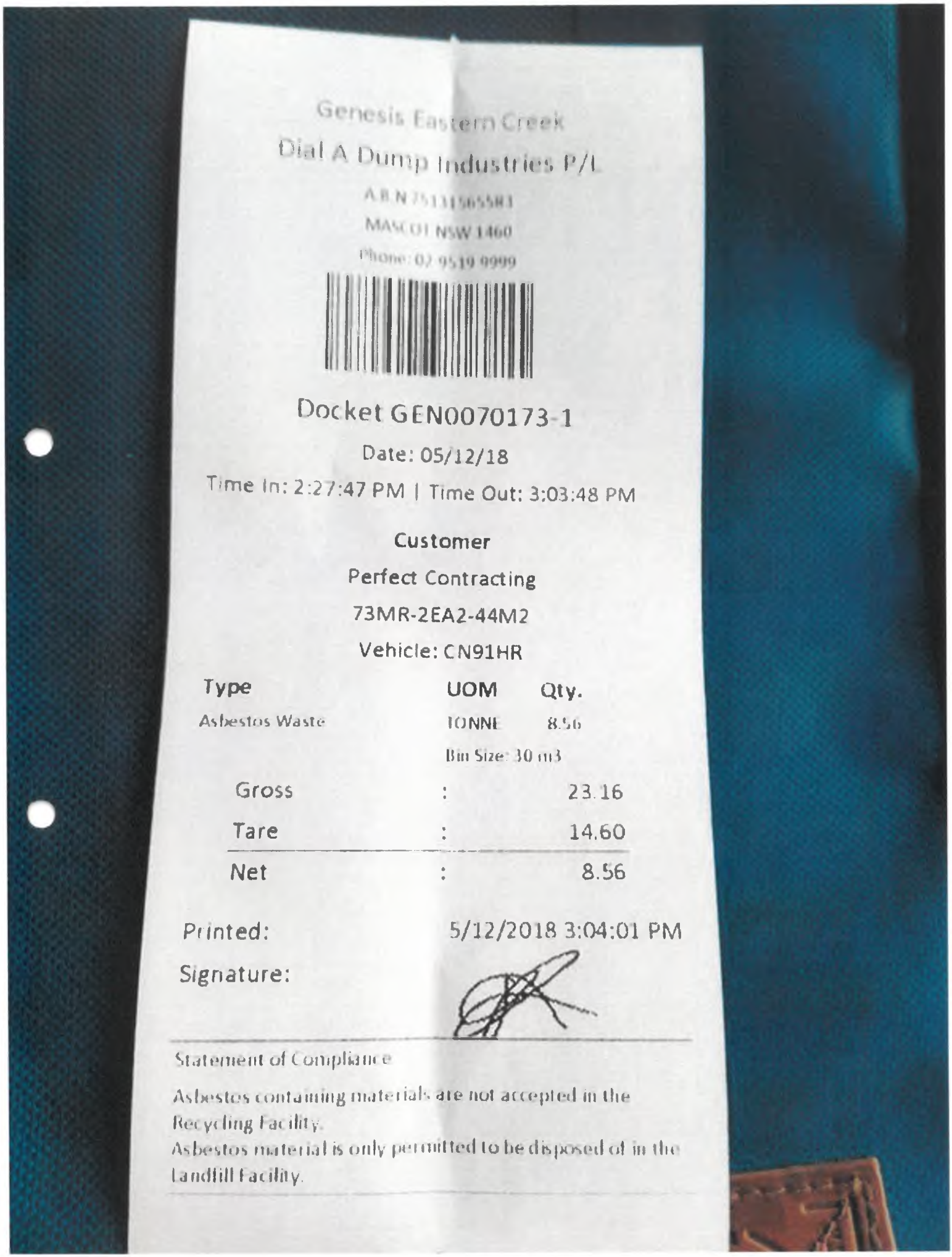
Printed: 3/12/2018 9:10:38 AM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.

Asbestos material is only permitted to be disposed of in the



Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75131565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0070173-1

Date: 05/12/18

Time In: 2:27:47 PM | Time Out: 3:03:48 PM

Customer

Perfect Contracting

73MR-2EA2-44M2

Vehicle: CN91HR

Type	UOM	Qty.
Asbestos Waste	TONNE	8.56
	Bin Size: 30 m3	

Gross	:	23.16
Tare	:	14.60
Net	:	8.56

Printed: 5/12/2018 3:04:01 PM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.
Asbestos material is only permitted to be disposed of in the Landfill Facility.

Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75131565583

MASCOT NSW 1460

Phone: 02 9519 9999

Docket GEN0070636-1

Date: 06/12/18

Time In: 12:19:27 PM | Time Out: 12:51:26 PM

Customer

Perfect Contracting

7BMT-XX7W-7VHK

Vehicle: CP89ZP

Type	UOM	Qty.
Asbestos Waste	TONNE	5.06
	Bin Size: 15 m3	
Gross	:	19.00
Tare	:	13.94
Net	:	5.06

Printed: 6/12/2018 12:51:43 PM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the Recycling Facility.
Asbestos material is only permitted to be disposed of in the Landfill Facility.

Genesis Eastern Creek

Dial A Dump Industries P/L

A.B.N 75331565581

MASC 01 NSW 1468

Phone: 02 9519 9999

Docket GEN0071208-1

Date: 07/12/18

Time In: 10:55:05 AM | Time Out: 11:42:01 AM

Customer

Perfect Contracting

LINDFIELD

Vehicle: CK18EJ

Type	UOM	Qty.
Asbestos Sheeting	TONNE	0.80
	Bin Size: 8 m3	

Gross	:	8.20
Tare	:	7.40
Net	:	0.80

Printed: 7/12/2018 11:42:17 AM

Signature:

Statement of Compliance

Asbestos containing materials are not accepted in the recycling facility.

Asbestos material is only permitted to be disposed of in the

Consignment XBB7-NJ4S-YJNB

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: XBB7-NJ4S-YJNB

Transport details

Delivered

Perfect Contracting

Daniel Green

Perfect Contracting

Daniel Green

CN91HR

Fri 28th Sep 2018

Fri 28th Sep 2018 12:22 PM

Fri 28th Sep 2018 12:24 PM

UTS Campus
100 Eton Road
Lindfield NSW 2070

UTS Campus
100 Eton Road
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Non-Friable (Weight)	2000.0 kg		3500.0 kg		3500.0 kg
Friable	1000.0 kg				
	3000.0 kg	**0**	**3500.0 kg**	**0**	**3500.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

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Consignment C3AV-KM27-RAC7

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: C3AV-KM27-RAC7

Transport details

Delivered

Perfect Contracting

Daniel Green

Perfect Contracting

Daniel Green

CP89ZP

Wed 24th Oct 2018

Wed 24th Oct 2018 15:19 PM

Wed 24th Oct 2018 15:19 PM

UTS Campus
100 Eton Rd
Lindfield NSW 2070

UTS Campus
100 Eton Rd
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Non-Friable (Weight)	1000.0 kg		1000.0 kg		1000.0 kg
	1000.0 kg	**0**	**1000.0 kg**	**0**	**1000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Document generated on 25 Jan 2019 11:19

Consignment MUBY-WBHU-CRWF

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: MUBY-WBHU-CRWF

Transport details

Delivered

Perfect Contracting

Geordie McHenry

Perfect Contracting

Geordie McHenry

CN91HR

Mon 12th Nov 2018

Mon 12th Nov 2018 10:34 AM

Mon 12th Nov 2018 10:34 AM

UTS Campus
100 Eton Rd
Lindfield NSW 2070

UTS Campus
100 Eton Rd
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Non-Friable (Weight)	3000.0 kg		3000.0 kg		3000.0 kg
	3000.0 kg	**0**	**3000.0 kg**	**0**	**3000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

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Consignment MBPH-SJW3-NYM3

ASBESTOS

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: MBPH-SJW3-NYM3

Transport details

Delivered

Perfect Contracting

Geordie McHenry

Perfect Contracting

Robertas Klimasauskas

CP89ZP

Mon 12th Nov 2018

Fri 25th Jan 2019 11:25 AM

Fri 25th Jan 2019 11:25 AM

UTS Campus
100 Eton Rd
100 Eton Rd
Lindfield NSW 2070

UTS Campus
100 Eton Rd
100 Eton Rd
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Non-Friable (Weight)	4000.0 kg		4000.0 kg		4000.0 kg
	4000.0 kg	**0**	**4000.0 kg**	**0**	**4000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

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Consignment MBPH-SJW3-NYM3

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: MBPH-SJW3-NYM3

Transport details

Delivered

Perfect Contracting

Geordie McHenry

Perfect Contracting

Robertas Klimasauskas

CP89ZP

Mon 12th Nov 2018

Fri 25th Jan 2019 11:25 AM

Fri 25th Jan 2019 11:25 AM

UTS Campus
100 Eton Rd
100 Eton Rd
Lindfield NSW 2070

UTS Campus
100 Eton Rd
100 Eton Rd
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Non-Friable (Weight)	4000.0 kg		4000.0 kg		4000.0 kg
	4000.0 kg	**0**	**4000.0 kg**	**0**	**4000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

Document generated on 25 Jan 2019 11:26

Consignment RCET-FTRM-XL9K

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: RCET-FTRM-XL9K

Transport details

Delivered

Perfect Contracting

Geordie McHenry

Perfect Contracting

Robertas Klimasauskas

CP89ZP

Fri 16th Nov 2018

Fri 25th Jan 2019 11:15 AM

Fri 25th Jan 2019 11:15 AM

UTS Campus
100 Eton Rd
100 Eton Rd
Lindfield NSW 2070

UTS Campus
100 Eton Rd
100 Eton Rd
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Non-Friable (Weight)	3000.0 kg		3000.0 kg		3000.0 kg
	3000.0 kg	**0**	**3000.0 kg**	**0**	**3000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

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Consignment TXYB-F9VW-W4P3

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: TXYB-F9VW-W4P3

Transport details

Delivered

Perfect Contracting

Geordie McHenry

Perfect Contracting

Robertas Klimasauskas

CN91HR

Fri 30th Nov 2018

Fri 25th Jan 2019 11:17 AM

Fri 25th Jan 2019 11:18 AM

UTS Campus
100 Eton RD
Lindfield NSW 2070

UTS Campus
100 Eton RD
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Non-Friable (Weight)	7000.0 kg		7000.0 kg		7000.0 kg
	7000.0 kg	**0**	**7000.0 kg**	**0**	**7000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

Document generated on 25 Jan 2019 11:18

Consignment 47WM-3PNL-4D62

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: 47WM-3PNL-4D62

Transport details

Delivered

Perfect Contracting

Geordie McHenry

Perfect Contracting

Robertas Klimasauskas

CP89ZP

Fri 30th Nov 2018

Fri 25th Jan 2019 11:28 AM

Fri 25th Jan 2019 11:29 AM

UTS Campus
100 Eton RD
100 Eton RD
Lindfield NSW 2070

UTS Campus
100 Eton RD
100 Eton RD
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Non-Friable (Weight)	7000.0 kg		7000.0 kg		7000.0 kg
	7000.0 kg	**0**	**7000.0 kg**	**0**	**7000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

Document generated on 25 Jan 2019 11:29

Consignment TVEW-HD4Y-7BWV

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: TVEW-HD4Y-7BWV

Transport details

Delivered

Perfect Contracting

Geordie McHenry

Perfect Contracting

Robertas Klimasauskas

CP89ZP

Tue 4th Dec 2018

Fri 25th Jan 2019 11:10 AM

Fri 25th Jan 2019 11:10 AM

UTS Campus
100 Eton RD
100 Eton RD
Lindfield NSW 2070

UTS Campus
100 Eton RD
100 Eton RD
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Non-Friable (Weight)	7000.0 kg		7000.0 kg		7000.0 kg
	7000.0 kg	**0**	**7000.0 kg**	**0**	**7000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

Document generated on 25 Jan 2019 11:12

Consignment 73MR-2EA2-44M2

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: 73MR-2EA2-44M2

Transport details

Delivered

Perfect Contracting

Geordie McHenry

Perfect Contracting

Robertas Klimasauskas

CN91HR

Wed 5th Dec 2018

Fri 25th Jan 2019 11:30 AM

Fri 25th Jan 2019 11:31 AM

UTS Campus
100 Eton Rd
100 Eton Rd
Lindfield NSW 2070

UTS Campus
100 Eton Rd
100 Eton Rd
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Non-Friable (Weight)	7000.0 kg		7000.0 kg		7000.0 kg
	7000.0 kg	**0**	**7000.0 kg**	**0**	**7000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

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Consignment FBBF-WK3K-N9VK

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: FBBF-WK3K-N9VK

Transport details

Delivered

Perfect Contracting

Geordie McHenry

Perfect Contracting

Robertas Klimasauskas

CN91HR

Mon 3rd Dec 2018

Fri 25th Jan 2019 11:37 AM

Fri 25th Jan 2019 11:37 AM

UTS Campus
100 Eton RD
100 Eton RD
Lindfield NSW 2070

UTS Campus
100 Eton RD
100 Eton RD
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Non-Friable (Weight)	6000.0 kg		6000.0 kg		6000.0 kg
	6000.0 kg	**0**	**6000.0 kg**	**0**	**6000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

Document generated on 25 Jan 2019 11:37

Consignment 7BMT-XX7W-7VHK

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: 7BMT-XX7W-7VHK

Transport details

Delivered

Perfect Contracting

Geordie McHenry

Perfect Contracting

Robertas Klimasauskas

CP89ZP

Thu 6th Dec 2018

Fri 25th Jan 2019 11:33 AM

Fri 25th Jan 2019 11:33 AM

UTS Campus
100 Eton RD
100 Eton RD
Lindfield NSW 2070

UTS Campus
100 Eton RD
100 Eton RD
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Non-Friable (Weight)	6000.0 kg		6000.0 kg		6000.0 kg
	6000.0 kg	**0**	**6000.0 kg**	**0**	**6000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

Document generated on 25 Jan 2019 11:34

Consignment XBUM-7CAK-BPEF

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: XBUM-7CAK-BPEF

Transport details

Delivered

Perfect Contracting

Geordie McHenry

Perfect Contracting

Robertas Klimasauskas

CK18EJ

Fri 7th Dec 2018

Fri 25th Jan 2019 11:35 AM

Fri 25th Jan 2019 11:35 AM

UTS Campus
100 Eton RD
Lindfield NSW 2070

UTS Campus
100 Eton RD
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Non-Friable (Weight)	3000.0 kg		3000.0 kg		3000.0 kg
	3000.0 kg	**0**	**3000.0 kg**	**0**	**3000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

Document generated on 25 Jan 2019 11:36

Consignment DBXW-RH4J-RUVV

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: DBXW-RH4J-RUVV

Transport details

Delivered

Perfect Contracting

Daniel Green

Perfect Contracting

Robertas Klimasauskas

CP89ZP

Thu 20th Dec 2018

Mon 14th Jan 2019 15:17 PM

Mon 14th Jan 2019 15:18 PM

UTS Campus
100 Eton Rd
Lindfield NSW 2070

UTS Campus
100 Eton Rd
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Asbestos Contaminated Soil	8000.0 kg		8000.0 kg		8000.0 kg
	8000.0 kg	**0**	**8000.0 kg**	**0**	**8000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

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Consignment PBZF-2ZHB-2Z7U

ASBESTOS

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: PBZF-2ZHB-2Z7U

Transport details

Delivered

CONSIGNOR
Perfect Contracting
CREATED BY
Robertas Klimasauskas

TRANSPORTER
Perfect Contracting
DRIVER
Robertas Klimasauskas
VEHICLE
CN91HR

UTS Campus
100 Eton Rd
Lindfield NSW 2070

DATE
Thu 20th Dec 2018
DISPATCHED
Tue 22nd Jan 2019 08:42 AM
RECEIVED
Tue 22nd Jan 2019 08:42 AM
RECEIVER
UTS Campus
100 Eton Rd
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Asbestos Contaminated Soil	9000.0 kg		19000.0 kg		19000.0 kg
	9000.0 kg	**0**	**19000.0 kg**	**0**	**19000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

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Consignment SBVJ-D93U-943Y

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: SBVJ-D93U-943Y

Transport details

Delivered

Perfect Contracting

Daniel Green

Perfect Contracting

Robertas Klimasauskas

CP89ZP

Thu 20th Dec 2018

Mon 14th Jan 2019 15:21 PM

Mon 14th Jan 2019 15:21 PM

UTS Campus
100 Eton RD
100 Eton RD
Lindfield NSW 2070

UTS Campus
100 Eton RD
100 Eton RD
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Mixed Asbestos Waste	8000.0 kg		8000.0 kg		8000.0 kg
	8000.0 kg	**0**	**8000.0 kg**	**0**	**8000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

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Consignment UB9B-NHVH-NFV4

Scan the QR2id Code for the current status of this Consignment. If you don't have a QR Code reader on your Smart Phone, you can download one free from the App store (search "QR Reader"). Alternatively, you can visit WasteLocate and enter the Consignment Number: UB9B-NHVH-NFV4

Transport details

Delivered

Perfect Contracting

Robertas Klimasauskas

Perfect Contracting

Robertas Klimasauskas

CN91HR

Thu 20th Dec 2018

Mon 14th Jan 2019 15:20 PM

Mon 14th Jan 2019 15:20 PM

UTS Campus
100 Eton RD
Lindfield NSW 2070

UTS Campus
100 Eton RD
Lindfield NSW 2070

Waste

Description	Nominated		Collected		Delivered
Mixed Asbestos Waste	8000.0 kg		8000.0 kg		8000.0 kg
	8000.0 kg	**0**	**8000.0 kg**	**0**	**8000.0 kg**

Planned Destination: WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Emma Keogh - emmakeogh@dadi.com.au - 0484628000

Actual Destination WMF4073

Genesis Landfill
Honeycomb Drive
Eastern Creek NSW 2766
Maxzine Walters - maxzinewalters@dadi.com.au - 0418600008

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Receiving Waste Facility EPL's

Environment Protection Licence

Licence - 13426

Licence Details	
Number:	13426
Anniversary Date:	02-March

Licensee

DIAL-A-DUMP (EC) PTY LTD

PO BOX 1040

MASCOT NSW 1460

Premises

GENESIS FACILITY

HONEYCOMB DRIVE

EASTERN CREEK NSW 2766

Scheduled Activity

Waste disposal (application to land)

Waste storage

Fee Based Activity	Scale
Waste disposal by application to land	Any capacity
Waste storage - other types of waste	Any other types of waste stored

Region

Waste & Resource Recovery

59-61 Goulburn Street

SYDNEY NSW 2000

Phone: (02) 9995 5000

Fax: (02) 9995 5999

PO Box A290

SYDNEY SOUTH NSW 1232

Environment Protection Licence

Licence - 13426

Environment Protection Licence

Licence - 13426

Environment Protection Licence

Licence - 13426

Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Environment Protection Licence

Licence - 13426

The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

DIAL-A-DUMP (EC) PTY LTD
PO BOX 1040
MASCOT NSW 1460

subject to the conditions which follow.

Environment Protection Licence

Licence - 13426

1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled development work listed below at the premises listed in A2.

There are three stages to the scheduled development works of which the following stages are authorised by this licence:
Stage 2B, Construction of Leachate System, Conveyor and Chute in accordance with A3.2.

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Waste disposal (application to land)	Waste disposal by application to land	Any capacity
Waste storage	Waste storage - other types of waste	Any other types of waste stored

A1.3 These licence conditions apply to all activities carried on at the premises, including:
a) waste storage, disposal and processing;
b) wastewater and/or leachate treatment systems.

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
GENESIS FACILITY
HONEYCOMB DRIVE
EASTERN CREEK
NSW 2766
LOT 1 DP 1145808, LOT 4 DP 1145808
QUARRY VOID BEING THAT PART LOT 1 DP 1145808 NOT INCLUDED IN EPL 20121 TOGETHER WITH THAT PART OF LOT 4 DP 1145808 NOT FORMING PART OF LICENSED PREMISES EPL 20121

A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:
a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

P1.1 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
2	Surface water quality monitoring		North-west onsite surface water detention basin
3	Surface water quality monitoring		South-west onsite surface water detention basin
5	Surface water overflow	Surface water overflow	Overflow (weir) from north-west surface water detention basin
6	Surface water overflow	Surface water overflow	Overflow (weir) from south-west surface water detention basin
7	Groundwater monitoring		Groundwater monitoring well on northern site boundary labelled as "BH5s" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012

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9	Groundwater monitoring	Groundwater monitoring well near leachate treatment plant (sth-east area) labelled as "BH8s" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
10	Groundwater monitoring	Groundwater monitoring well in western carpark adjacent to weighbridge labelled as "BH9s" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
11	Groundwater monitoring	Groundwater monitoring well in north-west area adjacent to quarry access road labelled as "BH14s" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
12	Groundwater monitoring	Groundwater monitoring well on eastern access track labelled as "BH15s" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
13	Groundwater monitoring	Groundwater monitoring well on sth site boundary - adjacent to concrete pad labelled as "BH16s" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
14	Groundwater monitoring	Groundwater monitoring well in western carpark adjacent to weighbridge labelled as "BH2i" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
15	Groundwater monitoring	Groundwater monitoring well on nth site boundary labelled as "BH4i" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012

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16	Groundwater monitoring	Groundwater monitoring well in sth-east area adjacent to leachate treatment plant labelled as "BH7i" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
17	Groundwater monitoring	Groundwater monitoring well in sth-west service station area labelled as "BH11i" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
18	Groundwater monitoring	Groundwater monitoring well in nth-east boundary labelled as "BH13i" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
19	Groundwater monitoring	Groundwater monitoring well on northern boundary labelled as "BH3d" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
20	Groundwater monitoring	Groundwater monitoring well in sth-east area near leachate treatment plant labelled as "BH6d" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
21	Groundwater monitoring	Groundwater monitoring well near workshop, sth-west part of site labelled as "BH10d" in Figure3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
22	Groundwater monitoring	Groundwater monitoring well near workshop, nth-east premises boundary labelled as "BH12d" in Figure3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012

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23	Groundwater monitoring	Groundwater monitoring well in quarry on western side labelled as "BH17d" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
24	Groundwater monitoring	Groundwater monitoring well on sth site boundary on concrete pad labelled as "BH18d" in Figure 3: Locations of Current Bores of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
25	groundwater monitoring	Groundwater monitoring well on northern access track labelled as "BH19s" in Figure 4: All Bore Locations of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
26	Groundwater monitoring	Groundwater monitoring well on north-eastern boundary labelled as "BH20s" in Figure 4: All Bore Locations of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
27	Groundwater monitoring	Groundwater monitoring well adjacent to the southern access road labelled as "BH21s" in Figure 4: All Bore Locations of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
28	Groundwater monitoring	Groundwater monitoring well adjacent to the south-western access road labelled as "BH22s" in Figure 4: All Bore Locations of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
29	Groundwater monitoring	Groundwater monitoring well adjacent to the southern access road labelled as "BH23i" in Figure 4: All Bore Locations of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012

30	Groundwater monitoring	Groundwater monitoring well adjacent to the northern access road labelled as "BH24i" in Figure 4: All Bore Locations of the report titled "Stage 1 Groundwater Monitoring Network" (Ref:BJ07/Rp053 Rev B1) dated October 2012
31	Groundwater quality monitoring	Temporary groundwater interception sump in base of landfill
32	Leachate quality monitoring	Leachate sump located in the easternmost extremity of the quarry base at a point approximately 50 metres south of the northern quarry wall at that point.

P1.3 The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.

Noise/Weather

EPA identification no.	Type of monitoring point	Location description
1	Noise monitoring	Nearest affected receivers

3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L1.2 The Licensee must operate the premises in a manner that ensures that all stormwater from all areas of the premises which has the potential to mobilise sediments and other material is controlled and diverted through appropriate erosion and sediment control/pollution control measures and sedimentation ponds.

L1.3 Sediment ponds must be maintained in a manner that ensures these retain an appropriate freeboard to minimise the potential for any turbid discharge. Depth indicators must be installed and maintained within these ponds that indicate the required freeboard to be maintained.

L1.4 Surface water must be diverted away from any area where waste is being landfilled.

L2 Concentration limits

L2.1 For each monitoring/discharge point or utilisation area specified in the table\s below (by a point number),

the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L2.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

L2.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\s.

L2.4 The licensee is not taken to have exceeded a concentration limit specified in this licence, for monitoring points 5 and 6, if the discharge has occurred solely as a result of a rainfall event at the premises exceeding a total of 45 millimeters over any consecutive five day period and the licensee has taken all practical measures to avoid or minimise water pollution.

L2.5 Water and/or Land Concentration Limits

POINT 5,6

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Ammonia	milligrams per litre				1
pH	pH				6.5 - 8.5
Total suspended solids	milligrams per litre				50

L3 Waste

L3.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled “Waste” and meeting the definition, if any, in the column titled “Description” in the table below.
Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled “Activity” in the table below.
Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled “Other Limits” in the table below.
This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits

NA	General solid waste (non-putrescible)	Acid Sulphate Soil and Potentially Acid Sulfate Soil that has been treated and meets the definition of General Solid waste (non-putrescible),	Waste disposal (application to land)	The soil must be treated in accordance with the neutralising techniques in the Acid Sulfate Soil Manual (ASSMAC, 1998), then chemically assessed in accordance with Step 5 in Part 1 of the Waste Classification Guidelines.
T140	Tyres	The tyre has a diameter of 1.2 metres or more; and/or the tyre has been shredded or had its walls removed; and/or the tyre was delivered to the premises as part of a domestic load. For the purposes of this description: tyres are taken to be shredded only if the tyres are in pieces measuring no more than 250mm in any direction; and domestic load means a load containing no more than 5 tyres having a diameter of less than 1.2 metres.	Waste disposal (application to land)	N/A
NA	Asbestos waste	As defined in Schedule 1 of the POEO Act, as in force from time to time.	Waste disposal (application to land)	N/A
NA	General solid waste (non-putrescible)	As defined in Schedule 1 of the POEO Act, as in force from time to time.	Waste disposal (application to land) Waste storage	N/A

L3.2 The Licensee must not landfill more than 700, 000 tonnes of non-putrescible waste per calender year.

L3.3 If the licence permits the disposal of asbestos waste, the licensee must comply with Clause 80 of the Protection of the Environment Operations (Waste) Regulation 2014.

L3.4 Except for the following, the Proponent shall dispose of all outputs produced from the waste processing

and/or resource recovery facility on site, subject to Environment Protection Licence 20121, to the Landfill:

a) Recyclables extracted and delivered off-site for resource recovery purposes;
b) Hazardous wastes extracted from the input waste stream and lawfully disposed of off-site; and
c) Output waste derived materials approved for use under the *Protection of the Environment Operations Act, 1997* and Regulations.

L3.5 The applicant must have in place and implement procedures to identify and prevent the disposal of any waste not permitted by condition L3.1 to be disposed of at the premises.

L3.6 The Licensee is only permitted to dispose of Immobilised waste which has been assessed as General Solid Waste (non-putrescible) and is subject to the general immobilisation approvals as set out in the following:
a) "2009/07 Metallurgical furnace slag or metallurgical furnace slag contaminated natural excavated materials"
b) "1999/05 Ash, ash-contaminated natural excavated materials or coal-contaminated natural excavated materials"

L4 Noise limits

L4.1 Noise generated from the Landfill must not exceed the noise limits presented in the table below:

Residence Location	Day LAeq, 15min (dBA)	Noise Criteria LAeq, 15min (dBA)
Nearest affected receiver (Minchinbury)	36	36
Nearest affected Receiver (Erskine Park)	36	36

L4.2 Notes:
a) Noise from the development is to be measured at the most affected point or within the residential boundary, or at the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary, to determine compliance with the LAeq (15 minute) noise limits. Where it can be demonstrated that direct measurement of noise from the project is impractical, the DECC may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.
b) The noise emission limits identified apply under meteorological conditions of:
· Wind speed up to 3m/s at 10 metres above ground level; or
· Temperature inversion conditions of up to 3ºC/100m and wind speed up to 2m/s at 10 metres

above the ground.

L4.3 Noise generated at the premises that is measured at each noise monitoring point established under this licence must not exceed the noise levels specified in Column 4 of the table below for that point during the corresponding time periods specified in Column 1 when measured using the corresponding measurement parameters listed in Column 2.

POINT 1

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Day	LAeq	Continuous	36

L5 Hours of operation

L5.1 Operating hours for all activities at the Premises must be limited to between 7:00am and 6:00pm Monday to Friday, and 8:00am to 4:00pm Saturday, Sunday and Public Holidays.

L5.2 Operating hours of the conveyor and chute system are restricted to the facilities operational hours as specified in Condition L5.1.

L6 Potentially offensive odour

L6.1 No condition of this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.
This includes:
a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
a) must be maintained in a proper and efficient condition; and
b) must be operated in a proper and efficient manner.

O3 Dust

O3.1 All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.

O3.2 Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading.

O4 Processes and management

O4.1 The licensee must take all practicable steps to control entry to the premises.

O4.2 The Licensee shall:
a) Implement suitable measures to manage pests, vermin and declared noxious weeds on site;
b) Inspect the site on a regular basis to ensure that these measures are working effectively, and that pests, vermin or noxious weeds are not present on site in sufficient numbers to pose an environmental hazard, or cause the loss of amenity in the surrounding area; and
c) Perform ongoing monitoring of weed infestation on and adjoining the site.

Note: For the purposes of this condition, noxious weeds are those species subject to an order declared under the Noxious Weeds Act 1993.

O4.3 The Licensee must have in place and implement procedures to minimise the risk of fire at the premises.

O4.4 The Licensee must minimise the tracking of waste and mud by vehicles leaving the premises.

O5 Waste management

O5.1 The licensee must have in place and operate a calibrated weighbridge to record the weight in tonnes of all waste brought into the premises and to determine the occupier's section 88 levy liability.

O5.2 There must be no incineration or burning of any waste at the premises.

O5.3 The licensee must not exhume any landfilled waste at the premises unless written approval is given by the EPA.

O5.4 **Covering of Waste**

Cover material must be:
a) Daily Cover
Daily Cover must be either:
i) virgin excavated natural material, or
ii) approved alternative daily cover.

Cover material must be applied to a minimum depth of 15 centimetres over all exposed landfilled waste prior to ceasing operations at the end of each day.

b) Intermediate Cover must be virgin excavated natural material.
Cover material must be applied to a depth of 30 centimetres over surfaces of the landfilled waste at the premises which are to be exposed for more than 90 days.

c) Cover material stockpile
At least two weeks cover material must be available at the premises under all weather conditions. This material may be won on site, or alternatively a cover stockpile must be maintained adjacent to the tip face.

O5.5 The licensee shall ensure that at no time is asbestos waste (as defined in the POEO Act) permitted to be placed in the conveyor/chute system for conveyance to the base of the landfill.

O5.6 The licensee must not carry out any activity that exposes previously landfilled waste at the premises, except as expressly permitted by a condition of this licence.

O5.7 Landfill leachate must not be irrigated except as expressly permitted by a condition of this licence.

O5.8 Water which contacts waste, other than virgin excavated natural material, must be managed as leachate. Leachate must only be disposed of by: a) disposal to sewer via a trade waste agreement, b) disposal at a facility licensed to accept such waste.

O5.9 The licensee must only dispose of waste within the landfill void.

O5.10 The licensee must submit and maintain a filling plan for the disposal of waste sequentially in each landfill cell(s). This Filling plan must be updated at intervals of no greater than 12 months.

O5.11 The Basal cell lining shall be constructed in accordance with the Douglas Partners June 2011 Report entitled "Environmental Management Strategy June 2011 - Leachate Collection and Conveyance System" and in compliance with the NSW EPA Solid Landfill Guidelines, 1996 Benchmark Techniques 1 and 2. This includes the QA/QC and testing program specified in that report.

In accordance with the Douglas Partners Report, the layers shall be composed of:
- A recompacted clay liner 90 centimetres thick with an *in situ* co-efficient of permeability of less than 10^{-9} ms^{-1};
- 300mm of recycled picrite ballast as drainage layer; and
- 270gm^{-2} geotextile barrier.

O5.12 Landfilling of waste and leachate levels must be be managed to ensure the groundwater gradient directs groundwater flows inwards towards the landfill void.

O5.13 The licensee must ensure that the leachate levels within the landfill below RL 25m AHD are maintained at at least 5m below the minimum elevation of the waste surface.

O5.14 One month before the level of waste in the void reaches RL 25m AHD, the Licensee must submit to the EPA: a detailed technical report regarding the upper floor liner; permanent leachate collection system design and; quality assurance program.

O5.15 No waste is to be emplaced in the pit above RL 25m AHD until the licensee has installed a permanent leachate barrier and collection system in accordance with a design approved by the EPA and the EPA has provided the licensee with written approval to dispose of waste in the pit above RL 25m AHD.

O5.16 Prior to construction of the upper floor liners (25 AHD) and permanent leachate collection systems, the licensee must submit to the EPA a detailed design report including a construction quality assurance (CQA) program. The report must contain: details of the engineered features of the liner and leachate collection and conveyance system, leachate storage and disposal infrastructure, stormwater management controls, gas management system, proposed daily and intermediate covering, proposed filling plan and groundwater and gas monitoring networks. This must include detailed plans and specifications and full “for construction” engineering drawings. The CQA program must contain sufficient details of the proposed installation methods, tests, inspections and other verifications to demonstrate that all materials and constructed features will conform to the required plans and specifications. The design report and CQA program must be submitted to the EPA at each stage for approval prior to commencing construction works.

O5.17 Final capping must be installed in accordance with Benchmark Technique 28 of the EPA's Environmental Guidelines: Solid Waste Landfills (2016) or an equivalant cap approved by the EPA in writing.

O5.18 The licensee must submit to the EPA within twelve months prior to the last load of waste being landfilled a closure plan in accordance with Section 76 of the Protection of the Environment Operations Act 1997.

O5.19 The final contours of the landfill must be in accordance with the approved Closure Plan.

Leachate Management Contingency Systems

O5.20 A Leachate Collection Contingency System (LCCS) must be installed. The LCCS must be installed in general accordance with Section 6.1 and 6.2 of the document “DADI Landfill, Leachate Management Contingency System Design, PSM1034-003R REV 1, June 2017,” (EPA DOC17/458260).

O5.21 The foundation footprint for the LCCS must be prepared in accordance with Sections 2 (1) and (2) of the document “Technical Specification for DADI Landfill Leachate Management Contingency Systems PSM1034-003S, June 2017” (the Technical Specification) (EPA DOC18/584994).

O5.22 The drainage material installed in the LCCS must be in accordance with 3.4 of the document “Technical Specification for DADI Landfill Leachate Management Contingency System PSM1034-003S, June 2017” (the Technical Specification), (EPA DOC18/584994).

O5.23 The filter material installed in the LCCS must be in accordance with 3.5 of the document “Technical

Specification for DADI Landfill Leachate Management Contingency System PSM1034-003S, June 2017" (the Technical Specification), (EPA DOC18/584994).

O5.24 Within 30 days of completion of the installation of the LCCS the licensee must provide the EPA with a copy of the Geotechnical Inspection and Testing Authority Report (GITA Report) proposed in Section 5.1 of the document "Technical Specification for DADI Landfill Leachate Management Contingency System PSM1034-003S, June 2017" (the Technical Specification), (EPA DOC18/584994). The GIPA Report must include photographic evidence and an as-built survey of the installed LCCS.

O6 Other operating conditions

O6.1 The licensee must manage any groundwater extracted from groundwater interception system in accordance with the report titled "Genesis Landfill Facility - Proposed Groundwater Sump" (Ref:BJ07/LT264 Rev B) by IGGC and dated 9 October 2012.

O6.2 The proponent shall:
a) Implement suitable measures to prevent unnecessary proliferation of litter both on and off site; and
b) Inspect and clear the site and surrounding area, of litter on a daily basis.

O6.3 The applicant must control pests and vermin at the premises.

O6.4 The Licensee must ensure that adequately trained staff are available at the premises in order to administer the requirements of this License.

O6.5 Bunding must be maintained for the leachate storage tanks that;
- is impervious to the fluids contained; and
- has sufficient capacity to contain 110% of the volume of the largest vessel; and
- will contain all pressurised leaks or spills.

O6.6 The Proponent shall store all chemicals, fuels and oils used on site in an appropriately designed impervious bunded area that contains 110 percent of the largest container contained within the bund. These bunds shall be designed and installed in accordance with the requirements of all relevant Australian standards, and/or EPA's Environment Protection Manual *Technical Bulletin Bunding and Spill Management.*

5 Monitoring and Recording Conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:
a) in a legible form, or in a form that can readily be reduced to a legible form;

b) kept for at least 4 years after the monitoring or event to which they relate took place; and
c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
a) the date(s) on which the sample was taken;
b) the time(s) at which the sample was collected;
c) the point at which the sample was taken; and
d) the name of the person who collected the sample.

M1.4 The licensee must record the date, duration and volume of any leachate discharge to surface water.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Water and/ or Land Monitoring Requirements

POINT 2,3

Pollutant	Units of measure	Frequency	Sampling Method
Ammonia	milligrams per litre	Quarterly	Grab sample
Arsenic	milligrams per litre	Quarterly	Grab sample
Cadmium	milligrams per litre	Quarterly	Grab sample
Chromium (total)	milligrams per litre	Quarterly	Grab sample
Copper	milligrams per litre	Quarterly	Grab sample
Electrical conductivity	milligrams per litre	Quarterly	Grab sample
Lead	milligrams per litre	Quarterly	Grab sample
Mercury	milligrams per litre	Quarterly	Grab sample
Nickel	milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	Grab sample
Total organic carbon	milligrams per litre	Quarterly	Grab sample
Total suspended solids	milligrams per litre	Quarterly	Grab sample
Zinc	milligrams per litre	Quarterly	Grab sample

POINT 5,6

Pollutant	Units of measure	Frequency	Sampling Method
Ammonia	milligrams per litre	Special Frequency 1	Grab sample

Electrical conductivity	microsiemens per centimetre	Special Frequency 1	Grab sample
pH	pH	Special Frequency 1	Grab sample
Total organic carbon	milligrams per litre	Special Frequency 1	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 1	Grab sample

POINT 7,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30

Pollutant	Units of measure	Frequency	Sampling Method
Alkalinity (as calcium carbonate)	milligrams per litre	Quarterly	Grab sample
Aluminium	milligrams per litre	Yearly	Grab sample
Arsenic	milligrams per litre	Yearly	Grab sample
Barium	milligrams per litre	Yearly	Grab sample
Benzene	milligrams per litre	Yearly	Grab sample
Cadmium	milligrams per litre	Yearly	Grab sample
Calcium	milligrams per litre	Quarterly	Grab sample
Chloride	milligrams per litre	Quarterly	Grab sample
Chromium	milligrams per litre	Yearly	Grab sample
Copper	milligrams per litre	Yearly	Grab sample
Electrical conductivity	microsiemens per centimetre	Quarterly	Probe
Ethyl benzene	milligrams per litre	Yearly	Grab sample
Fluoride	milligrams per litre	Yearly	Grab sample
Lead	milligrams per litre	Yearly	Grab sample
Magnesium	milligrams per litre	Quarterly	Grab sample
Manganese	micrograms per litre	Yearly	Grab sample
Mercury	milligrams per litre	Yearly	Grab sample
Nitrate + nitrite (oxidised nitrogen)	milligrams per litre	Quarterly	Grab sample
Nitrogen (ammonia)	milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	Probe
Phenols	micrograms per litre	Yearly	Grab sample
Phosphorus	milligrams per litre	Yearly	Grab sample
Potassium	milligrams per litre	Quarterly	Grab sample
Redox potential	millivolts	Quarterly	Probe
Sodium	milligrams per litre	Quarterly	Grab sample
Sulfate	milligrams per litre	Quarterly	Grab sample
Toluene	milligrams per litre	Yearly	Grab sample
Total organic carbon	milligrams per litre	Yearly	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Yearly	Grab sample
Xylene	milligrams per litre	Yearly	Grab sample
Zinc	milligrams per litre	Monthly	Grab sample

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Pollutant	Units of measure	Frequency	Sampling Method
Ammonia	milligrams per litre	Monthly	Grab sample
Total organic carbon	milligrams per litre	Monthly	Grab sample

POINT 32

Pollutant	Units of measure	Frequency	Sampling Method
Alkalinity (as calcium carbonate)	milligrams per litre	Quarterly	Grab sample
Aluminium	milligrams per litre	Yearly	Grab sample
Arsenic	milligrams per litre	Yearly	Grab sample
Barium	milligrams per litre	Yearly	Grab sample
Benzene	milligrams per litre	Yearly	Grab sample
Cadmium	milligrams per litre	Yearly	Grab sample
Calcium	milligrams per litre	Quarterly	Grab sample
Chloride	milligrams per litre	Quarterly	Grab sample
Chromium	milligrams per litre	Yearly	Grab sample
Cobalt	milligrams per litre	Yearly	Grab sample
Copper	milligrams per litre	Yearly	Grab sample
Electrical conductivity	microsiemens per centimetre	Quarterly	Probe
Ethyl benzene	milligrams per litre	Yearly	Grab sample
Fluoride	milligrams per litre	Quarterly	Grab sample
Lead	milligrams per litre	Yearly	Grab sample
Magnesium	milligrams per litre	Quarterly	Grab sample
Manganese	milligrams per litre	Quarterly	Grab sample
Mercury	milligrams per litre	Yearly	Grab sample
Nitrate	milligrams per litre	Quarterly	Grab sample
Nitrite	milligrams per litre	Quarterly	Grab sample
Nitrogen (ammonia)	milligrams per litre	Quarterly	Grab sample
Organochlorine pesticides	micrograms per litre	Yearly	Grab sample
Organophosphate pesticides	milligrams per litre	Yearly	Grab sample
pH	pH	Quarterly	Grab sample
Phenols	milligrams per litre	Yearly	Grab sample
Phosphorus (total)	milligrams per litre	Quarterly	Grab sample
Polycyclic aromatic hydrocarbons	milligrams per litre	Yearly	Grab sample
Potassium	milligrams per litre	Quarterly	Grab sample
Sodium	milligrams per litre	Quarterly	Grab sample
Standing Water Level	metres	Quarterly	In situ
Sulfate	milligrams per litre	Quarterly	Grab sample
Toluene	milligrams per litre	Yearly	Grab sample
Total dissolved solids	milligrams per litre	Quarterly	Grab sample

Total organic carbon	milligrams per litre	Yearly	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Yearly	Grab sample
Total suspended solids	milligrams per litre	Quarterly	Grab sample
Xylene	milligrams per litre	Yearly	Grab sample
Zinc	milligrams per litre	Yearly	Grab sample

M2.3 For the purposes of the table above Special Frequency 1 means the collection of samples:

a) on the first day of the authorised discharge that is compliant with Condition L2.1 and weekly thereafter if the discharge continues; and
b) within three days of the first day of discharge that is occurring as a result of a rainfall event at the premises.

Note: Surface water monitoring requirements and concentration limits for Points 2,3,5,6 will be reviewed by the EPA after one year of monitoring, with a view to reduce or remove these requirements where surface water quality at these Points is deemed not to be impacted by waste or leachate.

M3 Testing methods - concentration limits

M3.1 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Environmental monitoring

M4.1 Rainfall at the premises must be measured and recorded in millimetres per 24 hour period, at the same time each day.

M4.2 Wind strength and wind direction at the premises must be measured and recorded in degrees and knots/kmh at least every 15 minutes.

M4.3 The groundwater monitoring network must be designed and installed in a manner that will achieve an equivalent environmental performance to that of Benchmark Technique 4 detailed in the EPA's Environmental Guidelines: Solid Waste Landfills (2016).

M4.4 The groundwater monitoring program must be designed and implemented in a manner that will achieve an equivalent performance to the of Benchmark Technique 5 detailed in the EPA's Environmental Guidelines: Solid Waste Landfills (2016).

M5 Recording of pollution complaints

M5.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent

of the licensee in relation to pollution arising from any activity to which this licence applies.

M5.2 The record must include details of the following:
a) the date and time of the complaint;
b) the method by which the complaint was made;
c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
d) the nature of the complaint;
e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
f) if no action was taken by the licensee, the reasons why no action was taken.

M5.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M5.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M6 Telephone complaints line

M6.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M6.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M6.3 The preceding two conditions do not apply until either the date of the issue of this licence.

M7 Other monitoring and recording conditions

M7.1 The proponent must provide an annual audit of the design, operation and odour management practices of the operation with the primary aim of identifying improvements that lead to attainment of best practice in regard to minimising odour emitted from the premises. The proponent must implement all reasonable audit recommendations. The scope of such an audit to be regularly reviewed in consultation with the EPA.

M7.2 The EPA may require the proponent to conduct assessments or investigations that identify the extent of any potentially offensive odour emissions beyond the boundary of the premises. The scope of such investigations to be agreed to by the EPA and may include revised air dispersion modelling based on actual site emissions data, well designed field investigations according to German standards, and/ or use of field olfactometers, and analysis of detailed complaints records and on-site meteorological data.

M7.3 Within one year after the Licence is varied to allow the disposal of waste at the Premises, the licensee must implement a landfill gas monitoring program designed to demonstrate whether landfill gas is migrating from the premises. This landfill gas monitoring program must meet the environmental goals detailed in Benchmark Technique 16 and 17 of the EPA Environmental Guidelines: Solid Waste Landfills (2016).

M7.4 The Licensee must monitor and record, weekly, the height of the leachate relative to the Australian Height Datum at EPA Points 31 and 32.

6 Reporting Conditions

R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

1. a Statement of Compliance,
2. a Monitoring and Complaints Summary,
3. a Statement of Compliance - Licence Conditions,
4. a Statement of Compliance - Load based Fee,
5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
7. a Statement of Compliance - Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee:
a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

R1.5 The Annual Return for the reporting period must be supplied to the EPA via eConnect *EPA* or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

R1.7 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
a) the licence holder; or
b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R2.3 If the results of surface water quality monitoring in the sediment pond(s) required by condition M2.2 indicate ammonia concentrations greater than 1mg/L the licensee must contact the EPA within 24 hours and advise of the results of that monitoring.

R2.4 If leachate is discharged to surface waters from the premises the licensee must notify the event to the EPA in accordance with condition R3.1.

R2.5 The licensee must provide written details of any leachate discharge(s) referred to in Condition R2.4 to the EPA within 7 days of the date on which the incident occurred.

The written details referred to in the above condition must be provided as a report. The report must include the following information:
a) the volume of the leachate discharged and over what time period the discharge occurred;
b) the date and time of the commencement of the overflow;
c) the weather conditions at the time of the discharge, specifying the amount of rainfall on a daily basis that had fallen:
- on the day(s) of the discharge; and
- for the one week period prior to the discharge;
d) the most recent monitoring results of the chemical composition of the leachate;
e) an explanation as to why the discharge occurred;
f) the location(s) of the discharge; and
g) a plan of action to prevent a similar discharge in the future.

R2.6 If the results of monitoring at Point 25 as required by Condition M2.2 indicate ammonia concentrations greater than 2mg/L and/or TOC exceeds 20mg/L, the licensee must contact the EPA within 24 hours and advise of the results of that monitoring.

R2.7

In the event of a fire at the facility the applicant must record:

a) the time and date when the fire was deliberately started or reported;
b) whether the fire was authorised by the applicant, and, if not, the circumstances which ignited the fire;
c) the time and date that the fire ceased and whether it burnt out or was extinguished;
d) the location of fire (eg. clean timber stockpile, putrescible garbage cell, etc);
e) the prevailing weather conditions;
f) any observations made in regard to smoke direction and dispersion;
g) the amount of waste that was combusted by the fire; and
h) the action taken to extinguish the fire.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
a) where this licence applies to premises, an event has occurred at the premises; or
b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:
a) the cause, time and duration of the event;
b) the type, volume and concentration of every pollutant discharged as a result of the event;
c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

7 General Conditions

G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

8 Special Conditions

E1 Requirement to maintain financial assurance

E1.1 (a) A financial assurance in the form of an unconditional and irrevocable and on demand guarantee from a bank, building society or credit union operating in Australia as “Authorised Deposit-taking Institutions” under the Banking Act 1959 of the Commonwealth of Australia and supervised by the Australian Prudential Regulatory Authority (APRA) must be provided to the EPA prior to the issue of an environment protection licence allowing construction activities at the Premises. The financial assurance must be in favour of the EPA in the amount of two hundred thousand dollars (**$200,000**). The financial assurance is required to secure or guarantee funding for works or programs required by or under this licence. The financial assurance must contain a term that provides that any monies claimed can be paid to the EPA or, at the written direction of the EPA, to any other person.

(b) A financial assurance in the form of an unconditional and irrevocable and on demand guarantee from a bank, building society or credit union operating in Australia as “Authorised Deposit-taking Institutions” under the Banking Act 1959 of the Commonwealth of Australia and supervised by the Australian Prudential Regulatory Authority (APRA) must be provided to the EPA prior to the Licence being varied to allow the receipt of waste at the Premises. The financial assurance must be in favour of the EPA for a total amount to be held by the EPA of four hundred thousand dollars (**$400,000**). The financial assurance is required to secure or guarantee funding for works or programs required by or under this licence. The financial assurance must contain a term that provides that any monies claimed can be paid to the EPA or, at the written direction of the EPA, to any other person.

Note that this total financial assurance is inclusive of that required in E1.1(a)

(c) A financial assurance in the form of an unconditional and irrevocable and on demand guarantee from a bank, building society or credit union operating in Australia as “Authorised Deposit-taking Institutions” under the Banking Act 1959 of the Commonwealth of Australia and supervised by the Australian Prudential Regulatory Authority (APRA) must be provided to the EPA one calendar year after the EPA varies the Licence to allow the receipt of waste at the Premises. The financial assurance must be in favour of the EPA for a total amount to be held by the EPA of eight hundred thousand dollars (**$800,000**). The financial assurance is required to secure or guarantee funding for works or programs required by or under this licence. The financial assurance must contain a term that provides that any monies claimed can be paid to the EPA or, at the written direction of the EPA, to any other person.

Note that this total financial assurance is inclusive of that required in E1.1a) and E1.1b).

(d) The licensee must provide to the EPA, along with the original counterpart guarantee, confirmation in writing that the financial institution providing the guarantee is subject to supervision by the Australian Prudential Regulatory Authority (APRA).

E1.2 An adjustment to the financial assurance must be calculated, each licence review period, in line with the Consumer Price Index for the number of years since the financial assurance was last paid. The financial assurance must be replenished to the full amount plus CPI adjustments each licence review period.

E1.3 The financial assurance must be replenished by the full amount claimed or realised if the EPA has claimed on or realised the financial assurance or any part of it to undertake a work or program required to be carried out by the licence which has not been undertaken by the licence holder.

E1.4 The financial assurance must be maintained during the operation of the facility and thereafter until such time as the EPA is satisfied the premises is environmentally secure.

E1.5 The EPA may require an increase in the amount of the financial assurance at any time as a result of reassessment of the total likely costs and expenses of rehabilitation of the premises.

E1.6 The licensee must provide to the EPA the original counterpart guarantee within five working days of the issue of:
a) the financial assurance required by conditions E1.1, or
b) the adjusted financial assurance as required by condition E1.2 and E1.3

E2 Claims on financial assurance

E2.1 The EPA may claim on a financial assurance under s303 of the POEO Act if a licensee fails to carry out any work or program required to comply with the conditions of this licence.

E3 Environmental Obligations of Licensee (Works and Programs)

E3.1 While the licensee's premises are being used for the purpose to which the licence relates, the licensee must:
a) Clean up any spill, leak or other discharge of any waste(s) or other material(s) as soon as practicable after it becomes known to the licensee or to one of the licensee's employees or agents.
b) In the event(s) that any liquid and non-liquid waste(s) is unlawfully deposited on the premises, such waste(s) must be removed and lawfully disposed of as soon as practicable or in accordance with any direction given by the EPA.
c) Provide all monitoring data as required by the conditions of this licence or as directed by the EPA.

E3.2 In the event of an earthquake, storm, fire, flood or any other event where it is reasonable to suspect that a pollution incident has occurred, is occurring or is likely to occur, the licensee (whether or not the premises continue to be used for the purposes to which the licence relates) must:
a) make all efforts to contain all firewater on the licensee's premises,
b) make all efforts to control air pollution from the licensee's premises,
c) make all efforts to contain any discharge, spill or run-off from the licensee's premises,
d) make all efforts to prevent flood water entering the licensee's premises,
e) remediate and rehabilitate any exposed areas of soil and/or waste,
f) lawfully dispose of all liquid and solid waste(s) stored on the premises that is not already securely

disposed of,
g) at the request of the EPA monitor groundwater beneath the licensee's premises and its potential to migrate from the licensee's premises,
h) at the request of the EPA monitor surface water leaving the licensee's premises; and
i) ensure the licensee's premises is secure.

E3.3 After the licensee's premises cease to be used for the purpose to which the licence relates or in the event that the licensee ceases to carry out the activity that is the subject of this licence, that licensee must:
a) remove and lawfully dispose of all liquid and non-liquid waste stored on the licensee's premises; and
b) rehabilitate the site, including conducting an assessment of and if required remediation of any site contamination.

E4 Approved alternative daily cover specification – particulate waste materials

E4.1 In accordance with condition O5.4 the Licensee may apply material as an alternative daily cover that meets the following criteria:

a. The alternative daily cover must consist only of crushed concrete and/or crushed bricks and/or crushed clay tiles and/or crushed glass fines from domestic or commercial recycling collections, mixed with soil. The amount of soil in the mixture must be at least 25% (by mass).

b. The alternative daily cover must be applied to a depth of at least 150mm at the close of each operational day.

c. The alternative daily cover material must not contain contaminants at concentrations above those specified for General Solid Waste (Non-putrescible) in Tables 1 and 2 of the Waste Classification Guidelines, Part 1: Classifying Waste.

d. The alternative daily cover material must not contain asbestos, food waste, animal waste, grease trap waste, biosolids, rubber, plastic, bitumen, asphalt, paper, cloth, paint, wood, other vegetable matter, plaster and metal.

e. The maximum permissible dimension of particles is 50mm and 50% by mass of the material must be comprised of particles less than 1mm in diameter. Note: To meet all of the requirements in this approval, it is likely that the alternative daily cover will require processing into a fine particle size.

f. The alternative daily cover material must have the ability to suppress odours from the landfilled waste and must not itself generate offensive odours.

g. Rainwater which comes into contact with the alternative daily cover must be managed as landfill leachate.

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Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 mo nths. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.

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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-putrescible), special waste or hazardous waste

Ms Julie Currey

Environment Protection Authority

(By Delegation)

Date of this edition: 02-March-2012

End Notes

2	Licence varied by notice	1508182 issued on 31-Aug-2012
3	Licence varied by notice	1509249 issued on 15-Nov-2012
4	Licence varied by notice	1510881 issued on 24-Dec-2012
5	Licence varied by notice	1512149 issued on 04-Jul-2013
6	Licence varied by notice	1515838 issued on 11-Oct-2013
7	Licence varied by notice	1534175 issued on 06-Oct-2015
8	Licence varied by notice	1535829 issued on 22-Aug-2018

Environment Protection Licence

Licence - 4068

Licence Details	
Number:	4068
Anniversary Date:	31-December

Licensee
SITA AUSTRALIA PTY LTD
20 DAVIS ROAD
WETHERILL PARK NSW 2164

Premises
ELIZABETH DRIVE LANDFILL FACILITY
1725 ELIZABETH DRIVE
KEMPS CREEK NSW 2178

Scheduled Activity
Waste Disposal (application to land)
Waste Storage

Fee Based Activity	Scale
Waste disposal by application to land	Any annual capacity
Waste storage - other types of waste	> 0 T stored

Region
Waste & Resources - Waste Management
59-61 Goulburn Street SYDNEY NSW 2000
Phone: (02) 9995 5000
Fax: (02) 9995 5999
PO Box A290 SYDNEY SOUTH
NSW 1232

Environment Protection Licence

Licence - 4068

Environment Protection Licence

Licence - 4068

Environment Protection Licence

Licence - 4068

Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Environment Protection Licence

The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

SITA AUSTRALIA PTY LTD
20 DAVIS ROAD
WETHERILL PARK NSW 2164

subject to the conditions which follow.

Environment Protection Licence

Licence - 4068

1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Waste Disposal (application to land)	Waste disposal by application to land	Any annual capacity
Waste Storage	Waste storage - other types of waste	> 0 T stored

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
ELIZABETH DRIVE LANDFILL FACILITY
1725 ELIZABETH DRIVE
KEMPS CREEK
NSW 2178
LOT 1 DP 542395, LOT 740 DP 810111
(EXCEPT THAT PART HATCHED IN RED ON "PLAN SHOWING THE BOUNDARIES OF THE SAWT AREA OVER PART OF LOT 740 DP 810111" PREPARED BY MATTHEW FREEBURN SURVEYORS DATED 03.05.10)

A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:
a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

A3.2 The 'Elizabeth Drive Landfill Environmental Management Plan Revision/Edition 1', PPK Environment & Infrastructure Pty Ltd, dated 01/01/98.

Note: For the purposes of this licence the abbreviation “LEMP” is defined as the document titled Elizabeth Drive

Landfill Environmental Management Plan Revision/Edition 1, dated 01/01/98.

A3.3 The gas to energy & gas collection system at the Premises must be constructed and operated in accordance with Penrith City Council's development consent no. DA12/0515.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

P1.1 The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

Air

EPA identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
4	Air quality monitoring		Dust Monitoring point labelled "D5" on map titled "SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A" prepared by GHD Pty Ltd, dated August 2012. Located on western boundary of Premises.
5	Air quality monitoring		Dust Monitoring point labelled "D6" on map titled "SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A" prepared by GHD Pty Ltd, dated August 2012. Located on northern boundary of Premises.
6	Air quality monitoring		Dust Monitoring point labelled "D8" on map titled "SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A" prepared by GHD Pty Ltd, dated August 2012. Located on eastern boundary of Premises.
7	Air quality monitoring		Dust Monitoring point labelled "D10" on map titled "SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A" prepared by GHD Pty Ltd, dated August 2012. Located on south-western boundary of Premises.
8	Air quality monitoring		Dust Monitoring point labelled "D17" on map titled "SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A" prepared by GHD Pty Ltd, dated August 2012. Located on south-eastern boundary of Premises.
9	Air quality monitoring		Dust Monitoring point labelled "D20" on map titled "SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A" prepared by GHD Pty Ltd, dated August 2012. Located on north-eastern boundary of Premises.

10	Air quality monitoring	Dust Monitoring point labelled "D21" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on north-west corner of Premises.
45	Subsurface gas monitoring	Subsurface gas monitoring point labelled "SG1" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on western boundary of Premises.
46	Subsurface gas monitoring	Subsurface gas monitoring point labelled "SG2" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on SW boundary of Premises.
47	Subsurface gas monitoring	Subsurface gas monitoring point labelled "SG3" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on SW boundary of Premises.
48	Subsurface gas monitoring	Subsurface gas monitoring point labelled "SG4" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on SW boundary of Premises.
49	Subsurface gas monitoring	Subsurface gas monitoring point labelled "SG5" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on eastern boundary of Premises.
50	Subsurface gas monitoring	Subsurface gas monitoring point labelled "SG6" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on eastern boundary of Premises
51	Subsurface gas monitoring	Subsurface gas monitoring point labelled "SG7" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on eastern boundary of Premises

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

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P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
13	Wet weather discharge Water quality monitoring	Wet weather discharge Water quality monitoring	Wet weather overflow monitoring point labelled "ADP002" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Overflow from Dam No. 1 on SE boundary.
15	Wet weather discharge Water quality monitoring	Wet weather discharge Water quality monitoring	Wet weather overflow monitoring point labelled "ADP003" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Overflow from Dam No. 3 on SE boundary.
16	Groundwater quality monitoring		Groundwater monitoring point labelled "G1a" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on eastern boundary of Premises.
17	Groundwater quality monitoring		Groundwater monitoring point labelled "G3a" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on western boundary of Premises.
18	Groundwater quality monitoring		Groundwater monitoring point labelled "G4a" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on NW boundary of Premises.

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19	Groundwater quality monitoring	Groundwater monitoring point labelled "G5" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on northern boundary of Premises.
20	Groundwater quality monitoring	Groundwater monitoring point labelled "G6" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on SW boundary of Premises.
21	Groundwater quality monitoring	Groundwater monitoring point labelled "G7" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on SE boundary of Premises.
22	Groundwater quality monitoring	Groundwater monitoring point labelled "G9" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on western boundary of Premises.
23	Surface water quality monitoring	Surface water monitoring point labelled "S1" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located in Badgerys Creek upstream, SW of Premises.
24	Surface water quality monitoring	Surface water monitoring point labelled "S2" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located in Badgerys Creek midstream, west of Premises.

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25	Surface water quality monitoring	Surface water monitoring point labelled "S3" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located in Badgerys Creek downstream, NW of Premises.
26	Leachate quality monitoring General solid waste cell	Leachate monitoring point labelled "L7" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on NW corner of Cell C1 at the Premises.
27	Leachate quality monitoring Restricted Waste Cell - primary layer	Leachate monitoring point labelled "L10" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on NW corner of Restricted waste cell at Premises.
28	Leachate quality monitoring Restricted Waste Cell A2 - primary layer	Leachate monitoring point labelled "A2L1" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located at primary layer of Restricted waste cell A2.
29	Leachate quality monitoring Restricted Waste Cell A2 - secondary layer	Leachate monitoring point labelled "A2L2" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located at secondary layer of Restricted waste cell A.
30	Leachate quality monitoring Restricted Solid Waste Cell A2 - tertiary layer	Variable monitoring point located within the tertiary layer of Restricted waste cell A2
31	Surface water quality monitoring	Surface water monitoring point labelled "S9" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located in Dam 1 waters, SE boundary of Premises.

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33	Surface water quality monitoring		Surface water monitoring point labelled "S10" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located in Dam 3 waters, SW boundary of Premises.
34	Wet weather discharge Water quality monitoring - downstream of Main Water Supply Holding Pond	Wet weather discharge Water quality monitoring - downstream of Main Water Supply Holding Pond	Wet weather monitoring point labelled "S19" on map titled “SITA Australia–Elizabeth Drive Landfill– EPL 4068– Monitoring Locations-Figure 1-Rev A” prepared by GHD Pty Ltd, dated August 2012. Located downstream of western boundary of Premises.
35	Wet weather discharge Water quality monitoring	Wet weather discharge Water quality monitoring	Surface water monitoring point labelled "ADP-001" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on northern boundary of Premises.
36	Leachate Quality Monitoring Restricted Waste Cell A5 - primary layer		Leachate monitoring point labelled "A5L1" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on W boundary of Restricted Waste Cell A5.
37	Leachate Quality Monitoring Restricted Waste Cell A5 - secondary layer		Leachate monitoring point labelled "A5L2" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on W boundary of Restricted Waste Cell A5.
38	Leachate Quality Monitoring Restricted Solid Waste Cell A4 - primary layer		Leachate monitoring point labelled "A4L1" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on W boundary of Restricted Waste Cell A4.

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39	Leachate Quality Monitoring Restricted Waste Cell A4 - secondary layer	Leachate monitoring point labelled "A4L2" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on W boundary of Restricted Waste Cell A4.
40	Leachate Quality Monitoring General Solid Waste Cell	Leachate monitoring point labelled "L11" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on W boundary of General solid waste cell.
41	Leachate Quality Monitoring Restricted Solid Waste Cell A3 - primary layer	Leachate monitoring point labelled "A3L1" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on N boundary of Restricted Waste Cell A3.
42	Leachate Quality Monitoring Restricted Cell A3 - secondary layer	Leachate monitoring point labelled "A3L2" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on N boundary of Restricted Waste Cell A3.
43	Leachate Quality Monitoring General Solid Waste	Leachate monitoring point labelled "L9" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located on N boundary of General Solid Waste Cells.
44	Leachate Quality Monitoring General Solid Waste Cell	Leachate monitoring point labelled "L12" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located NW corner of General solid waste cell.
52	Leachate Quality Monitoring Restricted Waste Cell A5B - primary layer	Leachate monitoring point labelled "A5BL1" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located W corner of Cell A5B.

53	Leachate Quality Monitoring Restricted Waste Cell A5B - secondary layer	Leachate monitoring point labelled "A5BL2" on map titled “SITA Australia – Elizabeth Drive Landfill – EPL 4068 – Monitoring Locations - Figure 1 - Rev A” prepared by GHD Pty Ltd, dated August 2012. Located W corner of Cell A5B.

3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Concentration limits

L2.1 For each monitoring/discharge point or utilisation area specified in the table\s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L2.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

L2.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\s.

L2.4 Water and/or Land Concentration Limits

POINT 13,15,34,35

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Ammonia	milligrams per litre				0.9
Total suspended solids	milligrams per litre				50

L3 Waste

L3.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled “Waste” and meeting the definition, if any, in the column titled

"Description" in the table below.
Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.
Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.
This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	General solid waste (non-putrescible)	As defined in Schedule 1 of the POEO Act, as in force from time to time	Waste disposal (application to land)	Must only be disposed of in general solid waste (non-putrescible) landfill cells.
NA	General solid waste (non-putrescible)	Wastes assessed as General Solid Waste (non-putrescible) which are also subject to general or specific immobilisation approvals which have a restriction that they may only be disposed of at waste disposal facilities which have currently operating leachate collection systems.	Waste disposal (application to land)	Must only be disposed of in general solid waste (non-putrescible) landfill cells.
NA	Asbestos waste	As defined in Schedule 1 of the POEO Act, as in force from time to time	Waste disposal (application to land)	Must only be disposed of in general solid waste (non-putrescible) landfill cells.
NA	Waste tyres	As defined in Schedule 1 of the POEO Act, as in force from time to time	Waste disposal (application to land)	Must only be disposed of in general solid waste (non-putrescible) landfill cells.
NA	Restricted solid waste	As defined in Schedule 1 of the POEO Act, as in force from time to time	Waste disposal (application to land)	Must only be disposed of in restricted solid waste landfill cells.
NA	Restricted solid waste	Wastes assessed as Restricted Solid Wastes which are also subject to general or specific immobilisation approvals which have a restriction that they may only be disposed of at	Waste disposal (application to land)	Must only be disposed of in restricted solid waste landfill cells.

		waste disposal facilities which have currently operating leachate collection systems.		
NA	Restricted solid waste	Waste that is subject to specific immobilisation approval number 2010-S-08	Waste disposal (application to land)	Waste must be handled and disposed of in accordance with the conditions set out in specific immobilisation approval number 2010-S-08. Must only be disposed of in the monocell in the restricted solid waste landfill Cell A5.
NA	AWT outputs	Mixed waste organic outputs and source separated organic outputs sourced from the SITA SAWT facility	Waste storage	Must only be stored on the maturation pad as shown hatched in red on the plan: "Temporary Storage Pad - General Layout" prepared by GHD dated December 2010 (SK001).
NA	Waste	Any waste received on site that is below licensing thresholds in Schedule 1 of the POEO Act, as in force from time to time	-	NA

Tyres

L3.2 For the purposes of this condition:

a) tyres are taken to be shredded only if the tyres are in pieces measuring no more than 250 mm in any direction; and
b) domestic load means a load containing no more than 5 tyres having a diameter of less than 1.2 metres.

L3.3 The licensee must not dispose of any tyre at the premises unless:

a) the tyre has a diameter of 1.2 metres or more; and/or
b) the tyre has been shredded or had its walls removed; and/or
c) the tyre was delivered to the premises as part of a domestic load.

L3.4 Tyres stockpiled on the premises must:

a) not exceed fifty (50) tonnes of tyres at any one time; and
b) be located in a clearly defined area away from the tipping face; and
c) be managed to control vermin; and
d) be managed to prevent any tyres from catching fire.

Stockpiles

L3.5 The volume of unshredded and shredded garden waste and wood waste stockpiled at the Premises must not exceed 2,000 cubic metres (m3) at any one time.

L3.6 The volume of demolition material, concrete, broken tiles, blast furnace slag, and bricks stored or stockpiled for the purpose of landfill operations must not exceed 2,000 cubic metres (m3) at any one time.

L4 Noise limits

L4.1 Noise from the premises must not exceed:

a) an LA10(15 minute) noise emission criterion of 50 dB(A) during the day (7am to 10pm);
b) an LA10(15 minute) noise emission criterion of 45 dB(A) during the night (10pm to 7am);

except as expressly provided by this licence.

L4.2 Noise from the premises is to be measured at the most affected point on or within the residential property boundary to determine compliance with condition L4.1. If the most affected residential property boundary is greater than 30 metres from the premises, then the noise is to be measured at any point 30 metres from the nearest residence or noise sensitive area within the vicinity of the premises to determine compliance with condition L4.1. If the noise is substantially tonal, repetitive, frequency varying, or impulsive in character, 5 dB(A) must be added to the measured level for each characteristic, up to a maximum of 10dB(A)

L5 Blasting

L5.1 The overpressure level from blasting operations on the premises must not exceed:

a) 115 dB (Lin Peak) for more than 5% of the total number of blasts over the reporting period; and
b) 120dB (Lin Peak) at any time.

L5.2 Noise from blasting operations at the premises is to be measured at the most affected residential property, or if this is more than 30 metres from the residence, at the most affected point 30 metres from the residence, or other noise sensitive, or other noise sensitive areas in the vicinity of the premises, to determine compliance with condition L5.1.

L5.3 All blasting at the premises must only be conducted between the following hours: 9:00am to 4:00pm Monday to Friday, and at no time on Saturdays, Sundays or Public Holidays.

Ground vibration

L5.4 Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5mm/sec for more than five percent of the total number of blasts over a reporting period of this licence; and 10mm/s at one time.

L5.5 Vibration from blasting operations at the premises is to be measured at the most affected point residential property boundary; or if this is more than 30 metres from the residence, at the most affected point 30 metres from the residence or other noise sensitive area in the vicinity of the premises, to determine compliance with L5.4.

L6 Hours of operation

L6.1 All quarrying and waste compaction activities at the premises must only be conducted between the following hours: 7.00am to 6.00pm Monday to Friday; 7.00am to 5.00pm Saturdays; and 8.00am to 5.00pm Sundays and Public Holidays.

L6.2 All waste receipt activities at the premises must only be conducted between the following hours: 6.00am to 6.00pm Monday to Friday; 7.00am to 5.00pm Saturdays; and 8.00am to 5.00pm Sundays and Public Holidays.

L7 Potentially offensive odour

L7.1 No condition of this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.
This includes:
a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O1.2 All operations and activities occurring at the premises must be carried out in a manner that will prevent and minimise fire at the premises.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
a) must be maintained in a proper and efficient condition; and
b) must be operated in a proper and efficient manner.

O3 Dust

O3.1 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.

O4 Emergency response

O4.1 The licensee must maintain, and implement as necessary, a current emergency response plan for the premises. The licensee must keep the emergency response plan on the premises at all times. The emergency response plan must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. If a current emergency response plan does not exist at the date on which this condition is attached to the licence, the licensee must develop an emergency response plan within three months of that date.

O5 Processes and management

O5.1 The licensee must take all practicable steps to control entry to the premises.

O5.2 Waste screening protocols for all waste must, at a minimum, be in accordance with Sections 3.1.5, 3.1.7 and 3.2.3, of the "Elizabeth Drive Landfill's Draft Management Manual Edition 1, Amendment 3, January 1998" (LEMP).

O6 Waste management

O6.1 There must be no incineration or burning of any waste at the premises.

Covering of waste

O6.2 Cover material must be:
a) Daily cover
Daily cover material must be either:
i) virgin excavated natural material (VENM); or
ii) approved alternative daily cover (ADC).
Daily cover material must be applied to a minimum depth of 15 centimetres over all exposed landfilled waste prior to ceasing operations at the end of each day.
b) Intermediate cover
Virgin excavated natural material (VENM) must be applied to a depth of 30 centimetres over surfaces of the landfilled waste at the premises which are to be exposed for more than 90 days.
c) Cover material stockpile

At least two weeks cover material must be available at the premises under all weather conditions. This material may be won on site, or alternatively a cover stockpile must be maintained adjacent to the tip face.

O6.3 For the purposes of condition O6.2 (a) (ii) the approved ADC is ConCover that achieves the performance criteria specified in Benchmark Technique 33 of the NSW EPA Solid Landfill Guidelines. This ADC is not approved for use on the Restricted Solid Waste Landfill Cells.

O6.4 Where wastes are received at the premises for purposes of storage or processing, or transfer to another premises, then such wastes are not required to be covered on a daily basis provided that:

a) such wastes are stored and managed so as not cause or be likely to cause any off-site environmental effects;
b) such wastes are stored in a clearly defined area of the premises away from the tipping face.

General Solid Waste (non-putrescible) Landfills Cells - Leachate Management

O6.5 A leachate barrier system and leachate collection system must be installed in accordance with Appendix A- Benchmark Techniques 1 and 2 of NSW EPA Solid Landfill Guidelines.

O6.6 Leachate in any sump must not exceed a level that is equivalent to a saturated leachate depth of 300mm above the liner floor.

O6.7 The licensee must have all leachate re-injection areas in the general solid waste (non-putrescible) landfill cells, bunded at all times to contain the leachate.

O6.8 The licensee must manage the disposal of waste at the premises in accordance with the progressive filling plan as specified in Section 1.7.5 of the LEMP.

Restricted Solid Waste Cells - Leachate Management System

O6.9 All dedicated restricted solid waste cells must have a primary, secondary and tertiary leachate collection and conveyance system (LCCS), Flexible Membrane Liner, Fibre-reinforced Geosynthetic Clay Liner and re-compacted clay liner.

O6.10 The primary and secondary LCCS must be:
a) kept operational for a period at least up to the end of the post-closure care period of the landfill; and
b) chemically resistant to the chemicals is solution in the landfill leachate.

O6.11 The depth of leachate in the primary LCCS must not exceed 300 mm.

O6.12 All liquids extracted from the primary and secondary LCCS must be deemed to be leachate.

O6.13 Only leachate which has originated from the restricted solid waste cells may be re-circulated into the restricted solid waste cells.

Restricted Solid Waste Landfill Cells - Height Limit

O6.14 The finished surface or any intermediate surface for landfill Cells A3, A4 and A5 must be less than 25 metres above the secondary LCCS.

Note: Landfill Cells A3, A4 and A5 are as described in the documents “Variation to Construction of the industrial Waste Cell Lining System, Elizabeth Drive Landfill – Parsons Brinckerhoff Australia Pty Ltd, 4 December 2002” and “Elizabeth Drive Landfill – Specification for Lining Works, Cell A3 – Parsons Brinckerhoff Australia Pty Ltd, 4 December 2002” and “SITA Elizabeth Drive Landfill Licence Variation Application (Industrial Waste Cell A5)” – Maunsell Australia Pty Ltd - 16 January 2008.

Restricted Solid Waste Cells - Final Capping Specifications

O6.15 The completed dedicated restricted solid waste landfill cells must have a final capping comprising a bearing layer, overlaid by a composite liner system, overlaid by a middle drainage layer, and overlaid by a vegetated top cover.

O6.16 The bearing layer must comprise the 450mm layer of intermediate and daily cover.

O6.17 The composite liner system must consist of a GCL of a permeability to water of less than 10-11 m/s, laid over a foundation layer of re-compacted clay at least 600 mm in thickness, and with a permeability to water of less than 10-9 m/s. The re-compacted clay must be placed in layers with a maximum thickness of 300 mm. Each successive lift must be of the same material and the surface of each underlying layer must be scoured to prevent extreme permeability due to laminations between layers. The final grade of the composite liner system must be not less than 2 per cent at any point of measurement.

O6.18 A middle drainage layer with a permeability to water of 10-3 m/s must be placed over the composite liner system. The drainage layer must not be less than 300 mm in true thickness. The drainage media must have a sufficiently large void space to drain the runoff effectively and efficiently, and to prevent encrustation. Gravel of suitable grade or a combination of such gravel and a geonet must be used.

O6.19 A revegetation layer of a depth of not less tht 1 metre must be placed over the drainage layer. Plants selected for revegetation must have root systems that will not penetrate beyond the revegetation layer or block the drainage layer. The final grade of the vegetative layer should be between 3 and 5 per cent.

General Solid Waste (Non-Putrescible) Waste Landfill Cells - Final Capping

O6.20 The final capping of the general solid waste (non-putrescible) landfill cells must consist of a seal bearing layer of no less than 300mm as proposed in the document titled “SITA Environmental Solutions – Report for Elizabeth Drive Landfill – Final Capping Layer Design” prepared by GHD Pty Ltd on behalf of SITA Australia Pty Ltd (dated November 2006).

O6.21 The final capping of the general solid waste (non-putrescible) landfill cells must consist of a sealing layer of at least 500mm of compacted clay or shale having a permeability less than k =1 x 10 -8 ms-1 as described in the NSW EPA Solid Landfill Guidelines.

O6.22 The final capping of the general solid waste (non-putrescible) landfill cells must consist of a revegetation layer at least 300mm thick as proposed in the document titled “SITA Environmental Solutions – Report for Elizabeth Drive Landfill – Final Capping Layer Design” prepared by GHD Pty Ltd on behalf of SITA Australia Pty Ltd (November, 2006). The revegetation layer must meet Australian Standard for composts and soil conditioners AS4454-2003 (unrestricted).

O6.23 The final capping of the general solid waste (non-putrescible) landfill cells must commence within 6 months of final ladform contours for waste being achieved for each waste cell and be completed within 12

months.

O6.24 The licensee must undertake permeability tests at a frequency of one test for every 5000 square metres of upper surface of the sealing layer of the general solid (non-putrescible) waste landfill cells in accordance with AS 1289.6.7.3 (undisturbed).

O6.25 The construction of the capping works in the general solid (non-putrescible) waste landfill cells must be supervised by a suitably qualified and experienced person (such as a chartered professional engineer with Engineers Australia).

O6.26 Within 3 months of completing the capping of the general solid (non-putrescible) waste landfill cells, the licensee must provide the EPA with a report which contains:
a) as constructed drawings prepared from field surveys which depict the bottom and top surface of the seal bearing layer, sealing layer and revegetation layer;
b) the results of the tests conducted in accordance with condition [insert relevant CQA here].
c) an assessment of the performance of the recently installed capping works.

Noise mitigation during capping activities

O6.27 During any capping activities at the premises, the licensee must implement each of the noise mitigation measures set out in Part 5 - Mitigation Measures of the report titled *Elizabeth Drive SAWT & Landfill - Cumulative Noise Assessment (Report No. 04092-L, version B) July 2009* prepared by Wilkinson Murray Pty Limited on behalf of the licensee.

Closure Plan

O6.28 The licensee must prepare and submit to the EPA, within twelve months prior to the last load of waste being landfilled, a closure plan in accordance with section 76 of the Protection of the Environment Operations Act 1997.

O7 Other operating conditions

Management of surface waters

O7.1 The surface of the landfilled area of the premises must be contoured to minimise the drainage of surface waters onto areas where waste has been landfilled, except during a rainfall event of not less than 1 in 10 year occurrence over a 24 hour period.

O7.2 Drainage from the waste facility not subject to waste disposal must be directed away from the areas at which waste is being disposed.

5 Monitoring and Recording Conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

Environment Protection Licence

M1.2 All records required to be kept by this licence must be:
a) in a legible form, or in a form that can readily be reduced to a legible form;
b) kept for at least 4 years after the monitoring or event to which they relate took place; and
c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
a) the date(s) on which the sample was taken;
b) the time(s) at which the sample was collected;
c) the point at which the sample was taken; and
d) the name of the person who collected the sample.

Requirement to keep records of restricted solid waste disposal

M1.4 The licensee must maintain records of the quantity, composition, source, and disposal locations of all consignments of restricted solid waste disposed of at the premises.

M1.5 The disposal locations must be recorded on the Australian Map Grid (AMG) and Australian Height Datum (AHD), or recorded on a grid and datum that can be readily converted to AGM and AHD.

M1.6 The recorded disposal locations must be recorded accurately with Global Positioning System (GPS).

M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Air Monitoring Requirements

POINT 5,6,7,8,9,10

Pollutant	Units of measure	Frequency	Sampling Method
Particulates - Deposited Matter	grams per square metre per month	Quarterly	Australian Standard 3580.10.1-1991

POINT 45,46,47,48,49,50,51

Pollutant	Units of measure	Frequency	Sampling Method
Carbon dioxide	percent by volume	Quarterly	Special Method 2
Methane	percent by volume	Quarterly	Special Method 2

M2.3 Water and/ or Land Monitoring Requirements

POINT 13,15,34,35

Pollutant	Units of measure	Frequency	Sampling Method
BOD	milligrams per litre	Special Frequency 1	Grab sample
Conductivity	microsiemens per centimetre	Special Frequency 1	Grab sample
Nitrogen (ammonia)	milligrams per litre	Special Frequency 1	Grab sample
Total organic carbon	milligrams per litre	Special Frequency 1	Grab sample
TSS	milligrams per litre	Special Frequency 1	Grab sample

POINT 16,17,18,19,20,21,22

Pollutant	Units of measure	Frequency	Sampling Method
Alkalinity (as calcium carbonate)	milligrams per litre	Every 6 months	Grab sample
Aluminium	milligrams per litre	Yearly	Grab sample
Arsenic	milligrams per litre	Yearly	Grab sample
Barium	milligrams per litre	Yearly	Grab sample
Benzene	milligrams per litre	Yearly	Grab sample
Cadmium	milligrams per litre	Yearly	Grab sample
Calcium	milligrams per litre	Every 6 months	Grab sample
Chloride	milligrams per litre	Every 6 months	Grab sample
Chromium	milligrams per litre	Yearly	Grab sample
Conductivity	microsiemens per centimetre	Every 6 months	Grab sample
Copper	milligrams per litre	Yearly	Grab sample
Dissolved Oxygen	milligrams per litre	Every 6 months	Grab sample
Fluoride	milligrams per litre	Every 6 months	Grab sample
Iron	milligrams per litre	Yearly	Grab sample
Lead	milligrams per litre	Yearly	Grab sample
Magnesium	milligrams per litre	Every 6 months	Grab sample
Manganese	milligrams per litre	Yearly	Grab sample
Mercury	milligrams per litre	Yearly	Grab sample
Nickel	milligrams per litre	Yearly	Grab sample
Nitrate	milligrams per litre	Every 6 months	Grab sample
Nitrite	milligrams per litre	Every 6 months	Grab sample
Nitrogen (ammonia)	milligrams per litre	Quarterly	Grab sample
Nitrogen (total)	milligrams per litre	Every 6 months	Grab sample
pH	pH	Every 6 months	Grab sample

POINT 16

Pollutant	Units of measure	Frequency	Sampling Method
Phenols	milligrams per litre	Yearly	Grab sample

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POINT 16,17,18,19,20,21,22

Pollutant	Units of measure	Frequency	Sampling Method
Phosphorus (total)	milligrams per litre	Every 6 months	Grab sample
Polycyclic aromatic hydrocarbons	milligrams per litre	Yearly	Grab sample
Potassium	milligrams per litre	Every 6 months	Grab sample
Redox potential	millivolts	Every 6 months	Grab sample
Selenium	milligrams per litre	Every 6 months	Grab sample
Silver	milligrams per litre	Every 6 months	Grab sample
Sodium	milligrams per litre	Every 6 months	Grab sample
Standing Water Level	metres	Continuous	Continuously
Sulfate	milligrams per litre	Every 6 months	Grab sample
Total organic carbon	milligrams per litre	Quarterly	Grab sample

POINT 16

Pollutant	Units of measure	Frequency	Sampling Method
Total petroleum hydrocarbons	milligrams per litre	Yearly	Grab sample

POINT 16,17,18,19,20,21,22

Pollutant	Units of measure	Frequency	Sampling Method
Zinc	milligrams per litre	Yearly	Grab sample

POINT 17

Pollutant	Units of measure	Frequency	Sampling Method
Phenols	milligrams per litre	Every 6 months	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Every 6 months	Grab sample

POINT 18

Pollutant	Units of measure	Frequency	Sampling Method
Phenols	milligrams per litre	Yearly	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Yearly	Grab sample

POINT 19

Pollutant	Units of measure	Frequency	Sampling Method
Phenols	milligrams per litre	Yearly	Grab sample

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Total petroleum hydrocarbons	milligrams per litre	Yearly	Grab sample

POINT 20

Pollutant	Units of measure	Frequency	Sampling Method
Phenols	milligrams per litre	Yearly	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Every 6 months	Grab sample

POINT 21

Pollutant	Units of measure	Frequency	Sampling Method
Phenols	milligrams per litre	Yearly	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Yearly	Grab sample

POINT 22

Pollutant	Units of measure	Frequency	Sampling Method
Phenols	milligrams per litre	Every 6 months	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Yearly	Grab sample

POINT 23,24,25

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Quarterly	Grab sample
Conductivity	microsiemens per centimetre	Quarterly	Grab sample
Nitrogen (ammonia)	milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	Grab sample
Total organic carbon	milligrams per litre	Quarterly	Grab sample
Total suspended solids	milligrams per litre	Quarterly	Grab sample

POINT 26,27,28,29,36,37,38,39,40,41,42,43,44,52,53

Pollutant	Units of measure	Frequency	Sampling Method
Adsorbable Organic Halogens	milligrams per litre	Quarterly	Grab sample
Alkalinity (as calcium carbonate)	milligrams per litre	Quarterly	Grab sample
Aluminium	milligrams per litre	Quarterly	Grab sample
Arsenic	milligrams per litre	Quarterly	Grab sample
Barium	milligrams per litre	Quarterly	Grab sample
Benzene	milligrams per litre	Every 6 months	Grab sample

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Bicarbonate	milligrams per litre	Quarterly	Grab sample
Biochemical oxygen demand	milligrams per litre	Quarterly	Grab sample
Cadmium	milligrams per litre	Quarterly	Grab sample
Calcium	milligrams per litre	Quarterly	Grab sample
Chemical oxygen demand	milligrams per litre	Yearly	Grab sample
Chloride	milligrams per litre	Quarterly	Grab sample
Chlorinated Hydrocarbons	milligrams per litre	Every 6 months	Grab sample
Chromium	milligrams per litre	Quarterly	Grab sample
Conductivity	microsiemens per centimetre	Quarterly	Grab sample
Copper	milligrams per litre	Quarterly	Grab sample
Dissolved Oxygen	milligrams per litre	Quarterly	Grab sample
Fluoride	milligrams per litre	Quarterly	Grab sample
Lead	milligrams per litre	Quarterly	Grab sample
Magnesium	milligrams per litre	Quarterly	Grab sample
Manganese	milligrams per litre	Quarterly	Grab sample
Mercury	milligrams per litre	Quarterly	Grab sample
Nickel	milligrams per litre	Every 6 months	Grab sample
Nitrate	milligrams per litre	Quarterly	Grab sample
Nitrite	milligrams per litre	Quarterly	Grab sample
Nitrogen (ammonia)	milligrams per litre	Quarterly	Grab sample
Nitrogen (total)	milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	Grab sample
Phosphorus (total)	milligrams per litre	Quarterly	Grab sample
Polycyclic aromatic hydrocarbons	milligrams per litre	Every 6 months	Grab sample
Potassium	milligrams per litre	Quarterly	Grab sample
Redox potential	millivolts	Quarterly	Grab sample
Selenium	milligrams per litre	Yearly	Grab sample
Silica	milligrams per litre	Yearly	Grab sample
Silver	milligrams per litre	Yearly	Grab sample
Sodium	milligrams per litre	Quarterly	Grab sample
Standing Water Level	metres	Continuous	Continuously
Sulfate	milligrams per litre	Quarterly	Grab sample
Tin	milligrams per litre	Every 6 months	Grab sample
Total dissolved solids	milligrams per litre	Quarterly	Grab sample
Total organic carbon	milligrams per litre	Quarterly	Grab sample
Total Phenolics	milligrams per litre	Quarterly	Grab sample
Zinc	milligrams per litre	Quarterly	Grab sample

POINT 31,33

Pollutant	Units of measure	Frequency	Sampling Method

BOD	milligrams per litre	Quarterly	Grab sample
Conductivity	milligrams per litre	Quarterly	Grab sample
Nitrogen (ammonia)	milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	Grab sample
Total organic carbon	milligrams per litre	Quarterly	Grab sample
Total suspended solids	milligrams per litre	Quarterly	Grab sample

M2.4 For the purpose of the tables above, Special Frequency 1 means collection of samples:

a) on the first day of the authorised discharge from Points 13, 15 and/or 34, and at least once every calendar month thereafter; and/or
b) on the first day of each discharge from Points 13, 15 and/or 34, that is occurring as a result of a rainfall event at the premises exceeding a total of 48 millimetres over any consecutive five day period.

M2.5 The licensee must monitor the leachate level continuously at Points 26, 28, 29 and 30.

M2.6 For the purpose of the tables above, Special Frequency 2 means subsurface gas monitoring must be undertaken in accordance with Benchmark Techniques 16 of NSW EPA (1996) "Environmental Guidelines: Solid Waste Landfills".

Groundwater monitoring - Notification of exceedances

M2.7 In the event that monitoring of groundwater monitoring bores required under condition M2.1 of the licence detects ammonia in the groundwater at a concentration above 15mg/L in any of the points (EPA identification no.): 16, 17, 18, 19, 20, 21, and 22, the licensee must send written notification to Manager Waste Operations within 14 days of monitoring results becoming available.

M2.8 The licensee must monitor the depressurised groundwater from the general solid (non-putrescible) waste cells. If the depressurised groundwater detects ammonia at a concentration above 15mg/L, the licensee must send written notification to Manager Waste Operations within 14 days of the monitoring results becoming available.

M3 Testing methods - concentration limits

M3.1 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:
a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or
b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or
c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the

Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

Note: The *Protection of the Environment Operations (Clean Air) Regulation 2010* requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".

M4 Weather monitoring

M4.1 The licensee must monitor:

a) daily wind speed and direction; and
b) daily rainfall.

M5 Recording of pollution complaints

M5.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M5.2 The record must include details of the following:
a) the date and time of the complaint;
b) the method by which the complaint was made;
c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
d) the nature of the complaint;
e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
f) if no action was taken by the licensee, the reasons why no action was taken.

M5.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M5.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M6 Telephone complaints line

M6.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M6.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M6.3 The preceding two conditions do not apply until 3 months after:
a) the date of the issue of this licence or
b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was

served on the licensee under clause 10 of that regulation.

M7 Other monitoring and recording conditions

Recording of fires

M7.1 The licensee or its employees or agents must notify the EPA of the occurrence of all fires on the premises as soon as practical after becoming aware of the fire.

M7.2 The licensee must record the following data for every fire at the premises:

a) time and date that the fire was started;
b) time and date that the fire was either burnt-out or extinguished;
c) location of the fire;
d) prevailing weather conditons; and
e) observations made with regard to smoke detection and disperison.

Noise monitoring

M7.3 Noise generated from the premises expressed as LA10(15 minute) must be measured at the three nearest affected residents every 12 months over a full working day.

Landfill gas monitoring

M7.4 Landfill gas monitoring must be undertaken in accordance with the Benchmark Techniques 15-19 of the NSW EPA (1996) "Environmental Guidelines: Solid Waste Landfills".

M7.5 If the subsurface or enclosed space gas monitoring detects methane concentrations above 1.25% (v/v), the licensee must:

a) notify the EPA within 24 hours;
b) increase the frequency of monitoring to daily until advised otherwise in writing by the EPA; and
c) submit a written assessment to the EPA within 14 days of the incident becoming known to the licensee; the report must detail the emissions, and the management controls implemented (or proposed to be implemented), to prevent further emissions.

Leachate monitoring in restricted solid waste cells

M7.6 The licensee must monitor for the presence of leachate in secondary and tertiary LCCS drainage layers in all restricted solid waste landfill cells . If leachate is detected, the licensee must immediately take action in accordance with the ‘Leak Response Plan’ detailed in Part (e) of the licensee’s letter to the EPA dated 24 July 2000.

6 Reporting Conditions

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R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
a) a Statement of Compliance; and
b) a Monitoring and Complaints Summary.
At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

R1.3 Where this licence is transferred from the licensee to a new licensee:
a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

R1.7 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
a) the licence holder; or
b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R1.8 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R2 Notification of environmental harm

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
a) where this licence applies to premises, an event has occurred at the premises; or
b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:
a) the cause, time and duration of the event;
b) the type, volume and concentration of every pollutant discharged as a result of the event;
c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

7 General Conditions

G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the

premises.

8 Special Conditions

E1 Financial assurance

E1.1 A financial assurance, in favour of the EPA, in the amount of one million, two hundred and fifty thousand dollars ($1,250,000) must be maintained during the operation of the facility and thereafter until such time as the EPA is satisfied that the premises is environmentally secure.

This assurance must be replenished to the full amount should the EPA have reason to call up the assurance, or any part thereof, to correct environmental problems which have not been remedied by the occupier upon being given notice to do so.

Failure to maintain the assurance at the full amount will result in suspension of this licence.

E2 Construction of General Solid Waste (non-putrescible) Landfill Cell E4

E2.1 The licensee must construct general solid waste Cell E4 in accordance with the design, specifications and procedures detailed in the report titled *"Sita Australia Elizabeth Drive Landfill, Cells E2, E3 and E4 Specification, SLR Consulting Australia Pty Ltd, Report Number:10887, 26 March 2012." ("Report Number 10887, 26 March 2012")*

E2.2 Within two (2) months of the completion of the construction of the floor of Cell E4, the licensee must provide the EPA with a Construction Quality Assurance Report ("the CQA Report") which provides the details of the CQA testing results and procedures proposed in Report Number 10887, 26 March 2012.

E2.3 The licensee must not dispose of waste in Cell E4 unless the licensee has received approval in writing from the EPA to do so.

E3 Construction of the Monocell in Cell A5

E3.1 Within three months of completion of construction of the cap of the Cell A5 monocell, the licensee must provide the EPA with a Construction Quality Assurance Report ("the CQA Report") which provides the details of the CQA testing results procedures proposed in the Monocell Report. The CQA report must include an 'as built' survey of the completed monocell.

E4 Construction and Interface Capping for Restricted Solid Waste Cells A6 and A7

Restricted Solid Waste Cells A6 and A7 - Construction

E4.1 The floor of the restricted solid waste cells A6 and A7 must comprise from bottom up of the following:
a) groundwater drainage system consisting of perforated pipework within aggregate filled trenches;

b) a 900mm thick clay liner with a nominal permeability less than 10-9m/s;
c) a leak detection drainage geo composite (tri planar geonet with a non-woven geotextile bonded to both sides);
d) geosynthetic clay liner with a permeability less than 5 x 10-11m/s;
e) 2mm textured HDPE geo membrane;
f) protection geotextile (BIDM A75 or equivalent);
g) leachate collection and conveyance system consisting of a leachate drainage aggregate with a permeability greater than 10-3m/s and a system of SDR11 DN200 PE pipes; and
h) separation geotextile.

E4.2 The sidewalls of the restricted solid waste cells A6 and A7 must comprise of the following:
a) 900 mm thick clay liner with a nominal permeability less than 10-9 m/s;
b) leak detection drainage geo composite (a tri planar geonet with a non-woven geotextile bonded to both sides);
c) geosynthetic clay liner with a permeability of less than 5 x 10-11m/s;
d) 2mm single side textured HDPE geo membrane;
e) protection geotextile (BIDM A75 or equivalent);
f) drainage geo composite (a tri planar geonet with a non-woven geotextile bonded to one side); and
g) a sacrificial geomembrane.

E4.3 The licensee must construct the floor liner and sidewalls of the restricted solid waste cells A6 and A7 as detailed in Condition E4.1 and E4.2 in accordance with the design, specifications and procedures detailed in the report titled “SITA Australia Pty Ltd – Specification for Elizabeth Drive Landfill - Restricted Waste Cell A6 & A7” prepared by GHD and dated December 2013.

E4.4 The licensee must implement the measures detailed in the report titled “SITA Australia Pty Ltd – Construction Quality Assurance Plan for Elizabeth Drive Landfill - Restricted Waste Cell A6 & A7” (“the CQA Plan”) prepared by GHD and dated December 2013.

E4.5 Within three (3) months of the completion of construction of restricted solid waste cells A6 and A7, the licensee must provide the EPA with the documentation outlined in Chapter 14 of the CQA Plan.

E4.6 The licensee must not dispose of waste in restricted solid waste cells A6 and A7 unless the licensee has received approval in writing from the EPA to do so.

Restricted Solid Waste Cells A6 and A7 – Interface Capping

E4.7 As filling progresses in restricted solid waste cells A6 and A7, interface capping must be installed on the western batter of the landfill waste. The interface capping must comprise of the following:
a) 300 mm thick layer of compacted soil;
b) geotextile protection layer;
c) 2 mm LLDPE geo membrane; and
d) drainage geo composite with geotextile bonded to the upper side only.

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Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 mo nths. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.

Environment Protection Licence

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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-putrescible), special waste or hazardous waste

Mr Bernie Weir

Environment Protection Authority

(By Delegation)

Date of this edition: 13-September-2001

Environment Protection Licence

Licence - 4068

End Notes

1	Licence varied by notice 1012274, issued on 22-Nov-2001, which came into effect on 17-Dec-2001.
2	Licence transferred through application 140946, approved on 04-Dec-2001, which came into effect on 04-Dec-2001.
3	Licence varied by Change of contact details, issued on 04-Mar-2002, which came into effect on 04-Mar-2002.
4	Licence varied by notice 1027794, issued on 02-Jun-2003, which came into effect on 27-Jun-2003.
5	Licence varied by notice 1052725, issued on 24-Jan-2006, which came into effect on 18-Feb-2006.
6	Licence varied by notice 1061021, issued on 12-Sep-2006, which came into effect on 12-Sep-2006.
7	Licence varied by notice 1065278, issued on 25-Oct-2006, which came into effect on 25-Oct-2006.
8	Licence varied by notice 1073171, issued on 21-Sep-2007, which came into effect on 21-Sep-2007.
9	Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
10	Licence varied by notice 1083456, issued on 13-Jan-2009, which came into effect on 13-Jan-2009.
11	Licence varied by notice 1098074, issued on 27-Feb-2009, which came into effect on 27-Feb-2009.
12	Licence varied by notice 1099619, issued on 08-May-2009, which came into effect on 08-May-2009.
13	Licence varied by notice 1104883, issued on 15-Sep-2009, which came into effect on 15-Sep-2009.
14	Licence varied by notice 1114444, issued on 28-May-2010, which came into effect on 28-May-2010.
15	Licence varied by Correction to EPA Region data record., issued on 28-Jun-2010, which came into effect on 28-Jun-2010.
16	Licence varied by correction to DECCW Region data record, issued on 07-Jul-2010, which came into effect on 07-Jul-2010.
17	Licence varied by notice 1118752, issued on 25-Aug-2010, which came into effect on 25-Aug-2010.
18	Licence varied by notice 1122735, issued on 21-Dec-2010, which came into effect on 21-Dec-2010.

Environment Protection Licence

Licence - 4068

19	Licence varied by notice 1123246, issued on 24-Dec-2010, which came into effect on 24-Dec-2010.
20	Licence varied by notice 1501920 issued on 17-Apr-2014

Appendix F: Data (QA/QC) Evaluation

DATA (QA/QC) EVALUATION

INTRODUCTION

This Data (QA/QC) Evaluation forms part of the validation process for the DQOs documented in Section 4.1 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)	DUPHLB1 (primary sample BV102)	Approximately 20% of primary samples	Total PCBs
Intra-laboratory duplicate (soil)	DUPHLC1 (primary sample CV101)	As above	Lead
Intra-laboratory duplicate (soil)	DOPDUP1 (primary sample TOPSP1)	Approximately 12% of primary samples	Heavy metals, TRH/BTEX, PAHs, OCPs, OPPs and PCBs
Inter-laboratory duplicate (soil)	TOPDUP2 (primary sample TOP3)	As above	Heavy metals, TRH/BTEX, PAHs, OCPs, OPPs and PCBs
Trip spike (soil)	TOPTS1 (14-1-19)	One per day of soil sampling	BTEX
Trip blank (soil)	TBVA (15-12-18)	One per day of soil sampling	lead
Trip blank (soil)	TOPTB1 (14-1-19)	One for the assessment to demonstrate adequacy of	BTEX

Sample Type	Sample Identification	Frequency (of Sample Type)	Analysis Performed
		storage and transport methods	

The results for the field QA/QC samples are detailed in the laboratory summary tables (Table E to Table I 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.

Trip Spikes

Acceptable targets for trip spike samples in this report will be 70% to 130%. This is in line with spike recovery limits adopted by the laboratory for organic analysis.

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.

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.

The Envirolab report comment (report No: 205470 (page 7)) stated the following for Sample 205470-7 (EIS sample ref SPV7) "*Chrysotile asbestos identified embedded in several fragments of fibre cement, it is estimated to be 14.46g/kg in 29.31g of soil (i.e. > reporting limited for methods of 0.1g/kg)".*

As indicated Table 5.2, EIS did not observe any FCF within the excavated stockpile material during sampling activities associated with validation of Area A. EIS subsequently, contacted the laboratory via email requesting clarification of the following regarding sample 205470-7:

- That the Chrysotile asbestos was identified in fragments of fibre cement and not fibre bundles in soil?; and
- An indication of the number of fibre cement fragments identified and approximate size (i.e <7mm or >7mm)?

The laboratory responded via email with the following comment "*In regards to the email sent earlier, sample 205470-7 had a single piece of fibre cement material containing Chrysotile. The approximate size was >7mm and there were no loose fibre bundles present within the soil*".

Subsequently the laboratory report was revised and re-issued (report ref: 205470, revision No: Ro1) to reflect the above. The revised laboratory report is attached in appendix B.

Laboratory PQLs

Appropriate PQLs were adopted for the analysis and all PQLs were below the SAC.

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 chromium and several PAH compounds in DOPDUP1/TOPSP1; and
- Elevated RPDs were reported for chromium, copper and several PAH compounds in TOPDUP2/TOP3.

Values outside the acceptable limits have been attributed to sample heterogeneity and the difficulties associated with obtaining homogenous duplicate samples of heterogeneous matrices. As both the primary and duplicate sample results were less than the VAC, the exceedances are not considered to have had an adverse impact on the data set as a whole.

The Envirolab report comments (report No: 205470 (page 7), 208211 (page 11) and 209474 (page 25) states that "Excessive sample volumes were provided for asbestos analysis. A portion of the supplied samples were sub-sampled according to Envirolab procedures. We cannot guarantee that these sub-samples are indicative of the entire sample". However, we note that the entire sample was considered to be representative of what was being sampled at that specific location/depth. Therefore, any sub-sampling undertaken by the laboratory due to EIS providing excessive sample volume for some asbestos samples is not considered to have adversely affected the results.

Field Blanks

During the investigation, two soil trip blanks were 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.

Trip Spikes

The results ranged from 94% to 96% and indicated that field preservation methods were appropriate.

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, duplicates and matrix spikes were not reported in some of the laboratory reports. This is not considered to have an impact on the data quality for this assessment.

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.

Appendix G: PID Calibration Documentation

AES
ACTIVE ENVIRONMENTAL SOLUTIONS

Calibration and Service Report – PID

Company:	Environmental Investigation Ser	**Manufacturer:**	RAE	**Serial #:**	110-006735
Contact:	Alistair Mitchell	**Instrument:**	MINIRAE 2000 SN: 110-006735	**Asset #:**	
Address:	JK Group PO Box 976 NORTH RYDE, NSW	**Model:**	MiniRAE 2000	**Part #:**	
		Configuration:		**Sold:**	09.03.2006
		Wireless:		**Last Cal:**	16.06.2018
Phone:	0298885000	**Network ID:**		**Job #:**	51598
Fax:		**Unit ID:**		**Cal Spec:**	
Email:	amitchell@jkgroup.net.au	**Details:**		**Order #:**	EIS PID 1

Item	Test	Pass/Fail	Comments	Serial Number
Battery	NiCd, NiMH, Dry cell, LiIon	P		
Charger	Power Supply	-		
	Cradle, Travel Charger	-		
Pump	Flow	X	Faulty - replaced	
Filter	Filter, fitting, etc	X	Fitted new Filter	002-3022-001
Alarms	Audible, visual, vibration	P		
Display	Operation	P		
Switches	Operation	P		
PCB	Operation	P		
Connectors	Condition	P		
Firmware	Version	P		
Datalogger	Operation	P		
Monitor Housing	Condition	P		
Case	Condition / Type	P		
Sensors				
PID	Lamp	P		
PID	Sensor	P		
THP	Sensor	P		

Engineer's Report

Replaced faulty pump assembly and tested operation - okay
Checked flowrate and reset stall values - okay
Checked PC communication and configuration
Unit serviced and calibrated.

JOB NO: E30259KD
LOCATION: 100 Eton Road, Lindfield, NSW

EIS

PID FIELD CALIBRATION FORM

Make: MiniRAE	Model: MiniRAE 2000	Unit: Green	Date of last factory calibration: 16/6/18
Date of calibration: 15/12/18		Name of Calibrator: MD	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: 100 ppm		Error in measured reading: ± 0 ppm	

Make: MiniRAE	Model: 2000	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: ppm		Error in measured reading: ± ppm	

Make: MiniRAE	Model: 2000	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: ppm		Error in measured reading: ± ppm	

Make: MiniRAE	Model: 2000	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: ppm		Error in measured reading: ± ppm	

Make: MiniRAE	Model: 2000	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: ppm		Error in measured reading: ± ppm	

Make: MiniRAE	Model: 2000	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: ppm		Error in measured reading: ± ppm	

Make: MiniRAE	Model: 2000	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: ppm		Error in measured reading: ± ppm	

AES
ACTIVE ENVIRONMENTAL SOLUTIONS

Calibration Certificate

Sensor	Type	Serial No.	Span Gas	Concentration	Traceability Lot #	CF	Reading	
							Zero	Span
PID	10.6 eV Lamp	1062R114600	Isobutylene	100 ppm	WO148384-1		0	100

Calibrated/Repaired by: AMEND ROSHAN KUMAR Date: 16.06.2018 Next Due: 16.12.2018

Melbourne	**Head Office**	2 Merchant Avenue	THOMASTOWN VIC 3074	T: +(613) 9464 2300	F:+ (613) 9464 3421
Sydney	S14 Lvl 2	6-8 Holden Street	ASHFIELD NSW 2131	T: +(612) 9716 5966	F:+ (612) 9716 5988
Perth	Unit 6	41 Holder Way	MALAGA WA 6090	T: +(618) 9249 5663	F:+ (618) 9249 5362
Brisbane	Unit 17	23 Ashtan Place	BANYO QLD 4014	T: +(617) 3267 1433	F:+ (617) 3267 3559

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Appendix H: EIS Waste Classification Reports Prepared for the Site

ENVIRONMENTAL INVESTIGATION SERVICES

13 November 2018
Report Ref: E30259KDlet

Department of Education
C/- Savills (Australia) Pty Ltd
Level 25, Governor Phillip Tower
1 Farrer Place
Sydney NSW 2000

Attention: Mr Chris Laity

VIRGIN EXCAVATED NATURAL MATERIAL ASSESSMENT
PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
100 ETON ROAD, LINDFIELD, NSW, 2070

1 INTRODUCTION

Savills (Australia) Pty Ltd on behalf of the Department of Education ('the client') commissioned Environmental Investigation Services (EIS)[1] to assign a waste classification to the in-situ natural soil/bedrock located at 101 Eton Road, Lindfield, NSW, 2070 ('the site'). The site location is shown on Figure 1 and sampling for the assessment was confined to the in-situ soil in the investigation area as shown on Figure 2 attached in the appendices.

EIS have been commissioned by the client to undertake a Detailed Site Investigation (DSI) and prepare a Remediation Action Plan (RAP) for the proposed Lindfield Learning Village development. The assessment of in-situ soil at the site is complete and EIS have been requested by the client to provide a Virgin Excavated Natural Material (VENM) classification for the off-site disposal of the natural material in accordance with the NSW EPA Waste Classification Guidelines - Part 1: Classifying Waste (2014)[2].

The assessment was undertaken generally in accordance with an EIS proposal (Ref: EP48173KM) of 28 September 2018 and written acceptance from Department of Education care of Savills (Australia) Pty Ltd by email of 3 October 2018.

[1] Environmental consulting division of Jeffery & Katauskas Pty Ltd (J&K)
[2] NSW EPA, (2014). *Waste Classification Guidelines, Part 1: Classifying Waste.* (referred to as Waste Classification Guidelines 2014)

Postal Address: PO Box 976, North Ryde BC NSW 1670
Tel: 02 9888 5000 • Fax: 9888 5004
EIS is a division of Jeffery and Katauskas Pty Ltd • ABN 17 003 550 801

1.1 Proposed Development Details

The proposed development includes refurbishment of the existing site and buildings for use as a primary and high school.

Excavation works are required for services and may extend to a maximum of 1m below the existing ground level.

2 SITE INFORMATION

2.1 Site Identification and Description

Table 2-1: Site Identification

Site Address:	100 Eton Road, Lindfield, NSW
Lot & Deposited Plan:	Lot 2 and Lot 4 DP1151638
Land Use:	Currently vacant and proposed primary and high school
Area Applicable to VENM Classification (m^2):	Approximately 50,000
Geographical Location (approx.):	Latitude: -33.7899690 Longitude: 151.1606190

The site is located on the crest of a hill, which in the vicinity of the site generally slopes downwards towards the south.

A walkover inspection of the site was undertaken by EIS on 15 October 2018. The inspection was limited to accessible areas of the site and immediate surrounds. An internal inspection of buildings was not undertaken. The general layout of the site at the time of the inspection is shown in Figure 2.

At the time of the assessment the internal refurbishment works were underway and excavations associated with service trenching had commenced. Signage at various locations across the site indicated that it had most recently served as the Kuring-gai campus of the University of Technology Sydney (UTS). At the time of the inspection the site consisted of a variety of multi-level brick and concrete buildings, some interconnected, surrounded by landscaped areas and bushland. Two asphaltic concrete paved car parking areas were located in the eastern section of the site. Concrete and asphaltic concrete roads and footpaths were situated at various locations around the site.

No obvious signs of potentially contaminating activities were observed. A hazardous materials storage area was observed within a ground staff works area. The storage area was located within a brick building with a concrete floor which was observed to be in good condition.

2.2 Background

EIS has previously prepared the following reports for various stages of the development:

- EIS (2017a) *Preliminary Environmental Site Assessment*[3]*,* March 2017;
- EIS (2017b) *Preliminary Stage 2 Environmental Site Assessment*[4], October 2017; and
- EIS (2018) *Remediation Action Plan*[5], August 2018.

EIS have reviewed the information in the above reports. The VENM assessment has considered a broad suite of potential contaminants as outlined in Section 4.4.

2.3 Regional Geology

The geological map of Sydney (1983)[6] indicates the site to be underlain by Hawkesbury Sandstone, which typically consists of medium to coarse grained quartz sandstone with minor shale and laminite lenses.

3 ASSESSMENT CRITERIA

3.1 NSW EPA Waste Classification Guidelines

Off-site disposal of fill, contaminated material, stockpiled soil, natural soil, rock excavated as part of the proposed development works is regulated by the Protection of the Environment Operations Act (1997)[7] and associated regulations and guidelines including the Part 1 of the Waste Classification Guidelines.

Soils are classed into the following categories based on the chemical contaminant criteria outlined in the guidelines:

Table 3-1: 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; • If TCLP ≤ TCLP1 and SCC ≤ SCC1 then treat as general solid waste

[3] EIS (2017a) *Preliminary Environmental Site Assessment for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt dated 15 March 2017)

[4] EIS (2017b) *Preliminary Stage 2 Environmental Site Assessment for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt2 dated 16 October 2017)

[5] EIS (2018) *Remediation Action Plan for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt3 dated 16 August 2018)

[6] *1:100,000 Geological Map of Sydney (Series 9130),* Department of Mineral Resources (1983)

[7] Protection of Environment Operations Act 1997 (NSW) (POEO Act 1997)

Category	Description
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. EIS note that there are no specific guideline values for VENM.

4 INVESTIGATION PROCEDURE

4.1 Subsurface Investigation and Soil Sampling

Field work for this investigation was undertaken between 15 October and 6 November 2018. Soil samples were obtained from over fifty boreholes/test pits drilled/excavated for the DSI. The sampling locations are shown on Figure 2 attached in the appendices. The investigation was limited to a maximum depth of refusal of equipment as shown on the Draft borehole/test pit logs.

The sample locations were drilled/excavated using:

- A track mounted hydraulically operated drill rig equipped with spiral flight augers. Soil samples were obtained from a Standard Penetration Test (SPT) sampler or directly from the auger when conditions did not allow use of the SPT sampler;
- A 7 tonne excavator. Soil samples were obtained directly from the excavator/backhoe bucket; or
- Hand tools (shovel) in areas that were inaccessible to the above equipment.

Soil samples were collected from the fill and natural profiles encountered during the investigation. Samples were also obtained when there was a distinct change in lithology or based on the observations made during the investigation. All samples were recorded on the Draft borehole/testpit logs attached in the appendices.

Samples were placed in glass jars with plastic caps and Teflon seals with minimal headspace. Samples for asbestos analysis were placed in zip-lock plastic bags. Sampling personnel used disposable nitrile gloves during sampling activities. The samples were labelled with the job number, sampling location, sampling depth and date.

4.2 Screening for Volatile Organic Compounds (VOCs)

A portable Photoionisation Detector (PID) was used to screen the samples for the presence of VOCs and to assist with selection of samples for further analysis for petroleum hydrocarbons. 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.

The sensitivity of the PID is dependent on the organic compound and varies for different mixtures of hydrocarbons. Some compounds give relatively high readings and some can be undetectable even though present in identical concentrations. The portable PID is best used semi-quantitatively to compare samples contaminated by the same hydrocarbon source. The PID is calibrated before use by measurement of an isobutylene standard gas. All the PID measurements are quoted as parts per million (ppm) isobutylene equivalents.

4.3 Decontamination and Sample Preservation

The sampling equipment was decontaminated using a scrubbing brush and potable water and Decon 90 solution (phosphate free detergent) followed by rinsing with potable water.

Soil samples were preserved by immediate storage in an insulated sample container with ice in accordance with AS4482.1-2005 and AS4482.2-1999[8] as summarised in the following table:

Table 4-1: Soil Sample Preservation and Storage

Analyte	Preservation	Storage
Heavy metals	Unpreserved glass jar with Teflon lined lid	Store at <4°, analysis within 28 days (mercury and Cr[VI]) and 180 days (other metals)
Hydrocarbons, pesticides and other organics	As above	Store at <4°, analysis within 14 days
Asbestos	Sealed plastic bag	None

On completion of the fieldwork, the samples were delivered in the insulated sample container to a NATA registered laboratory for analysis under standard Chain of Custody (COC) procedures.

[8] *Guide to the Sampling and Investigation of Potentially Contaminated Soil Part2: Volatile Substances,* Standards Australia, 1999 (AS 1999)

4.4 Laboratory Analysis

Samples were analysed for a range of potential contaminants based on the site information presented in Section 2.

Selected natural soil and bedrock were analysed for the following:

- Heavy metals including: arsenic, cadmium, chromium (total), copper, lead, mercury, nickel and zinc;
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Total Recoverable Hydrocarbons (TRH);
- Monocyclic aromatic hydrocarbons including benzene, toluene, ethylbenzene and xylene (BTEX);
- Organochlorine pesticides (OCPs);
- Organophosphate pesticides (OPPs); and
- Polychlorinated biphenyls (PCBs).

Samples were analysed by Envirolab Services (NATA Accreditation Number – 2901) using the analytical methods detailed in the National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013[9]). Reference should be made to the laboratory reports attached in the appendices for further information.

5 RESULTS OF THE INVESTIGATION

5.1 Subsurface Conditions

The subsurface conditions encountered generally consisted of asphaltic concrete pavement in driveway and car parking areas to a maximum depth of 0.1m, underlain by silty sand or silty clay fill material, underlain by clayey sand, sandy clay or sandstone bedrock. Reference should be made to the Draft borehole/testpit logs attached in the appendices for further details.

5.2 VOC Screening

PID soil sample headspace readings are presented in the COC documents attached in the appendices. The PID results ranged from 0ppm to 1.5ppm equivalent isobutylene. These results generally indicate a lack of PID detectable volatile organic contaminants. Regardless a number of natural samples were analysed for BTEXN.

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

5.3 Laboratory Results

The laboratory results are attached in Table A. The results for fill (designated as fill in the table) and natural soil (described using the appropriate soil type in the table) or sandstone bedrock.

EIS are of the opinion that based on the available information, visual assessment and the laboratory data that all of the natural soil/bedrock are VENM.

EIS note that there were some minor detections of heavy fraction TRH some of the surface natural soil samples, however the TRH was subsequently demonstrated to most likely be the result of natural occurring organic plant material by silica gel clean-up analysis of some representative samples at the laboratory.

6 CONCLUSIONS

6.1 Classification of Natural Soil and Bedrock

Based on the scope of work undertaken for this assessment, and at the time of reporting, EIS are of the opinion that the natural soil and bedrock to a maximum depth of 1.5m below existing ground level at the site meets the definition of **VENM** for off-site disposal or re-use purposes. VENM is considered suitable for re-use on-site, or alternatively, the information included in this report may be used to assess whether the material is suitable for beneficial reuse at another site as fill material. In accordance with Part 1 of the Waste Classification Guidelines, the VENM is pre-classified as general solid waste and can also be disposed of accordingly to a facility that is licensed to accept it.

6.2 Recommendations

The VENM classification does not include classification of the fill material in accordance with the NSW EPA Waste Classification Guidelines 2014. EIS understand that the at this point in time the fill material excavated for the service trenching works will be separated from natural soil/bedrock and temporarily stockpiled in the south section of the site. A separate Waste Classification assessment report for the fill material will be prepared shortly. Fill material and VENM must not be mixed.

Any unexpected finds encountered during the site works should be inspected by a suitably qualified contaminated land consultant[10]. In the event that the find has the potential to alter the VENM classification documented in this report, additional testing and reporting should be undertaken.

[10] EIS recommend that the consultancy engaged for the work be a member of the Australian Contaminated Land Consultants Associated (ACLCA), and/or the individual undertaking the works be certified under one of the NSW EPA endorsed certified practitioner schemes

6.3 General Information

The fill material must be disposed of to a facility licensed by the NSW EPA to accept the waste. It is the responsibility of the receiving facility to ensure that the material meets their EPA license conditions. EIS accepts no liability whatsoever for illegal or inappropriate disposal of material.

Fill and contaminated soil disposal costs are significant and may affect project viability. These costs should be assessed at an early stage of the project development to avoid significant future unexpected additional costs.

Material classed as VENM must not be mixed with any fill material (including building rubble) as this will invalidate the VENM classification. Where doubt exists about the difference between fill and VENM material an environmental/geotechnical engineer should be contacted for advice.

Section 143 of the POEO Act 1997 states that if waste is transported to a place that cannot lawfully be used as a waste facility for that waste, then the transporter and owner of the waste are each guilty of an offence. The transporter and owner of the waste have a duty to ensure that the waste is disposed of in an appropriate manner. EIS accepts no liability whatsoever for the unlawful disposal of any waste from any site.

7 LIMITATIONS

The report limitations are outlined below:

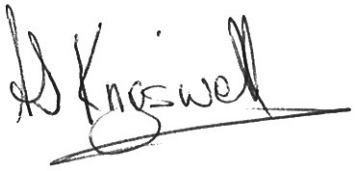
- EIS accepts no responsibility for any unidentified contamination issues at the site. Any unexpected problems/subsurface features that may be encountered during development works should be inspected by an environmental consultant as soon as possible;
- This report has been prepared based on site conditions 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;
- 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;
- Copyright in this report is the property of EIS. EIS has used a degree of care, skill and diligence normally exercised by consulting professionals in similar circumstances and locality. No other warranty expressed or implied is made or intended. Subject to payment of all fees due for the investigation, the client alone shall have a licence to use this report;
- If the client, or any person, provides a copy of this report to any third party, such third party must not rely on this report except with the express written consent of EIS; and
- Any third party who seeks to rely on this report without the express written consent of EIS does so entirely at their own risk and to the fullest extent permitted by law, EIS accepts no liability whatsoever, in respect of any loss or damage suffered by any such third party.

If you have any questions concerning the contents of this letter please do not hesitate to contact us.

Kind Regards

Mitchell Delaney
Senior Associate



Adrian Kingswell
Principal

Appendices:

Appendix A: Report Figures

Appendix B: Laboratory Summary Tables

Appendix C: Draft Borehole / Test pit Logs

Appendix D: Laboratory Report/s & COC Documents

Appendix A: Report Figures

AERIAL IMAGE SOURCE: GOOGLE EARTH PRO 7.1.5.1557
AERIAL IMAGE ©: 2015 GOOGLE INC.

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

Title: **SITE LOCATION PLAN**

Location: 100 ETON ROAD
LINDFIELD, NSW

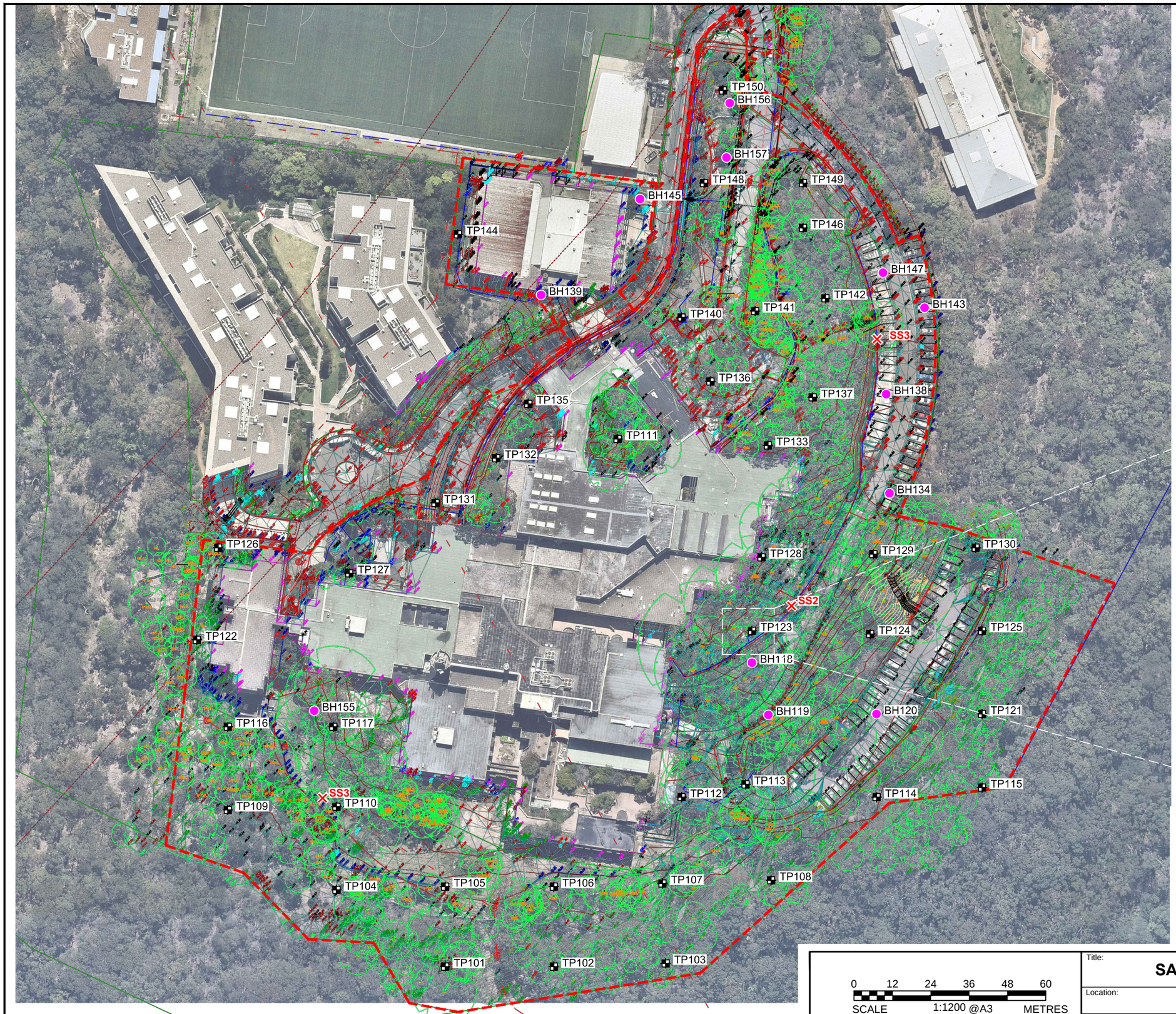
Report No: E30259KDlet

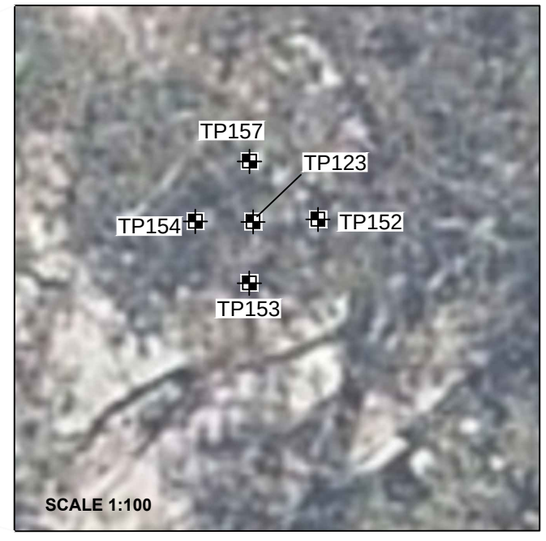
Figure No: 1

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

PLOT DATE: 13/11/2018 10:21:50 AM DWG FILE: S:\S EIS\SC EIS JOBS\30000'S\SE\30259KM LINDFIELD\CADE\30259KDLET.DWG





LEGEND

- APPROXIMATE SITE BOUNDARY
- BH BOREHOLE LOCATION
- TP TEST PIT LOCATION
- SS SURFACE SOIL SAMPLE

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM, 23 OCT 2018.

0 12 24 36 48 60
SCALE 1:1200 @A3 METRES

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

Title: **SAMPLE LOCATION PLAN**

Location: 100 ETON ROAD
LINDFIELD, NSW

Report No: E30259KDlet

Figure No: 2

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

PLOT DATE: 13/11/2018 2:48:04 PM DWG FILE: S:\S EIS\SC EIS JOBS\30000'S\E30259K\M LINDFIELD\CAD\E30259KDLET.DWG

Appendix B: Laboratory Summary Tables

Virgin Excavated Natural Material Assessment
100 Eton Road, Lindfield, NSW
E30259KDlet

EIS

TABLE A
SOIL LABORATORY RESULTS
All data in mg/kg unless stated otherwise

			HEAVY METALS								PAHs		OC/OP PESTICIDES				Total PCBs	TRH					BTEX COMPOUNDS				ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	B(a)P	Total Endosulfans	Chloropyrifos	Total Moderately Harmful	Total Scheduled		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	NSL	100	4	40	NSL	200	0.8	60	4	250	<50	<50	650		NSL		10,000	10	288	600	1,000	-
General Solid Waste SCC1			500	100	1900	NSL	1500	50	1050	NSL	200	10	108	7.5	250	<50	<50	650		NSL		10,000	18	518	1,080	1,800	-
Restricted Solid Waste CT2			400	80	400	NSL	400	16	160	NSL	800	3.2	240	16	1000	<50	<50	2600		NSL		40,000	40	1,152	2,400	4,000	-
Restricted Solid Waste SCC2			2000	400	7600	NSL	6000	200	4200	NSL	800	23	432	30	1000	<50	<50	2600		NSL		40,000	72	2,073	4,320	7,200	-
Sample Reference	**Sample Depth**	**Sample Description**																									
TP101	0.0-0.1	Fill: silty clay	<4	<0.4	5	5	33	<0.1	2	18	0.05	0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP102	0.0-0.1	Fill: silty sand	<4	<0.4	4	3	20	<0.1	1	12	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	0.6	<25	<50	170	310	480	<0.2	<0.5	<1	<3	Not Detected
TP102	0.1-0.2	Fill: clayey sand	<4	<0.4	4	2	18	<0.1	<1	10	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	110	110	<0.2	<0.5	<1	<3	Not Detected
TP103	0.0-0.1	Fill: silty clay	<4	<0.4	9	20	37	0.1	5	44	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP104	0.0-0.1	Fill: silty clay	<4	<0.4	6	5	19	<0.1	2	22	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP105	0.0-0.1	Fill: sandy gravel	<4	<0.4	5	29	4	<0.1	20	17	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP105	0.4-0.5	Sandy clay	<4	<0.4	10	12	9	<0.1	8	12	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP106	0.0-0.1	Fill: silty clay	4	<0.4	7	9	22	<0.1	5	31	<0.05	<0.05	<0.1	<0.1	<0.1	0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP106	0.6-0.7	Fill: silty clay	<4	<0.4	2	1	11	<0.1	<1	7	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP106	1.2-1.3	Sandy clay	<4	<0.4	18	<1	7	<0.1	<1	5	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP107	0.0-0.1	Fill: silty clay	<4	<0.4	13	23	93	<0.1	10	60	0.52	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	410	1800	2210	<0.2	<0.5	<1	<3	Not Detected
TP107	0.4-0.5	Fill: silty clay	<4	<0.4	10	1	10	<0.1	1	9	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP108	0.0-0.1	Fill: silty clay	<4	<0.4	8	7	18	<0.1	3	18	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP108	0.3-0.4	Fill: silty clay	<4	<0.4	53	27	20	<0.1	<1	40	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP109	0.0-0.1	Fill: silty clay	<4	<0.4	3	3	28	<0.1	1	8	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP110	0.0-0.1	Fill: silty clay	<4	<0.4	7	6	17	<0.1	5	24	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP110	0.3-0.4	Fill: clayey sand	<4	<0.4	8	3	7	<0.1	3	10	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP110	1.3-1.4	Fill: silty clay	<4	<0.4	7	2	8	<0.1	2	8	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP111	0-0.2	Silty sand	<4	<0.4	9	7	30	0.2	2	16	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	130	220	350	<0.2	<0.5	<1	<3	Not Detected
TP112	0.0-0.1	Fill: silty clay	<4	<0.4	4	5	14	<0.1	2	27	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP112	0.4-0.5	Sandy clay	<4	<0.4	7	<1	6	<0.1	1	3	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP113	0.0-0.05	Fill: silty clay	<4	<0.4	12	3	16	<0.1	2	15	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP113	0.9-1.0	Fill: silty clay	<4	<0.4	8	1	7	<0.1	<1	5	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP114	0.0-0.1	Fill: clayey sand	<4	<0.4	2	4	49	<0.1	1	6	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	280	280	<0.2	<0.5	<1	<3	Not Detected
TP115	0.0-0.1	Fill: silty sand	<4	<0.4	3	8	1800	<0.1	3	18	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.5	<25	<50	170	440	610	<0.2	<0.5	<1	<3	Not Detected
TP115	0.1-0.3	Sandy clay	<4	<0.4	4	1	15	<0.1	<1	5	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.5	<25	<50	<100	360	360	<0.2	<0.5	<1	<3	NA
TP116	0.0-0.05	Fill: silty sandy clay	<4	<0.4	4	9	66	<0.1	3	29	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	150	150	<0.2	<0.5	<1	<3	Not Detected
TP117	0.0-0.1	Fill: silty clay	<4	<0.4	9	13	26	<0.1	6	52	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH118	0-0.2	Fill: silty sandy gravel	<4	<0.4	30	35	9	0.1	41	39	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	200	270	470	<0.2	<0.5	<1	<3	Not Detected
BH119	0.15-0.35	Fill: silty sandy gravel	<4	<0.4	18	8	7	<0.1	15	14	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH119	0.6-0.8	Fill: silty sand	<4	<0.4	7	1	9	<0.1	1	9	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH119	1.3-1.5	Sandstone	<4	<0.4	9	2	10	<0.1	2	10	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
BH120	0.1-0.3	Fill: silty sand	<4	<0.4	8	3	4	<0.1	4	7	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP121	0.0-0.1	Fill: silty sand	<4	<0.4	2	5	99	<0.1	<1	5	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	130	130	<0.2	<0.5	<1	<3	Not Detected
TP122	0.0-0.1	Fill: silty sand	<4	<0.4	8	7	21	<0.1	1	19	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	130	130	<0.2	<0.5	<1	<3	Not Detected
TP123	0.0-0.1	Fill: silty clay	<4	<0.4	2	12	82	<0.1	3	35	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	4.2	<25	59	310	690	1059	<0.2	<0.5	<1	<3	Not Detected
TP123	0.2-0.3	Fill: clayey sand	<4	<0.4	2	1	15	<0.1	<1	3	<0.05	<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
TP123	0.5-0.6	Sandy clay	<4	<0.4	2	<1	4	<0.1	<1	3	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP124	0.0-0.1	Fill: silty sand	<4	<0.4	6	17	140	<0.1	3	14	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	260	260	<0.2	<0.5	<1	<3	Not Detected
TP125	0.5-0.15	Fill: clayey sand	<4	<0.4	4	12	82	<0.1	2	21	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	170	170	<0.2	<0.5	<1	<3	Not Detected
TP126	0.0-0.1	Fill: silty sand	<4	<0.4	7	9	7	<0.1	4	21	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP126	0.2-0.3	Fill: sandy clay	<4	<0.4	9	5	11	<0.1	9	19	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP127	0-0.2	Fill: silty sand	8	<0.4	15	16	35	<0.1	15	64	0.3	0.07	<0.1	<0.1	<0.1	<0.1	0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP127	0.3-0.4	Fill: sandy clay	<4	<0.4	10	5	17	<0.1	3	17	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP128	0.0-0.1	Fill: silty sand	<4	<0.4	11	7	64	<0.1	2	25	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	320	320	<0.2	<0.5	<1	<3	Not Detected
TP129	0.0-0.1	Fill: silty clay	6	<0.4	9	10	35	<0.1	6	36	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.5	<25	51	170	450	671	<0.2	<0.5	<1	<3	Not Detected
TP129	0.3-0.4	Fill: clayey sand	<4	<0.4	6	3	31	<0.1	1	6	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP129	0.95-1.0	Fill: clayey sand	<4	<0.4	4	<1	3	<0.1	<1	1	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP130	0.05-0.15	Fill: clayey sand	<4	<0.4	8	7	31	<0.1	2	20	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	100	230	330	<0.2	<0.5	<1	<3	Not Detected
TP130	0.7-0.8	Fill: clayey sand	<4	<0.4	14	5	29	<0.1	4	14	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	120	120	<0.2	<0.5	<1	<3	Not Detected
TP131	0-0.15	Fill: silty sand	6	<0.4	8	10	29	<0.1	4	38	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	190	190	<0.2	<0.5	<1	<3	Not Detected
TP132	0.0-0.1	Fill: silty sand	<4	<0.4	6	9	28	<0.1	2	35	0.66	0.1	<0.1	<0.1	<0.1	0.1	<0.1	<25	<50	<100	250	250	<0.2	<0.5	<1	<3	Not Detected
TP132	0.3-0.4	Fill: clayey sand	<4	<0.4	7	2	4	<0.1	<1	3	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP132	0.9-1.0	Clayey sand	<4	<0.4	6	<1	1	<0.1	<1	<1	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP133	0.0-0.1	Fill: silty sand	<4	<0.4	6	8	28	<0.1	3	20	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	160	160	<0.2	<0.5	<1	<3	Not Detected
TP133	0.3-0.4	Sand	<4	<0.4	<1	<1	<1	<0.1	<1	<1	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
BH134	0.1-0.3	Fill: Silty sand	<4	<0.4	13	4	6	<0.1	9	9	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP135	0-0.15	Fill: silty sand	4	<0.4	7	5	23	<0.1	2	25	8.7	0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	240	430	670	<0.2	<0.5	<1	<3	Not Detected
TP136	0.0-0.1	Fill: silty sand	<4	<0.4	3	3	19	<0.1	<1	12	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	200	200	<0.2	<0.5	<1	<3	Not Detected
TP137	0.0-0.1	Fill: silty sand	<4	<0.4	2	7	46	<0.1	2	17	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	120	120	<0.2	<0.5	<1	<3	Not Detected
BH138	0.05-0.1	Fill: silty sandy gravel	<4	<0.4	66	40	6	<0.1	71	42	0.3	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH138	0.2-0.3	Sandstone	<4	<0.4	3	<1	1	<0.1	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
BH139	0.2-0.35	Fill: silty gravelly sand	<4	<0.4	22	110	4	0.1	25	31	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP140	0.0-0.1	Fill: silty sand	<4	<0.4	7	13	24	<0.1	2	51	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	270	270	<0.2	<0.5	<1	<3	Not Detected
TP140	0.2-0.3	Clayey sand	<4	<0.4	10	2	3	<0.1	<1	9	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP141	0.0-0.1	Fill: silty sand	<4	<0.4	3	6	42	<0.1	1	12	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	100	100	<0.2	<0.5	<1	<3	Not Detected
TP141	0.3	Fill: silty sand	<4	<0.4	2	<1	2	<0.1	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	51	<100	<100	51	<0.2	<0.5	<1	<3	NA
TP142	0.0-0.1	Fill: silty sand clay	<4	<0.4	3	8	22	<0.1	2	28	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<1	<25	59	570	960	1589	<0.2	<0.5	<1	<3	Not Detected
TP142	0.2-0.3	Clayey sand	<4	<0.4	5	1	6	<0.1	<1	9	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
BH143	0.2-0.4	Silty sand	<4	<0.4	6	2	3	<0.1	3	4	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH143	0.5-0.8	Sandstone	<4	<0.4	4	<1	3	<0.1	<1	2	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP144	0-0.2	Fill: silty sand	4	<0.4	15	21	42	<0.1	5	160	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH145	0.1-0.2	Fill: sandy clayey gravel	<4	<0.4	37	35	4	<0.1	67	34	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH145	0.3-0.6	Clayey sand	<4	<0.4	7	4	2	<0.1	6	5	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP146	0.0-0.1	Fill: silty sand	<4	<0.4	4	7	41	<0.1	2	18	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	260	260	<0.2	<0.5	<1	<3	Not Detected
BH147	0.1-0.4	Silty sand	<4	<0.4	6	<1	2	<0.1	2	2	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH147	0.5-0.65	Sandstone	<4	<0.4	5	<1	8	<0.1	<1	7	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP148	0.0-0.05	Fill: silty clayey sand	<4	<0.4	5	7	21	<0.1	2	26	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	140	340	480	<0.2	<0.5	<1	<3	Not Detected
TP148	0.1-0.2	Silty sand	<4	<0.4	7	4	19	<0.1	1	11	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP149	0.0-0.1	Fill: silty sand	<4	<0.4	3	5	32	<0.1	1	14	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	160	160	<0.2	<0.5	<1	<3	Not Detected
TP149	0.3-0.4	Sandy clay	<4	<0.4	9	<1	2	<0.1	<1	2	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP150	0.0-0.1	Fill: sandy clay	<4	<0.4	13	11	18	<0.1	3	23	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	200	200	<0.2	<0.5	<1	<3	Not Detected
TP151	0.1-0.15	Fill: silty sand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP152	0-0.2	Fill: silty sand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP153	0-0.1	Fill: silty sand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP153	0.1-0.2	Fill: silty sand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP154	0-0.15	Fill: silty sand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DUPMDE	NA	soil	<4	0.6	10	49	170	0.1	7	180	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
Total Number of samples			83	83	83	83	83	83	83	83	83	83	60	60	60	60	65	83	83	83	83	83	83	83	83	83	65
Maximum Value			8	0.6	66	110	1800	0.2	71	180	8.7	0.7	<PQL	<PQL	<PQL	0.1	4.2	<PQL	59	570	1800	2210	<PQL	<PQL	<PQL	<PQL	NC

Appendix C: Draft Borehole / Test pit Logs

Note: A number of the Boreholes were tespits refer to Method on individual logs.

RW

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 101 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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	■		■							FILL: Silty clay, low to medium plasticity, brown, trace of root fibres.	w<PL			
									SC	Clayey SAND: fine to medium grained, yellow brown, trace of ironstone gravel.	M			
	■		■				0.5							
										END OF ENVIRONMENTAL HOLE AT 0.60 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 102 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P./A.M.

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	■		■							FILL: Silty sand, fine to medium grained, brown, trace sandstone, ironstone gravel and root fibres.	D			MULCH COVER
										FILL: Clayey sand, fine to medium grained, yellow brown, trace sandstone gravel, concrete, root fibres, ash and glass.	W			
	■		■				0.5		CL-Cl	Sandy CLAY: low to medium plasticity, yellow brown, trace of sandstone gravels.	w~PL			
										END OF ENVIRONMENTAL HOLE AT 0.80 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 103 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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										FILL: Silty clay, low to medium plasticity, brown, traces of igneous and river gravel.	w>PL			PLASTIC COVER
									SC	Clayey SAND: fine to medium grained, grey mottled yellow brown.	W			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.50 m				REFUSAL ON INFERRED SANDSTONE
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 104 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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	■		■							FILL: Silty clay, low to medium plasticity, brown, trace of organic material and root fibres.	w<PL			
	■		■						CL-CI	Sandy CLAY: low to medium plasticity, yellow brown.	w<PL			
										END OF ENVIRONMENTAL HOLE AT 0.30 m				
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 105 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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										FILL: Sandy gravel, fine to coarse grained, grey, fine to medium grained, brown.	M			GRASS COVER
										FILL: Sandy clay, low to medium plasticity, yellow brown, trace of ironstone and igneous gravel.	w>PL			
							0.5		CL-CI	Sandy CLAY: low to medium plasticity, yellow brown.	w>PL			
							1.0			END OF ENVIRONMENTAL HOLE AT 1.00 m				REFUSAL ON INFERRED SANDSTONE
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 106 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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	■		■				0.5			FILL: Silty clay, low to medium plasticity, brown, trace of igneous gravel and slag.	w<PL			GRASS COVER
										FILL: Silty clay, low to medium plasticity, light brown and grey, trace of sandstrne gravel and ash.				
	■		■				1.0		CL-CI	Sandy CLAY: low to medium plasticity, orange brown.	w<PL			
	■		■				1.5			END OF ENVIRONMENTAL HOLE AT 1.30 m				REFUSAL ON INFERRED SANDSTONE
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 107 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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	■									FILL: Silty clay, low to medium plasticity, brown, with river gravel, trace of root fibres.	w>PL			GRASS COVER
							0.5			FILL: Silty clay, low to medium plasticity, grey mottled light brown, trace of ironstone and sandstone gravel, roots and ash.				
	■		■						CL-CI	Sandy CLAY: low to medium plasticity, light brown.	w<PL			
	■		■				1.0			END OF ENVIRONMENTAL HOLE AT 0.90 m				REFUSAL ON INFERRED SANDSTONE
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 108 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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	■		■							FILL: Silty clay, low to medium plasticity, brown, trace of sandstone gravel.	w>PL			MULCH COVER
	■		■				0.5			FILL: Silty clay, low to medium plasticity, brown motlted grey, trace of brick, sandstone gravel and plastic.	w<PL			
	■		■							FILL: Silty clay, low to medium plasticity, brown mottled light brown, trace of sandstone.				
							1.0			END OF ENVIRONMENTAL HOLE AT 0.90 m				REFUSAL ON INFERRED SANDSTONE
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 109 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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	■		■							FILL: Silty sand, fine to medium grained, brown, trace of clay fines and root fibres.	M			MULCH COVER
									CL-CI	Sandy CLAY: low to medium plasticity, yellow brown.	w>PL			
	■		■				0.5			END OF ENVIRONMENTAL HOLE AT 0.40 m				REFUSAL ON INFERRED SANDSTONE
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 110 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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										FILL: Silty clay, low to medium plasticity, brown, trace of root fibres.	w>PL			GRASS COVER
										FILL: Clayey sand, fine to medium grained, yellow brown, trace of igneous and ironsotne gravel and ash.	M			
							0.5							
										FILL: Sandy clay, low to medium plasticity, yellow brown, trace of ironstone and sandstone gravel.	w>PL			POSSIBLY NATURAL RAIN COLLAPSING HOLE
							1.0							
										END OF ENVIRONMENTAL HOLE AT 1.40 m				REFUSAL ON INFERRED SANDSTONE
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 111 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.D.

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									SM	Silty SAND: fine to medium grained, brown, with organic matter.	D			MULCH COVER
										END OF ENVIRONMENTAL HOLE AT 0.20 m				REFUSAL ON INFERRED SANDSTONE BEDROCK

0.5
1.0
1.5
2.0
2.5
3.0

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 112 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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	■		■							FILL: Silty clay, low to medium plasticity, brown, trace of sandstone gravel.	w>PL			MULCH COVER
									CL-CI	Sandy CLAY: low to medium plasticity, yellow brown, trace of sandstone gravel.	w>PL			
	■		■				0.5							
										END OF ENVIRONMENTAL HOLE AT 0.60 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 113 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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	■		■				0.0			FILL: Silty clay, low to medium plasticity, brown, trace of igneous gravel, root fibres and ash.	w>PL w<PL			
										FILL: Silty clay, low to medium plasticity, light brown, trace of ironstone and sandstone gravel.				
										FILL: Silty clay, low to medium plasticity, orange brown, trace of ironstone gravel.				
							0.5							
	■		■				1.0			END OF ENVIRONMENTAL HOLE AT 1.00 m				
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 114 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P.

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	■		■							FILL: Clayey sand, fine to medium grained, dark brown, trace of root fibres.	M			MULCH COVER
	■		■						SC	Clayey SAND: fine to medium grained, yellow brown, trace of ironstone gravel.	M			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.30 m				REFUSAL
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 115 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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	■		■							FILL: Silty sand, fine to medium grained, grey, with organic material.	M			MULCH COVER
	■		■						CL-CI	Sandy CLAY: low to medium plasticity, yellow brown, trace of ironstone gravel.	w<PL			
										END OF ENVIRONMENTAL HOLE AT 0.20 m				REFUSAL ON INFERRED SANDSTONE
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No.
116
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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	■		■		■				CL-CI	FILL: Silty sandy clay, low to medium plasticity, brown, traces of root fibres.	w>PL			
										Sandy CLAY: low to medium plasticity, yellow brown.	w>PL			
										END OF ENVIRONMENTAL HOLE AT 0.25 m				
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 117 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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										FILL: Silty clay, low to medium plasticity, brown, trace of root fibres.	w>PL			GRASS COVER
									SC	Clayey SAND: fine to medium grained, yellow brown, trace of sandstone gravel.	M			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.50 m				REFUSAL ON INFERRED SANDSTONE
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

Borehole No. 118
1 / 1

BOREHOLE LOG

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD
Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** SPIRAL AUGER **R.L. Surface:** N/A
Date: 6/11/18 **Datum:** AHD
Plant Type: JK205 **Logged/Checked By:** M.D.

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										ASPHALTIC CONCRETE: 80mm.t				
	■		■						-	FILL: Silty sandy gravel, fine to medium grained, dark brown igneous.	XW			ROAD BASE
									-	SANDSTONE: fine to medium grained, brown.				HIGH 'TC' BIT RESISTANCE
	■		■			N > 5 12,5/ 50mm REFUSAL	0.5							
							1.0			END OF BOREHOLE AT 0.95 m				'TC' BIT REFUSAL
							1.5							
							2.0							
							2.5							
							3.0							

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

Borehole No. 119 1 / 1

BOREHOLE LOG

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD
Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** SPIRAL AUGER **R.L. Surface:** N/A
Date: 6/11/18 **Datum:** AHD
Plant Type: JK205 **Logged/Checked By:** M.D.

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										ASPHALTIC CONCRETE: 50mm.t.				
									-	FILL: Silty sandy gravel, dark grey, igneous.				ROAD BASE
						N = 31 12,17,14	0.5			FILL: Silty sand, fine to coarse grained, brown, with fine to coarse grained sandstone gravel.	D			
							1.0							
							1.5		-	SANDSTONE: fine to medium grained.	XW - DW			
							2.0							
										END OF BOREHOLE AT 2.20 m				REFUSAL
							2.5							
							3.0							

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

Borehole No. 120 1 / 1

BOREHOLE LOG

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** AHD

Plant Type: JK205 **Logged/Checked By:** M.D.

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										ASPHALTIC CONCRETE: 50mm.t.				
									-	FILL: Silty sand, fine to medium grained, brown, trace of fine to medium grained sandstone gravel.	D			
									-	SANDSTONE: fine to medium grained, brown.	XW			LOW 'TC' BIT RESISTANCE
						N=SPT 3/ 150mm REFUSAL	0.5							
							1.0			END OF BOREHOLE AT 0.85 m				'TC' BIT REFUSAL Groundwater monitoring well installed to 0.85m. Class 18 machine slotted 50mm dia. PVC standpipe 0.85m to 0.35m. Casing 0.35m to 0.0m. 2mm sand filter pack 0.85m to 0.3m. Bentonite seal 0.3m to 0.1m. Completed with a concreted gatic cover.
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 121 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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	■		■							FILL: Silty sand, fine to medium grained, grey, with clay fines trace of root fibres.	M			MULCH COVER
	■		■						CL-CI	Sandy CLAY: low to medium plasticity, yellow brown, trace of ironstone gravel.	w>PL			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.40 m				REFUSAL ON INFERRED SANDSTONE
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 122 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P./A.M.

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	■		■							FILL: Silty sand, fine to medium grained, yellow brown, trace of concrete, sandstone, ironstone gravel and root fibres.	D			MULCH COVER
	■		■						SC	Clayey SAND: fine to medium grained, yellow brown, trace of sandstone gravels.	W			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.30 m				REFUSAL
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No.
123
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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										FILL: Silty clay, low to medium plasticity, with organic material, trace of root fibres.	w<PL			MULCH COVER
										FILL: Clayey sand, fine to medium grained, brown, trace of ash.	M			
							0.5		CL-CI	Sandy CLAY: low to medium plasticity, yellow brown mottled grey.	w>PL			
										END OF ENVIRONMENTAL HOLE AT 0.60 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 124 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P.

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	■		■							FILL: Silty sand, fine to medium grained, light brown, trace of root fibres.	D			MULCH COVER
					■				CL-CI	Sandy CLAY: low to medium plasticity, yelow brown, trace of ironstone gravel.	M			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.40 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 125 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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	■		■						-	MULCH COVER				
										FILL: Clayey sand, fine to medium grained,grey, trace of ironstone and sandstone gravel and root fibres.	M			
									CL-CI	Sandy CLAY: low to medium plasticity, yellow brown, trace of ironstone gravel.	w>PL			
	■		■				0.5			END OF ENVIRONMENTAL HOLE AT 0.50 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 126 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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							0.5			FILL: Silty sand, fine to medium grained, brown, trace of root fibres.	D			GRASS COVER
										FILL: Sandy clay, low to medium plasticity, yellow brown, trace of sandstone and ironstone gravel, brick and concrete.	w<PL			
									-	SANDSTONE: yellow brown.	XW			
							1.0			END OF ENVIRONMENTAL HOLE AT 0.70 m				REFUSAL ON INFERRED SANDSTONE
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 127 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.D.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, with organic matter and clay fines.	D			MULCH COVER
										FILL: Sandy clay, low plasticity, light brown, trace of medium grained sandstone gravel and ash.	w<PL			POSSIBLY NATURAL
	■		■				0.5			END OF ENVIRONMENTAL HOLE AT 0.40 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 128

1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, with organic material, trace concrete, sandstone, igneous, ironstone gravel and root fibres.	D			MULCH COVER
										END OF ENVIRONMENTAL HOLE AT 0.10 m				REFUSAL
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Borehole No.
129
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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							0.5			FILL: Silty clay, low to medium plasticity, brown, trace of rooot fibres.	w<PL			
										FILL: Clayey sand, fine to medium grained, brown, with ironstone gravel, trace of igneous gravel.	M			
										FILL: Clayey sand, fine to medium grained, grey, trace of ironstone gravel.				
							1.0		-	SANDSTONE: fine to medium grained, brown.	XW			
										END OF ENVIRONMENTAL HOLE AT 1.00 m				
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 130 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P.

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										MULCH COVER: 0.05mm	M			MULCH COVER
										FILL: Clayey sand, fine to medium grained, yellow brown, trace of sandstone, ironstone gravels and ash.	D			
							0.5			FILL: Sandy clay, low to medium plasticity, yellow brown, trace of sandstone, ironstone gravel, root fibres and ash.	M			
							1.0							
							1.5		CL-CI	Sandy CLAY: low to medium plasticity, yellow brown.	M			
										END OF ENVIRONMENTAL HOLE AT 1.80 m				
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 131 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.D.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, with fine to medium grained, sandstone and ironstone gravel, trace of igneous, ash and organic matter.	D			MULCH COVER
							0.5			END OF ENVIRONMENTAL HOLE AT 0.15 m				REFUSAL ON INFERRED SANDSTONE BOULDER
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No.
132
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P.

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	■		■				0.0			FILL: Silty sand, fine to medium grained, dark brown, trace of sandstone gravel and root fibres.	D			GRASS COVER
										FILL: CLayey sand, fine to medium grained, yellow brown, trace of brick, sandstone, ironstone gravel and ash.				
							0.5							
	■		■						SC	Clayey SAND: fine to medium grained, yellow brown, trace of sandstone gravel.	D			
							1.0			END OF ENVIRONMENTAL HOLE AT 1.00 m				
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 133 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, trace of root fibres.	D			MULCH COVER
	■		■						SP	SAND: fine to medium grained, light grey.	D			
							0.5		-	SANDSTONE: medium to coarse grained, yellow red brown.	DW			
										END OF ENVIRONMENTAL HOLE AT 0.65 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 134 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** AHD

Plant Type: JK205 **Logged/Checked By:** M.D.

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										ASPHALTIC CONCRETE: 100mm.t				
									-	FILL: Silty sand, fine to medium grained, brown, trace of fine to medium grained sandstone gravel.	D			
									-	SANDSTONE: fine to medium grained, light brown.				
						N > 4 10,4/ 50mm REFUSAL	0.5							
										END OF ENVIRONMENTAL HOLE AT 0.70 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 135 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.D.

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									SM	Silty SAND: fine to medium grained, brown, with organic matter, trace of fine to medium grained sandstone gravel.	D			MULCH COVER
										END OF ENVIRONMENTAL HOLE AT 0.15 m				REFUSAL ON INFERRED SANDSTONE BEDROCK

0.5

1.0

1.5

2.0

2.5

3.0

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 136

1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, trace of root fibres.	D			MULCH COVER
	■								SC	Clayey SAND: fine to medium grained, yellow brown, trace of sandstone gravel and root fibres.	D			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.30 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 137 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, trace of root fibres.	D			MULCH COVER
	■		■				0.5		SP	SAND: fine to medium grained, grey, trace of sandstone gravel.	D			
										END OF ENVIRONMENTAL HOLE AT 0.65 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 138 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** AHD

Plant Type: JK205 **Logged/Checked By:** M.D.

Groundwater Record	SAMPLES ES	ASS	ASB	SAL	DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel Density	Hand Penetrometer Readings (kPa)	Remarks
DRY ON COMPLETION										ASPHALTIC CONCRETE: 50mm.t				
									-	FILL: Silty sandy gravel, dark brown, igneous gravel.	D			ROAD BASE
									-	SANDSTONE: fine to medium grained, light grey.	XW - DW			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.50 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 139 1 / 5

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 2/11/18 **Datum:** AHD

Plant Type: JK205 **Logged/Checked By:** A.C.K.

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 AUGERING ▽ COMPLETION OF AUGERING										ASPHALTIC CONCRETE: 70mm.t				
									-	FILL: Silty gravelly sand, fine to medium grained, dark grey brown, medium grained igneous gravel.	M			
									SP	SAND: fine to medium grained, light brown, trace of fine to medium grained sandstone gravel.	M			
						N=SPT 6/ 50mm REFUSAL	0.5		-	SANDSTONE: fine to medium grained, light grey and orange brown.	SW	H		HIGH 'TC' BIT RESISTANCE
							1.0							
							1.5			REFER TO CORED BOREHOLE LOG				Groundwater monitoring well installed to 15.0m. Class 18 machine slotted 50mm dia. PVC standpipe 1.0m to 15.0m. Casing 0.1m to 1.0m. 2mm sand filter pack 0.8m to 15.0m. Bentonite seal 0.1m to 0.8m. Backfilled with sand (and/or cutiings) to the surface. Completed with a concreted gatic cover.
							2.0							
							2.5							
							3.0							

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

Borehole No. 139 2 / 5

CORED BOREHOLE LOG

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD
Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Core Size:** NMLC **R.L. Surface:** N/A
Date: 2/11/18 **Inclination:** VERTICAL **Datum:** AHD
Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$	DEFECT DETAILS: SPACING (mm)	DEFECT DETAILS: DESCRIPTION (Specific / General)	Formation
				START CORING AT 1.35m						
100% RETURN		1.5		SANDSTONE: fine to medium grained, light grey, ornage brown and red brown, bedded at 0-20°.	MW	H			(1.41m) XWS, 10°, 1 mm.t (1.46m) XWS, 5°, 1 mm.t (1.48m) XWS, 10°, 5 mm.t (1.54m) XWS, 15°, 8 mm.t	
		2.0								
		2.5								
		3.0								
		3.5							(3.50m) Be, 20°, P, S, ROOT FIBRES INFILL	
		4.0							(3.91m) XWS, 10°, 7 mm.t (3.98m) XWS, 10°, 40 mm.t	
				SANDSTONE: fine to medium grained, light grey, with dark grey laminae bedded at 0-10°.	SW				(4.37m) XWS, 0°, 30 mm.t	

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

Borehole No. 139 3 / 5

CORED BOREHOLE LOG

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD
Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Core Size:** NMLC **R.L. Surface:** N/A
Date: 2/11/18 **Inclination:** VERTICAL **Datum:** AHD
Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$ (VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DETAILS: SPACING (mm) (600, 200, 60, 20)	DEFECT DETAILS: DESCRIPTION (Specific / General)	Formation
100% RETURN		5.0		SANDSTONE: fine to medium grained, light grey, with dark grey laminae bedded at 0-10°. *(continued)*	SW / FR	H			(4.63m) XWS, 0°, 7 mm t	
		5.5							(5.46m) J, 45°, P, R, Cn (5.48m) J, 45°, P, R, Cn	
		6.0								
		6.5								
		7.0								
		7.5								

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

Borehole No. 139 4 / 5

CORED BOREHOLE LOG

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD
Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Core Size:** NMLC **R.L. Surface:** N/A
Date: 2/11/18 **Inclination:** VERTICAL **Datum:** AHD
Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./

Water Loss/Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$ (VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DETAILS: SPACING (mm) (600, 200, 60, 20)	DEFECT DETAILS: DESCRIPTION (Specific / General)	Formation
100% RETURN		8.5		SANDSTONE: fine to medium grained, light grey, with dark grey laminae bedded at 0-10°.	FR	H				
		9.0		SANDSTONE: fine to medium grained, light grey.						
		9.5								
		10.0								
		10.5								
		11.0								

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

Borehole No. 139 5 / 5

CORED BOREHOLE LOG

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD
Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM | **Core Size:** NMLC | **R.L. Surface:** N/A
Date: 2/11/18 | **Inclination:** VERTICAL | **Datum:** AHD
Plant Type: JK205 | **Bearing:** N/A | **Logged/Checked By:** A.C.K./

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$ (VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DETAILS: SPACING (mm) (600, 200, 60, 20)	DEFECT DETAILS: DESCRIPTION (Specific / General)	Formation
100% RETURN		12.0		SANDSTONE: fine to medium grained, light grey. *(continued)*	FR	H				
		12.5								
		13.0								
		13.5								
		14.0							(13.67m) J, 30°, P, R, Cn	
		14.5								

END OF ENVIRONMENTAL HOLE AT 15.00 m

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 140 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P.

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	■		■							FILL: Silty sand, fine to medium grained, light brown, trace of root fibres.	D			MULCH COVER
	■		■						SC	Clayey SAND: fine to medium grained, yellow brown, trace of sandstone gravel.	M			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.40 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 141 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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	■		■		■					FILL: Silty sand, fine to medium grained, brown, trace of root fibres and organic material.	M			MULCH COVER
										FILL: Silty sand, fine to medium grained, grey.				POSSIBLY NATURAL
							0.5			END OF ENVIRONMENTAL HOLE AT 0.30 m				REFUSAL ON INFERRED SANDSTONE
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 142 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P.

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	■		■							FILL: Sandy silt, low to medium plasticity, dark brown, trace of root fibres.	w<PL			MULCH COVER
	■		■						SC	Clayey SAND: fine to medium grained, yellow brown, trace of sandstone, ironstone gravels and root fibres.	M			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.40 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

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Borehole No. 143 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** AHD

Plant Type: JK205 **Logged/Checked By:** M.D.

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									-	ASPHALTIC CONCRETE: 50mm.t				
									-	FILL: Silty gravel, dark brown, igneous.	D			ROAD BASE
									SM	Silty SAND: fine to medium grained, brown, with fine to medium grained sandstone gravel.	D			
						N > 14 6,9,5/ 50mm REFUSAL	0.5		-	SANDSTONE: fine to medium grained, brown.	XW			
							1.0			END OF ENVIRONMENTAL HOLE AT 0.80 m				REFUSAL
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 144 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.D.

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										FILL: Silty sand, fine to medium grained, brown, trace of fine grained ironstone and sandstone gravel, trace of ash.	D			
										END OF ENVIRONMENTAL HOLE AT 0.20 m				
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 145 1 / 6

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** AHD

Plant Type: JK205 **Logged/Checked By:** A.C.K.

Groundwater Record	SAMPLES ES	ASS	ASB	SAL	DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel Density	Hand Penetrometer Readings (kPa)	Remarks
DRY ON COMPLETION OF AUGERING										CONCRETE: 100mm.t.				7mm REINFORCEMENT 55mm TOP COVER
									-	FILL: Sandy clayey gravel, medium grained, igneous and sandstone, dark grey brown, fine to medium grained sand.	M			
									SC	Clayey SAND: medium grained, light brown, trace of medium to coarse sandstone gravel.	M			RESIDUAL
						N=SPT 8/ 100mm REFUSAL	0.5		-	SANDSTONE: fine to medium grained, light grey and orange brown.				HAWKESBURY SANDSTONE HIGH 'TC' BIT RESISTANCE
							1.0			REFER TO CORED BOREHOLE LOG				Groundwater monitoring well installed to 15.31m. Class 18 machine slotted 50mm dia. PVC standpipe 0.9m to 15.31m. Casing 0.1m to 0.9m. 2mm sand filter pack 0.4m to 15.31m. Bentonite seal 0.1m to 0.4m. Backfilled with sand (and/or cuttings) to the surface. Completed with a concreted gatic cover.
							1.5							
							2.0							
							2.5							
							3.0							

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

Borehole No. 145 2 / 6

CORED BOREHOLE LOG

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD
Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Core Size:** NMLC **R.L. Surface:** N/A
Date: 5/11/18 **Inclination:** VERTICAL **Datum:** AHD
Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$: VL 0.1, L 0.3, M 1, H 3, VH 10, EH	DEFECT DETAILS: SPACING (mm) 600, 200, 60, 20	DEFECT DETAILS: DESCRIPTION (Type, orientation, defect roughness and shape, defect coatings and seams, openness and thickness) Specific / General	Formation
				START CORING AT 1.25m						
ON COMPLETION OF CORING		1.5 2.0 2.5 3.0 3.5 4.0		SANDSTONE: fine to medium grained, orange brown, with light grey laminae, bedded at 0-20°.	MW	H				Hawkesbury Sandstone
				SANDSTONE: fine to medium grained, light grey and orange brown, bedded at 0-10°.	SW				(4.19m) XWS, 0°, 7 mm t (4.23m) XWS, 5°, 14 mm t	

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

CORED BOREHOLE LOG

Borehole No. 145 3 / 6

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD
Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Core Size:** NMLC **R.L. Surface:** N/A
Date: 5/11/18 **Inclination:** VERTICAL **Datum:** AHD
Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$: VL 0.1, L 0.3, M 1, H 3, VH 10, EH	DEFECT DETAILS: SPACING (mm) 600, 200, 60, 20	DEFECT DETAILS: DESCRIPTION (Type, orientation, defect roughness and shape, defect coatings and seams, openness and thickness) Specific / General	Formation
		5.0		SANDSTONE: fine to medium grained, light grey and orange brown, bedded at 0-10°. *(continued)*	SW	H				
		5.5		SANDSTONE: fine to medium grained, light grey with grey laminae, bedded at 0-20°.	FR				(5.22m) XWS, 0°, 5 mm t	
		6.0								
		6.5							(6.45m) XWS, 0°, 20 mm t (6.57m) XWS, 0°, 3 mm t	Hawkesbury Sandstone
		7.0								
		7.5								

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

Borehole No. 145 4 / 6

CORED BOREHOLE LOG

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD
Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Core Size:** NMLC **R.L. Surface:** N/A
Date: 5/11/18 **Inclination:** VERTICAL **Datum:** AHD
Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./

Water Loss/Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$: VL 0.1, L 0.3, M 1, H 3, VH 10, EH	DEFECT DETAILS: SPACING (mm) 600, 200, 60, 20	DEFECT DETAILS: DESCRIPTION (Type, orientation, defect roughness and shape, defect coatings and seams, openness and thickness) Specific / General	Formation
		8.5		SANDSTONE: fine to medium grained, light grey.	FR	H				Hawkesbury Sandstone
		9.0								
		9.5								
		10.0								
		10.5								
		11.0								

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

Borehole No. 145 5 / 6

CORED BOREHOLE LOG

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD
Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Core Size:** NMLC **R.L. Surface:** N/A
Date: 5/11/18 **Inclination:** VERTICAL **Datum:** AHD
Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$ (VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DETAILS: SPACING (mm) (600, 200, 60, 20)	DEFECT DETAILS: DESCRIPTION (Specific / General)	Formation
		12.0		SANDSTONE: fine to medium grained, light grey. *(continued)*	FR	H				Hawkesbury Sandstone
		12.5								
		13.0								
		13.5								
		14.0								
		14.5								

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

CORED BOREHOLE LOG

Borehole No. 145 6 / 6

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD
Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Core Size:** NMLC **R.L. Surface:** N/A
Date: 5/11/18 **Inclination:** VERTICAL **Datum:** AHD
Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$: VL 0.1, L 0.3, M 1, H 3, VH 10, EH	DEFECT DETAILS: SPACING (mm) 600, 200, 60, 20	DEFECT DETAILS: DESCRIPTION (Type, orientation, defect roughness and shape, defect coatings and seams, openness and thickness) Specific / General	Formation
				SANDSTONE: fine to medium grained, light grey, *(continued)*	FR	H				
		15.5		END OF ENVIRONMENTAL HOLE AT 15.31 m						
		16.0								
		16.5								
		17.0								
		17.5								
		18.0								

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 146 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P.

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	■	■	■							FILL: Silty sand, fine to medium grained, dark brown, trace of root fibres.	D			MULCH COVER
									SP	SAND: fine to medium grained, light yellow brown, trace of sandstone gravel and root fibres.	M			
	■	■	■						SC	Clayey SAND: fine to medium grained, yellow brown, trace of sandstone gravel.	M			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.50 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 147 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** AHD

Plant Type: JK205 **Logged/Checked By:** M.D.

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
										ASPHALTIC CONCRETE: 80mm.t.				
DRY ON COMPLETION									SM	Silty SAND: fine to medium grained, light brown, with fine to medium grained sandstone gravel.	D			
						N > 7 11,7,0/ 50mm REFUSAL	0.5		-	SANDSTONE: fine to medium grained, brown.	XW - DW			
										END OF ENVIRONMENTAL HOLE AT 0.65 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 148 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P.

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	■		■						SM	FILL: Silty clayey sand, fine to medium grained, dark brown, trace of ironstone and root fibres.	D			GRASS COVER
	■		■							Silty SAND: fine to medium grained, light brown, trace of ironstone, sandstone gravel and root fibres.	D			REFUSAL
										END OF ENVIRONMENTAL HOLE AT 0.20 m				
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 149 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.M.P.

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	■		■							FILL: Silty sand, fine to medium grained, light brown, trace of sandstone gravel and root fibres.	D			MULCH COVER
									CL-CI	Sandy CLAY: low to medium plasticity, yellow brown, trace of sandstone gravel and root fibres.	M			
	■		■				0.5							
										END OF ENVIRONMENTAL HOLE AT 0.60 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 150 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** A.M.

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
	■		■							FILL: Sandy clayey silt, low to medium plasticity, brown, trace of ironstone gravel and root fibres.	w>PL			GRASS COVER
	■		■						SC	Clayey SAND: fine to medium grained, yellow brown, trace of root fibres.	M			
▶							0.5			END OF ENVIRONMENTAL HOLE AT 0.40 m				REFUSAL ON INFERRED SANDSTONE
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 151 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.D.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, trace of fine to medium grained sandstone gravel, organic matter and ash.	D			MULCH COVER
										END OF ENVIRONMENTAL HOLE AT 0.15 m				REFUSAL ON SANDSTONE BEDROCK
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No.
152
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD
Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A
Date: 5/11/18 **Datum:** AHD
Plant Type: **Logged/Checked By:** M.D.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, trace of fine to medium grained sandstone gravel, organic matter and ash.	D			MULCH COVER
										END OF ENVIRONMENTAL HOLE AT 0.20 m				
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 153 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.D.

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										FILL: Silty sand, fine to medium grained, grey, trace of fine to medium grained sandstone gravel and organic metter and ash.	D			MULCH COVER
									SM		D			
									FILL	Silty SAND: fine to medium grained, brown.				
										END OF ENVIRONMENTAL HOLE AT 0.20 m				REFUSAL ON SANDSTONE BEDROCK
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No.
154
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** AHD

Plant Type: **Logged/Checked By:** M.D.

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	■		■							FILL: Silty sand, fine to medium grained, light grey yellow brown, trace of fine to medium grained sandstone gravel, ash and organic matter.	D			MULCH COVER
										END OF ENVIRONMENTAL HOLE AT 0.15 m				REFUSAL ON SANDSTONE BEDROCK
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 155 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** AHD

Plant Type: JK205 **Logged/Checked By:** M.D.

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										FILL: Silty sand, fine to medium grained, dark brown, trace of fine to medium sandstone gravel, roots and ash.				GRASS COVER
							0.5		-	SANDSTONE: fine to medium grained, light brown.	XW			MODERATE 'TC' BIT RESISTANCE
							1.0							
							1.5							HIGH RESISTANCE
										END OF ENVIRONMENTAL HOLE AT 1.50 m				'TC' BIT REFUSAL Groundwater monitoring well installed to 1.5m. Class 18 machine slotted 50mm dia. PVC standpipe 1.5m to 0.5m. Casing 0.5m to 0.0m. 2mm sand filter pack 1.5m to 0.55m. Bentonite seal 0.55m to 0.1m. Completed with a concreted gatic cover.
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 156 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KM **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** AHD

Plant Type: JK205 **Logged/Checked By:** M.D.

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
SUNK ON COMPLETION							0.5			FILL: Silty sand, dark brown, trace of fine to medium grained sandstone and igneous gravel, ash and foam.	W			GRASS COVER
							1.0		-	SANDSTONE: fine to medium grained, brown.	DW			MODERATE TO HIGH 'TC' BIT RESISTANCE
							1.5			END OF ENVIRONMENTAL HOLE AT 1.30 m				Groundwater monitoring well installed to 1.3m. Class 18 machine slotted 50mm dia. PVC standpipe 1.3m to 0.5m. Casing 0.5m to 0.0m. 2mm sand filter pack 1.3m to 0.4m. Bentonite seal 0.4m to 0.3m. Backfilled with sand to the surface. Completed with a concreted gatic cover.
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

EIS

Borehole No. 157 1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

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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										FILL: Silty sand, fine to medium grained, dark brown, trace of fine to medium grained sandstone gravel, ash and organic matter.				GRASS COVER
							0.5		SM	Silty SAND: fine to medium grained, brown.				
									-	SANDSTONE: fine to medium grained, brown.				MODERATE TO HIGH 'TC' BIT RESISTANCE
							1.0			END OF ENVIRONMENTAL HOLE AT 0.80 m				'TC' BIT REFUSAL Groundwater monitoring well installed to 0.8m. Class 18 machine slotted 50mm dia. PVC standpipe 0.8m to 0.4m. Casing 0.4m to 0.0m. 2mm sand filter pack 0.8m to 0.3m. Bentonite seal 0.3m to 0.1m. Completed with a concreted gatic cover.
							1.5							
							2.0							
							2.5							
							3.0							

Appendix D: Laboratory Report/s & COC Documents

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

CERTIFICATE OF ANALYSIS 203424

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KM, Lindfield**
Number of Samples	95 Soil
Date samples received	18/10/2018
Date completed instructions received	18/10/2018

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	24/10/2018
Date of Issue	24/10/2018

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Asbestos Approved By
Analysed by Asbestos Approved Identifier: Aida Marner
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Jeremy Faircloth, Organics Supervisor
Long Pham, Team Leader, Metals
Lucy Zhu, Asbsestos Analyst
Steven Luong, Senior Chemist

Authorised By

Jacinta Hurst, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-1	203424-3	203424-4	203424-6	203424-8
Your Reference	UNITS	TP101	TP102	TP102	TP103	TP104
Depth		0.0-0.1	0.0-0.1	0.1-0.2	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	16/10/2018	16/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	105	103	96	104	94

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-10	203424-11	203424-13	203424-14	203424-15
Your Reference	UNITS	TP105	TP105	TP106	TP106	TP106
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.6-0.7	1.2-1.3
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	105	103	102	105	108

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-16	203424-17	203424-19	203424-20	203424-22
Your Reference	UNITS	TP107	TP107	TP108	TP108	TP109
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.3-0.4	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	101	105	108	107	104

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-24	203424-25	203424-26	203424-27	203424-28
Your Reference	UNITS	TP110	TP110	TP110	TP112	TP112
Depth		0.0-0.1	0.3-0.4	1.3-1.4	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	101	104	109	89	103

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-29	203424-31	203424-32	203424-34	203424-36
Your Reference	UNITS	TP113	TP113	TP114	TP115	TP116
Depth		0.0-0.05	0.9-1.0	0.0-0.1	0.0-0.1	0.0-0.05
Date Sampled		15/10/2018	15/10/2018	17/10/2018	17/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	102	103	95	96

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-45
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP123
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	103	101	80	99

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-47	203424-49	203424-51	203424-52	203424-54
Your Reference	UNITS	TP124	TP125	TP126	TP126	TP128
Depth		0.0-0.1	0.5-0.15	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		17/10/2018	17/10/2018	17/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	99	100	102	100

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-55	203424-56	203424-58	203424-59	203424-60
Your Reference	UNITS	TP129	TP129	TP129	TP130	TP130
Depth		0.0-0.1	0.3-0.4	0.95-1.0	0.05-0.15	0.7-0.8
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	104	101	115	106

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-62	203424-63	203424-64	203424-65	203424-66
Your Reference	UNITS	TP132	TP132	TP132	TP133	TP133
Depth		0.0-0.1	0.3-0.4	0.9-1.0	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	106	103	105	106	112

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-67	203424-69	203424-71	203424-72	203424-73
Your Reference	UNITS	TP136	TP137	TP140	TP140	TP141
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	105	106	101	105	101

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-76	203424-78	203424-81	203424-83	203424-84
Your Reference	UNITS	TP142	TP146	TP148	TP149	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	17/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	107	105	111	102

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-85	203424-87	203424-88	203424-89	203424-90
Your Reference	UNITS	TP150	TBS1	TS	DUPAMS1	DUPAMS2
Depth		0.0-0.1	-	-	-	-
Date Sampled		17/10/2018	12/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
TRH C_6 - C_9	mg/kg	<25	[NA]	[NA]	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	[NA]	[NA]	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	[NA]	[NA]	<25	<25
Benzene	mg/kg	<0.2	<0.2	86%	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	88%	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	83%	<1	<1
m+p-xylene	mg/kg	<2	<2	83%	<2	<2
o-Xylene	mg/kg	<1	<1	84%	<1	<1
naphthalene	mg/kg	<1	[NA]	[NA]	<1	<1
Total +ve Xylenes	mg/kg	<1	[NA]	[NA]	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	109	99	102	103

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		203424-91	203424-93	203424-95
Your Reference	UNITS	DUPAMS4	DUPAMS7	DUPAMS10
Depth		-	-	-
Date Sampled		15/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018
TRH C_6 - C_9	mg/kg	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	104	102	109

svTRH (C10-C40) in Soil						
Our Reference		203424-1	203424-3	203424-4	203424-6	203424-8
Your Reference	UNITS	TP101	TP102	TP102	TP103	TP104
Depth		0.0-0.1	0.0-0.1	0.1-0.2	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	16/10/2018	16/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	170	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	310	110	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	51	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	51	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	400	110	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	120	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	570	110	<50	<50
Surrogate o-Terphenyl	%	96	98	94	93	98

svTRH (C10-C40) in Soil						
Our Reference		203424-10	203424-11	203424-13	203424-14	203424-15
Your Reference	UNITS	TP105	TP105	TP106	TP106	TP106
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.6-0.7	1.2-1.3
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	20/10/2018	20/10/2018	20/10/2018
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	92	93	91	91

svTRH (C10-C40) in Soil						
Our Reference		203424-16	203424-17	203424-19	203424-20	203424-22
Your Reference	UNITS	TP107	TP107	TP108	TP108	TP109
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.3-0.4	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	410	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	1,800	<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	1,600	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	2,400	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	4,000	<50	<50	<50	<50
Surrogate o-Terphenyl	%	84	93	93	93	93

svTRH (C10-C40) in Soil						
Our Reference		203424-24	203424-25	203424-26	203424-27	203424-28
Your Reference	UNITS	TP110	TP110	TP110	TP112	TP112
Depth		0.0-0.1	0.3-0.4	1.3-1.4	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
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	92	91	103	91

svTRH (C10-C40) in Soil						
Our Reference		203424-29	203424-31	203424-32	203424-34	203424-36
Your Reference	UNITS	TP113	TP113	TP114	TP115	TP116
Depth		0.0-0.05	0.9-1.0	0.0-0.1	0.0-0.1	0.0-0.05
Date Sampled		15/10/2018	15/10/2018	17/10/2018	17/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	170	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	280	440	150
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	71	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	71	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	300	440	120
TRH >C_{34} -C_{40}	mg/kg	<100	<100	140	290	170
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	440	800	290
Surrogate o-Terphenyl	%	92	91	94	99	88

svTRH (C10-C40) in Soil						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-45
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP123
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	59	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	310	<100
TRH C_{29} - C_{36}	mg/kg	<100	130	130	690	110
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	60	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	60	<50
TRH >C_{16} -C_{34}	mg/kg	<100	120	130	860	100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	100	320	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	120	230	1,200	100
Surrogate o-Terphenyl	%	97	92	84	97	91

svTRH (C10-C40) in Soil						
Our Reference		203424-47	203424-49	203424-51	203424-52	203424-54
Your Reference	UNITS	TP124	TP125	TP126	TP126	TP128
Depth		0.0-0.1	0.5-0.15	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		17/10/2018	17/10/2018	17/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
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	260	170	<100	<100	320
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	270	160	100	<100	340
TRH >C_{34} -C_{40}	mg/kg	150	<100	<100	<100	160
Total +ve TRH (>C10-C40)	mg/kg	410	160	100	<50	490
Surrogate o-Terphenyl	%	94	91	90	90	99

svTRH (C10-C40) in Soil						
Our Reference		203424-55	203424-56	203424-58	203424-59	203424-60
Your Reference	UNITS	TP129	TP129	TP129	TP130	TP130
Depth		0.0-0.1	0.3-0.4	0.95-1.0	0.05-0.15	0.7-0.8
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	23/10/2018	20/10/2018	20/10/2018
TRH C_{10} - C_{14}	mg/kg	51	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	170	<100	<100	100	<100
TRH C_{29} - C_{36}	mg/kg	450	<100	<100	230	120
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	500	<100	<100	280	120
TRH >C_{34} -C_{40}	mg/kg	280	<100	<100	110	<100
Total +ve TRH (>C10-C40)	mg/kg	780	<50	<50	390	120
Surrogate o-Terphenyl	%	97	95	92	98	93

svTRH (C10-C40) in Soil						
Our Reference		203424-62	203424-63	203424-64	203424-65	203424-66
Your Reference	UNITS	TP132	TP132	TP132	TP133	TP133
Depth		0.0-0.1	0.3-0.4	0.9-1.0	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
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	250	<100	<100	160	<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	250	<100	<100	170	<100
TRH >C_{34} -C_{40}	mg/kg	130	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	380	<50	<50	170	<50
Surrogate o-Terphenyl	%	96	91	90	94	92

svTRH (C10-C40) in Soil						
Our Reference		203424-67	203424-69	203424-71	203424-72	203424-73
Your Reference	UNITS	TP136	TP137	TP140	TP140	TP141
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
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	200	120	270	<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	200	120	300	<100	100
TRH >C_{34} -C_{40}	mg/kg	110	<100	150	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	310	120	440	<50	100
Surrogate o-Terphenyl	%	91	91	93	91	90

svTRH (C10-C40) in Soil						
Our Reference		203424-76	203424-78	203424-81	203424-83	203424-84
Your Reference	UNITS	TP142	TP146	TP148	TP149	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	17/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
TRH C_{10} - C_{14}	mg/kg	59	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	570	<100	140	<100	<100
TRH C_{29} - C_{36}	mg/kg	960	260	340	160	<100
TRH >C_{10} -C_{16}	mg/kg	230	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	230	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	1,100	240	390	160	<100
TRH >C_{34} -C_{40}	mg/kg	900	160	200	100	<100
Total +ve TRH (>C10-C40)	mg/kg	2,200	410	580	260	<50
Surrogate o-Terphenyl	%	110	92	99	73	77

svTRH (C10-C40) in Soil						
Our Reference		203424-85	203424-89	203424-90	203424-91	203424-93
Your Reference	UNITS	TP150	DUPAMS1	DUPAMS2	DUPAMS4	DUPAMS7
Depth		0.0-0.1	-	-	-	-
Date Sampled		17/10/2018	15/10/2018	15/10/2018	15/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
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	200	<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	200	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	200	<50	<50	<50	<50
Surrogate o-Terphenyl	%	89	90	91	88	87

svTRH (C10-C40) in Soil		
Our Reference		203424-95
Your Reference	UNITS	DUPAMS10
Depth		-
Date Sampled		17/10/2018
Type of sample		Soil
Date extracted	-	19/10/2018
Date analysed	-	20/10/2018
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	260
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	240
TRH >C_{34} -C_{40}	mg/kg	130
Total +ve TRH (>C10-C40)	mg/kg	370
Surrogate o-Terphenyl	%	89

PAHs in Soil						
Our Reference		203424-1	203424-3	203424-4	203424-6	203424-8
Your Reference	UNITS	TP101	TP102	TP102	TP103	TP104
Depth		0.0-0.1	0.0-0.1	0.1-0.2	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	16/10/2018	16/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	112	96	95	96	98

PAHs in Soil						
Our Reference		203424-10	203424-11	203424-13	203424-14	203424-15
Your Reference	UNITS	TP105	TP105	TP106	TP106	TP106
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.6-0.7	1.2-1.3
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	95	99	93	97

PAHs in Soil						
Our Reference		203424-16	203424-17	203424-19	203424-20	203424-22
Your Reference	UNITS	TP107	TP107	TP108	TP108	TP109
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.3-0.4	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	0.2	<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	0.2	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.52	<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	%	81	97	93	95	95

PAHs in Soil						
Our Reference		203424-24	203424-25	203424-26	203424-27	203424-28
Your Reference	UNITS	TP110	TP110	TP110	TP112	TP112
Depth		0.0-0.1	0.3-0.4	1.3-1.4	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	98	96	91	105	93

PAHs in Soil						
Our Reference		203424-29	203424-31	203424-32	203424-34	203424-36
Your Reference	UNITS	TP113	TP113	TP114	TP115	TP116
Depth		0.0-0.05	0.9-1.0	0.0-0.1	0.0-0.1	0.0-0.05
Date Sampled		15/10/2018	15/10/2018	17/10/2018	17/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	93	96	97	101

PAHs in Soil						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-45
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP123
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	100	96	92	95	97

PAHs in Soil						
Our Reference		203424-47	203424-49	203424-51	203424-52	203424-54
Your Reference	UNITS	TP124	TP125	TP126	TP126	TP128
Depth		0.0-0.1	0.5-0.15	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		17/10/2018	17/10/2018	17/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	94	94	94

PAHs in Soil						
Our Reference		203424-55	203424-56	203424-58	203424-59	203424-60
Your Reference	UNITS	TP129	TP129	TP129	TP130	TP130
Depth		0.0-0.1	0.3-0.4	0.95-1.0	0.05-0.15	0.7-0.8
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	99	99	93	92	95

PAHs in Soil						
Our Reference		203424-62	203424-63	203424-64	203424-65	203424-66
Your Reference	UNITS	TP132	TP132	TP132	TP133	TP133
Depth		0.0-0.1	0.3-0.4	0.9-1.0	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	0.2	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.1	<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	0.66	<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	%	96	95	92	93	97

PAHs in Soil						
Our Reference		203424-67	203424-69	203424-71	203424-72	203424-73
Your Reference	UNITS	TP136	TP137	TP140	TP140	TP141
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	93	95	93

PAHs in Soil						
Our Reference		203424-76	203424-78	203424-81	203424-83	203424-84
Your Reference	UNITS	TP142	TP146	TP148	TP149	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	17/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	100	93	100	96	94

PAHs in Soil						
Our Reference		203424-85	203424-89	203424-90	203424-91	203424-93
Your Reference	UNITS	TP150	DUPAMS1	DUPAMS2	DUPAMS4	DUPAMS7
Depth		0.0-0.1	-	-	-	-
Date Sampled		17/10/2018	15/10/2018	15/10/2018	15/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	94	91	96	94

PAHs in Soil		
Our Reference		203424-95
Your Reference	UNITS	DUPAMS10
Depth		-
Date Sampled		17/10/2018
Type of sample		Soil
Date extracted	-	19/10/2018
Date analysed	-	22/10/2018
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	%	93

Organochlorine Pesticides in soil						
Our Reference		203424-1	203424-3	203424-6	203424-10	203424-11
Your Reference	UNITS	TP101	TP102	TP103	TP105	TP105
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	16/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	86	87	85	84	79

Organochlorine Pesticides in soil						
Our Reference		203424-13	203424-14	203424-16	203424-17	203424-20
Your Reference	UNITS	TP106	TP106	TP107	TP107	TP108
Depth		0.0-0.1	0.6-0.7	0.0-0.1	0.4-0.5	0.3-0.4
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	79	82	82	84	83

Organochlorine Pesticides in soil						
Our Reference		203424-24	203424-25	203424-27	203424-29	203424-34
Your Reference	UNITS	TP110	TP110	TP112	TP113	TP115
Depth		0.0-0.1	0.3-0.4	0.0-0.1	0.0-0.05	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	84	91	105	96	113

Organochlorine Pesticides in soil						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-47
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP124
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	95	92	99	114	100

Organochlorine Pesticides in soil						
Our Reference		203424-52	203424-54	203424-55	203424-56	203424-59
Your Reference	UNITS	TP126	TP128	TP129	TP129	TP130
Depth		0.2-0.3	0.0-0.1	0.0-0.1	0.3-0.4	0.05-0.15
Date Sampled		17/10/2018	17/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	93	107	92	103

Organochlorine Pesticides in soil						
Our Reference		203424-62	203424-65	203424-67	203424-69	203424-71
Your Reference	UNITS	TP132	TP133	TP136	TP137	TP140
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	118	99	93	94	91

Organochlorine Pesticides in soil						
Our Reference		203424-73	203424-76	203424-78	203424-81	203424-83
Your Reference	UNITS	TP141	TP142	TP146	TP148	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	124	94	104	96

Organochlorine Pesticides in soil					
Our Reference		203424-85	203424-89	203424-91	203424-95
Your Reference	UNITS	TP150	DUPAMS1	DUPAMS4	DUPAMS10
Depth		0.0-0.1	-	-	-
Date Sampled		17/10/2018	15/10/2018	15/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	22/10/2018	22/10/2018	19/10/2018
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	%	98	77	78	107

Organophosphorus Pesticides						
Our Reference		203424-1	203424-3	203424-6	203424-10	203424-11
Your Reference	UNITS	TP101	TP102	TP103	TP105	TP105
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	16/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	86	87	85	84	79

Organophosphorus Pesticides						
Our Reference		203424-13	203424-14	203424-16	203424-17	203424-20
Your Reference	UNITS	TP106	TP106	TP107	TP107	TP108
Depth		0.0-0.1	0.6-0.7	0.0-0.1	0.4-0.5	0.3-0.4
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	79	82	82	84	83

Organophosphorus Pesticides						
Our Reference		203424-24	203424-25	203424-27	203424-29	203424-34
Your Reference	UNITS	TP110	TP110	TP112	TP113	TP115
Depth		0.0-0.1	0.3-0.4	0.0-0.1	0.0-0.05	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	84	91	105	96	113

Organophosphorus Pesticides						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-47
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP124
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	95	92	99	114	100

Organophosphorus Pesticides						
Our Reference		203424-52	203424-54	203424-55	203424-56	203424-59
Your Reference	UNITS	TP126	TP128	TP129	TP129	TP130
Depth		0.2-0.3	0.0-0.1	0.0-0.1	0.3-0.4	0.05-0.15
Date Sampled		17/10/2018	17/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	93	107	92	103

Organophosphorus Pesticides						
Our Reference		203424-62	203424-65	203424-67	203424-69	203424-71
Your Reference	UNITS	TP132	TP133	TP136	TP137	TP140
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	118	99	93	94	91

Organophosphorus Pesticides						
Our Reference		203424-73	203424-76	203424-78	203424-81	203424-83
Your Reference	UNITS	TP141	TP142	TP146	TP148	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	124	94	104	96

Organophosphorus Pesticides					
Our Reference		203424-85	203424-89	203424-91	203424-95
Your Reference	UNITS	TP150	DUPAMS1	DUPAMS4	DUPAMS10
Depth		0.0-0.1	-	-	-
Date Sampled		17/10/2018	15/10/2018	15/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	22/10/2018	22/10/2018	19/10/2018
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	%	98	77	78	107

PCBs in Soil						
Our Reference		203424-1	203424-3	203424-6	203424-10	203424-11
Your Reference	UNITS	TP101	TP102	TP103	TP105	TP105
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	16/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	<0.1	<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	0.6	<0.1	<0.1	<0.1
Surrogate TCLMX	%	86	87	85	84	79

PCBs in Soil						
Our Reference		203424-13	203424-14	203424-16	203424-17	203424-20
Your Reference	UNITS	TP106	TP106	TP107	TP107	TP108
Depth		0.0-0.1	0.6-0.7	0.0-0.1	0.4-0.5	0.3-0.4
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	79	82	82	84	83

PCBs in Soil						
Our Reference		203424-24	203424-25	203424-27	203424-29	203424-34
Your Reference	UNITS	TP110	TP110	TP112	TP113	TP115
Depth		0.0-0.1	0.3-0.4	0.0-0.1	0.0-0.05	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Surrogate TCLMX	%	84	91	105	96	113

PCBs in Soil						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-47
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP124
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	4.2	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	4.2	<0.1
Surrogate TCLMX	%	95	92	99	114	100

PCBs in Soil						
Our Reference		203424-52	203424-54	203424-55	203424-56	203424-59
Your Reference	UNITS	TP126	TP128	TP129	TP129	TP130
Depth		0.2-0.3	0.0-0.1	0.0-0.1	0.3-0.4	0.05-0.15
Date Sampled		17/10/2018	17/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Aroclor 1016	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Surrogate TCLMX	%	92	93	107	92	103

PCBs in Soil						
Our Reference		203424-62	203424-65	203424-67	203424-69	203424-71
Your Reference	UNITS	TP132	TP133	TP136	TP137	TP140
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	118	99	93	94	91

PCBs in Soil						
Our Reference		203424-73	203424-76	203424-78	203424-81	203424-83
Your Reference	UNITS	TP141	TP142	TP146	TP148	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Aroclor 1016	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	96	124	94	104	96

PCBs in Soil					
Our Reference		203424-85	203424-89	203424-91	203424-95
Your Reference	UNITS	TP150	DUPAMS1	DUPAMS4	DUPAMS10
Depth		0.0-0.1	-	-	-
Date Sampled		17/10/2018	15/10/2018	15/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	22/10/2018	22/10/2018	19/10/2018
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	%	98	77	78	107

Acid Extractable metals in soil						
Our Reference		203424-1	203424-3	203424-4	203424-6	203424-8
Your Reference	UNITS	TP101	TP102	TP102	TP103	TP104
Depth		0.0-0.1	0.0-0.1	0.1-0.2	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	16/10/2018	16/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	4	4	9	6
Copper	mg/kg	5	3	2	20	5
Lead	mg/kg	33	20	18	37	19
Mercury	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Nickel	mg/kg	2	1	<1	5	2
Zinc	mg/kg	18	12	10	44	22

Acid Extractable metals in soil						
Our Reference		203424-10	203424-11	203424-13	203424-14	203424-15
Your Reference	UNITS	TP105	TP105	TP106	TP106	TP106
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.6-0.7	1.2-1.3
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	10	7	2	18
Copper	mg/kg	29	12	9	1	<1
Lead	mg/kg	4	9	22	11	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	20	8	5	<1	<1
Zinc	mg/kg	17	12	31	7	5

Acid Extractable metals in soil						
Our Reference		203424-16	203424-17	203424-19	203424-20	203424-22
Your Reference	UNITS	TP107	TP107	TP108	TP108	TP109
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.3-0.4	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	10	8	53	3
Copper	mg/kg	23	1	7	27	3
Lead	mg/kg	93	10	18	20	28
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	1	3	<1	1
Zinc	mg/kg	60	9	18	40	8

Acid Extractable metals in soil						
Our Reference		203424-24	203424-25	203424-26	203424-27	203424-28
Your Reference	UNITS	TP110	TP110	TP110	TP112	TP112
Depth		0.0-0.1	0.3-0.4	1.3-1.4	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	7	4	7
Copper	mg/kg	6	3	2	5	<1
Lead	mg/kg	17	7	8	14	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	3	2	2	1
Zinc	mg/kg	24	10	8	27	3

Acid Extractable metals in soil						
Our Reference		203424-29	203424-31	203424-32	203424-34	203424-36
Your Reference	UNITS	TP113	TP113	TP114	TP115	TP116
Depth		0.0-0.05	0.9-1.0	0.0-0.1	0.0-0.1	0.0-0.05
Date Sampled		15/10/2018	15/10/2018	17/10/2018	17/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	8	2	3	4
Copper	mg/kg	3	1	4	8	9
Lead	mg/kg	16	7	49	110	66
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	<1	1	3	3
Zinc	mg/kg	15	5	6	18	29

Acid Extractable metals in soil						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-45
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP123
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	2	8	2	2
Copper	mg/kg	13	5	7	12	1
Lead	mg/kg	26	99	21	82	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	<1	1	3	<1
Zinc	mg/kg	52	5	19	35	3

Acid Extractable metals in soil						
Our Reference		203424-47	203424-49	203424-51	203424-52	203424-54
Your Reference	UNITS	TP124	TP125	TP126	TP126	TP128
Depth		0.0-0.1	0.5-0.15	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		17/10/2018	17/10/2018	17/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	6	4	7	9	11
Copper	mg/kg	17	12	9	5	7
Lead	mg/kg	140	82	7	11	64
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	2	4	9	2
Zinc	mg/kg	14	21	21	19	25

Acid Extractable metals in soil						
Our Reference		203424-55	203424-56	203424-58	203424-59	203424-60
Your Reference	UNITS	TP129	TP129	TP129	TP130	TP130
Depth		0.0-0.1	0.3-0.4	0.95-1.0	0.05-0.15	0.7-0.8
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	6	4	8	14
Copper	mg/kg	10	3	<1	7	5
Lead	mg/kg	35	31	3	31	29
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	1	<1	2	4
Zinc	mg/kg	36	6	1	20	14

Acid Extractable metals in soil						
Our Reference		203424-62	203424-63	203424-64	203424-65	203424-66
Your Reference	UNITS	TP132	TP132	TP132	TP133	TP133
Depth		0.0-0.1	0.3-0.4	0.9-1.0	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	6	7	6	6	<1
Copper	mg/kg	9	2	<1	8	<1
Lead	mg/kg	28	4	1	28	<1
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	<1	<1	3	<1
Zinc	mg/kg	35	3	<1	20	<1

Acid Extractable metals in soil						
Our Reference		203424-67	203424-69	203424-71	203424-72	203424-73
Your Reference	UNITS	TP136	TP137	TP140	TP140	TP141
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	3	2	7	10	3
Copper	mg/kg	3	7	13	2	6
Lead	mg/kg	19	46	24	3	42
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	2	2	<1	1
Zinc	mg/kg	12	17	51	9	12

Acid Extractable metals in soil						
Our Reference		203424-76	203424-78	203424-81	203424-83	203424-84
Your Reference	UNITS	TP142	TP146	TP148	TP149	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	17/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	3	4	5	3	9
Copper	mg/kg	8	7	7	5	<1
Lead	mg/kg	22	41	21	32	2
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	2	2	1	<1
Zinc	mg/kg	28	18	26	14	2

Acid Extractable metals in soil						
Our Reference		203424-85	203424-89	203424-90	203424-91	203424-93
Your Reference	UNITS	TP150	DUPAMS1	DUPAMS2	DUPAMS4	DUPAMS7
Depth		0.0-0.1	-	-	-	-
Date Sampled		17/10/2018	15/10/2018	15/10/2018	15/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	11	4	10	2
Copper	mg/kg	11	16	7	23	2
Lead	mg/kg	18	31	55	44	18
Mercury	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Nickel	mg/kg	3	7	2	6	<1
Zinc	mg/kg	23	59	23	52	3

Acid Extractable metals in soil			
Our Reference		203424-95	203424-96
Your Reference	UNITS	DUPAMS10	TP115 - [TRIPLICATE]
Depth		-	0.0-0.1
Date Sampled		17/10/2018	17/10/2018
Type of sample		Soil	Soil
Date prepared	-	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	4	4
Copper	mg/kg	17	15
Lead	mg/kg	88	740
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	3	3
Zinc	mg/kg	13	17

Moisture						
Our Reference		203424-1	203424-3	203424-4	203424-6	203424-8
Your Reference	UNITS	TP101	TP102	TP102	TP103	TP104
Depth		0.0-0.1	0.0-0.1	0.1-0.2	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	16/10/2018	16/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	17	11	9.6	8.3	15

Moisture						
Our Reference		203424-10	203424-11	203424-13	203424-14	203424-15
Your Reference	UNITS	TP105	TP105	TP106	TP106	TP106
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.6-0.7	1.2-1.3
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	7.7	10	12	7.2	8.5

Moisture						
Our Reference		203424-16	203424-17	203424-19	203424-20	203424-22
Your Reference	UNITS	TP107	TP107	TP108	TP108	TP109
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.3-0.4	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	16	15	14	11	7.7

Moisture						
Our Reference		203424-24	203424-25	203424-26	203424-27	203424-28
Your Reference	UNITS	TP110	TP110	TP110	TP112	TP112
Depth		0.0-0.1	0.3-0.4	1.3-1.4	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	13	9.0	9.1	10	11

Moisture						
Our Reference		203424-29	203424-31	203424-32	203424-34	203424-36
Your Reference	UNITS	TP113	TP113	TP114	TP115	TP116
Depth		0.0-0.05	0.9-1.0	0.0-0.1	0.0-0.1	0.0-0.05
Date Sampled		15/10/2018	15/10/2018	17/10/2018	17/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	18	8.7	20	17	28

Moisture						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-45
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP123
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	26	12	16	11	12

Moisture						
Our Reference		203424-47	203424-49	203424-51	203424-52	203424-54
Your Reference	UNITS	TP124	TP125	TP126	TP126	TP128
Depth		0.0-0.1	0.5-0.15	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		17/10/2018	17/10/2018	17/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	9.4	16	13	11	12

Moisture						
Our Reference		203424-55	203424-56	203424-58	203424-59	203424-60
Your Reference	UNITS	TP129	TP129	TP129	TP130	TP130
Depth		0.0-0.1	0.3-0.4	0.95-1.0	0.05-0.15	0.7-0.8
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	19	4.9	11	14	12

Moisture						
Our Reference		203424-62	203424-63	203424-64	203424-65	203424-66
Your Reference	UNITS	TP132	TP132	TP132	TP133	TP133
Depth		0.0-0.1	0.3-0.4	0.9-1.0	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	17	11	12	17	5.8

Moisture						
Our Reference		203424-67	203424-69	203424-71	203424-72	203424-73
Your Reference	UNITS	TP136	TP137	TP140	TP140	TP141
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	14	13	13	8.7	15

Moisture						
Our Reference		203424-76	203424-78	203424-81	203424-83	203424-84
Your Reference	UNITS	TP142	TP146	TP148	TP149	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	17/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	24	14	21	6.2	12

Moisture						
Our Reference		203424-85	203424-89	203424-90	203424-91	203424-93
Your Reference	UNITS	TP150	DUPAMS1	DUPAMS2	DUPAMS4	DUPAMS7
Depth		0.0-0.1	-	-	-	-
Date Sampled		17/10/2018	15/10/2018	15/10/2018	15/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	17	31	25	16	12

Moisture		
Our Reference		203424-95
Your Reference	UNITS	DUPAMS10
Depth		-
Date Sampled		17/10/2018
Type of sample		Soil
Date prepared	-	19/10/2018
Date analysed	-	22/10/2018
Moisture	%	15

Asbestos ID - soils						
Our Reference		203424-1	203424-3	203424-4	203424-6	203424-8
Your Reference	UNITS	TP101	TP102	TP102	TP103	TP104
Depth		0.0-0.1	0.0-0.1	0.1-0.2	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	16/10/2018	16/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 15g	Approx. 25g	Approx. 30g	Approx. 30g	Approx. 15g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		203424-10	203424-11	203424-13	203424-14	203424-16
Your Reference	UNITS	TP105	TP105	TP106	TP106	TP107
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.6-0.7	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 45g	Approx. 35g	Approx. 30g	Approx. 35g	Approx. 40g
Sample Description	-	Brown coarse-grained soil & rocks	Beige sandy 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		203424-17	203424-19	203424-20	203424-22	203424-24
Your Reference	UNITS	TP107	TP108	TP108	TP109	TP110
Depth		0.4-0.5	0.0-0.1	0.3-0.4	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 35g	Approx. 45g	Approx. 25g	Approx. 20g	Approx. 25g
Sample Description	-	Beige sandy 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		203424-25	203424-26	203424-27	203424-29	203424-31
Your Reference	UNITS	TP110	TP110	TP112	TP113	TP113
Depth		0.3-0.4	1.3-1.4	0.0-0.1	0.0-0.05	0.9-1.0
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 40g	Approx. 45g	Approx. 20g	Approx. 30g	Approx. 35g
Sample Description	-	Beige coarse-grained soil & rocks	Beige coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Beige 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		203424-32	203424-34	203424-36	203424-38	203424-40
Your Reference	UNITS	TP114	TP115	TP116	TP117	TP121
Depth		0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1	0.0-0.1
Date Sampled		17/10/2018	17/10/2018	15/10/2018	15/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 20g	Approx. 20g	Approx. 30g	Approx. 25g	Approx. 20g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		203424-42	203424-44	203424-45	203424-47	203424-49
Your Reference	UNITS	TP122	TP123	TP123	TP124	TP125
Depth		0.0-0.1	0.0-0.1	0.2-0.3	0.0-0.1	0.5-0.15
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 25g	Approx. 15g	Approx. 25g	Approx. 15g	Approx. 30g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		203424-51	203424-52	203424-54	203424-55	203424-56
Your Reference	UNITS	TP126	TP126	TP128	TP129	TP129
Depth		0.0-0.1	0.2-0.3	0.0-0.1	0.0-0.1	0.3-0.4
Date Sampled		17/10/2018	17/10/2018	17/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 40g	Approx. 30g	Approx. 30g	Approx. 15g	Approx. 50g
Sample Description	-	Brown coarse-grained soil & rocks	Beige sandy soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Beige 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		203424-59	203424-60	203424-62	203424-63	203424-65
Your Reference	UNITS	TP130	TP130	TP132	TP132	TP133
Depth		0.05-0.15	0.7-0.8	0.0-0.1	0.3-0.4	0.0-0.1
Date Sampled		17/10/2018	17/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 35g	Approx. 40g	Approx. 15g	Approx. 30g	Approx. 15g
Sample Description	-	Brown coarse-grained soil & rocks	Beige sandy soil & rocks	Brown coarse-grained soil & rocks	Beige sandy 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		203424-67	203424-69	203424-71	203424-73	203424-76
Your Reference	UNITS	TP136	TP137	TP140	TP141	TP142
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 20g	Approx. 20g	Approx. 15g	Approx. 20g	Approx. 15g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils					
Our Reference		203424-78	203424-81	203424-83	203424-85
Your Reference	UNITS	TP146	TP148	TP149	TP150
Depth		0.0-0.1	0.0-0.05	0.0-0.1	0.0-0.1
Date Sampled		16/10/2018	17/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 15g	Approx. 15g	Approx. 20g	Approx. 25g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
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-8	203424-3
Date extracted	-			23/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			24/10/2018	1	22/10/2018	22/10/2018		22/10/2018	22/10/2018
TRH C_6 - C_9	mg/kg	25	Org-016	<25	1	<25	<25	0	103	98
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	1	<25	<25	0	103	98
Benzene	mg/kg	0.2	Org-016	<0.2	1	<0.2	<0.2	0	109	104
Toluene	mg/kg	0.5	Org-016	<0.5	1	<0.5	<0.5	0	101	95
Ethylbenzene	mg/kg	1	Org-016	<1	1	<1	<1	0	103	99
m+p-xylene	mg/kg	2	Org-016	<2	1	<2	<2	0	102	97
o-Xylene	mg/kg	1	Org-016	<1	1	<1	<1	0	103	98
naphthalene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	117	1	105	105	0	118	107

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	203424-25
Date extracted	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	11	22/10/2018	22/10/2018		22/10/2018	22/10/2018
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	11	<25	<25	0	104	96
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	11	<25	<25	0	104	96
Benzene	mg/kg	0.2	Org-016	[NT]	11	<0.2	<0.2	0	111	102
Toluene	mg/kg	0.5	Org-016	[NT]	11	<0.5	<0.5	0	100	92
Ethylbenzene	mg/kg	1	Org-016	[NT]	11	<1	<1	0	105	96
m+p-xylene	mg/kg	2	Org-016	[NT]	11	<2	<2	0	103	94
o-Xylene	mg/kg	1	Org-016	[NT]	11	<1	<1	0	104	96
naphthalene	mg/kg	1	Org-014	[NT]	11	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	11	103	111	7	114	105

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	203424-44
Date extracted	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	24	22/10/2018	22/10/2018		22/10/2018	22/10/2018
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	24	<25	<25	0	108	105
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	24	<25	<25	0	108	105
Benzene	mg/kg	0.2	Org-016	[NT]	24	<0.2	<0.2	0	116	101
Toluene	mg/kg	0.5	Org-016	[NT]	24	<0.5	<0.5	0	104	103
Ethylbenzene	mg/kg	1	Org-016	[NT]	24	<1	<1	0	109	108
m+p-xylene	mg/kg	2	Org-016	[NT]	24	<2	<2	0	106	107
o-Xylene	mg/kg	1	Org-016	[NT]	24	<1	<1	0	109	104
naphthalene	mg/kg	1	Org-014	[NT]	24	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	24	101	96	5	117	101

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]	34	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	34	22/10/2018	22/10/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	34	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	34	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	34	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	34	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	34	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	34	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	34	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	34	95	123	26	[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]	42	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	42	22/10/2018	22/10/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	42	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	42	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	42	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	42	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	42	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	42	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	42	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	42	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	42	101	98	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]	52	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	52	22/10/2018	22/10/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	52	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	52	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	52	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	52	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	52	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	52	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	52	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	52	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	52	102	99	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]	62	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	62	22/10/2018	22/10/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	62	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	62	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	62	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	62	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	62	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	62	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	62	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	62	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	62	106	99	7	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	203424-3
Date extracted	-			22/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			23/10/2018	1	19/10/2018	19/10/2018		19/10/2018	24/10/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	1	<50	<50	0	109	115
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	1	<100	<100	0	100	121
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	1	<100	<100	0	104	#
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	1	<50	<50	0	109	115
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	1	<100	<100	0	100	121
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	1	<100	<100	0	104	#
Surrogate o-Terphenyl	%		Org-003	76	1	96	96	0	109	98

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	203424-25
Date extracted	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	11	19/10/2018	20/10/2018		20/10/2018	20/10/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	11	<50	<50	0	105	100
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	11	<100	<100	0	96	91
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	11	<100	<100	0	100	98
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	11	<50	<50	0	105	100
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	11	<100	<100	0	96	91
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	11	<100	<100	0	100	98
Surrogate o-Terphenyl	%		Org-003	[NT]	11	92	92	0	106	92

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	203424-44
Date extracted	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	24	20/10/2018	20/10/2018		20/10/2018	24/10/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	24	<50	<50	0	104	103
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	24	<100	<100	0	92	91
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	24	<100	<100	0	108	#
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	24	<50	<50	0	104	103
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	24	<100	<100	0	92	91
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	24	<100	<100	0	108	#
Surrogate o-Terphenyl	%		Org-003	[NT]	24	96	97	1	105	97

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	34	20/10/2018	20/10/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	34	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	34	170	260	42	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	34	440	530	19	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	34	71	130	59	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	34	440	540	20	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	34	290	360	22	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	34	99	100	1	[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]	42	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	42	20/10/2018	20/10/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	42	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	42	<100	110	10	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	42	130	200	42	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	42	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	42	130	260	67	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	42	100	130	26	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	42	84	97	14	[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]	52	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	52	20/10/2018	20/10/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	52	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	52	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	52	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	52	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	52	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	52	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	52	90	90	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]	62	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	62	20/10/2018	20/10/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	62	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	62	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	62	250	150	50	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	62	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	62	250	150	50	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	62	130	<100	26	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	62	96	91	5	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	203424-3
Date extracted	-			23/10/2018	1	19/10/2018	19/10/2018		23/10/2018	19/10/2018
Date analysed	-			24/10/2018	1	22/10/2018	22/10/2018		24/10/2018	22/10/2018
Naphthalene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	94	86
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	90	87
Phenanthrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	91	101
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	<0.1	<0.1	0	94	99
Pyrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	89	89
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	95	91
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	92	98
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	87	1	112	98	13	87	98

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	203424-25
Date extracted	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	11	22/10/2018	22/10/2018		22/10/2018	22/10/2018
Naphthalene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	106	92
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	108	88
Phenanthrene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	112	101
Anthracene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	11	<0.1	0.1	0	108	99
Pyrene	mg/kg	0.1	Org-012	[NT]	11	<0.1	0.1	0	98	91
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	101	94
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	11	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	11	<0.05	0.1	67	110	101
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	11	95	95	0	100	96

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	203424-44
Date extracted	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	24	22/10/2018	22/10/2018		22/10/2018	22/10/2018
Naphthalene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	105	101
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	106	106
Phenanthrene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	110	91
Anthracene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	107	105
Pyrene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	96	136
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	100	95
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	24	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	24	<0.05	<0.05	0	108	100
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	24	98	96	2	97	101

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	34	22/10/2018	22/10/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
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	97	98	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]	42	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	42	22/10/2018	22/10/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	42	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	42	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	42	92	96	4	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	52	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	52	22/10/2018	22/10/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	52	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	52	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	52	94	93	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]	62	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	62	22/10/2018	22/10/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	62	0.1	<0.1	0	[NT]	[NT]
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	0.2	<0.1	67	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	62	0.2	<0.1	67	[NT]	[NT]
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	[NT]	[NT]
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	0.1	0.05	67	[NT]	[NT]
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	96	93	3	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	203424-3
Date extracted	-			19/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			19/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
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	78	76
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	87	87
Heptachlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	83	81
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	81	82
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	86	92
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	87	91
Dieldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	86	87
Endrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	87	98
pp-DDD	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	87	92
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	80	91
Methoxychlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	102	1	86	85	1	111	109

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	203424-25
Date extracted	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
HCB	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	96	91
gamma-BHC	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	100	96
Heptachlor	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	93	90
delta-BHC	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	92	88
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	99	94
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	104	100
Dieldrin	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	102	97
Endrin	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	100	96
pp-DDD	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	89	84
Endosulfan II	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	102	96
Methoxychlor	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	11	79	80	1	125	118

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	203424-44
Date extracted	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
HCB	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	93	95
gamma-BHC	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	95	95
Heptachlor	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	88	92
delta-BHC	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	90	92
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	96	98
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	102	105
Dieldrin	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	99	99
Endrin	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	93	103
pp-DDD	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	86	89
Endosulfan II	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	96	93
Methoxychlor	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	24	84	83	1	122	121

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	34	113	107	5	[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]	42	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	42	19/10/2018	19/10/2018		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	42	99	97	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]	52	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	52	19/10/2018	19/10/2018		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	52	92	90	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]	62	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	62	19/10/2018	19/10/2018		[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	62	0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	62	118	97	20	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	203424-3
Date extracted	-			19/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			19/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
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	98	86
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	108	93
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	120	99
Fenitrothion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	113	113
Malathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	95	91
Parathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	117	95
Ronnel	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	103	93
Surrogate TCMX	%		Org-008	102	1	86	85	1	89	93

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	203424-25
Date extracted	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	93	86
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	108	109
Dimethoate	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	117	88
Fenitrothion	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	116	113
Malathion	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	101	99
Parathion	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	100	89
Ronnel	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	103	95
Surrogate TCMX	%		Org-008	[NT]	11	79	80	1	97	92

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	203424-44
Date extracted	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	91	89
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	109	107
Dimethoate	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	111	109
Fenitrothion	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	109	108
Malathion	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	104	101
Parathion	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	111	86
Ronnel	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	100	101
Surrogate TCMX	%		Org-008	[NT]	24	84	83	1	94	93

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	34	113	107	5	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	42	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	42	19/10/2018	19/10/2018		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	42	99	97	2	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	52	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	52	19/10/2018	19/10/2018		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	52	92	90	2	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	62	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	62	19/10/2018	19/10/2018		[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	62	118	97	20	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	203424-3
Date extracted	-			19/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			19/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
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	99	102
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	102	1	86	85	1	89	93

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	203424-25
Date extracted	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	106	102
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	11	79	80	1	97	92

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	203424-44
Date extracted	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	24	<0.1	<0.1	0	93	#
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	24	84	83	1	94	93

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	34	113	107	5	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	42	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	42	19/10/2018	19/10/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	42	99	97	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]	44	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	44	19/10/2018	19/10/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	44	4.2	3.7	13	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	44	<1	<1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	44	114	109	4	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	52	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	52	19/10/2018	19/10/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	52	92	90	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]	62	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	62	19/10/2018	19/10/2018		[NT]	[NT]
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	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	62	118	97	20	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	203424-3
Date prepared	-			19/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			22/10/2018	1	22/10/2018	22/10/2018		22/10/2018	22/10/2018
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	107	94
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	95	93
Chromium	mg/kg	1	Metals-020	<1	1	5	4	22	103	100
Copper	mg/kg	1	Metals-020	<1	1	5	4	22	110	107
Lead	mg/kg	1	Metals-020	<1	1	33	30	10	103	104
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	113	97
Nickel	mg/kg	1	Metals-020	<1	1	2	2	0	100	99
Zinc	mg/kg	1	Metals-020	<1	1	18	17	6	98	92

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	203424-25
Date prepared	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	11	22/10/2018	22/10/2018		22/10/2018	22/10/2018
Arsenic	mg/kg	4	Metals-020	[NT]	11	<4	<4	0	111	94
Cadmium	mg/kg	0.4	Metals-020	[NT]	11	<0.4	<0.4	0	100	92
Chromium	mg/kg	1	Metals-020	[NT]	11	10	11	10	108	103
Copper	mg/kg	1	Metals-020	[NT]	11	12	11	9	116	106
Lead	mg/kg	1	Metals-020	[NT]	11	9	9	0	109	101
Mercury	mg/kg	0.1	Metals-021	[NT]	11	<0.1	<0.1	0	104	92
Nickel	mg/kg	1	Metals-020	[NT]	11	8	7	13	106	97
Zinc	mg/kg	1	Metals-020	[NT]	11	12	11	9	104	90

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	203424-44
Date prepared	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	24	22/10/2018	22/10/2018		22/10/2018	22/10/2018
Arsenic	mg/kg	4	Metals-020	[NT]	24	<4	<4	0	105	93
Cadmium	mg/kg	0.4	Metals-020	[NT]	24	<0.4	<0.4	0	96	92
Chromium	mg/kg	1	Metals-020	[NT]	24	7	7	0	102	97
Copper	mg/kg	1	Metals-020	[NT]	24	6	6	0	107	100
Lead	mg/kg	1	Metals-020	[NT]	24	17	17	0	104	84
Mercury	mg/kg	0.1	Metals-021	[NT]	24	<0.1	<0.1	0	100	108
Nickel	mg/kg	1	Metals-020	[NT]	24	5	5	0	101	97
Zinc	mg/kg	1	Metals-020	[NT]	24	24	25	4	99	74

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	34	22/10/2018	22/10/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	34	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	34	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	34	3	3	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	34	8	27	109	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	34	110	1800	177	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	34	3	3	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	34	18	16	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]	42	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	42	22/10/2018	22/10/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	42	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	42	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	42	8	8	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	42	7	7	0	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	42	21	21	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	42	1	1	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	42	19	17	11	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	52	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	52	22/10/2018	22/10/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	52	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	52	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	52	9	11	20	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	52	5	6	18	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	52	11	10	10	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	52	9	11	20	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	52	19	17	11	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	62	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	62	22/10/2018	22/10/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	62	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	62	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	62	6	5	18	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	62	9	7	25	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	62	28	22	24	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	62	2	1	67	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	62	35	35	0	[NT]	[NT]

Result Definitions

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

Quality Control Definitions

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

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

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

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

TRH Soil C10-C40 NEPM - # Percent recovery for the matrix spike is not possible to report as the high concentration of analytes in the samples 3 and 44 have caused interference.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 203424-34 for Cu and Pb. Therefore a triplicate result has been issued as laboratory sample number 203424-96.

PCBs in Soil - PQL has been raised due to interference from analytes(other than those being tested) in the sample 34,34d,44,44d,55,76.

Envirolab Services Pty Ltd
ABN 37 112 535 645
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SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KM, Lindfield
Envirolab Reference	203424
Date Sample Received	18/10/2018
Date Instructions Received	18/10/2018
Date Results Expected to be Reported	24/10/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	95 Soil
Turnaround Time Requested	3 days
Temperature on Receipt (°C)	19.1
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:

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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	On Hold
TP101-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP101-0.4-0.5									✓
TP102-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP102-0.1-0.2	✓	✓	✓				✓	✓	
TP102-0.4-0.5									✓
TP103-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP103-0.45-0.5									✓
TP104-0.0-0.1	✓	✓	✓				✓	✓	
TP104-0.15-0.3									✓
TP105-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP105-0.4-0.5	✓	✓	✓	✓	✓	✓	✓	✓	
TP105-0.9-1.0									✓
TP106-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP106-0.6-0.7	✓	✓	✓	✓	✓	✓	✓	✓	
TP106-1.2-1.3	✓	✓	✓				✓		
TP107-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP107-0.4-0.5	✓	✓	✓	✓	✓	✓	✓	✓	
TP107-0.8-0.9									✓
TP108-0.0-0.1	✓	✓	✓				✓	✓	
TP108-0.3-0.4	✓	✓	✓	✓	✓	✓	✓	✓	
TP108-0.7-0.8									✓
TP109-0.0-0.1	✓	✓	✓				✓	✓	
TP109-0.3-0.4									✓
TP110-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP110-0.3-0.4	✓	✓	✓	✓	✓	✓	✓	✓	
TP110-1.3-1.4	✓	✓	✓				✓	✓	
TP112-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP112-0.4-0.5	✓	✓	✓				✓		
TP113-0.0-0.05	✓	✓	✓	✓	✓	✓	✓	✓	
TP113-0.1-0.2									✓
TP113-0.9-1.0	✓	✓	✓				✓	✓	
TP114-0.0-0.1	✓	✓	✓				✓	✓	

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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	On Hold
TP114-0.2-0.3									✓
TP115-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP115-0.1-0.2									✓
TP116-0.0-0.05	✓	✓	✓				✓	✓	
TP116-0.2-0.25									✓
TP117-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP117-0.3-0.4									✓
TP121-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP121-0.2-0.3									✓
TP122-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP122-0.2-0.3									✓
TP123-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP123-0.2-0.3	✓	✓	✓				✓	✓	
TP123-0.5-0.6									✓
TP124-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP124-0.2-0.3									✓
TP125-0.5-0.15	✓	✓	✓				✓	✓	
TP125-0.3-0.4									✓
TP126-0.0-0.1	✓	✓	✓				✓	✓	
TP126-0.2-0.3	✓	✓	✓	✓	✓	✓	✓	✓	
TP126-0.65-0.7									✓
TP128-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP129-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP129-0.3-0.4	✓	✓	✓	✓	✓	✓	✓	✓	
TP129-0.7-0.8									✓
TP129-0.95-1.0	✓	✓	✓				✓		
TP130-0.05-0.15	✓	✓	✓	✓	✓	✓	✓	✓	
TP130-0.7-0.8	✓	✓	✓				✓	✓	
TP130-1.4-1.5									✓
TP132-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP132-0.3-0.4	✓	✓	✓				✓	✓	
TP132-0.9-1.0	✓	✓	✓				✓		

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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	On Hold
TP133-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP133-0.3-0.4	✓	✓	✓				✓		
TP136-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP136-0.2-0.3									✓
TP137-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP137-0.2-0.3									✓
TP140-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP140-0.2-0.3	✓	✓	✓				✓		
TP141-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP141-0.15-0.3									✓
TP141-0.3									✓
TP142-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP142-0.2-0.3									✓
TP146-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP146-0.1-0.2									✓
TP146-0.3-0.4									✓
TP148-0.0-0.05	✓	✓	✓	✓	✓	✓	✓	✓	
TP148-0.1-0.2									✓
TP149-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP149-0.3-0.4	✓	✓	✓				✓		
TP150-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP150-0.2-0.3									✓
TBS1	✓								
TS	✓								
DUPAMS1	✓	✓	✓	✓	✓	✓	✓		
DUPAMS2	✓	✓	✓				✓		
DUPAMS4	✓	✓	✓	✓	✓	✓	✓		
DUPAMS6									✓
DUPAMS7	✓	✓	✓				✓		
DUPAMS8									✓
DUPAMS10	✓	✓	✓	✓	✓	✓	✓		

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.

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E30259KM	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: ~~STANDARD~~ 3 DAYTA	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 1/4	Attention: Mitche Delaney
Attention: Aileen		

Location: Lindfield

Sampler: AM

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6a	Combo 3a	pH, CEC and clay content	Combo 6	Combo 3	BTEX							
15/10/18	1	TP101	0-0.1	G, A	0	F: Silty Clay	X												
↓	2	↓	0.4-0.5	|	0	Sandy Clay													
16/10/18	3	TP102	0-0.1	|	0	F: Silty Sand	X												
↓	4	↓	0.1-0.2	|	0	F: Clayey Sand		X											
↓	5		0.4-0.5	|	0	Sandy Clay													
15/10/18	6	TP103	0-0.1	|	0	F: Silty Clay	X												
|	7	↓	0.45-0.5	|	0	Clayey Sand													
|	8	TP104	0-0.1	|	0	F: Silty Clay		X											
|	9	↓	0.15-0.3	|	0	Sandy Clay													
|	10	TP105	0-0.1	|	0	FILL: Sandy Gravel	X												
|	11	|	0.4-0.5	|	0.1	F: Sandy Clay	X												
|	12	↓	0.9-1.0	|	0	Sandy Clay													
|	13	TP106	0-0.1	|	0	F: Silty Clay	X												
|	14	|	0.6-0.7	|	0	F: Silty Clay	X												
|	15	↓	1.2-1.3	|	0	Sandy Clay					X								
|	16	TP107	0-0.1	|	0	F: Silty Clay	X												
|	17	|	0.4-0.5	|	0	↓	X												
|	18	↓	0.8-0.9	|	0	Sandy Clay													
|	19	TP108	0-0.1	|	0	F: Silty Clay		X											
|	20	|	0.3-0.4	|	0	↓	X												
|	21	↓	0.7-0.8	|	0	↓													
|	22	TP109	0-0.1	|	0	F: Silty Sand		X											
|	23	↓	0.3-0.4	|	0	Sandy Clay													
|	24	TP110	0-0.1	|	0	F: Silty Clay	X												
↓	25	↓	0.3-0.4	↓	0	F: Clayey Sand	X												

ENVIROLAB

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

Job No: 208628

Date Received: 18/10/18

Time Received: 17:00

Received By: MT

Temp: Cool/Ambient: 19.1

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:	Date:	Time:	Received By:	Date:
MA	18/10/18		Ming Yan Zo	18/10/18 17:00

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E30259KM	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: ~~STANDARD~~ 3 DAY TAT	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 2/4	Attention: Mitch Delaney
Attention: Aileen		

Location:	Lindfield	Sample Preserved in Esky on Ice
Sampler:	AM	Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6a	Combo 3a	pH, CEC and clay content	Combo 6	Combo 3	BTEX							
15/10/18	26	TP110	1.3-1.4	G, A	0-1	Fill: Sandy Clay		X											
	27	TP112	0-0.1		0	F: Silty Clay	X												
	28	↓	0.4-0.5		0	Sandy Clay					X								
	29	TP113	0-0.05		0	F: Silty Clay	X												
	30		0.1-0.2		0	↓													
↓	31	↓	0.9-1.0		0	↓		X											
17/10/18	32	TP114	0-0.1		0	F: Clayey Sand		X											
	33	↓	0.2-0.3		0	Clayey Sand													
	34	TP115	0-0.1		0	F: Silty Sand	X												
↓	35	↓	0.1-0.2		0	Sandy Clay													
15/10/18	36	TP116	0-0.05		0	F: Silty Sand		X											
	37	↓	0.2-0.25		0	Sandy Clay													
	38	TP117	0-0.1		0	F: Silty Clay	X												
↓	39	↓	0.3-0.4		0	Clayey Sand													
17/10/18	40	TP121	0-0.1		0	F: Silty Sand	X												
↓	41	↓	0.2-0.3		0	Sandy Clay													
16/10/18	42	TP122	0-0.1		0	F: Silty Clay	X												
	43	↓	0.2-0.3		0	Clayey Sand													
	44	TP123	0-0.1		0	F: Silty Clay	X												
	45		0.2-0.3		0	F: Clayey Sand		X											
↓	46	↓	0.5-0.6		0	Sandy Clay													
17/10/18	47	TP124	0-0.1		0	F: Silty Sand	X												
	48	↓	0.2-0.3		0	Sandy Clay													
	49	TP125	0.5-0.15		0	F: Clayey Sand		X											
↓	50	↓	0.3-0.4	↓	0	Sandy Clay													

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:
MO	18/10/18		Ming Yan Zo	18/10/18 17:00

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E30259KM	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: STANDARD 3 DAYTA	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 3/4	Attention: Mitch Delaney
Attention: Aileen		

Location: Lindfield

Sampler: AM

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6a	Combo 3a	pH, CEC and clay content	Combo 6	Combo 3	BTEX							
20362																			
17/10/18	51	TP126	0-0.1	G, A	0	F: Silty Sand		X											
	52	↓	0.2-0.3		0	F: Sandy Clay	X												
	53	↓	0.65-0.7		0	Sandstone													
↓	54	TP128	0-0.1		0.1	F: Silty Sand	X												
16/10/18	55	TP129	0-0.1		0	F: Silty Clay	X												
	56	↓	0.3-0.4		0	Filling, Sand	X												
	57	↓	0.7-0.8		0	↓													
↓	58	↓	0.95-1.0		0	Sandstone					X								
17/10/18	59	TP130	0.05-0.15		0.1	F: Clayey Sand	X												
	60	↓	0.7-0.8		0	F: Sandy Clay		X											
↓	61	↓	1.4-1.5		0	Sandy Clay													
16/10/18	62	TP132	0-0.1		0	F: Silty Sand	X												
	63	↓	0.3-0.4		0.1	F: Clayey Sand		X											
	64	↓	0.9-1.0		0	Clayey Sand					X								
	65	TP133	0-0.1		0	F: Silty Sand	X												
	66	↓	0.3-0.4		0	Sand					X								
	67	TP136	0-0.1		0	F: Silty Sand	X												
	68	↓	0.2-0.3		0	Clayey Sand													
	69	TP137	0-0.1		0	F: Silty Sand	X												
	70	↓	0.2-0.3		0	Sand													
	71	TP140	0-0.1		0	F: Silty Sand	X												
	72		0.2-0.3		0	Clayey Sand					X								
	73	TP141	0-0.1		0	F: Silty Sand	X												
	74	↓	0.15-0.3		0	↓													
↓	75	↓	0.3		0.7	Sandstone													

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:
AM	18/10/18		Ming Yan Zo	18/10/18 4:20

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: E30259KM Date Results Required: ~~STANDARD~~ 3 DAY TAT Page: 4/4	ENVIRONMENTAL INVESTIGATION SERVICES REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitche Delaney

Location: Lindfield
Sampler: AM
Sample Preserved in Esky on Ice

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Tests Required: Combo 6a	Combo 3a	pH, CEC and clay content	Combo 6	Combo 3	BTEX							
20342																			
16/10/18	76	TP142	0-0.1	G, A	0	F: Sandy Silt	X												
↓	77	↓	0.2-0.3	↓	0	Clayey Soil	X												
	78	TP146	0-0.1		0	F: Silty Sand	X												
	79	↓	0.1-0.2		0	Sand													
↓	80		0.3-0.4		0	Clayey Sand													
17/10/18	81	TP148	0-0.05		0	Fill: Silty Clayey	X												
↓	82	↓	0.1-0.2		4.7	Silty Sand													
16/10/18	83	TP149	0-0.1		0	F: Silty Sand	X												
↓	84	↓	0.3-0.4		0	Sandy Clay					X								
17/10/18	85	TP150	0-0.1		0	F: Sandy Clayey Silt	X												
↓	86		0.2-0.3	↓	0	Clayey Sand													
12/10/18	87	TB51	—	G	—	Soil Blank						X							
15/10/18	88	TS	—	↓	—	Soil Spike						X							
15/10/18	89	DUPAMS1	—	G	—	Dup Soil				X									
15/10/18	90	DUPAMS2	—		—						X								
15/10/18	—	DUPAMS3	—		—						X		(send to ENV lab VIC)						
15/10/18	91	DUPAMS4	—		—					X									
15/10/18	—	DUPAMS5	—		—					X			(send to ENV VIC)						
16/10/18	92	DUPAMS6	—		—														
↓	93	DUPAMS7	—		—						X								
17/10/18	94	DUPAMS8	—		—														
17/10/18	—	DUPAMS9	—		—						X		(send to ENV VIC)						
17/10/18	95	DUPAMS10	—	↓	—	↓				X									

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:
MD	18/10/18		Ming Yan Zo	18/10/18 1730

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www.envirolab.com.au

CERTIFICATE OF ANALYSIS 203424-A

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KM, Lindfield**
Number of Samples	95 Soil
Date samples received	18/10/2018
Date completed instructions received	25/10/2018

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	29/10/2018
Date of Issue	29/10/2018

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Results Approved By
Jeremy Faircloth, Organics Supervisor
Long Pham, Team Leader, Metals
Steven Luong, Senior Chemist

Authorised By

Jacinta Hurst, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-A-35	203424-A-46	203424-A-75	203424-A-77	203424-A-82
Your Reference	UNITS	TP115	TP123	TP141	TP142	TP148
Depth		0.1-0.2	0.5-0.6	0.3	0.2-0.3	0.1-0.2
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	29/10/2018	29/10/2018	29/10/2018	29/10/2018	29/10/2018
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	%	113	108	112	116	117

svTRH (C10-C40) in Soil						
Our Reference		203424-A-35	203424-A-46	203424-A-75	203424-A-77	203424-A-82
Your Reference	UNITS	TP115	TP123	TP141	TP142	TP148
Depth		0.1-0.2	0.5-0.6	0.3	0.2-0.3	0.1-0.2
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	26/10/2018	26/10/2018	26/10/2018	27/10/2018	27/10/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	51	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	360	<100	<100	<100	140
TRH >C_{10} -C_{16}	mg/kg	<50	<50	60	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	60	<50	<50
TRH >C_{16} -C_{34}	mg/kg	340	<100	<100	<100	180
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	340	<50	60	<50	180
Surrogate o-Terphenyl	%	90	89	97	96	86

PAHs in Soil						
Our Reference		203424-A-35	203424-A-46	203424-A-75	203424-A-77	203424-A-82
Your Reference	UNITS	TP115	TP123	TP141	TP142	TP148
Depth		0.1-0.2	0.5-0.6	0.3	0.2-0.3	0.1-0.2
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	29/10/2018	29/10/2018	29/10/2018	29/10/2018	29/10/2018
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	%	105	116	115	106	120

Organochlorine Pesticides in soil						
Our Reference		203424-A-35	203424-A-45	203424-A-46	203424-A-75	203424-A-77
Your Reference	UNITS	TP115	TP123	TP123	TP141	TP142
Depth		0.1-0.2	0.2-0.3	0.5-0.6	0.3	0.2-0.3
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
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	%	103	97	111	101	105

Organochlorine Pesticides in soil		
Our Reference		203424-A-82
Your Reference	UNITS	TP148
Depth		0.1-0.2
Date Sampled		17/10/2018
Type of sample		Soil
Date extracted	-	26/10/2018
Date analysed	-	26/10/2018
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Surrogate TCMX	%	104

Organophosphorus Pesticides						
Our Reference		203424-A-35	203424-A-46	203424-A-75	203424-A-77	203424-A-82
Your Reference	UNITS	TP115	TP123	TP141	TP142	TP148
Depth		0.1-0.2	0.5-0.6	0.3	0.2-0.3	0.1-0.2
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
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	%	103	111	101	105	104

PCBs in Soil						
Our Reference		203424-A-35	203424-A-45	203424-A-46	203424-A-75	203424-A-77
Your Reference	UNITS	TP115	TP123	TP123	TP141	TP142
Depth		0.1-0.2	0.2-0.3	0.5-0.6	0.3	0.2-0.3
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
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	%	103	97	111	101	105

PCBs in Soil		
Our Reference		203424-A-82
Your Reference	UNITS	TP148
Depth		0.1-0.2
Date Sampled		17/10/2018
Type of sample		Soil
Date extracted	-	26/10/2018
Date analysed	-	26/10/2018
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate TCLMX	%	104

Acid Extractable metals in soil						
Our Reference		203424-A-35	203424-A-46	203424-A-75	203424-A-77	203424-A-82
Your Reference	UNITS	TP115	TP123	TP141	TP142	TP148
Depth		0.1-0.2	0.5-0.6	0.3	0.2-0.3	0.1-0.2
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	4	2	2	5	7
Copper	mg/kg	1	<1	<1	1	4
Lead	mg/kg	15	4	2	6	19
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1	<1	1
Zinc	mg/kg	5	3	<1	9	11

Moisture						
Our Reference		203424-A-35	203424-A-45	203424-A-46	203424-A-75	203424-A-77
Your Reference	UNITS	TP115	TP123	TP123	TP141	TP142
Depth		0.1-0.2	0.2-0.3	0.5-0.6	0.3	0.2-0.3
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	29/10/2018	29/10/2018	29/10/2018	29/10/2018	29/10/2018
Moisture	%	9.2	13	16	7.3	11

Moisture		
Our Reference		203424-A-82
Your Reference	UNITS	TP148
Depth		0.1-0.2
Date Sampled		17/10/2018
Type of sample		Soil
Date prepared	-	26/10/2018
Date analysed	-	29/10/2018
Moisture	%	8.1

Metals in TCLP USEPA1311			
Our Reference		203424-A-34	203424-A-47
Your Reference	UNITS	TP115	TP124
Depth		0.0-0.1	0.0-0.1
Date Sampled		17/10/2018	17/10/2018
Type of sample		Soil	Soil
Date extracted	-	26/10/2018	26/10/2018
Date analysed	-	26/10/2018	26/10/2018
pH of soil for fluid# determ.	pH units	5.5	5.6
pH of soil TCLP (after HCl)	pH units	1.3	1.3
Extraction fluid used	-	1	1
pH of final Leachate	pH units	5.0	5.0
Lead in TCLP	mg/L	0.2	0.34

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.
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-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-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-3	[NT]
Date extracted	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			29/10/2018	[NT]	[NT]	[NT]	[NT]	29/10/2018	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	109	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	109	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	[NT]	[NT]	101	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	[NT]	[NT]	105	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	112	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	113	[NT]
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	110	[NT]
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	108	[NT]	[NT]	[NT]	[NT]	117	[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	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	110	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	110	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	115	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	110	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	110	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	115	[NT]
Surrogate o-Terphenyl	%		Org-003	98	[NT]	[NT]	[NT]	[NT]	120	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			29/10/2018	[NT]	[NT]	[NT]	[NT]	29/10/2018	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	102	[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]	104	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	108	[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]	108	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	98	[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]	99	[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	114	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[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]	82	[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]	90	[NT]
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	79	[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]	89	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	90	[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]	93	[NT]
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	87	[NT]
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	94	[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	110	[NT]	[NT]	[NT]	[NT]	119	[NT]

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[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]	89	[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]	83	[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]	101	[NT]
Fenitrothion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Malathion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	72	[NT]
Parathion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Ronnel	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Surrogate TCMX	%		Org-008	110	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[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]	91	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCLMX	%		Org-006	110	[NT]	[NT]	[NT]	[NT]	109	[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	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[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]	104	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	129	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]

QUALITY CONTROL: Metals in TCLP USEPA1311						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Lead in TCLP	mg/L	0.03	Metals-020 ICP-AES	<0.03	[NT]	[NT]	[NT]	[NT]	111	[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.

Andrew Fitzsimons

From: Mitchell Delaney <MDelaney@jkgroup.net.au>
Sent: Thursday, 25 October 2018 12:53 PM
To: Samplereceipt
Cc: Ken Nguyen
Subject: EIS additional analysis request 203424 E30259KM - Lindfield

Importance: High

ELS:203424-A
TAT: 2 days
Due: 29/10/18

Hi,

Can I please schedule to following additional analysis on a 2 day TA.

TP115 (0.1-0.2m)	35	Combo 6
TP123 (0.2-0.3m)	45	OCP & PCBs
TP123 (0.5-0.6m)	46	Combo 6
TP141 (0.3m)	75	Combo 6
TP142 (0.2-0.3m)	77	Combo 6
TP148 (0.1-0.2m)	82	Combo 6
TP115 (0-0.1m)	34	TCLP for lead
TP124 (0-0.1m)	47	TCLP for lead

Many thanks.

Regards,

Mitchell Delaney
Senior Associate | Environmental Scientist

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CERTIFICATE OF ANALYSIS 203424-B

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KM, Lindfield**
Number of Samples	95 Soil
Date samples received	18/10/2018
Date completed instructions received	26/10/2018

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	02/11/2018
Date of Issue	02/11/2018

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Results Approved By
Steven Luong, Senior Chemist

Authorised By

Jacinta Hurst, Laboratory Manager

sTPH in Soil (C10-C40)-Silica			
Our Reference		203424-B-34	203424-B-76
Your Reference	UNITS	TP115	TP142
Depth		0.0-0.1	0.0-0.1
Date Sampled		17/10/2018	16/10/2018
Type of sample		Soil	Soil
Date extracted	-	29/10/2018	29/10/2018
Date analysed	-	30/10/2018	30/10/2018
TPH C_{10} - C_{14}	mg/kg	<50	<50
TPH C_{15} - C_{28}	mg/kg	<100	<100
TPH C_{29} - C_{36}	mg/kg	<100	170
TPH >C_{10} -C_{16}	mg/kg	<50	<50
TPH >C_{16} -C_{34}	mg/kg	<100	210
TPH >C_{34} -C_{40}	mg/kg	<100	<100
Surrogate o-Terphenyl	%	98	96

Method ID	Methodology Summary
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.

QUALITY CONTROL: sTPH in Soil (C10-C40)-Silica						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date extracted	-			29/10/2018	34	29/10/2018	29/10/2018		29/10/2018	[NT]
Date analysed	-			29/10/2018	34	30/10/2018	30/10/2018		29/10/2018	[NT]
TPH C_{10} - C_{14}	mg/kg	50	Org-003	<50	34	<50	<50	0	104	[NT]
TPH C_{15} - C_{28}	mg/kg	100	Org-003	<100	34	<100	<100	0	102	[NT]
TPH C_{29} - C_{36}	mg/kg	100	Org-003	<100	34	<100	<100	0	130	[NT]
TPH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	34	<50	<50	0	104	[NT]
TPH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	34	<100	<100	0	102	[NT]
TPH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	34	<100	<100	0	130	[NT]
Surrogate o-Terphenyl	%		Org-003	103	34	98	112	13	102	[NT]

QUALITY CONTROL: sTPH in Soil (C10-C40)-Silica						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	76	29/10/2018	29/10/2018		[NT]	[NT]
Date analysed	-			[NT]	76	30/10/2018	30/10/2018		[NT]	[NT]
TPH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	76	<50	<50	0	[NT]	[NT]
TPH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	76	<100	<100	0	[NT]	[NT]
TPH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	76	170	<100	52	[NT]	[NT]
TPH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	76	<50	<50	0	[NT]	[NT]
TPH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	76	210	120	55	[NT]	[NT]
TPH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	76	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	76	96	96	0	[NT]	[NT]

Result Definitions

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

Quality Control Definitions

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

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

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.

Andrew Fitzsimons

From: Mitchell Delaney <MDelaney@jkgroup.net.au>
Sent: Friday, 26 October 2018 11:06 AM
To: Simon Song
Cc: Samplereceipt
Subject: RE: Sample Receipt for 203424-A E30259KM, Lindfield

Importance: High

Hi Simon,

Sorry, additionally, could we also please schedule TRH analysis with silica gel clean up on the following samples:

- TP115 (0-0.1m); and -34
- TP142 (0-0.1m). -76

Please call me if need be.

ELS: 203424-B
TAT: 5 days
Due: 2/11/18

Many thanks.

Regards,

Mitchell Delaney
Senior Associate | Environmental Scientist

T: +612 9888 5000
F: +612 9888 5001
MDelaney@jkgroup.net.au
www.jkgroup.net.au

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ENVIRONMENTAL INVESTIGATION SERVICES
CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS
PO Box 976, North Ryde BC NSW 1670
115 Wicks Rd, Macquarie Park NSW 2113

From: Simon Song [mailto:SSong@envirolab.com.au]
Sent: Thursday, 25 October 2018 6:02 PM
To: Mitchell Delaney <MDelaney@jkgroup.net.au>
Subject: Sample Receipt for 203424-A E30259KM, Lindfield

Please refer to attached for:
a copy of our Sample Receipt Advice (SRA)
Please open and read the SRA as it contains important information.
Please let the lab know immediately if there are any issues.

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

INTERIM REPORT 204970

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KD, Linfield**
Number of Samples	35 Soil, 2 Water
Date samples received	06/11/2018
Date completed instructions received	06/11/2018

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	08/11/2018
Interim Report Date	08/11/2018

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

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		204970-1	204970-2	204970-4	204970-5	204970-6
Your Reference	UNITS	TP111	BH118	BH119	BH119	BH119
Depth		0-0.2	0-0.2	0.15-0.35	0.6-0.8	1.3-1.5
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	%	91	93	94	90	96

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		204970-7	204970-9	204970-10	204970-11	204970-12
Your Reference	UNITS	BH120	TP127	TP127	TP131	BH134
Depth		0.1-0.3	0-0.2	0.3-0.4	0-0.15	0.1-0.3
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	%	92	90	91	94	96

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		204970-14	204970-15	204970-16	204970-17	204970-18
Your Reference	UNITS	TP135	BH138	BH138	BH143	BH143
Depth		0-0.15	0.05-0.1	0.2-0.3	0.2-0.4	0.5-0.8
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	98	92	85

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		204970-19	204970-20	204970-21	204970-22	204970-23
Your Reference	UNITS	TP144	BH145	BH145	BH147	BH147
Depth		0-0.2	0.1-0.2	0.3-0.6	0.1-0.4	0.5-0.65
Date Sampled		05/11/2018	05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	95	89	91

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		204970-29	204970-30	204970-32	204970-34	204970-36
Your Reference	UNITS	BH139	DUP4	DUPMDE	TSR2	TBR2
Depth		0.2-0.35	-	-	-	-
Date Sampled		02/11/2018	02/11/2018	02/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	07/11/2018	07/11/2018
TRH C_6 - C_9	mg/kg	<25	<25	<25	[NA]	[NA]
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	[NA]	[NA]
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	[NA]	[NA]
Benzene	mg/kg	<0.2	<0.2	<0.2	90%	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	91%	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	92%	<1
m+p-xylene	mg/kg	<2	<2	<2	93%	<2
o-Xylene	mg/kg	<1	<1	<1	91%	<1
naphthalene	mg/kg	<1	<1	<1	[NA]	[NA]
Total +ve Xylenes	mg/kg	<1	<1	<1	[NA]	<1
Surrogate aaa-Trifluorotoluene	%	93	89	93	93	101

svTRH (C10-C40) in Soil						
Our Reference		204970-1	204970-2	204970-4	204970-5	204970-6
Your Reference	UNITS	TP111	BH118	BH119	BH119	BH119
Depth		0-0.2	0-0.2	0.15-0.35	0.6-0.8	1.3-1.5
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	08/11/2018	08/11/2018	08/11/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	130	200	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	220	270	<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	280	400	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	190	340	160	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	470	740	160	<50	<50
Surrogate o-Terphenyl	%	100	79	76	75	73

svTRH (C10-C40) in Soil						
Our Reference		204970-7	204970-9	204970-10	204970-11	204970-12
Your Reference	UNITS	BH120	TP127	TP127	TP131	BH134
Depth		0.1-0.3	0-0.2	0.3-0.4	0-0.15	0.1-0.3
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	190	<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	180	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	110	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	290	<50
Surrogate o-Terphenyl	%	72	72	64	69	77

svTRH (C10-C40) in Soil						
Our Reference		204970-14	204970-15	204970-16	204970-17	204970-18
Your Reference	UNITS	TP135	BH138	BH138	BH143	BH143
Depth		0-0.15	0.05-0.1	0.2-0.3	0.2-0.4	0.5-0.8
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	240	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	430	<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	570	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	250	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	820	<50	<50	<50	<50
Surrogate o-Terphenyl	%	90	78	78	73	71

svTRH (C10-C40) in Soil						
Our Reference		204970-19	204970-20	204970-21	204970-22	204970-23
Your Reference	UNITS	TP144	BH145	BH145	BH147	BH147
Depth		0-0.2	0.1-0.2	0.3-0.6	0.1-0.4	0.5-0.65
Date Sampled		05/11/2018	05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	120	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	120	<50	<50	<50	<50
Surrogate o-Terphenyl	%	74	64	67	77	76

svTRH (C10-C40) in Soil				
Our Reference		204970-29	204970-30	204970-32
Your Reference	UNITS	BH139	DUP4	DUPMDE
Depth		0.2-0.35	-	-
Date Sampled		02/11/2018	02/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	250
TRH C_{29} - C_{36}	mg/kg	<100	<100	510
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	670
TRH >C_{34} -C_{40}	mg/kg	<100	<100	250
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	920
Surrogate o-Terphenyl	%	77	74	79

PAHs in Soil						
Our Reference		204970-1	204970-2	204970-4	204970-5	204970-6
Your Reference	UNITS	TP111	BH118	BH119	BH119	BH119
Depth		0-0.2	0-0.2	0.15-0.35	0.6-0.8	1.3-1.5
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	%	72	72	79	76	77

PAHs in Soil						
Our Reference		204970-7	204970-9	204970-10	204970-11	204970-12
Your Reference	UNITS	BH120	TP127	TP127	TP131	BH134
Depth		0.1-0.3	0-0.2	0.3-0.4	0-0.15	0.1-0.3
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	0.07	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	0.3	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	74	74	66	64	79

PAHs in Soil						
Our Reference		204970-14	204970-15	204970-16	204970-17	204970-18
Your Reference	UNITS	TP135	BH138	BH138	BH143	BH143
Depth		0-0.15	0.05-0.1	0.2-0.3	0.2-0.4	0.5-0.8
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	1.4	0.2	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.3	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	1.7	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	1.4	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.6	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.7	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	1	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.70	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.3	<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	0.3	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	8.7	0.3	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.9	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	1	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	1.0	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	82	80	82	73	74

PAHs in Soil						
Our Reference		204970-19	204970-20	204970-21	204970-22	204970-23
Your Reference	UNITS	TP144	BH145	BH145	BH147	BH147
Depth		0-0.2	0.1-0.2	0.3-0.6	0.1-0.4	0.5-0.65
Date Sampled		05/11/2018	05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	%	72	60	86	76	78

PAHs in Soil				
Our Reference		204970-29	204970-30	204970-32
Your Reference	UNITS	BH139	DUP4	DUPMDE
Depth		0.2-0.35	-	-
Date Sampled		02/11/2018	02/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018
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	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	70	70	71

Organochlorine Pesticides in soil						
Our Reference		204970-1	204970-2	204970-4	204970-7	204970-9
Your Reference	UNITS	TP111	BH118	BH119	BH120	TP127
Depth		0-0.2	0-0.2	0.15-0.35	0.1-0.3	0-0.2
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	87	96	89	87

Organochlorine Pesticides in soil						
Our Reference		204970-11	204970-12	204970-14	204970-15	204970-16
Your Reference	UNITS	TP131	BH134	TP135	BH138	BH138
Depth		0-0.15	0.1-0.3	0-0.15	0.05-0.1	0.2-0.3
Date Sampled		05/11/2018	06/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	%	84	88	86	91	99

Organochlorine Pesticides in soil						
Our Reference		204970-17	204970-19	204970-20	204970-21	204970-22
Your Reference	UNITS	BH143	TP144	BH145	BH145	BH147
Depth		0.2-0.4	0-0.2	0.1-0.2	0.3-0.6	0.1-0.4
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	84	76	87	99

Organochlorine Pesticides in soil					
Our Reference		204970-23	204970-29	204970-30	204970-32
Your Reference	UNITS	BH147	BH139	DUP4	DUPMDE
Depth		0.5-0.65	0.2-0.35	-	-
Date Sampled		06/11/2018	02/11/2018	02/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	%	88	89	78	80

Organophosphorus Pesticides						
Our Reference		204970-1	204970-2	204970-4	204970-7	204970-9
Your Reference	UNITS	TP111	BH118	BH119	BH120	TP127
Depth		0-0.2	0-0.2	0.15-0.35	0.1-0.3	0-0.2
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	87	96	89	87

Organophosphorus Pesticides						
Our Reference		204970-11	204970-12	204970-14	204970-15	204970-16
Your Reference	UNITS	TP131	BH134	TP135	BH138	BH138
Depth		0-0.15	0.1-0.3	0-0.15	0.05-0.1	0.2-0.3
Date Sampled		05/11/2018	06/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	<0.2	<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	%	84	88	86	91	99

Organophosphorus Pesticides						
Our Reference		204970-17	204970-19	204970-20	204970-21	204970-22
Your Reference	UNITS	BH143	TP144	BH145	BH145	BH147
Depth		0.2-0.4	0-0.2	0.1-0.2	0.3-0.6	0.1-0.4
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	84	76	87	99

Organophosphorus Pesticides					
Our Reference		204970-23	204970-29	204970-30	204970-32
Your Reference	UNITS	BH147	BH139	DUP4	DUPMDE
Depth		0.5-0.65	0.2-0.35	-	-
Date Sampled		06/11/2018	02/11/2018	02/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	%	88	89	78	80

PCBs in Soil						
Our Reference		204970-1	204970-2	204970-4	204970-7	204970-9
Your Reference	UNITS	TP111	BH118	BH119	BH120	TP127
Depth		0-0.2	0-0.2	0.15-0.35	0.1-0.3	0-0.2
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	87	96	89	87

PCBs in Soil						
Our Reference		204970-11	204970-12	204970-14	204970-15	204970-16
Your Reference	UNITS	TP131	BH134	TP135	BH138	BH138
Depth		0-0.15	0.1-0.3	0-0.15	0.05-0.1	0.2-0.3
Date Sampled		05/11/2018	06/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	%	84	88	86	91	99

PCBs in Soil						
Our Reference		204970-17	204970-19	204970-20	204970-21	204970-22
Your Reference	UNITS	BH143	TP144	BH145	BH145	BH147
Depth		0.2-0.4	0-0.2	0.1-0.2	0.3-0.6	0.1-0.4
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	84	76	87	99

PCBs in Soil						
Our Reference		204970-23	204970-24	204970-25	204970-26	204970-27
Your Reference	UNITS	BH147	TP151	TP152	TP153	TP153
Depth		0.5-0.65	0.1-0.15	0-0.2	0-0.1	0.1-0.2
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	1.1	1.9	0.6
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	1.1	1.9	0.6
Surrogate TCLMX	%	88	96	117	93	82

PCBs in Soil					
Our Reference		204970-28	204970-29	204970-30	204970-32
Your Reference	UNITS	TP154	BH139	DUP4	DUPMDE
Depth		0-0.15	0.2-0.35	-	-
Date Sampled		05/11/2018	02/11/2018	02/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	1.1	<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	1.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	91	89	78	80

Acid Extractable metals in soil						
Our Reference		204970-1	204970-2	204970-4	204970-5	204970-6
Your Reference	UNITS	TP111	BH118	BH119	BH119	BH119
Depth		0-0.2	0-0.2	0.15-0.35	0.6-0.8	1.3-1.5
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	30	18	7	9
Copper	mg/kg	7	35	8	1	2
Lead	mg/kg	30	9	7	9	10
Mercury	mg/kg	0.2	0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	41	15	1	2
Zinc	mg/kg	16	39	14	9	10

Acid Extractable metals in soil						
Our Reference		204970-7	204970-9	204970-10	204970-11	204970-12
Your Reference	UNITS	BH120	TP127	TP127	TP131	BH134
Depth		0.1-0.3	0-0.2	0.3-0.4	0-0.15	0.1-0.3
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Arsenic	mg/kg	<4	8	<4	6	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	15	10	8	13
Copper	mg/kg	3	16	5	10	4
Lead	mg/kg	4	35	17	29	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	15	3	4	9
Zinc	mg/kg	7	64	17	38	9

Acid Extractable metals in soil						
Our Reference		204970-14	204970-15	204970-16	204970-17	204970-18
Your Reference	UNITS	TP135	BH138	BH138	BH143	BH143
Depth		0-0.15	0.05-0.1	0.2-0.3	0.2-0.4	0.5-0.8
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	66	3	6	4
Copper	mg/kg	5	40	<1	2	<1
Lead	mg/kg	23	6	1	3	3
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	71	<1	3	<1
Zinc	mg/kg	25	42	<1	4	2

Acid Extractable metals in soil						
Our Reference		204970-19	204970-20	204970-21	204970-22	204970-23
Your Reference	UNITS	TP144	BH145	BH145	BH147	BH147
Depth		0-0.2	0.1-0.2	0.3-0.6	0.1-0.4	0.5-0.65
Date Sampled		05/11/2018	05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Arsenic	mg/kg	4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	37	7	6	5
Copper	mg/kg	21	35	4	<1	<1
Lead	mg/kg	42	4	2	2	8
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	67	6	2	<1
Zinc	mg/kg	160	34	5	2	7

Acid Extractable metals in soil				
Our Reference		204970-29	204970-30	204970-32
Your Reference	UNITS	BH139	DUP4	DUPMDE
Depth		0.2-0.35	-	-
Date Sampled		02/11/2018	02/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018
Arsenic	mg/kg	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	0.6
Chromium	mg/kg	22	38	10
Copper	mg/kg	110	38	49
Lead	mg/kg	4	4	170
Mercury	mg/kg	0.1	<0.1	0.1
Nickel	mg/kg	25	67	7
Zinc	mg/kg	31	32	180

Moisture						
Our Reference		204970-1	204970-2	204970-4	204970-5	204970-6
Your Reference	UNITS	TP111	BH118	BH119	BH119	BH119
Depth		0-0.2	0-0.2	0.15-0.35	0.6-0.8	1.3-1.5
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Moisture	%	17	5.8	4.5	4.1	3.4

Moisture						
Our Reference		204970-7	204970-9	204970-10	204970-11	204970-12
Your Reference	UNITS	BH120	TP127	TP127	TP131	BH134
Depth		0.1-0.3	0-0.2	0.3-0.4	0-0.15	0.1-0.3
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Moisture	%	5.9	10	9.2	7.2	4.4

Moisture						
Our Reference		204970-14	204970-15	204970-16	204970-17	204970-18
Your Reference	UNITS	TP135	BH138	BH138	BH143	BH143
Depth		0-0.15	0.05-0.1	0.2-0.3	0.2-0.4	0.5-0.8
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Moisture	%	5.8	9.9	4.4	15	15

Moisture						
Our Reference		204970-19	204970-20	204970-21	204970-22	204970-23
Your Reference	UNITS	TP144	BH145	BH145	BH147	BH147
Depth		0-0.2	0.1-0.2	0.3-0.6	0.1-0.4	0.5-0.65
Date Sampled		05/11/2018	05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Moisture	%	15	10	8.1	5.8	4.3

Moisture						
Our Reference		204970-24	204970-25	204970-26	204970-27	204970-28
Your Reference	UNITS	TP151	TP152	TP153	TP153	TP154
Depth		0.1-0.15	0-0.2	0-0.1	0.1-0.2	0-0.15
Date Sampled		05/11/2018	05/11/2018	05/11/2018	05/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Moisture	%	13	16	10	4.4	8.9

Moisture				
Our Reference		204970-29	204970-30	204970-32
Your Reference	UNITS	BH139	DUP4	DUPMDE
Depth		0.2-0.35	-	-
Date Sampled		02/11/2018	02/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018
Moisture	%	5.7	7.5	12

Asbestos ID - soils						
Our Reference		204970-1	204970-2	204970-4	204970-5	204970-7
Your Reference	UNITS	TP111	BH118	BH119	BH119	BH120
Depth		0-0.2	0-0.2	0.15-0.35	0.6-0.8	0.1-0.3
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Sample mass tested	g	Approx. 20g	Approx. 45g	Approx. 30g	Approx. 40g	Approx. 40g
Sample Description	-	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy 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		204970-9	204970-10	204970-11	204970-12	204970-14
Your Reference	UNITS	TP127	TP127	TP131	BH134	TP135
Depth		0-0.2	0.3-0.4	0-0.15	0.1-0.3	0-0.15
Date Sampled		05/11/2018	05/11/2018	05/11/2018	06/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Sample mass tested	g	Approx. 20g	Approx. 35g	Approx. 35g	Approx. 40g	Approx. 25g
Sample Description	-	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Beige sandy soil & rocks	Brown sandy 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		204970-15	204970-17	204970-19	204970-20	204970-22
Your Reference	UNITS	BH138	BH143	TP144	BH145	BH147
Depth		0.05-0.1	0.2-0.4	0-0.2	0.1-0.2	0.1-0.4
Date Sampled		06/11/2018	06/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Sample mass tested	g	Approx. 45g	Approx. 20g	Approx. 25g	Approx. 45g	Approx. 35g
Sample Description	-	Brown sandy soil & rocks	Beige sandy soil & rocks	Brown sandy soil & rocks	Grey coarse-grained soil & rocks	Beige sandy 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		204970-29
Your Reference	UNITS	BH139
Depth		0.2-0.35
Date Sampled		02/11/2018
Type of sample		Soil
Date analysed	-	08/11/2018
Sample mass tested	g	Approx. 55g
Sample Description	-	Brown sandy soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected

Misc Inorg - Soil					
Our Reference		204970-1	204970-9	204970-12	204970-17
Your Reference	UNITS	TP111	TP127	BH134	BH143
Depth		0-0.2	0-0.2	0.1-0.3	0.2-0.4
Date Sampled		05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018
pH 1:5 soil:water	pH Units	5.2	6.9	7.8	6.8

CEC					
Our Reference		204970-1	204970-9	204970-12	204970-17
Your Reference	UNITS	TP111	TP127	BH134	BH143
Depth		0-0.2	0-0.2	0.1-0.3	0.2-0.4
Date Sampled		05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Exchangeable Ca	meq/100g	2.4	9.4	2.5	0.8
Exchangeable K	meq/100g	0.2	0.4	<0.1	<0.1
Exchangeable Mg	meq/100g	0.99	1.1	1.2	0.57
Exchangeable Na	meq/100g	<0.1	<0.1	0.25	<0.1
Cation Exchange Capacity	meq/100g	3.7	11	4.0	1.6

Clay 50-120g					
Our Reference		204970-1	204970-9	204970-12	204970-17
Your Reference	UNITS	TP111	TP127	BH134	BH143
Depth		0-0.2	0-0.2	0.1-0.3	0.2-0.4
Date Sampled		05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-				
Date analysed	-				
Clay in soils <2µm	% (w/w)				

BTEX in Water			
Our Reference		204970-35	204970-37
Your Reference	UNITS	FR2	FR3
Depth		-	-
Date Sampled		05/11/2018	06/11/2018
Type of sample		Water	Water
Date extracted	-	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018
Benzene	µg/L	<1	<1
Toluene	µg/L	<1	<1
Ethylbenzene	µg/L	<1	<1
m+p-xylene	µg/L	<2	<2
o-xylene	µg/L	<1	<1
Surrogate Dibromofluoromethane	%	93	94
Surrogate toluene-d8	%	95	99
Surrogate 4-BFB	%	103	101

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.
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-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
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.
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-13	204970-2
Date extracted	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			08/11/2018	1	08/11/2018	08/11/2018		08/11/2018	08/11/2018
TRH C_6 - C_9	mg/kg	25	Org-016	<25	1	<25	<25	0	90	96
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	1	<25	<25	0	90	96
Benzene	mg/kg	0.2	Org-016	<0.2	1	<0.2	<0.2	0	82	85
Toluene	mg/kg	0.5	Org-016	<0.5	1	<0.5	<0.5	0	88	93
Ethylbenzene	mg/kg	1	Org-016	<1	1	<1	<1	0	94	102
m+p-xylene	mg/kg	2	Org-016	<2	1	<2	<2	0	93	101
o-Xylene	mg/kg	1	Org-016	<1	1	<1	<1	0	95	101
naphthalene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	93	1	91	92	1	96	98

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	204970-30
Date extracted	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			[NT]	14	08/11/2018	08/11/2018		08/11/2018	08/11/2018
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	14	<25	<25	0	93	89
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	14	<25	<25	0	93	89
Benzene	mg/kg	0.2	Org-016	[NT]	14	<0.2	<0.2	0	82	81
Toluene	mg/kg	0.5	Org-016	[NT]	14	<0.5	<0.5	0	86	83
Ethylbenzene	mg/kg	1	Org-016	[NT]	14	<1	<1	0	98	95
m+p-xylene	mg/kg	2	Org-016	[NT]	14	<2	<2	0	99	94
o-Xylene	mg/kg	1	Org-016	[NT]	14	<1	<1	0	99	94
naphthalene	mg/kg	1	Org-014	[NT]	14	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	14	98	95	3	96	91

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Date analysed	-			[NT]	29	08/11/2018	08/11/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	29	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	29	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	29	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	29	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	29	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	29	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	29	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	29	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	29	93	95	2	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	204970-2
Date extracted	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			08/11/2018	1	07/11/2018	07/11/2018		07/11/2018	08/11/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	1	<50	<50	0	87	90
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	1	130	200	42	88	95
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	1	220	380	53	93	#
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	1	<50	67	29	87	90
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	1	280	470	51	88	95
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	1	190	300	45	93	#
Surrogate o-Terphenyl	%		Org-003	95	1	100	69	37	108	79

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	204970-30
Date extracted	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			[NT]	14	08/11/2018	08/11/2018		08/11/2018	08/11/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	14	<50	50	0	116	105
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	14	240	300	22	122	109
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	14	430	510	17	111	111
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	14	<50	51	2	116	105
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	14	570	690	19	122	109
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	14	250	330	28	111	111
Surrogate o-Terphenyl	%		Org-003	[NT]	14	90	86	5	101	74

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	204970-2
Date extracted	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			08/11/2018	1	08/11/2018	08/11/2018		08/11/2018	08/11/2018
Naphthalene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	101	103
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	101	103
Phenanthrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	108	110
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	<0.1	<0.1	0	97	100
Pyrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	87	90
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	104	105
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	104	108
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	96	1	72	67	7	91	90

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	204970-30
Date extracted	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			[NT]	14	08/11/2018	08/11/2018		08/11/2018	08/11/2018
Naphthalene	mg/kg	0.1	Org-012	[NT]	14	<0.1	<0.1	0	103	104
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	14	0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	14	0.1	<0.1	0	100	102
Phenanthrene	mg/kg	0.1	Org-012	[NT]	14	1.4	0.9	43	110	111
Anthracene	mg/kg	0.1	Org-012	[NT]	14	0.3	0.2	40	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	14	1.7	1.3	27	97	100
Pyrene	mg/kg	0.1	Org-012	[NT]	14	1.4	1.1	24	88	90
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	14	0.6	0.5	18	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	14	0.7	0.5	33	107	108
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	14	1	0.8	22	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	14	0.70	0.52	30	117	117
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	14	0.3	0.2	40	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	14	0.3	0.2	40	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	14	82	85	4	92	90

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Date analysed	-			[NT]	29	08/11/2018	08/11/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	29	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	29	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	29	70	70	0	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	204970-2
Date extracted	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
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	88	88
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	96	93
Heptachlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	87	90
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	89	89
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	91	90
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	98	96
Dieldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	94	92
Endrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	94	100
pp-DDD	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	83	81
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	90	92
Methoxychlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	99	1	75	80	6	100	102

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	204970-30
Date extracted	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
HCB	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	89	93
gamma-BHC	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	93	97
Heptachlor	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	77	86
delta-BHC	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	90	93
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	90	95
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	96	105
Dieldrin	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	93	97
Endrin	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	90	99
pp-DDD	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	79	116
Endosulfan II	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	86	83
Methoxychlor	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	14	86	105	20	103	104

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Date analysed	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	29	89	76	16	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	204970-2
Date extracted	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
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	100	93
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	104	106
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	104	109
Fenitrothion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	103	99
Malathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	78	81
Parathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	118	110
Ronnel	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	103	102
Surrogate TCMX	%		Org-008	99	1	75	80	6	78	76

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	204970-30
Date extracted	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	98	95
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	103	85
Dimethoate	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	14	<0.2	<0.2	0	109	103
Fenitrothion	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	102	96
Malathion	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	79	71
Parathion	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	103	99
Ronnel	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	102	101
Surrogate TCMX	%		Org-008	[NT]	14	86	105	20	73	70

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Date analysed	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	29	89	76	16	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	204970-2
Date extracted	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
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	101
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	99	1	75	80	6	78	76

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	204970-30
Date extracted	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	14	<0.1	<0.1	0	100	105
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	14	86	105	20	73	70

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	27	07/11/2018	07/11/2018		[NT]	[NT]
Date analysed	-			[NT]	27	07/11/2018	07/11/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	27	0.6	0.3	67	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	27	82	102	22	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Date analysed	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	29	89	76	16	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	204970-2
Date prepared	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			08/11/2018	1	08/11/2018	08/11/2018		08/11/2018	08/11/2018
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	105	81
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	98	78
Chromium	mg/kg	1	Metals-020	<1	1	9	10	11	100	86
Copper	mg/kg	1	Metals-020	<1	1	7	7	0	109	117
Lead	mg/kg	1	Metals-020	<1	1	30	31	3	102	84
Mercury	mg/kg	0.1	Metals-021	<0.1	1	0.2	0.2	0	108	111
Nickel	mg/kg	1	Metals-020	<1	1	2	2	0	99	85
Zinc	mg/kg	1	Metals-020	<1	1	16	17	6	95	63

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	204970-30
Date prepared	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			[NT]	14	08/11/2018	08/11/2018		08/11/2018	08/11/2018
Arsenic	mg/kg	4	Metals-020	[NT]	14	4	6	40	104	81
Cadmium	mg/kg	0.4	Metals-020	[NT]	14	<0.4	<0.4	0	98	76
Chromium	mg/kg	1	Metals-020	[NT]	14	7	10	35	101	92
Copper	mg/kg	1	Metals-020	[NT]	14	5	6	18	109	110
Lead	mg/kg	1	Metals-020	[NT]	14	23	27	16	103	78
Mercury	mg/kg	0.1	Metals-021	[NT]	14	<0.1	<0.1	0	101	117
Nickel	mg/kg	1	Metals-020	[NT]	14	2	2	0	99	73
Zinc	mg/kg	1	Metals-020	[NT]	14	25	29	15	97	71

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Date analysed	-			[NT]	29	08/11/2018	08/11/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	29	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	29	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	29	22	26	17	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	29	110	150	31	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	29	4	4	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	29	0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	29	25	25	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	29	31	30	3	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			08/11/2018	1	08/11/2018	08/11/2018		08/11/2018	[NT]
Date analysed	-			08/11/2018	1	08/11/2018	08/11/2018		08/11/2018	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	1	5.2	5.2	0	97	[NT]

QUALITY CONTROL: CEC					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
Date analysed	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Exchangeable K	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	109	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Exchangeable Na	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: BTEX in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			07/11/2018	[NT]	[NT]	[NT]	[NT]	07/11/2018	[NT]
Date analysed	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	99	[NT]
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate Dibromofluoromethane	%		Org-016	92	[NT]	[NT]	[NT]	[NT]	95	[NT]
Surrogate toluene-d8	%		Org-016	99	[NT]	[NT]	[NT]	[NT]	110	[NT]
Surrogate 4-BFB	%		Org-016	109	[NT]	[NT]	[NT]	[NT]	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: >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

Asbestos: Excessive sample volume was provided for asbestos analysis. A portion of the supplied sample was sub-sampled according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.
Note: Samples 204970-2, 4, 5, 7, 9, 10, 11, 12, 14, 15, 19, 20, 22, 29 were sub-sampled from bags provided by the client.

OP's in Soil - PQL has been raised due to interference from analytes(other than those being tested) in the sample14 and 14d.

TRH Soil C10-C40 NEPM - # Percent recovery is not possible to report as the high concentration of analytes in sample 2 has caused interference.

Acid Extractable Metals in Soil - Spike recovery for Zn in sample #2 at 63% which is outside lab acceptance criteria (70-130%), however, the LCS recovery is acceptable at 95%, sample heterogeneity suspected

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SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KD, Linfield
Envirolab Reference	204970
Date Sample Received	06/11/2018
Date Instructions Received	06/11/2018
Date Results Expected to be Reported	08/11/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	35 Soil, 2 Water
Turnaround Time Requested	2 days
Temperature on Receipt (°C)	19.0
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:

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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	Misc Inorg - Soil	CEC	Clay 50-120g	BTEX in Water	On Hold
TP111-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH118-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓					
BH118-0.3-0.5													✓
BH119-0.15-0.35	✓	✓	✓	✓	✓	✓	✓	✓					
BH119-0.6-0.8	✓	✓	✓				✓	✓					
BH119-1.3-1.5	✓	✓	✓				✓						
BH120-0.1-0.3	✓	✓	✓	✓	✓	✓	✓	✓					
BH120-0.5-0.7													✓
TP127-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
TP127-0.3-0.4	✓	✓	✓				✓	✓					
TP131-0-0.15	✓	✓	✓	✓	✓	✓	✓	✓					
BH134-0.1-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH134-0.5-0.7													✓
TP135-0-0.15	✓	✓	✓	✓	✓	✓	✓	✓					
BH138-0.05-0.1	✓	✓	✓	✓	✓	✓	✓	✓					
BH138-0.2-0.3	✓	✓	✓	✓	✓	✓	✓						
BH143-0.2-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH143-0.5-0.8	✓	✓	✓				✓						
TP144-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓					
BH145-0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓					
BH145-0.3-0.6	✓	✓	✓	✓	✓	✓	✓						
BH147-0.1-0.4	✓	✓	✓	✓	✓	✓	✓	✓					
BH147-0.5-0.65	✓	✓	✓	✓	✓	✓	✓						
TP151-0.1-0.15						✓							
TP152-0-0.2						✓							
TP153-0-0.1						✓							
TP153-0.1-0.2						✓							
TP154-0-0.15						✓							
BH139-0.2-0.35	✓	✓	✓	✓	✓	✓	✓	✓					
DUP4	✓	✓	✓	✓	✓	✓	✓						
DUPMDC													✓
DUPMDE	✓	✓	✓	✓	✓	✓	✓						

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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	Misc Inorg - Soil	CEC	Clay 50-120g	BTEX in Water	On Hold
DUPMDF													✓
TSR2	✓												
FR2												✓	
TSR2	✓												
FR3												✓	

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.

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CERTIFICATE OF ANALYSIS 204970-A

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KD, Linfield**
Number of Samples	35 Soil, 2 Water
Date samples received	06/11/2018
Date completed instructions received	09/11/2018

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	12/11/2018
Date of Issue	12/11/2018

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

Results Approved By
Jaimie Loa-Kum-Cheung, Senior Chemist

Authorised By

Jacinta Hurst, Laboratory Manager

Metals in TCLP USEPA1311					
Our Reference		204970-A-2	204970-A-15	204970-A-20	204970-A-32
Your Reference	UNITS	BH118	BH138	BH145	DUPMDE
Depth		0-0.2	0.05-0.1	0.1-0.2	-
Date Sampled		06/11/2018	06/11/2018	05/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	12/11/2018	12/11/2018	12/11/2018	12/11/2018
Date analysed	-	12/11/2018	12/11/2018	12/11/2018	12/11/2018
pH of soil for fluid# determ.	pH units	9.5	9.7	9.6	6.8
pH of soil TCLP (after HCl)	pH units	1.7	1.8	1.9	1.7
Extraction fluid used	-	1	1	1	1
pH of final Leachate	pH units	5.2	5.3	5.1	4.9
Lead in TCLP	mg/L	[NA]	[NA]	[NA]	0.06
Nickel in TCLP	mg/L	0.04	0.08	0.04	[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. Please note that the mass used may be scaled down from the default based on sample mass available.
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	-			12/11/2018	15	12/11/2018	12/11/2018		12/11/2018	[NT]
Date analysed	-			12/11/2018	15	12/11/2018	12/11/2018		12/11/2018	[NT]
Lead in TCLP	mg/L	0.03	Metals-020 ICP-AES	<0.03	[NT]	[NT]	[NT]	[NT]	101	[NT]
Nickel in TCLP	mg/L	0.02	Metals-020 ICP-AES	<0.02	15	0.08	0.08	0	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.
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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.
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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.

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Measurement Uncertainty estimates are available for most tests upon request.

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SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KD, Linfield
Envirolab Reference	204970-A
Date Sample Received	06/11/2018
Date Instructions Received	09/11/2018
Date Results Expected to be Reported	12/11/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	35 Soil, 2 Water
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	19.0
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:

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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	Lead in TCLP	Nickel in TCLP	On Hold
TP111-0-0.2							✓
BH118-0-0.2	✓	✓	✓	✓		✓	
BH118-0.3-0.5							✓
BH119-0.15-0.35							✓
BH119-0.6-0.8							✓
BH119-1.3-1.5							✓
BH120-0.1-0.3							✓
BH120-0.5-0.7							✓
TP127-0-0.2							✓
TP127-0.3-0.4							✓
TP131-0-0.15							✓
BH134-0.1-0.3							✓
BH134-0.5-0.7							✓
TP135-0-0.15							✓
BH138-0.05-0.1	✓	✓	✓	✓		✓	
BH138-0.2-0.3							✓
BH143-0.2-0.4							✓
BH143-0.5-0.8							✓
TP144-0-0.2							✓
BH145-0.1-0.2	✓	✓	✓	✓		✓	
BH145-0.3-0.6							✓
BH147-0.1-0.4							✓
BH147-0.5-0.65							✓
TP151-0.1-0.15							✓
TP152-0-0.2							✓
TP153-0-0.1							✓
TP153-0.1-0.2							✓
TP154-0-0.15							✓
BH139-0.2-0.35							✓
DUP4							✓
DUPMDC							✓
DUPMDE	✓	✓	✓	✓	✓		

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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	Lead in TCLP	Nickel in TCLP	On Hold
DUPMDF							✓
TSR2							✓
FR2							✓
TBR2							✓
FR3							✓

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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.

Andrew Fitzsimons

From: Mitchell Delaney <MDelaney@jkgroup.net.au>
Sent: Friday, 9 November 2018 11:51 AM
To: Samplereceipt
Subject: Additional TCLP Analysis 204970 E3029KD - Fast TA

Hi Guys,

Could I please schedule some TCLPs with the result to be provided asap.

BH118 (0-0.2m) - Nickel - 2
BH138 (0.05-0.1m) - Nickel - 15
BH145 (0.1-0.2m) - Nickel - 20
DUPMDE - lead - 32

ELS: 204970-A
TAT: 1 day
Due: 12/11/18

Many thanks

Regards,

Mitchell Delaney
Senior Associate | Environmental Scientist

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ENVIRONMENTAL INVESTIGATION SERVICES
CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS
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ENVIRONMENTAL INVESTIGATION SERVICES

26 November 2018
Report Ref: E30259KDlet2-WC

Department of Education
C/- Savills (Australia) Pty Ltd
Level 25, Governor Phillip Tower
1 Farrer Place
Sydney NSW 2000

Attention: Mr Chris Laity

WASTE CLASSIFICATION ASSESSMENT
PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
100 ETON ROAD, LINDFIELD, NSW, 2070

1 INTRODUCTION

Savills (Australia) Pty Ltd on behalf of the Department of Education ('the client') commissioned Environmental Investigation Services (EIS)[1] to assign a waste classification to the in-situ soil located at 100 Eton Road, Lindfield, NSW, 2070 ('the site'). The site location is shown on Figure 1 and sampling for the assessment was confined to the in-situ soil in the investigation area as shown on Figure 2 attached in the appendices.

EIS have been commissioned by the client to undertake a Detailed Site Investigation (DSI) and prepare a Remediation Action Plan (RAP) for the proposed Lindfield Learning Village development. The assessment of in-situ soil at the site has been completed and EIS have been requested by the client to provide a Waste Classification for the off-site disposal of the fill material and natural material in accordance with the NSW EPA Waste Classification Guidelines - Part 1: Classifying Waste (2014)[2].

The assessment was undertaken generally in accordance with an EIS proposal (Ref: EP48173KM) of 28 September 2018 and written acceptance from Department of Education care of Savills (Australia) Pty Ltd by email of 3 October 2018.

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

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

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EIS is a division of Jeffery and Katauskas Pty Ltd ● ABN 17 003 550 801

1.1 Proposed Development Details

The proposed development includes refurbishment of the existing site and buildings for use as a primary and high school.

Excavation works are required for services and may extend to a maximum of 1m below the existing ground level.

2 SITE INFORMATION

2.1 Site Identification and Description

Table 2-1: Site Identification

Site Address:	100 Eton Road, Lindfield, NSW
Lot & Deposited Plan:	Lot 2 and Lot 4 DP1151638
Land Use:	Currently vacant and Proposed primary and high school
Area Applicable to Waste Classification (m^2):	Approximately 50,000
Geographical Location (approx.):	Latitude: -33.7899690 Longitude: 151.1606190

The site is located on the crest of a hill, which in the vicinity of the site generally slopes downwards towards the south-west, south and south-east.

A walkover inspection of the site was undertaken by EIS on 15 October 2018. The inspection was limited to accessible areas of the site and immediate surrounds. An internal inspection of buildings was not undertaken. The general layout of the site at the time of the inspection is shown in Figure 2.

At the time of the assessment the internal refurbishment works were underway and excavations associated with service trenching had commenced. Signage at various locations across the site indicated that it had most recently served as the Kuring-gai campus of the University of Technology Sydney (UTS). At the time of the inspection the site consisted of a variety of multi-level brick and concrete buildings, some interconnected, surrounded by landscaped areas and bushland. Two asphaltic concrete paved car parking areas were located in the eastern section of the site. Concrete and asphaltic concrete roads and footpaths were situated at various locations around the site.

No obvious signs of potentially contaminating activities were observed. A hazardous materials storage area was observed within a ground staff works area. The storage area was located within a brick building with a concrete floor which was observed to be in good condition.

2.2 Background

EIS has previously prepared the following reports for various stages of the development:

- EIS (2017a) *Preliminary Environmental Site Assessment*[3]*,* March 2017;
- EIS (2017b) *Preliminary Stage 2 Environmental Site Assessment*[4], October 2017;
- EIS (2018) *Remediation Action Plan*[5], August 2018;
- EIS (2018b) *Virgin Excavated Natural Material Assessment*[6], November 2018; and
- EIS (2018c) *Remediation Action Plan - Addendum*[7], November 2018.

EIS have reviewed the relevant information in the above reports. The Waste Classification assessment has considered a broad suite of potential contaminants as outlined in Section 4.4 and has been undertaken in conjunction with the current DSI.

The results of the EIS Virgin Excavated Natural Material (VENM) Assessment (EIS 2018b) will be incorporated within this waste classification report.

Taylor have undertaken some of the required excavation works for proposed development, some of the VENM was disposed of off-site and fill material has been stockpiled in the south section of the site. Taylor has indicated to EIS that no unexpected finds were encountered at the site during the excavation works undertaken to date. EIS understand that stockpiled and remaining in-situ fill material is to either be re-used on site (where appropriate) or disposed of off-site to a NSW EPA Licensed facility.

2.3 Regional Geology

The geological map of Sydney (1983)[8] indicates the site to be underlain by Hawkesbury Sandstone, which typically consists of medium to coarse grained quartz sandstone with minor shale and laminite lenses.

[3] EIS (2017a) *Preliminary Environmental Site Assessment for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt dated 15 March 2017)

[4] EIS (2017b) *Preliminary Stage 2 Environmental Site Assessment for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt2 dated 16 October 2017)

[5] EIS (2018) *Remediation Action Plan for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt3 dated 16 August 2018)

[6] EIS (2018b) *Virgin Excavated Material Assessment (VENM) for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KDlet dated 13 November 2018)

[7] EIS (2018c) *Remediation Action Plan - Addendum for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt3_RAP_Addendum dated 21 November 2018)

[8] *1:100,000 Geological Map of Sydney (Series 9130),* Department of Mineral Resources (1983)

3 ASSESSMENT CRITERIA

3.1 NSW EPA Waste Classification Guidelines

Off-site disposal of fill, contaminated material, stockpiled soil, natural soil, rock excavated as part of the proposed development works is regulated by the Protection of the Environment Operations Act (1997)[9] and associated regulations and guidelines including the Part 1 of the Waste Classification Guidelines.

Soils are classed into the following categories based on the chemical contaminant criteria outlined in the guidelines:

Table 3-1: 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; • 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. EIS note that there are no specific guideline values for VENM.

[9] Protection of Environment Operations Act 1997 (NSW) (POEO Act 1997)

4 INVESTIGATION PROCEDURE

4.1 Subsurface Investigation and Soil Sampling

Field work for this investigation was undertaken between 15 October and 6 November 2018. Soil samples were obtained from over fifty boreholes/test pits drilled/excavated for the DSI. The sampling locations are shown on Figure 2 attached in the appendices. The investigation was limited to a maximum depth of refusal of equipment as shown on the borehole/test pit logs.

The sample locations were drilled/excavated using:

- A track mounted hydraulically operated drill rig equipped with spiral flight augers. Soil samples were obtained from a Standard Penetration Test (SPT) sampler or directly from the auger when conditions did not allow use of the SPT sampler;
- A 7 tonne excavator. Soil samples were obtained directly from the excavator/backhoe bucket; or
- Hand tools (shovel) in areas that were inaccessible to the above equipment.

Soil samples were collected from the fill and natural profiles encountered during the investigation. Samples were also obtained when there was a distinct change in lithology or based on the observations made during the investigation. All samples were recorded on the borehole/testpit logs attached in the appendices.

Samples were placed in glass jars with plastic caps and Teflon seals with minimal headspace. Samples for asbestos analysis were placed in zip-lock plastic bags. Sampling personnel used disposable nitrile gloves during sampling activities. The samples were labelled with the job number, sampling location, sampling depth and date.

4.2 Screening for Volatile Organic Compounds (VOCs)

A portable Photoionisation Detector (PID) was used to screen the samples for the presence of VOCs and to assist with selection of samples for further analysis for petroleum hydrocarbons. 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.

The sensitivity of the PID is dependent on the organic compound and varies for different mixtures of hydrocarbons. Some compounds give relatively high readings and some can be undetectable even though present in identical concentrations. The portable PID is best used semi-quantitatively to compare samples contaminated by the same hydrocarbon source. The PID is calibrated before use by measurement of an isobutylene standard gas. All the PID measurements are quoted as parts per million (ppm) isobutylene equivalents.

4.3 Decontamination and Sample Preservation

The sampling equipment was decontaminated using a scrubbing brush and potable water and Decon 90 solution (phosphate free detergent) followed by rinsing with potable water.

Soil samples were preserved by immediate storage in an insulated sample container with ice in accordance with AS4482.1-2005 and AS4482.2-1999[10] as summarised in the following table:

Table 4-1: Soil Sample Preservation and Storage

Analyte	Preservation	Storage
Heavy metals	Unpreserved glass jar with Teflon lined lid	Store at <4°, analysis within 28 days (mercury and Cr[VI]) and 180 days (other metals)
Hydrocarbons, pesticides and other organics	As above	Store at <4°, analysis within 14 days
PFAS compounds	Unpreserved plastic jar	Store at <4°, analysis within 60 days
Asbestos	Sealed plastic bag	None

On completion of the fieldwork, the samples were delivered in the insulated sample container to a NATA registered laboratory for analysis under standard Chain of Custody (COC) procedures.

4.4 Laboratory Analysis

Samples were analysed for a range of potential contaminants based on the site information presented in Section 2.

Sixty eight selected in-situ fill soil samples were analysed for the following:

- Heavy metals including: arsenic, cadmium, chromium (total), copper, lead, mercury, nickel and zinc;
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Total Recoverable Hydrocarbons (TRH);
- Monocyclic aromatic hydrocarbons including benzene, toluene, ethylbenzene and xylene (BTEX);
- Organochlorine pesticides (OCPs);
- Organophosphate pesticides (OPPs);
- Polychlorinated biphenyls (PCBs);
- Asbestos; and
- TCLP leachate analysis for PAHs and/or heavy metals where required.

Three surface fill soil samples were analysed for Per-and poly-fluoro alkyl (PFAS).

Twenty five selected natural soil and bedrock were analysed for the following:

[10] *Guide to the Sampling and Investigation of Potentially Contaminated Soil Part2: Volatile Substances,* Standards Australia, 1999 (AS 1999)

- Heavy metals including: arsenic, cadmium, chromium (total), copper, lead, mercury, nickel and zinc;
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Total Recoverable Hydrocarbons (TRH);
- Monocyclic aromatic hydrocarbons including benzene, toluene, ethylbenzene and xylene (BTEX);
- Organochlorine pesticides (OCPs);
- Organophosphate pesticides (OPPs); and
- Polychlorinated biphenyls (PCBs).

Samples were analysed by Envirolab Services (NATA Accreditation Number – 2901) using the analytical methods detailed in the National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013[11]). Reference should be made to the laboratory reports attached in the appendices for further information. Reference should be made to the laboratory reports (Ref: 203242, 203424-A, 203424-B, 15166, 15166-A, 204970-A, 15316, 204813) attached in the appendices for further information.

5 RESULTS OF THE INVESTIGATION

5.1 Subsurface Conditions

The subsurface conditions encountered generally consisted of asphaltic concrete pavement in driveway and car parking areas to a maximum depth of 0.1m, underlain by silty sand or silty clay fill material, underlain by clayey sand, sandy clay or sandstone bedrock. Reference should be made to the borehole/testpit logs attached in the appendices for further details.

5.2 VOC Screening

PID soil sample headspace readings are presented in the COC documents attached in the appendices. The PID results ranged from 0ppm to 1.5ppm equivalent isobutylene. These results generally indicate a lack of PID detectable volatile organic contaminants.

5.3 Laboratory Results

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.

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

Table 5-1: 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	93	6	1	Nickel concentrations exceeded the CT1 criterion in three fill samples collected from TP118 (0-0.2m), BH138 (0-0.5-0.1m) and BH145 (0.1-0.2m). The maximum nickel concentration was 71mg/kg. Lead concentrations exceeded the CT1 criterion in four fill samples collected from TP115 (0-0.1m), TP124 (0-0.1m) and DUPMDE and DUPAMS9. The maximum lead concentration was 1,800mg/kg (TP115 (0-0.15m) which was above the SCC1 Criterion of 1,500mg/kg. Statistical calculations were undertaken on the fill soil lead results using ProUCL (Version 5.1), the results are attached in the appendices. In summary, the 95% UCL for lead was 47.25mg/kg which was below the CT1 criterion.
TRH	93	0	0	All TRH results were below the SCC1 criterion. EIS note that there were some minor detections of heavy fraction TRH in some of the surface natural soil samples, however the TRH was subsequently demonstrated to most likely be the result of natural occurring organic plant material by silica gel clean-up analysis of some representative samples at the laboratory.
BTEX	93	0	0	All BTEX results were below the laboratory practical quantitation limits (PQLs).

Analyte	No. of Samples Analysed	No. of Results > CT Criteria	No. of Results > SCC Criteria	Comments
Total PAHs	93	0	0	All total PAH results were below the SCC1 criterion.
Benzo(a)pyrene	93	0	0	All results for Benzo(a)pyrene were below the CT1 criterion.
OCPs & OPPs	65	0	0	All results for OCPs and OPPs were below the SCC1 criterion.
PCBs	70	0	0	All results for PCBs were below the SCC1 criterion.
PFAS	3	0	0	All results for PFAS compounds were below the SCC1 criterion.
Asbestos	66	-	-	Asbestos (associated with a fragment of fibre cement) was detected in one fill soil sample, collected at a depth of 0.0m to 0.2m in BH1. Borehole BH1 was drilled as part of the Preliminary Stage 2 Environmental Site Assessment (2017b). Asbestos was not detected at the remaining sampling locations.

Table 5-2: Summary of Soil Laboratory Results Compared to TCLP Criteria

Analyte	No. of Samples Analysed	No. of Results > TCLP Criteria	Comments
Lead	4	0	The four fill samples with lead concentrations above the CT1 criterion were analysed for TCLP lead. All lead TCLP results were below the TCLP1 criterion.
Nickel	3	0	The three fill samples with nickel concentrations above the CT1 criterion were analysed for TCLP nickel. All nickel TCLP results were below the TCLP1 criterion.

6 CONCLUSIONS

6.1 Waste Classification of Fill

Based on the results of the assessment, and at the time of reporting, the fill material has been classified into the following waste streams as outlined in the table below.

Table 6-1: Waste Classification

Material	Classification	Comments
Fill material in the investigation area identified as Area A and shown on Figure 2	**General Solid Waste (non-putrescible) containing asbestos**	Asbestos (associated with a fragment of fibre cement) was detected in one fill soil sample, collected at sampling location BH1. Borehole BH1 was drilled as part of the Preliminary Stage 2 Environmental Site Assessment (2017b) and subsequently EIS classified the fill material in the vicinity of BH1 as General Solid Waste (non-putrescible) containing Special Waste (asbestos). Although no further asbestos containing material (ACM) was identified as part of the current DSI, the above waste classification is still applicable to Area A (as shown in Figure 2) until the ACM remediation works detailed in the EIS Remediation Action Plan (2018) and Remediation Action Plan – Addendum (2018c) have been completed and validated. In NSW, the transport of Asbestos Waste weighing more than 100 kilograms, must be tracked and reported to the NSW EPA using the WasteLocate system.
Fill material over the remainder of the investigation area	**General Solid Waste (non-putrescible)**	Due to the detection of total PCBs at a concentration of 4.2mg/kg in the fill soil sample TP123 (0-0.1m), the fill material shown as Area B on the attached Figure 2 is considered as PCB contaminated soil (PCB waste) under the Polychlorinated Biphenyl (PCB) Chemical Control Order 1997. Although, the fill material in Area B is considered a PCB contaminated soil (PCB waste), the soil is still classified as General Solid Waste (non-putrescible) in accordance with the NSW EPA Waste Classification Guidelines 2014.

Fill to be disposed of off-site must be transported of to a landfill that is licensed by the NSW EPA to receive the waste stream. The landfill should be contacted to obtain the required approvals prior to commencement of excavation.

6.2 Classification of Natural Soil and Bedrock

Based on the scope of work undertaken for this assessment, and at the time of reporting, EIS are of the opinion that the natural soil and bedrock to a maximum depth of 1.5m below existing ground level at the site meets the definition of **VENM** for off-site disposal or re-use purposes. VENM is considered suitable for re-use on-site, or alternatively, the information included in this report may be used to assess whether the material is suitable for beneficial reuse at another site as fill material. In accordance with Part 1 of the Waste Classification Guidelines, the VENM is pre-classified as general solid waste and can also be disposed of accordingly to a facility that is licensed to accept it.

6.3 Recommendations

Any unexpected finds encountered during the site works should be inspected by a suitably qualified contaminated land consultant[12]. In the event that the find has the potential to alter the VENM classification documented in this report, additional testing and reporting should be undertaken.

6.4 General Information

The fill material must be disposed of to a facility licensed by the NSW EPA to accept the waste. It is the responsibility of the receiving facility to ensure that the material meets their EPA license conditions. EIS accepts no liability whatsoever for illegal or inappropriate disposal of material.

Fill and contaminated soil disposal costs are significant and may affect project viability. These costs should be assessed at an early stage of the project development to avoid significant future unexpected additional costs.

Material classed as VENM must not be mixed with any fill material (including building rubble) as this will invalidate the VENM classification. Where doubt exists about the difference between fill and VENM material an environmental/geotechnical engineer should be contacted for advice.

Section 143 of the POEO Act 1997 states that if waste is transported to a place that cannot lawfully be used as a waste facility for that waste, then the transporter and owner of the waste are each guilty of an offence. The transporter and owner of the waste have a duty to ensure that the waste is disposed of in an appropriate manner. EIS accepts no liability whatsoever for the unlawful disposal of any waste from any site.

[12] EIS recommend that the consultancy engaged for the work be a member of the Australian Contaminated Land Consultants Associated (ACLCA), and/or the individual undertaking the works be certified under one of the NSW EPA endorsed certified practitioner schemes

7 LIMITATIONS

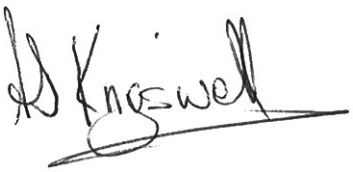
The report limitations are outlined below:

- 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;
- 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;
- 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;
- Copyright in this report is the property of EIS. EIS has used a degree of care, skill and diligence normally exercised by consulting professionals in similar circumstances and locality. No other warranty expressed or implied is made or intended. Subject to payment of all fees due for the investigation, the client alone shall have a licence to use this report;
- If the client, or any person, provides a copy of this report to any third party, such third party must not rely on this report except with the express written consent of EIS; and
- Any third party who seeks to rely on this report without the express written consent of EIS does so entirely at their own risk and to the fullest extent permitted by law, EIS accepts no liability whatsoever, in respect of any loss or damage suffered by any such third party.

If you have any questions concerning the contents of this letter please do not hesitate to contact us.

Kind Regards

Mitchell Delaney
Senior Associate



Adrian Kingswell
Principal

Appendices:

Appendix A: Report Figures
Appendix B: Laboratory Summary Tables
Appendix C: Borehole/ Test pit Logs
Appendix D: Laboratory Report/s & COC Documents
Appendix E: Statistical Calculations

Appendix A: Report Figures

AERIAL IMAGE SOURCE: GOOGLE EARTH PRO 7.1.5.1557
AERIAL IMAGE ©: 2015 GOOGLE INC.

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

Title: **SITE LOCATION PLAN**

Location: 100 ETON ROAD
LINDFIELD, NSW

Report No: E30259KDlet2-WC

Figure No: 1

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

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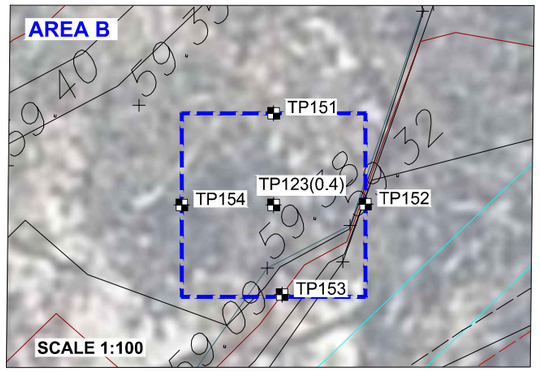
CHARLES BEAN SPORTS FIELD

TP150(0.2)
BH156(1.1)(1.1)
TP148(0.05)
TP149(0.1)
BH145(0.3)(0.3)
BH/MW157(0.4)
TP144(>0.2)
TP146(0.1)
BH147(>0.08)
BH139(0.4)(0.4)
TP142(0.1)
BH143(0.2)
TP140(0.2)
TP141(0.3)
SS3
TP136(0.1)
TP137(0.1)
BH138(0.1)
TP135(>0.15)
TP111(0.2)
TP133(0.3)
TP132(0.8)
BH134(0.4)
TP131(>0.15)
TP126(0.65)
TP130(1.4)
TP128(>0.1)
TP129(0.95)
TP127(>0.4)
AREA B
SS2
TP122(0.2)
TP124(0.1)
TP125(0.15)
BH118(0.2)
BH155(0.4)(0.4)
BH119(1.3)
BH120(0.4)(0.4)
TP121(0.2)
TP116(0.05)
TP117(0.2)
AREA A
TP113(>1.0)
TP115(0.1)
TP112(0.2)
TP114(0.2)
SS3
TP110(>1.4)
TP109(0.1)
BH3(0.35)
BH1(0.3)
BH/MW2(0.3)
BH5(0.2)
BH/MW4(0.2)
TP104(0.15)
TP105(0.7)
TP106(0.8)
TP107(0.7)
TP108(>0.9)
TP101(0.2)
TP102(0.3)
TP103(0.4)

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM, 23 OCT 2018.



LEGEND

- APPROXIMATE SITE BOUNDARY
- BH/MW(Fill Depth) — BOREHOLE AND GROUND WATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
- BH (Fill Depth) — GROUND WATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
- TP(Fill Depth) — TEST PIT LOCATION, NUMBER AND DEPTH OF FILL (m)
- ***AREA A*** — GENERAL SOLID WASTE CONTAINING ASBESTOS AREA
- ***AREA B*** — GENERAL SOLID WASTE TO BE DISPOSED OF IN ACCORDANCE WITH THE PCB CHEMICAL CONTROL ORDER 1997.
- SS — SURFACE SOIL SAMPLE

0 12 24 36 48 60
SCALE 1:1200 @A3 METRES

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

Title: **SOIL WASTE CLASSIFICATION AREAS**

Location: 100 ETON ROAD LINDFIELD, NSW

Report No: E30259KDlet2-WC

Figure No: 2

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

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Appendix B: Laboratory Summary Tables

TABLE A-1
SOIL LABORATORY RESULTS COMPARED TO WASTE CLASSIFICATION GUIDELINES
All data in mg/kg unless stated otherwise

			HEAVY METALS								PAHs		OC/OP PESTICIDES				Total PCBs	TRH					BTEX COMPOUNDS				ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	B(a)P	Total Endosulfans	Chloropyrifos	Total Moderately Harmful	Total Scheduled		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	NSL	100	4	40	NSL	200	0.8	60	4	250	<50	<50	650		NSL		10,000	10	288	600	1,000	-
General Solid Waste SCC1			500	100	1900	NSL	1500	50	1050	NSL	200	10	108	7.5	250	<50	<50	650		NSL		10,000	18	518	1,080	1,800	-
Restricted Solid Waste CT2			400	80	400	NSL	400	16	160	NSL	800	3.2	240	16	1000	<50	<50	2600		NSL		40,000	40	1,152	2,400	4,000	-
Restricted Solid Waste SCC2			2000	400	7600	NSL	6000	200	4200	NSL	800	23	432	30	1000	<50	<50	2600		NSL		40,000	72	2,073	4,320	7,200	-
Sample Reference	**Sample Depth**	**Sample Description**																									
BH1	0.0-0.2	Fill: silty sand	<4	<0.4	8	16	48	<0.1	9	44	0.06	0.06	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Detected
BH1	0.3-0.5	Silty sand	<4	<0.4	6	3	10	<0.1	<1	6	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
BH2	0.0-0.2	Fill: silty sand	5	<0.4	17	5	14	<0.1	3	17	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not detected.
BH2	0.3-0.5	Silty sand	<4	<0.4	9	2	11	<0.1	2	12	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
BH3	0.0-0.2	Fill: silty sand	<4	<0.4	11	4	12	<0.1	3	18	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not detected.
BH3	0.6-0.8	Silty sand	<4	<0.4	12	<1	6	<0.1	<1	3	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
BH4	0.0-0.2	Fill: silty sand	<4	<0.4	10	14	20	<0.1	7	36	1.3	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not detected.
BH4	0.5-0.95	Silty sand	<4	<0.4	10	1	11	<0.1	1	30	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
BH5	0.0-0.2	Fill: silty sand	<4	<0.4	12	78	25	<0.1	9	48	<0.05	<0.05	<0.1	<0.1	<0.1	1.5	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not detected.
BH5	0.3-0.5	Silty sand	<4	<0.4	10	3	11	<0.1	3	19	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP101	0.0-0.1	Fill: silty clay	<4	<0.4	5	5	33	<0.1	2	18	0.05	0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP102	0.0-0.1	Fill: silty sand	<4	<0.4	4	3	20	<0.1	1	12	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	0.6	<25	<50	170	310	480	<0.2	<0.5	<1	<3	Not Detected
TP102	0.1-0.2	Fill: clayey sand	<4	<0.4	4	2	18	<0.1	<1	10	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	110	110	<0.2	<0.5	<1	<3	Not Detected
TP103	0.0-0.1	Fill: silty clay	<4	<0.4	9	20	37	0.1	5	44	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP104	0.0-0.1	Fill: silty clay	<4	<0.4	6	5	19	<0.1	2	22	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP105	0.0-0.1	Fill: sandy gravel	<4	<0.4	5	29	4	<0.1	20	17	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP105	0.4-0.5	Sandy clay	<4	<0.4	10	12	9	<0.1	8	12	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP106	0.0-0.1	Fill: silty clay	4	<0.4	7	9	22	<0.1	5	31	<0.05	<0.05	<0.1	<0.1	<0.1	0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP106	0.6-0.7	Fill: silty clay	<4	<0.4	2	1	11	<0.1	<1	7	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP106	1.2-1.3	Sandy clay	<4	<0.4	18	<1	7	<0.1	<1	5	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP107	0.0-0.1	Fill: silty clay	<4	<0.4	13	23	93	<0.1	10	60	0.52	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	410	1800	2210	<0.2	<0.5	<1	<3	Not Detected
TP107	0.4-0.5	Fill: silty clay	<4	<0.4	10	1	10	<0.1	1	9	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP108	0.0-0.1	Fill: silty clay	<4	<0.4	8	7	18	<0.1	3	18	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP108	0.3-0.4	Fill: silty clay	<4	<0.4	53	27	20	<0.1	<1	40	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP109	0.0-0.1	Fill: silty clay	<4	<0.4	3	3	28	<0.1	1	8	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP110	0.0-0.1	Fill: silty clay	<4	<0.4	7	6	17	<0.1	5	24	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP110	0.3-0.4	Fill: clayey sand	<4	<0.4	8	3	7	<0.1	3	10	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP110	1.3-1.4	Fill: silty clay	<4	<0.4	7	2	8	<0.1	2	8	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP111	0-0.2	Silty sand	<4	<0.4	9	7	30	0.2	2	16	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	130	220	350	<0.2	<0.5	<1	<3	Not Detected
TP112	0.0-0.1	Fill: silty clay	<4	<0.4	4	5	14	<0.1	2	27	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP112	0.4-0.5	Sandy clay	<4	<0.4	7	<1	6	<0.1	1	3	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP113	0.0-0.05	Fill: silty clay	<4	<0.4	12	3	16	<0.1	2	15	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP113	0.9-1.0	Fill: silty clay	<4	<0.4	8	1	7	<0.1	<1	5	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP114	0.0-0.1	Fill: clayey sand	<4	<0.4	2	4	49	<0.1	1	6	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	280	280	<0.2	<0.5	<1	<3	Not Detected
TP115	0.0-0.1	Fill: silty sand	<4	<0.4	3	8	**1800**	<0.1	3	18	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.5	<25	<50	170	440	610	<0.2	<0.5	<1	<3	Not Detected
TP115	0.1-0.3	Sandy clay	<4	<0.4	4	1	15	<0.1	<1	5	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.5	<25	<50	<100	360	360	<0.2	<0.5	<1	<3	NA
TP116	0.0-0.05	Fill: silty sandy clay	<4	<0.4	4	9	66	<0.1	3	29	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	150	150	<0.2	<0.5	<1	<3	Not Detected
TP117	0.0-0.1	Fill: silty clay	<4	<0.4	9	13	26	<0.1	6	52	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH118	0-0.2	Fill: silty sandy gravel	<4	<0.4	30	35	9	0.1	**41**	39	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	200	270	470	<0.2	<0.5	<1	<3	Not Detected
BH119	0.15-0.35	Fill: silty sandy gravel	<4	<0.4	18	8	7	<0.1	15	14	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH119	0.6-0.8	Fill: silty sand	<4	<0.4	7	1	9	<0.1	1	9	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH119	1.3-1.5	Sandstone	<4	<0.4	9	2	10	<0.1	2	10	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
BH120	0.1-0.3	Fill: silty sand	<4	<0.4	8	3	4	<0.1	4	7	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP121	0.0-0.1	Fill: silty sand	<4	<0.4	2	5	99	<0.1	<1	5	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	130	130	<0.2	<0.5	<1	<3	Not Detected
TP122	0.0-0.1	Fill: silty sand	<4	<0.4	8	7	21	<0.1	1	19	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	130	130	<0.2	<0.5	<1	<3	Not Detected
TP123	0.0-0.1	Fill: silty clay	<4	<0.4	2	12	82	<0.1	3	35	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	4.2	<25	59	310	690	1059	<0.2	<0.5	<1	<3	Not Detected
TP123	0.2-0.3	Fill: clayey sand	<4	<0.4	2	1	15	<0.1	<1	3	<0.05	<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
TP123	0.5-0.6	Sandy clay	<4	<0.4	2	<1	4	<0.1	<1	3	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP124	0.0-0.1	Fill: silty sand	<4	<0.4	6	17	**140**	<0.1	3	14	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	260	260	<0.2	<0.5	<1	<3	Not Detected
TP125	0.5-0.15	Fill: clayey sand	<4	<0.4	4	12	82	<0.1	2	21	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	170	170	<0.2	<0.5	<1	<3	Not Detected
Total Number of samples			50	50	50	50	50	50	50	50	50	50	32	32	32	32	32	50	50	50	50	50	50	50	50	50	36
Maximum Value			5	<PQL	53	78	1800	0.2	41	60	1.3	0.2	<PQL	<PQL	<PQL	1.5	4.2	<PQL	59	410	1800	2210	<PQL	<PQL	<PQL	<PQL	NC

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

TABLE A-2
SOIL LABORATORY RESULTS COMPARED TO WASTE CLASSIFICATION GUIDELINES
All data in mg/kg unless stated otherwise

			HEAVY METALS								PAHs		OC/OP PESTICIDES				Total	TRH					BTEX COMPOUNDS				ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	B(a)P	Total Endosulfans	Chloropyrifos	Total Moderately Harmful	Total Scheduled	PCBs	C_6-C_9	C_{10}-C_{14}	C_{15}-C_{28}	C_{29}-C_{36}	Total C_{10}-C_{36}	Benzene	Toluene	Ethyl benzene	Total Xylenes	
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.05	0.1	0.1	0.1	0.1	0.1	25	50	100	100	250	0.2	0.5	1	3	100
General Solid Waste CT1			100	20	100	NSL	100	4	40	NSL	200	0.8	60	4	250	<50	<50	650		NSL		10,000	10	288	600	1,000	-
General Solid Waste SCC1			500	100	1900	NSL	1500	50	1050	NSL	200	10	108	7.5	250	<50	<50	650		NSL		10,000	18	518	1,080	1,800	-
Restricted Solid Waste CT2			400	80	400	NSL	400	16	160	NSL	800	3.2	240	16	1000	<50	<50	2600		NSL		40,000	40	1,152	2,400	4,000	-
Restricted Solid Waste SCC2			2000	400	7600	NSL	6000	200	4200	NSL	800	23	432	30	1000	<50	<50	2600		NSL		40,000	72	2,073	4,320	7,200	-
Sample Reference	**Sample Depth**	**Sample Description**																									
TP126	0.0-0.1	Fill: silty sand	<4	<0.4	7	9	7	<0.1	4	21	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP126	0.2-0.3	Fill: sandy clay	<4	<0.4	9	5	11	<0.1	9	19	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP127	0-0.2	Fill: silty sand	8	<0.4	15	16	35	<0.1	15	64	0.3	0.07	<0.1	<0.1	<0.1	<0.1	0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP127	0.3-0.4	Fill: sandy clay	<4	<0.4	10	5	17	<0.1	3	17	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP128	0.0-0.1	Fill: silty sand	<4	<0.4	11	7	64	<0.1	2	25	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	320	320	<0.2	<0.5	<1	<3	Not Detected
TP129	0.0-0.1	Fill: silty clay	6	<0.4	9	10	35	<0.1	6	36	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.5	<25	51	170	450	671	<0.2	<0.5	<1	<3	Not Detected
TP129	0.3-0.4	Fill: clayey sand	<4	<0.4	6	3	31	<0.1	1	6	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP129	0.95-1.0	Fill: clayey sand	<4	<0.4	4	<1	3	<0.1	<1	1	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP130	0.05-0.15	Fill: clayey sand	<4	<0.4	8	7	31	<0.1	2	20	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	100	230	330	<0.2	<0.5	<1	<3	Not Detected
TP130	0.7-0.8	Fill: clayey sand	<4	<0.4	14	5	29	<0.1	4	14	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	120	120	<0.2	<0.5	<1	<3	Not Detected
TP131	0-0.15	Fill: silty sand	6	<0.4	8	10	29	<0.1	4	38	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	190	190	<0.2	<0.5	<1	<3	Not Detected
TP132	0.0-0.1	Fill: silty sand	<4	<0.4	6	9	28	<0.1	2	35	0.66	0.1	<0.1	<0.1	<0.1	0.1	<0.1	<25	<50	<100	250	250	<0.2	<0.5	<1	<3	Not Detected
TP132	0.3-0.4	Fill: clayey sand	<4	<0.4	7	2	4	<0.1	<1	3	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP132	0.9-1.0	Clayey sand	<4	<0.4	6	<1	1	<0.1	<1	<1	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP133	0.0-0.1	Fill: silty sand	<4	<0.4	6	8	28	<0.1	3	20	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	160	160	<0.2	<0.5	<1	<3	Not Detected
TP133	0.3-0.4	Sand	<4	<0.4	<1	<1	<1	<0.1	<1	<1	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
BH134	0.1-0.3	Fill: Silty sand	<4	<0.4	13	4	6	<0.1	9	9	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP135	0-0.15	Fill: silty sand	4	<0.4	7	5	23	<0.1	2	25	8.7	0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	240	430	670	<0.2	<0.5	<1	<3	Not Detected
TP136	0.0-0.1	Fill: silty sand	<4	<0.4	3	3	19	<0.1	<1	12	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	200	200	<0.2	<0.5	<1	<3	Not Detected
TP137	0.0-0.1	Fill: silty sand	<4	<0.4	2	7	46	<0.1	2	17	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	120	120	<0.2	<0.5	<1	<3	Not Detected
BH138	0.05-0.1	Fill: silty sandy gravel	<4	<0.4	66	40	6	<0.1	**71**	42	0.3	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH138	0.2-0.3	Sandstone	<4	<0.4	3	<1	1	<0.1	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
BH139	0.2-0.35	Fill: silty gravelly sand	<4	<0.4	22	110	4	0.1	25	31	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
TP140	0.0-0.1	Fill: silty sand	<4	<0.4	7	13	24	<0.1	2	51	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	270	270	<0.2	<0.5	<1	<3	Not Detected
TP140	0.2-0.3	Clayey sand	<4	<0.4	10	2	3	<0.1	<1	9	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP141	0.0-0.1	Fill: silty sand	<4	<0.4	3	6	42	<0.1	1	12	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	100	100	<0.2	<0.5	<1	<3	Not Detected
TP141	0.3	Fill: silty sand	<4	<0.4	2	<1	2	<0.1	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	51	<100	<100	51	<0.2	<0.5	<1	<3	NA
TP142	0.0-0.1	Fill: silty sand clay	<4	<0.4	3	8	22	<0.1	2	28	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<1	<25	59	570	960	1589	<0.2	<0.5	<1	<3	Not Detected
TP142	0.2-0.3	Clayey sand	<4	<0.4	5	1	6	<0.1	<1	9	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
BH143	0.2-0.4	Silty sand	<4	<0.4	6	2	3	<0.1	3	4	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH143	0.5-0.8	Sandstone	<4	<0.4	4	<1	3	<0.1	<1	2	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP144	0-0.2	Fill: silty sand	4	<0.4	15	21	42	<0.1	5	160	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH145	0.1-0.2	Fill: sandy clayey gravel	<4	<0.4	37	35	4	<0.1	**67**	34	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH145	0.3-0.6	Clayey sand	<4	<0.4	7	4	2	<0.1	6	5	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP146	0.0-0.1	Fill: silty sand	<4	<0.4	4	7	41	<0.1	2	18	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	260	260	<0.2	<0.5	<1	<3	Not Detected
BH147	0.1-0.4	Silty sand	<4	<0.4	6	<1	2	<0.1	2	2	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	Not Detected
BH147	0.5-0.65	Sandstone	<4	<0.4	5	<1	8	<0.1	<1	7	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP148	0.0-0.05	Fill: silty clayey sand	<4	<0.4	5	7	21	<0.1	2	26	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	140	340	480	<0.2	<0.5	<1	<3	Not Detected
TP148	0.1-0.2	Silty sand	<4	<0.4	7	4	19	<0.1	1	11	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP149	0.0-0.1	Fill: silty sand	<4	<0.4	3	5	32	<0.1	1	14	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	160	160	<0.2	<0.5	<1	<3	Not Detected
TP149	0.3-0.4	Sandy clay	<4	<0.4	9	<1	2	<0.1	<1	2	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<PQL	<0.2	<0.5	<1	<3	NA
TP150	0.0-0.1	Fill: sandy clay	<4	<0.4	13	11	18	<0.1	3	23	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	200	200	<0.2	<0.5	<1	<3	Not Detected
TP151	0.1-0.15	Fill: Silty sand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP152	0-0.2	Fill: Silty sand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP153	0-0.1	Fill: Silty sand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP153	0.1-0.2	Fill: Silty sand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP154	0-0.15	Fill: Silty sand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Number of samples			42	42	42	42	42	42	42	42	42	42	32	32	32	32	37	42	42	42	42	42	42	42	42	42	30
Maximum Value			8	<PQL	66	110	64	0.1	71	160	8.7	0.7	<PQL	<PQL	<PQL	0.1	1.9	<PQL	59	570	960	1589	<PQL	<PQL	<PQL	<PQL	NC
Statistical Analysis on Fill Samples																											
Number of Fill Samples			NC	NC	NC	NC	68	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Mean Value			NC	NC	NC	NC	53	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Standard Deviation			NC	NC	NC	NC	216.5	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
% UCL			NC	NC	NC	NC	95	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
UCL Value			NC	NC	NC	NC	47.25	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

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

TABLE A-3

SOIL LABORATORY RESULTS COMPARED TO WASTE CLASSIFICATION GUIDELINES

All data in mg/kg unless stated otherwise

			PFAS COMPOUNDS	
			PFOS + PFHxS	PFOA
PQL - Envirolab Services			0.0002	0.0001
General Solid Waste CT1			NSL	NSL
General Solid Waste SCC1			1.8	18
Restricted Solid Waste CT2			NSL	NSL
Restricted Solid Waste SCC2			7.2	72
Sample Reference	**Sample Depth**	**Sample Description**		
SS1	NA	Fill: silty sand	0.0006	<0.0001
SS2	NA	Fill: silty sand	0.0005	<0.0001
SS3	NA	Fill: silty sand	0.0003	<0.0001
Total Number of samples			3	3
Maximum Value			0.0006	<PQL

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

TABLE B

SOIL LABORATORY TCLP RESULTS

All data in mg/L unless stated otherwise

			Lead	Nickel
PQL - Envirolab Services			0.03	0.02
TCLP1 - General Solid Waste			5	2
TCLP2 - Restricted Solid Waste			20	8
TCLP3 - Hazardous Waste			>20	>8
Sample Reference	**Sample Depth**	**Sample Description**		
TP115	0.0-0.1	Fill: silty sand	0.2	NA
TP124	0.0-0.1	Fill: silty sand	0.34	NA
BH118	0-0.2	Fill: silty sandy gravel	NA	0.04
BH138	0.05-0.1	Fill: silty sandy gravel	NA	0.08
BH145	0.1-0.2	Fill: sandy clayey gravel	NA	0.04
DUPAMS9	NA	Fill	0.06	NA
DUPMDE	NA	Fill	0.06	NA
Total Number of samples			4	3
Maximum Value			0.34	0.08

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

Appendix C: Borehole / Test pit Logs

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP101
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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	■		■							FILL: Silty clay, low to medium plasticity, brown, trace of root fibres.	w<PL			
	■		■				0.5		SC	Clayey SAND: fine to medium grained, yellow brown, trace of ironstone gravel.	M			
										END OF ENVIRONMENTAL HOLE AT 0.60 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB.GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:31 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP102
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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	■		■							FILL: Silty sand, fine to medium grained, brown, trace of sandstone, ironstone gravel and root fibres.	D			MULCH COVER
	■		■								M			
										FILL: Clayey sand, fine to medium grained, yellow brown, trace sandstone gravel, concrete, root fibres, ash and glass.				
	■		■				0.5		CL-CI	Sandy CLAY: low to medium plasticity, yellow brown, trace of sandstone gravel.	w~PL			
										END OF ENVIRONMENTAL HOLE AT 0.80 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP103
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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										FILL: Silty clay, low to medium plasticity, brown, traces of igneous and river gravel.	w>PL			PLASTIC COVER
									SC	Clayey SAND: fine to medium grained, grey mottled yellow brown.	M			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.50 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB.GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:31 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP104
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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	■		■							FILL: Silty clay, low to medium plasticity, brown, trace of organic material and root fibres.	w<PL			
	■		■						CL-CI	Sandy CLAY: low to medium plasticity, yellow brown.	w<PL			
										END OF ENVIRONMENTAL HOLE AT 0.30 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP105
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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	■		■				0.0			FILL: Sandy gravel, fine to coarse grained, grey, brown, fine to medium grained sand.	M			GRASS COVER
										FILL: Sandy clay, low to medium plasticity, yellow brown, trace of ironstone and igneous gravel.	w>PL			
	■		■				0.5							
									CL-CI	Sandy CLAY: low to medium plasticity, yellow brown.	w>PL			
	■		■				1.0			END OF ENVIRONMENTAL HOLE AT 1.00 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB.GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:31 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP106
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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	■		■				0.0			FILL: Silty clay, low to medium plasticity, brown, trace of igneous gravel and slag.	w<PL			GRASS COVER
										FILL: Silty clay, low to medium plasticity, light brown and grey, trace of sandstrne gravel and ash.				
	■		■				0.5							
									CL-CI	Sandy CLAY: low to medium plasticity, orange brown.	w<PL			
	■		■				1.0							
										END OF ENVIRONMENTAL HOLE AT 1.30 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP107
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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	■		■							FILL: Silty clay, low to medium plasticity, brown, with river gravel, trace of root fibres.	w>PL			GRASS COVER
							0.5			FILL: Silty clay, low to medium plasticity, grey mottled light brown, trace of ironstone and sandstone gravel, roots and ash.				
	■		■						CL-CI	Sandy CLAY: low to medium plasticity, light brown.	w<PL			
	■		■				1.0			END OF ENVIRONMENTAL HOLE AT 0.90 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP108
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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	■		■							FILL: Silty clay, low to medium plasticity, brown, trace of sandstone gravel.	w>PL			MULCH COVER
	■		■				0.5			FILL: Silty clay, low to medium plasticity, brown motlted grey, trace of brick, sandstone gravel and plastic.	w<PL			
	■		■							FILL: Silty clay, low to medium plasticity, brown mottled light brown, trace of sandstone.				
							1.0			END OF ENVIRONMENTAL HOLE AT 0.90 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB.GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:31 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP109
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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										FILL: Silty sand, fine to medium grained, brown, trace of clay fines and root fibres.	M			MULCH COVER
									CL-CI	Sandy CLAY: low to medium plasticity, yellow brown.	w>PL			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.40 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP110
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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										FILL: Silty clay, low to medium plasticity, brown, trace of root fibres.	w>PL			GRASS COVER
										FILL: Clayey sand, fine to medium grained, yellow brown, trace of igneous and ironsotne gravel and ash.	M			APPEARS POORLY COMPACTED
							0.5			FILL: Sandy clay, low to medium plasticity, yellow brown, trace of ironstone and sandstone gravel.	w>PL			POSSIBLY NATURAL RAIN COLLAPSING TEST PIT
							1.0							
							1.5			END OF ENVIRONMENTAL HOLE AT 1.40 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP111
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.D./A.K.

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									SM	Silty SAND: fine to medium grained, brown, with organic matter.	D			MULCH COVER
							0.5			END OF ENVIRONMENTAL HOLE AT 0.20 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP112
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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	■		■							FILL: Silty clay, low to medium plasticity, brown, trace of sandstone gravel.	w>PL			MULCH COVER
	■		■				0.5		CL-CI	Sandy CLAY: low to medium plasticity, yellow brown, trace of sandstone gravel.	w>PL			
										END OF ENVIRONMENTAL HOLE AT 0.60 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP113
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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	■		■				0.0			FILL: Silty clay, low to medium plasticity, brown, trace of igneous gravel, root fibres and ash.	w>PL			
	■		■							FILL: Silty clay, low to medium plasticity, light brown, trace of ironstone and sandstone gravel.	w<PL			
										FILL: Silty clay, low to medium plasticity, orange brown, trace of ironstone gravel.				
	■		■				0.5							
							1.0			END OF ENVIRONMENTAL HOLE AT 1.00 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP114
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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	■		■							FILL: Clayey sand, fine to medium grained, dark brown, trace of root fibres.	M			MULCH COVER
	■		■						SC	Clayey SAND: fine to medium grained, yellow brown, trace of ironstone gravel.	M			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.30 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP115
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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	■		■							FILL: Silty sand, fine to medium grained, grey, with organic material.	M			MULCH COVER
	■		■						CL-CI	Sandy CLAY: low to medium plasticity, yellow brown, trace of ironstone gravel.	w<PL			
										END OF ENVIRONMENTAL HOLE AT 0.20 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:32 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP116
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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	■		■		■				CL-CI	FILL: Silty sandy clay, low to medium plasticity, brown, traces of root fibres.	w>PL			
										Sandy CLAY: low to medium plasticity, yellow brown.	w>PL			
										END OF ENVIRONMENTAL HOLE AT 0.25 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP117
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 15/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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	■		■							FILL: Silty clay, low to medium plasticity, brown, trace of root fibres.	w>PL			GRASS COVER
	■		■						SC	Clayey SAND: fine to medium grained, yellow brown, trace of sandstone gravel.	M			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.50 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB.GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:32 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH118
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** N/A

Plant Type: JK205 **Logged/Checked By:** M.D./A.K.

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
										ASPHALTIC CONCRETE: 80mm.t				
DRY ON COMPLETION	■		■						-	FILL: Silty sandy gravel, fine to medium grained, dark brown igneous.	DW			ROAD BASE
									-	SANDSTONE: fine to medium grained, brown.				HIGH 'TC' BIT RESISTANCE
	■		■			N > 5 12,5/ 50mm REFUSAL	0.5							
							1.0			END OF ENVIRONMENTAL HOLE AT 0.95 m				'TC' BIT REFUSAL
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB.GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:30 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH119
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** N/A

Plant Type: JK205 **Logged/Checked By:** M.D./A.K.

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										ASPHALTIC CONCRETE: 50mm.t.				
									-	FILL: Silty sandy gravel, dark grey, igneous.				ROAD BASE
						N = 31 12,17,14	0.5			FILL: Silty sand, fine to coarse grained, brown, with fine to coarse grained sandstone gravel.	D			
							1.0							
							1.5		-	SANDSTONE: fine to medium grained, orange brown.	XW - DW			MODERATE 'TC' BIT RESISTANCE WITH HIGH BANDS
							2.0							
										END OF ENVIRONMENTAL HOLE AT 2.20 m				'TC' BIT REFUSAL
							2.5							
							3.0							

JK 9.01.2 LIB.GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:30 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH120
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** N/A

Plant Type: JK205 **Logged/Checked By:** M.D./M.D.

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
										ASPHALTIC CONCRETE: 50mm.t.				
DRY ON COMPLETION	■		■						-	FILL: Silty sand, fine to medium grained, brown, trace of fine to medium grained sandstone gravel.	D			
	■		■			N=SPT 3/ 150mm REFUSAL	0.5		-	SANDSTONE: fine to medium grained, orange brown.	XW - DW			MODERATE 'TC' BIT RESISTANCE WITH HIGH BANDS
							1.0			END OF ENVIRONMENTAL HOLE AT 0.85 m				'TC' BIT REFUSAL Monitoring well installed to 0.85m. Class 18 machine slotted 42mm dia. PVC standpipe 0.85m to 0.35m. Casing 0.35m to 0.0m. 2mm sand filter pack 0.85m to 0.3m. Bentonite seal 0.3m to 0.1m. Completed with a concreted gatic cover.
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP121
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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	■		■							FILL: Silty sand, fine to medium grained, grey, with clay fines trace of root fibres.	M			MULCH COVER
	■		■						CL-CI	Sandy CLAY: low to medium plasticity, yellow brown, trace of ironstone gravel.	w>PL			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.40 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP122
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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	■		■							FILL: Silty sand, fine to medium grained, yellow brown, trace of concrete, sandstone, ironstone gravel and root fibres.	D			MULCH COVER
	■		■						SC	Clayey SAND: fine to medium grained, yellow brown, trace of sandstone gravels.	W			
										END OF ENVIRONMENTAL HOLE AT 0.30 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP123
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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	■		■							FILL: Silty clay, low to medium plasticity, with organic material, trace of root fibres.	w<PL			MULCH COVER
										FILL: Clayey sand, fine to medium grained, brown, trace of ash.	M			
	■		■				0.5		CL-CI	Sandy CLAY: low to medium plasticity, yellow brown mottled grey.	w>PL			
										END OF ENVIRONMENTAL HOLE AT 0.60 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP124
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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	■		■							FILL: Silty sand, fine to medium grained, light brown, trace of root fibres.	D			MULCH COVER
									CL-CI	Sandy CLAY: low to medium plasticity, yelow brown, trace of ironstone gravel.	M			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.40 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP125
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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										MULCH COVER				
									-	FILL: Clayey sand, fine to medium grained,grey, trace of ironstone and sandstone gravel and root fibres.	M			
									CL-CI	Sandy CLAY: low to medium plasticity, yellow brown, trace of ironstone gravel.	w>PL			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.50 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP126
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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							0.5			FILL: Silty sand, fine to medium grained, brown, trace of root fibres.	D			GRASS COVER
										FILL: Sandy clay, low to medium plasticity, yellow brown, trace of sandstone and ironstone gravel, brick and concrete.	w<PL			
									-	SANDSTONE: fine to coarse grained, yellow brown.	XW			
							1.0			END OF ENVIRONMENTAL HOLE AT 0.70 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB.GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:33 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP127
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.D./A.K.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, with organic matter and clay fines.	D			MULCH COVER
										FILL: Sandy clay, low plasticity, light brown, trace of sandstone gravel and ash.	w<PL			POSSIBLY NATURAL
	■		■				0.5			END OF ENVIRONMENTAL HOLE AT 0.40 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP128
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, with organic material, trace concrete, sandstone, igneous, ironstone gravel and root fibres.	D			MULCH COVER
										END OF ENVIRONMENTAL HOLE AT 0.10 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB.GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:33 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP129
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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	■		■				0.0			FILL: Silty clay, low to medium plasticity, brown, trace of rooot fibres.	w<PL			
										FILL: Clayey sand, fine to medium grained, brown, with ironstone gravel, trace of igneous gravel.	M			
	■		■				0.5			FILL: Clayey sand, fine to medium grained, grey, trace of ironstone gravel.				
	■		■				1.0		-	SANDSTONE: fine to medium grained, brown.	XW			
										END OF ENVIRONMENTAL HOLE AT 1.00 m				REFUSAL ON SANDSTONE BEDROCK
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP130
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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										MULCH COVER: 0.05mm	M			MULCH COVER
									-	FILL: Clayey sand, fine to medium grained, yellow brown, trace of sandstone, ironstone gravels and ash.	D			
							0.5			FILL: Sandy clay, low to medium plasticity, yellow brown, trace of sandstone, ironstone gravel, root fibres and ash.	M			
							1.0							
							1.5		CL-CI	Sandy CLAY: low to medium plasticity, yellow brown.	M			
										END OF ENVIRONMENTAL HOLE AT 1.80 m				
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB.GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:33 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP131
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.D./A.K.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, with sandstone and ironstone gravel, trace of igneous, ash and organic matter.	D			MULCH COVER
										END OF ENVIRONMENTAL HOLE AT 0.15 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP132
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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	■		■				0.0			FILL: Silty sand, fine to medium grained, dark brown, trace of sandstone gravel and root fibres.	D			GRASS COVER
										FILL: Clayey sand, fine to medium grained, yellow brown, trace of brick, sandstone, ironstone gravel and ash.				
							0.5		SC	Clayey SAND: fine to medium grained, yellow brown, trace of sandstone gravel.	D			
	■		■				1.0			END OF ENVIRONMENTAL HOLE AT 1.00 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP133
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, trace of root fibres.	D			MULCH COVER
	■		■						SP	SAND: fine to medium grained, light grey.	D			
							0.5		-	SANDSTONE: medium to coarse grained, light yellow and red brown.	XW			
										END OF ENVIRONMENTAL HOLE AT 0.65 m				REFUSAL ON SANDSTONE BEDROCK
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH134
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** N/A

Plant Type: JK205 **Logged/Checked By:** M.D./A.K.

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										ASPHALTIC CONCRETE: 100mm.t				
									-	FILL: Silty sand, fine to medium grained, brown, trace of fine to medium grained sandstone gravel.	D			
									-	SANDSTONE: fine to medium grained, light brown.	XW - DW			LOW 'TC' BIT RESISTANCE WITH MODERATE TO HIGH BANDS
						N > 4 10,4/ 50mm REFUSAL	0.5							
										END OF ENVIRONMENTAL HOLE AT 0.70 m				'TC' BIT REFUSAL
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:30 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP135
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.D./A.K.

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	■		■							FILL: Silty sand, fine to medium grained, brown, with organic matter, trace of fine to medium grained sandstone gravel.	D			MULCH COVER
										END OF ENVIRONMENTAL HOLE AT 0.15 m				REFUSAL ON INFERRED SANDSTONE BEDROCK

0.5
1.0
1.5
2.0
2.5
3.0

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP136
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, trace of root fibres.	D			MULCH COVER
									SC	Clayey SAND: fine to medium grained, yellow brown, trace of sandstone gravel and root fibres.	D			
										END OF ENVIRONMENTAL HOLE AT 0.30 m				
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB.GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:33 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP137
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, trace of root fibres.	D			MULCH COVER
									SP	SAND: fine to medium grained, grey, trace of sandstone gravel.	D			
							0.5							
										END OF ENVIRONMENTAL HOLE AT 0.65 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH138
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** N/A

Plant Type: JK205 **Logged/Checked By:** M.D./A.K.

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										ASPHALTIC CONCRETE: 50mm.t				
									-	FILL: Silty sandy gravel, dark brown, igneous gravel.	D			ROAD BASE
									-	SANDSTONE: fine to medium grained, light grey.	XW - DW			LOW 'TC' BIT RESISTANCE WITH MODERATE BANDS
							0.5			END OF ENVIRONMENTAL HOLE AT 0.50 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH139
1 / 5

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 2/11/18 **Datum:** N/A

Plant Type: JK205 **Logged/Checked By:** A.C.K./M.D.

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
										ASPHALTIC CONCRETE: 70mm.t				
ON COMPLETION OF CORING ▽	■								-	FILL: Silty gravelly sand, fine to medium grained, dark grey brown, medium grained igneous gravel.	M			
									SP	SAND: fine to medium grained, light brown, trace of fine to medium grained sandstone gravel.	M			
						N=SPT 6/ 50mm REFUSAL	0.5		-	SANDSTONE: fine to medium grained, light grey and orange brown.	SW	H		HIGH 'TC' BIT RESISTANCE
							1.0							
										REFER TO CORED BOREHOLE LOG				Monitoring well installed to 15.0m. Class 18 machine slotted 50mm dia. PVC standpipe 1.0m to 15.0m. Casing 0.1m to 1.0m. 2mm sand filter pack 0.8m to 15.0m. Bentonite seal 0.1m to 0.8m. Backfilled with sand (and/or cutiings) to the surface. Completed with a concreted gatic cover.
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH139
2 / 5

CORED ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Core Size:** NMLC **R.L. Surface:** N/A

Date: 2/11/18 **Inclination:** VERTICAL **Datum:** N/A

Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./M.D.

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$: VL -0.1, L -0.3, M -1, H -3, VH -10, EH	DEFECT DETAILS: SPACING (mm) 600, 200, 60, 20	DEFECT DETAILS: DESCRIPTION (Specific / General)	Formation
				START CORING AT 1.35m						
100% RETURN		1.5		SANDSTONE: fine to medium grained, light grey, orange brown and red brown, bedded at 0-20°.	MW	H			(1.41m) XWS, 10°, 1 mm.t (1.46m) XWS, 5°, 1 mm.t (1.48m) XWS, 10°, 5 mm.t (1.54m) XWS, 15°, 8 mm.t	
		2.0								
		2.5								
		3.0								
		3.5							(3.50m) Be, 20°, P, S, ORGANIC INFILL	
		4.0							(3.91m) XWS, 10°, 7 mm.t (3.98m) XWS, 10°, 40 mm.t	
				SANDSTONE: fine to medium grained, light grey, with dark grey laminae bedded at 0-10°.	SW				(4.37m) XWS, 0°, 30 mm.t	

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH139
3 / 5

CORED ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Core Size:** NMLC **R.L. Surface:** N/A

Date: 2/11/18 **Inclination:** VERTICAL **Datum:** N/A

Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./M.D.

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$ (VL -0.1, L -0.3, M -1, H -3, VH -10, EH)	DEFECT DETAILS: SPACING (mm) (600, 200, 60, 20)	DEFECT DETAILS: DESCRIPTION (Specific / General)	Formation
100% RETURN		5.0		SANDSTONE: fine to medium grained, light grey, with dark grey laminae bedded at 0-10°. *(continued)*	SW / FR	H			(4.63m) XWS, 0°, 7 mm.t	
		5.5							(5.46m) J, 45°, P, R, Cn (5.48m) J, 45°, P, R, Cn	
		6.0								
		6.5								
		7.0								
		7.5								

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH139
4 / 5

CORED ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Core Size:** NMLC **R.L. Surface:** N/A

Date: 2/11/18 **Inclination:** VERTICAL **Datum:** N/A

Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./M.D.

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$ VL -0.1, L -0.3, M -1, H -3, VH -10, EH	DEFECT DETAILS SPACING (mm) 600, 200, 60, 20	DEFECT DETAILS DESCRIPTION Type, orientation, defect roughness and shape, defect coatings and seams, openness and thickness Specific / General	Formation
100% RETURN		8.5		SANDSTONE: fine to medium grained, light grey, with dark grey laminae bedded at 0-10°.	FR	H				
		9.0		SANDSTONE: fine to medium grained, light grey.						
		9.5								
		10.0								
		10.5								
		11.0								

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH139
5 / 5

CORED ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Core Size:** NMLC **R.L. Surface:** N/A

Date: 2/11/18 **Inclination:** VERTICAL **Datum:** N/A

Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./M.D.

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$: VL -0.1, L -0.3, M -1, H -3, VH -10, EH	DEFECT DETAILS: SPACING (mm) 600, 200, 60, 20	DEFECT DETAILS: DESCRIPTION (Type, orientation, defect roughness and shape, defect coatings and seams, openness and thickness) Specific / General	Formation
100% RETURN		12.0		SANDSTONE: fine to medium grained, light grey. *(continued)*	FR	H				
		12.5								
		13.0								
		13.5								
		14.0								
		14.5								

(13.67m) J, 30°, P, R, Cn

JK 9.012 LIB:GLB Log JK CORED BOREHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:30 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

END OF ENVIRONMENTAL HOLE AT 15.00 m

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP140
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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	■		■							FILL: Silty sand, fine to medium grained, light brown, trace of root fibres.	D			MULCH COVER
	■		■						SC	Clayey SAND: fine to medium grained, yellow brown, trace of sandstone gravel.	M			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.40 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP141
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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										FILL: Silty sand, fine to medium grained, brown, trace of root fibres and organic material.	M			MULCH COVER
										FILL: Silty sand, fine to medium grained, grey.				POSSIBLY NATURAL
							0.5			END OF ENVIRONMENTAL HOLE AT 0.30 m				REFUSAL ON INFERRED SANDSTONE BEDROCK SANDSTONE BEDROCK SAMPLE OBTAINED AT 0.3m
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP142
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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	■		■							FILL: Sandy silt, low to medium plasticity, dark brown, trace of root fibres.	w<PL			MULCH COVER
									SC	Clayey SAND: fine to medium grained, yellow brown, trace of sandstone, ironstone gravels and root fibres.	M			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.40 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB.GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:34 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP143
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** N/A

Plant Type: JK205 **Logged/Checked By:** M.D./M.D.

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
										ASPHALTIC CONCRETE: 50mm.t				
DRY ON COMPLETION									-	FILL: Silty gravel, dark brown, igneous.	D			ROAD BASE
									SM	Silty SAND: fine to medium grained, brown, with fine to medium grained sandstone gravel.	D			
						N > 14 6,9,5/ 50mm REFUSAL	0.5		-	SANDSTONE: fine to medium grained, brown.	XW			
										END OF ENVIRONMENTAL HOLE AT 0.85 m				REFUSAL
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP144
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.D./A.K.

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	■		■							FILL: Silty sand, fine to medium grained, brown, trace of fine to medium grained ironstone and sandstone gravel and ash.	D			
										END OF ENVIRONMENTAL HOLE AT 0.20 m				REFUSAL ON INFERRED SANDSTONE BEDROCK

0.5
1.0
1.5
2.0
2.5
3.0

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH145
1 / 6

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** N/A

Plant Type: JK205 **Logged/Checked By:** A.C.K./M.D.

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 OF AUGERING										CONCRETE: 100mm.t.				7mm REINFORCEMENT 55mm TOP COVER
									-	FILL: Sandy clayey gravel, medium grained, igneous and sandstone, dark grey brown, fine to medium grained sand.	M			
									SC	Clayey SAND: medium grained, light brown, trace of medium to coarse sandstone gravel.	M			RESIDUAL
						N=SPT 8/ 100mm REFUSAL	0.5		-	SANDSTONE: fine to medium grained, light grey and orange brown.				HAWKESBURY SANDSTONE HIGH 'TC' BIT RESISTANCE
							1.0			REFER TO CORED BOREHOLE LOG				Monitoring well installed to 15.31m. Class 18 machine slotted 50mm dia. PVC standpipe 0.9m to 15.31m. Casing 0.1m to 0.9m. 2mm sand filter pack 0.7m to 15.31m. Bentonite seal 0.1m to 0.7m. Backfilled with sand (and/or cuttings) to the surface. Completed with a concreted gatic cover.
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH145
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CORED ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Core Size:** NMLC **R.L. Surface:** N/A

Date: 5/11/18 **Inclination:** VERTICAL **Datum:** N/A

Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./M.D.

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$: VL -0.1, L -0.3, M -1, H -3, VH -10, EH	DEFECT DETAILS: SPACING (mm) 600, 200, 60, 20	DEFECT DETAILS: DESCRIPTION (Specific / General)	Formation
				START CORING AT 1.25m						
		1.5		SANDSTONE: fine to medium grained, orange brown, with light grey laminae, bedded at 0-20°.	MW	H				
		2.0								
		2.5								
ON COMPLETION OF CORING		3.0								Hawkesbury Sandstone
		3.5								
		4.0								
				SANDSTONE: fine to medium grained, light grey and orange brown, bedded at 0-10°.	SW				(4.19m) XWS, 0°, 7 mm.t (4.23m) XWS, 5°, 14 mm.t	

JK 9.012 LIB:GLB Log, JK CORED BOREHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:30 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH145
3 / 6

CORED ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Core Size:** NMLC **R.L. Surface:** N/A

Date: 5/11/18 **Inclination:** VERTICAL **Datum:** N/A

Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./M.D.

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$ VL -0.1, L -0.3, M -1, H -3, VH -10, EH	DEFECT DETAILS SPACING (mm) 600, 200, 60, 20	DEFECT DETAILS DESCRIPTION Type, orientation, defect roughness and shape, defect coatings and seams, openness and thickness Specific / General	Formation
		5.0		SANDSTONE: fine to medium grained, light grey and orange brown, bedded at 0-10°. *(continued)*	SW	H				
		5.5		SANDSTONE: fine to medium grained, light grey with grey laminae, bedded at 0-20°.	FR				(5.22m) XWS, 0°, 5 mm.t	
		6.0								
		6.5							(6.45m) XWS, 0°, 20 mm.t (6.57m) XWS, 0°, 3 mm.t	Hawkesbury Sandstone
		7.0								
		7.5								

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH145
4 / 6

CORED ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Core Size:** NMLC **R.L. Surface:** N/A

Date: 5/11/18 **Inclination:** VERTICAL **Datum:** N/A

Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./M.D.

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$ VL 0.1 L 0.3 M 1 H 3 VH 10 EH	DEFECT DETAILS SPACING (mm) 600 200 60 20	DEFECT DETAILS DESCRIPTION Type, orientation, defect roughness and shape, defect coatings and seams, openness and thickness Specific / General	Formation
		8.5		SANDSTONE: fine to medium grained, light grey laminae, bedded at 0-20°.	FR	H				Hawkesbury Sandstone
		9.0								
		9.5								
		10.0								
		10.5								
		11.0								

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH145
5 / 6

CORED ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Core Size:** NMLC **R.L. Surface:** N/A

Date: 5/11/18 **Inclination:** VERTICAL **Datum:** N/A

Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./M.D.

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$ VL 0.1 L 0.3 M 1 H 3 VH 10 EH	DEFECT DETAILS SPACING (mm) 600 200 60 20	DEFECT DETAILS DESCRIPTION Type, orientation, defect roughness and shape, defect coatings and seams, openness and thickness Specific / General	Formation
		12.0		SANDSTONE: fine to medium grained, light grey laminae, bedded at 0-20°. *(continued)*	FR	H				
		12.5		SANDSTONE: fine to medium grained, light grey.						
		13.0								
		13.5								
		14.0								
		14.5								

JK 9.01.2 LIB:GLB Log JK CORED BOREHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:30 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH145
6 / 6

CORED ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Core Size:** NMLC **R.L. Surface:** N/A

Date: 5/11/18 **Inclination:** VERTICAL **Datum:** N/A

Plant Type: JK205 **Bearing:** N/A **Logged/Checked By:** A.C.K./M.D.

Water Loss\Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$ VL 0.1 L 0.3 M 1 H 3 VH 10 EH	DEFECT DETAILS SPACING (mm) 600 200 60 20	DEFECT DETAILS DESCRIPTION Type, orientation, defect roughness and shape, defect coatings and seams, openness and thickness Specific / General	Formation
				SANDSTONE: fine to medium grained, light grey. *(continued)*	FR	H				
		15.5		END OF ENVIRONMENTAL HOLE AT 15.31 m						
		16.0								
		16.5								
		17.0								
		17.5								
		18.0								

FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP146
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, trace of root fibres.	D			MULCH COVER
	■		■						SP	SAND: fine to medium grained, light yellow brown, trace of sandstone gravel and root fibres.	M			
	■		■						SC	Clayey SAND: fine to medium grained, yellow brown, trace of sandstone gravel.	M			
							0.5			END OF ENVIRONMENTAL HOLE AT 0.50 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH147
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** N/A

Plant Type: JK205 **Logged/Checked By:** M.D./A.K.

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
										ASPHALTIC CONCRETE: 80mm.t.				
DRY ON COMPLETION			■						SM	Silty SAND: fine to medium grained, light brown, with fine to medium grained sandstone gravel.	D			
						N > 7 11,7,0/ 50mm REFUSAL	0.5		-	SANDSTONE: fine to medium grained, brown.	XW - DW			HIGH 'TC' BIT RESISTANCE
										END OF ENVIRONMENTAL HOLE AT 0.65 m				REFUSAL
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB.GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:31 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP148
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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	■		■						SM	FILL: Silty clayey sand, fine to medium grained, dark brown, trace of ironstone and root fibres.	D			GRASS COVER
	■		■							Silty SAND: fine to medium grained, light brown, trace of ironstone, sandstone gravel and root fibres.	D			REFUSAL ON INFERRED SANDSTONE BEDROCK
							0.5			END OF ENVIRONMENTAL HOLE AT 0.20 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB.GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:34 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP149
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 16/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.M.P./M.D.

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	■		■							FILL: Silty sand, fine to medium grained, light brown, trace of sandstone gravel and root fibres.	D			MULCH COVER
									CL-CI	Sandy CLAY: low to medium plasticity, yellow brown, trace of sandstone gravel and root fibres.	M			
	■		■				0.5							
										END OF ENVIRONMENTAL HOLE AT 0.60 m				
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP150
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 17/10/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** A.M./M.D.

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
	■		■							FILL: Sandy clayey silt, low to medium plasticity, brown, trace of ironstone gravel and root fibres.	w>PL			GRASS COVER
	■		■						SC	Clayey SAND: fine to medium grained, yellow brown, trace of root fibres.	M			
▶										END OF ENVIRONMENTAL HOLE AT 0.40 m				REFUSAL ON INFERRED SANDSTONE BEDROCK
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB:GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:34 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP151
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.D./A.K.

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										FILL: Silty sand, fine to medium grained, dark brown, trace of fine to medium grained sandstone gravel, organic matter and ash.	D			MULCH COVER
										END OF ENVIRONMENTAL HOLE AT 0.15 m				REFUSAL ON SANDSTONE BEDROCK

0.5
1.0
1.5
2.0
2.5
3.0

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP152
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.D./A.K.

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	■		■							FILL: Silty sand, fine to medium grained, dark brown, trace of fine to medium grained sandstone gravel, organic matter and ash.	D			MULCH COVER
										END OF ENVIRONMENTAL HOLE AT 0.20 m				REFUSAL ON SANDSTONE BEDROCK

0.5
1.0
1.5
2.0
2.5
3.0

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP153
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.D./A.K.

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										FILL: Silty sand, fine to medium grained, grey, trace of fine to medium grained sandstone gravel and organic metter and ash.	D			MULCH COVER
										FILL:Silty sand, fine to medium grained, brown.				
										END OF ENVIRONMENTAL HOLE AT 0.20 m				REFUSAL ON SANDSTONE BEDROCK
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
TP154
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** HAND TOOLS **R.L. Surface:** N/A

Date: 5/11/18 **Datum:** N/A

Plant Type: N/A **Logged/Checked By:** M.D./A.K.

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	■		■							FILL: Silty sand, fine to medium grained, light grey yellow brown, trace of fine to medium grained sandstone gravel, ash and organic matter.	D			MULCH COVER
										END OF ENVIRONMENTAL HOLE AT 0.15 m				REFUSAL ON SANDSTONE BEDROCK
							0.5							
							1.0							
							1.5							
							2.0							
							2.5							
							3.0							

JK 9.01.2 LIB GLB Log JK AUGERHOLE - MASTER E30259KD LINDFIELD EDITED.GPJ <<DrawingFile>> 21/11/2018 16:35 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.01.2 2018-04-02 Prj: JK 9.01.0 2018-03-20

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH155
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** N/A

Plant Type: JK205 **Logged/Checked By:** M.D./A.K.

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										FILL: Silty sand, fine to medium grained, dark brown, trace of fine to medium sandstone gravel, roots and ash.	D			GRASS COVER
							0.5		-	SANDSTONE: fine to medium grained, light brown.	XW			MODERATE 'TC' BIT RESISTANCE
							1.0							
							1.5							HIGH RESISTANCE
										END OF ENVIRONMENTAL HOLE AT 1.50 m				'TC' BIT REFUSAL Monitoring well installed to 1.5m. Class 18 machine slotted 42mm dia. PVC standpipe 1.5m to 0.5m. Casing 0.5m to 0.0m. 2mm sand filter pack 1.5m to 0.55m. Bentonite seal 0.55m to 0.1m. Completed with a concreted gatic cover.
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH156
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** N/A

Plant Type: JK205 **Logged/Checked By:** M.D./A.K.

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
ON COMPLETION OF AUGERING ▽							0.5			FILL: Silty sand, dark brown, trace of fine to medium grained sandstone and igneous gravel, ash and foam.	W			GRASS COVER
▶							1.0		-	SANDSTONE: fine to medium grained, brown.	DW			MODERATE TO HIGH 'TC' BIT RESISTANCE
							1.5			END OF ENVIRONMENTAL HOLE AT 1.30 m				'TC' BIT REFUSAL Monitoring well installed to 1.3m. Class 18 machine slotted 42mm dia. PVC standpipe 1.3m to 0.5m. Casing 0.5m to 0.0m. 2mm sand filter pack 1.3m to 0.4m. Bentonite seal 0.4m to 0.3m. Backfilled with sand to the surface. Completed with a concreted gatic cover.
							2.0							
							2.5							
							3.0							

Environmental Investigation Services

CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Log No.
BH157
1 / 1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: DEPARTMENT OF EDUCATION C/- SAVILLS (AUSTRALIA) PTY LTD

Project: PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT

Location: ETON ROAD, LINDFIELD, NSW

Job No.: E30259KD **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 6/11/18 **Datum:** N/A

Plant Type: JK205 **Logged/Checked By:** M.D./A.K.

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										FILL: Silty sand, fine to medium grained, dark brown, trace of fine to medium grained sandstone gravel, ash and organic matter.	D			GRASS COVER
							0.5		SM	Silty SAND: fine to medium grained, brown.	M			
									-	SANDSTONE: fine to medium grained, brown.	XW			MODERATE TO HIGH 'TC' BIT RESISTANCE
							1.0			END OF ENVIRONMENTAL HOLE AT 0.80 m				'TC' BIT REFUSAL Monitoring well installed to 0.8m. Class 18 machine slotted 42mm dia. PVC standpipe 0.8m to 0.4m. Casing 0.4m to 0.0m. 2mm sand filter pack 0.8m to 0.3m. Bentonite seal 0.3m to 0.1m. Completed with a concreted gatic cover.
							1.5							
							2.0							
							2.5							
							3.0							

Appendix D: Laboratory Report/s & COC Documents

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

CERTIFICATE OF ANALYSIS 203424

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KM, Lindfield**
Number of Samples	95 Soil
Date samples received	18/10/2018
Date completed instructions received	18/10/2018

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	24/10/2018
Date of Issue	24/10/2018

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Asbestos Approved By
Analysed by Asbestos Approved Identifier: Aida Marner
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Jeremy Faircloth, Organics Supervisor
Long Pham, Team Leader, Metals
Lucy Zhu, Asbsestos Analyst
Steven Luong, Senior Chemist

Authorised By

Jacinta Hurst, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-1	203424-3	203424-4	203424-6	203424-8
Your Reference	UNITS	TP101	TP102	TP102	TP103	TP104
Depth		0.0-0.1	0.0-0.1	0.1-0.2	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	16/10/2018	16/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	105	103	96	104	94

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-10	203424-11	203424-13	203424-14	203424-15
Your Reference	UNITS	TP105	TP105	TP106	TP106	TP106
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.6-0.7	1.2-1.3
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	105	103	102	105	108

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-16	203424-17	203424-19	203424-20	203424-22
Your Reference	UNITS	TP107	TP107	TP108	TP108	TP109
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.3-0.4	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	101	105	108	107	104

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-24	203424-25	203424-26	203424-27	203424-28
Your Reference	UNITS	TP110	TP110	TP110	TP112	TP112
Depth		0.0-0.1	0.3-0.4	1.3-1.4	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	101	104	109	89	103

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-29	203424-31	203424-32	203424-34	203424-36
Your Reference	UNITS	TP113	TP113	TP114	TP115	TP116
Depth		0.0-0.05	0.9-1.0	0.0-0.1	0.0-0.1	0.0-0.05
Date Sampled		15/10/2018	15/10/2018	17/10/2018	17/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	102	103	95	96

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-45
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP123
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	103	101	80	99

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-47	203424-49	203424-51	203424-52	203424-54
Your Reference	UNITS	TP124	TP125	TP126	TP126	TP128
Depth		0.0-0.1	0.5-0.15	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		17/10/2018	17/10/2018	17/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	99	100	102	100

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-55	203424-56	203424-58	203424-59	203424-60
Your Reference	UNITS	TP129	TP129	TP129	TP130	TP130
Depth		0.0-0.1	0.3-0.4	0.95-1.0	0.05-0.15	0.7-0.8
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	104	101	115	106

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-62	203424-63	203424-64	203424-65	203424-66
Your Reference	UNITS	TP132	TP132	TP132	TP133	TP133
Depth		0.0-0.1	0.3-0.4	0.9-1.0	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	106	103	105	106	112

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-67	203424-69	203424-71	203424-72	203424-73
Your Reference	UNITS	TP136	TP137	TP140	TP140	TP141
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	105	106	101	105	101

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-76	203424-78	203424-81	203424-83	203424-84
Your Reference	UNITS	TP142	TP146	TP148	TP149	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	17/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	107	105	111	102

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-85	203424-87	203424-88	203424-89	203424-90
Your Reference	UNITS	TP150	TBS1	TS	DUPAMS1	DUPAMS2
Depth		0.0-0.1	-	-	-	-
Date Sampled		17/10/2018	12/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
TRH C_6 - C_9	mg/kg	<25	[NA]	[NA]	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	[NA]	[NA]	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	[NA]	[NA]	<25	<25
Benzene	mg/kg	<0.2	<0.2	86%	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	88%	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	83%	<1	<1
m+p-xylene	mg/kg	<2	<2	83%	<2	<2
o-Xylene	mg/kg	<1	<1	84%	<1	<1
naphthalene	mg/kg	<1	[NA]	[NA]	<1	<1
Total +ve Xylenes	mg/kg	<1	[NA]	[NA]	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	109	99	102	103

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		203424-91	203424-93	203424-95
Your Reference	UNITS	DUPAMS4	DUPAMS7	DUPAMS10
Depth		-	-	-
Date Sampled		15/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018
TRH C_6 - C_9	mg/kg	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	104	102	109

svTRH (C10-C40) in Soil						
Our Reference		203424-1	203424-3	203424-4	203424-6	203424-8
Your Reference	UNITS	TP101	TP102	TP102	TP103	TP104
Depth		0.0-0.1	0.0-0.1	0.1-0.2	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	16/10/2018	16/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	170	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	310	110	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	51	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	51	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	400	110	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	120	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	570	110	<50	<50
Surrogate o-Terphenyl	%	96	98	94	93	98

svTRH (C10-C40) in Soil						
Our Reference		203424-10	203424-11	203424-13	203424-14	203424-15
Your Reference	UNITS	TP105	TP105	TP106	TP106	TP106
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.6-0.7	1.2-1.3
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	20/10/2018	20/10/2018	20/10/2018
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	92	93	91	91

svTRH (C10-C40) in Soil						
Our Reference		203424-16	203424-17	203424-19	203424-20	203424-22
Your Reference	UNITS	TP107	TP107	TP108	TP108	TP109
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.3-0.4	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	410	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	1,800	<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	1,600	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	2,400	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	4,000	<50	<50	<50	<50
Surrogate o-Terphenyl	%	84	93	93	93	93

svTRH (C10-C40) in Soil						
Our Reference		203424-24	203424-25	203424-26	203424-27	203424-28
Your Reference	UNITS	TP110	TP110	TP110	TP112	TP112
Depth		0.0-0.1	0.3-0.4	1.3-1.4	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
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	92	91	103	91

svTRH (C10-C40) in Soil						
Our Reference		203424-29	203424-31	203424-32	203424-34	203424-36
Your Reference	UNITS	TP113	TP113	TP114	TP115	TP116
Depth		0.0-0.05	0.9-1.0	0.0-0.1	0.0-0.1	0.0-0.05
Date Sampled		15/10/2018	15/10/2018	17/10/2018	17/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	170	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	280	440	150
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	71	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	71	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	300	440	120
TRH >C_{34} -C_{40}	mg/kg	<100	<100	140	290	170
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	440	800	290
Surrogate o-Terphenyl	%	92	91	94	99	88

svTRH (C10-C40) in Soil						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-45
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP123
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	59	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	310	<100
TRH C_{29} - C_{36}	mg/kg	<100	130	130	690	110
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	60	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	60	<50
TRH >C_{16} -C_{34}	mg/kg	<100	120	130	860	100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	100	320	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	120	230	1,200	100
Surrogate o-Terphenyl	%	97	92	84	97	91

svTRH (C10-C40) in Soil						
Our Reference		203424-47	203424-49	203424-51	203424-52	203424-54
Your Reference	UNITS	TP124	TP125	TP126	TP126	TP128
Depth		0.0-0.1	0.5-0.15	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		17/10/2018	17/10/2018	17/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
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	260	170	<100	<100	320
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	270	160	100	<100	340
TRH >C_{34} -C_{40}	mg/kg	150	<100	<100	<100	160
Total +ve TRH (>C10-C40)	mg/kg	410	160	100	<50	490
Surrogate o-Terphenyl	%	94	91	90	90	99

svTRH (C10-C40) in Soil						
Our Reference		203424-55	203424-56	203424-58	203424-59	203424-60
Your Reference	UNITS	TP129	TP129	TP129	TP130	TP130
Depth		0.0-0.1	0.3-0.4	0.95-1.0	0.05-0.15	0.7-0.8
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	23/10/2018	20/10/2018	20/10/2018
TRH C_{10} - C_{14}	mg/kg	51	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	170	<100	<100	100	<100
TRH C_{29} - C_{36}	mg/kg	450	<100	<100	230	120
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	500	<100	<100	280	120
TRH >C_{34} -C_{40}	mg/kg	280	<100	<100	110	<100
Total +ve TRH (>C10-C40)	mg/kg	780	<50	<50	390	120
Surrogate o-Terphenyl	%	97	95	92	98	93

svTRH (C10-C40) in Soil						
Our Reference		203424-62	203424-63	203424-64	203424-65	203424-66
Your Reference	UNITS	TP132	TP132	TP132	TP133	TP133
Depth		0.0-0.1	0.3-0.4	0.9-1.0	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
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	250	<100	<100	160	<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	250	<100	<100	170	<100
TRH >C_{34} -C_{40}	mg/kg	130	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	380	<50	<50	170	<50
Surrogate o-Terphenyl	%	96	91	90	94	92

svTRH (C10-C40) in Soil						
Our Reference		203424-67	203424-69	203424-71	203424-72	203424-73
Your Reference	UNITS	TP136	TP137	TP140	TP140	TP141
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
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	200	120	270	<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	200	120	300	<100	100
TRH >C_{34} -C_{40}	mg/kg	110	<100	150	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	310	120	440	<50	100
Surrogate o-Terphenyl	%	91	91	93	91	90

svTRH (C10-C40) in Soil						
Our Reference		203424-76	203424-78	203424-81	203424-83	203424-84
Your Reference	UNITS	TP142	TP146	TP148	TP149	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	17/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
TRH C_{10} - C_{14}	mg/kg	59	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	570	<100	140	<100	<100
TRH C_{29} - C_{36}	mg/kg	960	260	340	160	<100
TRH >C_{10} -C_{16}	mg/kg	230	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	230	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	1,100	240	390	160	<100
TRH >C_{34} -C_{40}	mg/kg	900	160	200	100	<100
Total +ve TRH (>C10-C40)	mg/kg	2,200	410	580	260	<50
Surrogate o-Terphenyl	%	110	92	99	73	77

svTRH (C10-C40) in Soil						
Our Reference		203424-85	203424-89	203424-90	203424-91	203424-93
Your Reference	UNITS	TP150	DUPAMS1	DUPAMS2	DUPAMS4	DUPAMS7
Depth		0.0-0.1	-	-	-	-
Date Sampled		17/10/2018	15/10/2018	15/10/2018	15/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	20/10/2018	20/10/2018	20/10/2018	20/10/2018	20/10/2018
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	200	<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	200	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	200	<50	<50	<50	<50
Surrogate o-Terphenyl	%	89	90	91	88	87

svTRH (C10-C40) in Soil		
Our Reference		203424-95
Your Reference	UNITS	DUPAMS10
Depth		-
Date Sampled		17/10/2018
Type of sample		Soil
Date extracted	-	19/10/2018
Date analysed	-	20/10/2018
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	260
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	240
TRH >C_{34} -C_{40}	mg/kg	130
Total +ve TRH (>C10-C40)	mg/kg	370
Surrogate o-Terphenyl	%	89

PAHs in Soil						
Our Reference		203424-1	203424-3	203424-4	203424-6	203424-8
Your Reference	UNITS	TP101	TP102	TP102	TP103	TP104
Depth		0.0-0.1	0.0-0.1	0.1-0.2	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	16/10/2018	16/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	112	96	95	96	98

PAHs in Soil						
Our Reference		203424-10	203424-11	203424-13	203424-14	203424-15
Your Reference	UNITS	TP105	TP105	TP106	TP106	TP106
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.6-0.7	1.2-1.3
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	95	99	93	97

PAHs in Soil						
Our Reference		203424-16	203424-17	203424-19	203424-20	203424-22
Your Reference	UNITS	TP107	TP107	TP108	TP108	TP109
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.3-0.4	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	0.2	<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	0.2	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.52	<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	%	81	97	93	95	95

PAHs in Soil						
Our Reference		203424-24	203424-25	203424-26	203424-27	203424-28
Your Reference	UNITS	TP110	TP110	TP110	TP112	TP112
Depth		0.0-0.1	0.3-0.4	1.3-1.4	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	98	96	91	105	93

PAHs in Soil						
Our Reference		203424-29	203424-31	203424-32	203424-34	203424-36
Your Reference	UNITS	TP113	TP113	TP114	TP115	TP116
Depth		0.0-0.05	0.9-1.0	0.0-0.1	0.0-0.1	0.0-0.05
Date Sampled		15/10/2018	15/10/2018	17/10/2018	17/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	93	96	97	101

PAHs in Soil						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-45
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP123
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	100	96	92	95	97

PAHs in Soil						
Our Reference		203424-47	203424-49	203424-51	203424-52	203424-54
Your Reference	UNITS	TP124	TP125	TP126	TP126	TP128
Depth		0.0-0.1	0.5-0.15	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		17/10/2018	17/10/2018	17/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	94	94	94

PAHs in Soil						
Our Reference		203424-55	203424-56	203424-58	203424-59	203424-60
Your Reference	UNITS	TP129	TP129	TP129	TP130	TP130
Depth		0.0-0.1	0.3-0.4	0.95-1.0	0.05-0.15	0.7-0.8
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	99	99	93	92	95

PAHs in Soil						
Our Reference		203424-62	203424-63	203424-64	203424-65	203424-66
Your Reference	UNITS	TP132	TP132	TP132	TP133	TP133
Depth		0.0-0.1	0.3-0.4	0.9-1.0	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	0.2	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.1	<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	0.66	<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	%	96	95	92	93	97

PAHs in Soil						
Our Reference		203424-67	203424-69	203424-71	203424-72	203424-73
Your Reference	UNITS	TP136	TP137	TP140	TP140	TP141
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	93	95	93

PAHs in Soil						
Our Reference		203424-76	203424-78	203424-81	203424-83	203424-84
Your Reference	UNITS	TP142	TP146	TP148	TP149	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	17/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	%	100	93	100	96	94

PAHs in Soil						
Our Reference		203424-85	203424-89	203424-90	203424-91	203424-93
Your Reference	UNITS	TP150	DUPAMS1	DUPAMS2	DUPAMS4	DUPAMS7
Depth		0.0-0.1	-	-	-	-
Date Sampled		17/10/2018	15/10/2018	15/10/2018	15/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	94	91	96	94

PAHs in Soil		
Our Reference		203424-95
Your Reference	UNITS	DUPAMS10
Depth		-
Date Sampled		17/10/2018
Type of sample		Soil
Date extracted	-	19/10/2018
Date analysed	-	22/10/2018
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	%	93

Organochlorine Pesticides in soil						
Our Reference		203424-1	203424-3	203424-6	203424-10	203424-11
Your Reference	UNITS	TP101	TP102	TP103	TP105	TP105
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	16/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	86	87	85	84	79

Organochlorine Pesticides in soil						
Our Reference		203424-13	203424-14	203424-16	203424-17	203424-20
Your Reference	UNITS	TP106	TP106	TP107	TP107	TP108
Depth		0.0-0.1	0.6-0.7	0.0-0.1	0.4-0.5	0.3-0.4
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	79	82	82	84	83

Organochlorine Pesticides in soil						
Our Reference		203424-24	203424-25	203424-27	203424-29	203424-34
Your Reference	UNITS	TP110	TP110	TP112	TP113	TP115
Depth		0.0-0.1	0.3-0.4	0.0-0.1	0.0-0.05	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	84	91	105	96	113

Organochlorine Pesticides in soil						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-47
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP124
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	95	92	99	114	100

Organochlorine Pesticides in soil						
Our Reference		203424-52	203424-54	203424-55	203424-56	203424-59
Your Reference	UNITS	TP126	TP128	TP129	TP129	TP130
Depth		0.2-0.3	0.0-0.1	0.0-0.1	0.3-0.4	0.05-0.15
Date Sampled		17/10/2018	17/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	93	107	92	103

Organochlorine Pesticides in soil						
Our Reference		203424-62	203424-65	203424-67	203424-69	203424-71
Your Reference	UNITS	TP132	TP133	TP136	TP137	TP140
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	118	99	93	94	91

Organochlorine Pesticides in soil						
Our Reference		203424-73	203424-76	203424-78	203424-81	203424-83
Your Reference	UNITS	TP141	TP142	TP146	TP148	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	124	94	104	96

Organochlorine Pesticides in soil					
Our Reference		203424-85	203424-89	203424-91	203424-95
Your Reference	UNITS	TP150	DUPAMS1	DUPAMS4	DUPAMS10
Depth		0.0-0.1	-	-	-
Date Sampled		17/10/2018	15/10/2018	15/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	22/10/2018	22/10/2018	19/10/2018
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	%	98	77	78	107

Organophosphorus Pesticides						
Our Reference		203424-1	203424-3	203424-6	203424-10	203424-11
Your Reference	UNITS	TP101	TP102	TP103	TP105	TP105
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	16/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	86	87	85	84	79

Organophosphorus Pesticides						
Our Reference		203424-13	203424-14	203424-16	203424-17	203424-20
Your Reference	UNITS	TP106	TP106	TP107	TP107	TP108
Depth		0.0-0.1	0.6-0.7	0.0-0.1	0.4-0.5	0.3-0.4
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	79	82	82	84	83

Organophosphorus Pesticides						
Our Reference		203424-24	203424-25	203424-27	203424-29	203424-34
Your Reference	UNITS	TP110	TP110	TP112	TP113	TP115
Depth		0.0-0.1	0.3-0.4	0.0-0.1	0.0-0.05	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	84	91	105	96	113

Organophosphorus Pesticides						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-47
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP124
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	95	92	99	114	100

Organophosphorus Pesticides						
Our Reference		203424-52	203424-54	203424-55	203424-56	203424-59
Your Reference	UNITS	TP126	TP128	TP129	TP129	TP130
Depth		0.2-0.3	0.0-0.1	0.0-0.1	0.3-0.4	0.05-0.15
Date Sampled		17/10/2018	17/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	93	107	92	103

Organophosphorus Pesticides						
Our Reference		203424-62	203424-65	203424-67	203424-69	203424-71
Your Reference	UNITS	TP132	TP133	TP136	TP137	TP140
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	118	99	93	94	91

Organophosphorus Pesticides						
Our Reference		203424-73	203424-76	203424-78	203424-81	203424-83
Your Reference	UNITS	TP141	TP142	TP146	TP148	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	124	94	104	96

Organophosphorus Pesticides					
Our Reference		203424-85	203424-89	203424-91	203424-95
Your Reference	UNITS	TP150	DUPAMS1	DUPAMS4	DUPAMS10
Depth		0.0-0.1	-	-	-
Date Sampled		17/10/2018	15/10/2018	15/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	22/10/2018	22/10/2018	19/10/2018
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	%	98	77	78	107

PCBs in Soil						
Our Reference		203424-1	203424-3	203424-6	203424-10	203424-11
Your Reference	UNITS	TP101	TP102	TP103	TP105	TP105
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	16/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	<0.1	<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	0.6	<0.1	<0.1	<0.1
Surrogate TCLMX	%	86	87	85	84	79

PCBs in Soil						
Our Reference		203424-13	203424-14	203424-16	203424-17	203424-20
Your Reference	UNITS	TP106	TP106	TP107	TP107	TP108
Depth		0.0-0.1	0.6-0.7	0.0-0.1	0.4-0.5	0.3-0.4
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	79	82	82	84	83

PCBs in Soil						
Our Reference		203424-24	203424-25	203424-27	203424-29	203424-34
Your Reference	UNITS	TP110	TP110	TP112	TP113	TP115
Depth		0.0-0.1	0.3-0.4	0.0-0.1	0.0-0.05	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.5
Surrogate TCLMX	%	84	91	105	96	113

PCBs in Soil						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-47
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP124
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	4.2	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	4.2	<0.1
Surrogate TCLMX	%	95	92	99	114	100

PCBs in Soil						
Our Reference		203424-52	203424-54	203424-55	203424-56	203424-59
Your Reference	UNITS	TP126	TP128	TP129	TP129	TP130
Depth		0.2-0.3	0.0-0.1	0.0-0.1	0.3-0.4	0.05-0.15
Date Sampled		17/10/2018	17/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Aroclor 1016	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Surrogate TCLMX	%	92	93	107	92	103

PCBs in Soil						
Our Reference		203424-62	203424-65	203424-67	203424-69	203424-71
Your Reference	UNITS	TP132	TP133	TP136	TP137	TP140
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
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	%	118	99	93	94	91

PCBs in Soil						
Our Reference		203424-73	203424-76	203424-78	203424-81	203424-83
Your Reference	UNITS	TP141	TP142	TP146	TP148	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Aroclor 1016	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	96	124	94	104	96

PCBs in Soil					
Our Reference		203424-85	203424-89	203424-91	203424-95
Your Reference	UNITS	TP150	DUPAMS1	DUPAMS4	DUPAMS10
Depth		0.0-0.1	-	-	-
Date Sampled		17/10/2018	15/10/2018	15/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	19/10/2018	22/10/2018	22/10/2018	19/10/2018
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	%	98	77	78	107

Acid Extractable metals in soil						
Our Reference		203424-1	203424-3	203424-4	203424-6	203424-8
Your Reference	UNITS	TP101	TP102	TP102	TP103	TP104
Depth		0.0-0.1	0.0-0.1	0.1-0.2	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	16/10/2018	16/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	4	4	9	6
Copper	mg/kg	5	3	2	20	5
Lead	mg/kg	33	20	18	37	19
Mercury	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Nickel	mg/kg	2	1	<1	5	2
Zinc	mg/kg	18	12	10	44	22

Acid Extractable metals in soil						
Our Reference		203424-10	203424-11	203424-13	203424-14	203424-15
Your Reference	UNITS	TP105	TP105	TP106	TP106	TP106
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.6-0.7	1.2-1.3
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	10	7	2	18
Copper	mg/kg	29	12	9	1	<1
Lead	mg/kg	4	9	22	11	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	20	8	5	<1	<1
Zinc	mg/kg	17	12	31	7	5

Acid Extractable metals in soil						
Our Reference		203424-16	203424-17	203424-19	203424-20	203424-22
Your Reference	UNITS	TP107	TP107	TP108	TP108	TP109
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.3-0.4	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	10	8	53	3
Copper	mg/kg	23	1	7	27	3
Lead	mg/kg	93	10	18	20	28
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	1	3	<1	1
Zinc	mg/kg	60	9	18	40	8

Acid Extractable metals in soil						
Our Reference		203424-24	203424-25	203424-26	203424-27	203424-28
Your Reference	UNITS	TP110	TP110	TP110	TP112	TP112
Depth		0.0-0.1	0.3-0.4	1.3-1.4	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	7	4	7
Copper	mg/kg	6	3	2	5	<1
Lead	mg/kg	17	7	8	14	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	3	2	2	1
Zinc	mg/kg	24	10	8	27	3

Acid Extractable metals in soil						
Our Reference		203424-29	203424-31	203424-32	203424-34	203424-36
Your Reference	UNITS	TP113	TP113	TP114	TP115	TP116
Depth		0.0-0.05	0.9-1.0	0.0-0.1	0.0-0.1	0.0-0.05
Date Sampled		15/10/2018	15/10/2018	17/10/2018	17/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	8	2	3	4
Copper	mg/kg	3	1	4	8	9
Lead	mg/kg	16	7	49	110	66
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	<1	1	3	3
Zinc	mg/kg	15	5	6	18	29

Acid Extractable metals in soil						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-45
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP123
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	2	8	2	2
Copper	mg/kg	13	5	7	12	1
Lead	mg/kg	26	99	21	82	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	<1	1	3	<1
Zinc	mg/kg	52	5	19	35	3

Acid Extractable metals in soil						
Our Reference		203424-47	203424-49	203424-51	203424-52	203424-54
Your Reference	UNITS	TP124	TP125	TP126	TP126	TP128
Depth		0.0-0.1	0.5-0.15	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		17/10/2018	17/10/2018	17/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	6	4	7	9	11
Copper	mg/kg	17	12	9	5	7
Lead	mg/kg	140	82	7	11	64
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	2	4	9	2
Zinc	mg/kg	14	21	21	19	25

Acid Extractable metals in soil						
Our Reference		203424-55	203424-56	203424-58	203424-59	203424-60
Your Reference	UNITS	TP129	TP129	TP129	TP130	TP130
Depth		0.0-0.1	0.3-0.4	0.95-1.0	0.05-0.15	0.7-0.8
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
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	6	4	8	14
Copper	mg/kg	10	3	<1	7	5
Lead	mg/kg	35	31	3	31	29
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	1	<1	2	4
Zinc	mg/kg	36	6	1	20	14

Acid Extractable metals in soil						
Our Reference		203424-62	203424-63	203424-64	203424-65	203424-66
Your Reference	UNITS	TP132	TP132	TP132	TP133	TP133
Depth		0.0-0.1	0.3-0.4	0.9-1.0	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	6	7	6	6	<1
Copper	mg/kg	9	2	<1	8	<1
Lead	mg/kg	28	4	1	28	<1
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	<1	<1	3	<1
Zinc	mg/kg	35	3	<1	20	<1

Acid Extractable metals in soil						
Our Reference		203424-67	203424-69	203424-71	203424-72	203424-73
Your Reference	UNITS	TP136	TP137	TP140	TP140	TP141
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	3	2	7	10	3
Copper	mg/kg	3	7	13	2	6
Lead	mg/kg	19	46	24	3	42
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	2	2	<1	1
Zinc	mg/kg	12	17	51	9	12

Acid Extractable metals in soil						
Our Reference		203424-76	203424-78	203424-81	203424-83	203424-84
Your Reference	UNITS	TP142	TP146	TP148	TP149	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	17/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	3	4	5	3	9
Copper	mg/kg	8	7	7	5	<1
Lead	mg/kg	22	41	21	32	2
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	2	2	1	<1
Zinc	mg/kg	28	18	26	14	2

Acid Extractable metals in soil						
Our Reference		203424-85	203424-89	203424-90	203424-91	203424-93
Your Reference	UNITS	TP150	DUPAMS1	DUPAMS2	DUPAMS4	DUPAMS7
Depth		0.0-0.1	-	-	-	-
Date Sampled		17/10/2018	15/10/2018	15/10/2018	15/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	11	4	10	2
Copper	mg/kg	11	16	7	23	2
Lead	mg/kg	18	31	55	44	18
Mercury	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Nickel	mg/kg	3	7	2	6	<1
Zinc	mg/kg	23	59	23	52	3

Acid Extractable metals in soil			
Our Reference		203424-95	203424-96
Your Reference	UNITS	DUPAMS10	TP115 - [TRIPLICATE]
Depth		-	0.0-0.1
Date Sampled		17/10/2018	17/10/2018
Type of sample		Soil	Soil
Date prepared	-	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	4	4
Copper	mg/kg	17	15
Lead	mg/kg	88	740
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	3	3
Zinc	mg/kg	13	17

Moisture						
Our Reference		203424-1	203424-3	203424-4	203424-6	203424-8
Your Reference	UNITS	TP101	TP102	TP102	TP103	TP104
Depth		0.0-0.1	0.0-0.1	0.1-0.2	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	16/10/2018	16/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	17	11	9.6	8.3	15

Moisture						
Our Reference		203424-10	203424-11	203424-13	203424-14	203424-15
Your Reference	UNITS	TP105	TP105	TP106	TP106	TP106
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.6-0.7	1.2-1.3
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	7.7	10	12	7.2	8.5

Moisture						
Our Reference		203424-16	203424-17	203424-19	203424-20	203424-22
Your Reference	UNITS	TP107	TP107	TP108	TP108	TP109
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.3-0.4	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	16	15	14	11	7.7

Moisture						
Our Reference		203424-24	203424-25	203424-26	203424-27	203424-28
Your Reference	UNITS	TP110	TP110	TP110	TP112	TP112
Depth		0.0-0.1	0.3-0.4	1.3-1.4	0.0-0.1	0.4-0.5
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	13	9.0	9.1	10	11

Moisture						
Our Reference		203424-29	203424-31	203424-32	203424-34	203424-36
Your Reference	UNITS	TP113	TP113	TP114	TP115	TP116
Depth		0.0-0.05	0.9-1.0	0.0-0.1	0.0-0.1	0.0-0.05
Date Sampled		15/10/2018	15/10/2018	17/10/2018	17/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	18	8.7	20	17	28

Moisture						
Our Reference		203424-38	203424-40	203424-42	203424-44	203424-45
Your Reference	UNITS	TP117	TP121	TP122	TP123	TP123
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3
Date Sampled		15/10/2018	17/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	26	12	16	11	12

Moisture						
Our Reference		203424-47	203424-49	203424-51	203424-52	203424-54
Your Reference	UNITS	TP124	TP125	TP126	TP126	TP128
Depth		0.0-0.1	0.5-0.15	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		17/10/2018	17/10/2018	17/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	9.4	16	13	11	12

Moisture						
Our Reference		203424-55	203424-56	203424-58	203424-59	203424-60
Your Reference	UNITS	TP129	TP129	TP129	TP130	TP130
Depth		0.0-0.1	0.3-0.4	0.95-1.0	0.05-0.15	0.7-0.8
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	19	4.9	11	14	12

Moisture						
Our Reference		203424-62	203424-63	203424-64	203424-65	203424-66
Your Reference	UNITS	TP132	TP132	TP132	TP133	TP133
Depth		0.0-0.1	0.3-0.4	0.9-1.0	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	17	11	12	17	5.8

Moisture						
Our Reference		203424-67	203424-69	203424-71	203424-72	203424-73
Your Reference	UNITS	TP136	TP137	TP140	TP140	TP141
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	14	13	13	8.7	15

Moisture						
Our Reference		203424-76	203424-78	203424-81	203424-83	203424-84
Your Reference	UNITS	TP142	TP146	TP148	TP149	TP149
Depth		0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1	0.3-0.4
Date Sampled		16/10/2018	16/10/2018	17/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	24	14	21	6.2	12

Moisture						
Our Reference		203424-85	203424-89	203424-90	203424-91	203424-93
Your Reference	UNITS	TP150	DUPAMS1	DUPAMS2	DUPAMS4	DUPAMS7
Depth		0.0-0.1	-	-	-	-
Date Sampled		17/10/2018	15/10/2018	15/10/2018	15/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/10/2018	19/10/2018	19/10/2018	19/10/2018	19/10/2018
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Moisture	%	17	31	25	16	12

Moisture		
Our Reference		203424-95
Your Reference	UNITS	DUPAMS10
Depth		-
Date Sampled		17/10/2018
Type of sample		Soil
Date prepared	-	19/10/2018
Date analysed	-	22/10/2018
Moisture	%	15

Asbestos ID - soils						
Our Reference		203424-1	203424-3	203424-4	203424-6	203424-8
Your Reference	UNITS	TP101	TP102	TP102	TP103	TP104
Depth		0.0-0.1	0.0-0.1	0.1-0.2	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	16/10/2018	16/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 15g	Approx. 25g	Approx. 30g	Approx. 30g	Approx. 15g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		203424-10	203424-11	203424-13	203424-14	203424-16
Your Reference	UNITS	TP105	TP105	TP106	TP106	TP107
Depth		0.0-0.1	0.4-0.5	0.0-0.1	0.6-0.7	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 45g	Approx. 35g	Approx. 30g	Approx. 35g	Approx. 40g
Sample Description	-	Brown coarse-grained soil & rocks	Beige sandy 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		203424-17	203424-19	203424-20	203424-22	203424-24
Your Reference	UNITS	TP107	TP108	TP108	TP109	TP110
Depth		0.4-0.5	0.0-0.1	0.3-0.4	0.0-0.1	0.0-0.1
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 35g	Approx. 45g	Approx. 25g	Approx. 20g	Approx. 25g
Sample Description	-	Beige sandy 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		203424-25	203424-26	203424-27	203424-29	203424-31
Your Reference	UNITS	TP110	TP110	TP112	TP113	TP113
Depth		0.3-0.4	1.3-1.4	0.0-0.1	0.0-0.05	0.9-1.0
Date Sampled		15/10/2018	15/10/2018	15/10/2018	15/10/2018	15/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 40g	Approx. 45g	Approx. 20g	Approx. 30g	Approx. 35g
Sample Description	-	Beige coarse-grained soil & rocks	Beige coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Beige 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		203424-32	203424-34	203424-36	203424-38	203424-40
Your Reference	UNITS	TP114	TP115	TP116	TP117	TP121
Depth		0.0-0.1	0.0-0.1	0.0-0.05	0.0-0.1	0.0-0.1
Date Sampled		17/10/2018	17/10/2018	15/10/2018	15/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 20g	Approx. 20g	Approx. 30g	Approx. 25g	Approx. 20g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		203424-42	203424-44	203424-45	203424-47	203424-49
Your Reference	UNITS	TP122	TP123	TP123	TP124	TP125
Depth		0.0-0.1	0.0-0.1	0.2-0.3	0.0-0.1	0.5-0.15
Date Sampled		16/10/2018	16/10/2018	16/10/2018	17/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 25g	Approx. 15g	Approx. 25g	Approx. 15g	Approx. 30g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		203424-51	203424-52	203424-54	203424-55	203424-56
Your Reference	UNITS	TP126	TP126	TP128	TP129	TP129
Depth		0.0-0.1	0.2-0.3	0.0-0.1	0.0-0.1	0.3-0.4
Date Sampled		17/10/2018	17/10/2018	17/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 40g	Approx. 30g	Approx. 30g	Approx. 15g	Approx. 50g
Sample Description	-	Brown coarse-grained soil & rocks	Beige sandy soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Beige 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		203424-59	203424-60	203424-62	203424-63	203424-65
Your Reference	UNITS	TP130	TP130	TP132	TP132	TP133
Depth		0.05-0.15	0.7-0.8	0.0-0.1	0.3-0.4	0.0-0.1
Date Sampled		17/10/2018	17/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 35g	Approx. 40g	Approx. 15g	Approx. 30g	Approx. 15g
Sample Description	-	Brown coarse-grained soil & rocks	Beige sandy soil & rocks	Brown coarse-grained soil & rocks	Beige sandy 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		203424-67	203424-69	203424-71	203424-73	203424-76
Your Reference	UNITS	TP136	TP137	TP140	TP141	TP142
Depth		0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		16/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 20g	Approx. 20g	Approx. 15g	Approx. 20g	Approx. 15g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils					
Our Reference		203424-78	203424-81	203424-83	203424-85
Your Reference	UNITS	TP146	TP148	TP149	TP150
Depth		0.0-0.1	0.0-0.05	0.0-0.1	0.0-0.1
Date Sampled		16/10/2018	17/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	22/10/2018	22/10/2018	22/10/2018	22/10/2018
Sample mass tested	g	Approx. 15g	Approx. 15g	Approx. 20g	Approx. 25g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
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-8	203424-3
Date extracted	-			23/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			24/10/2018	1	22/10/2018	22/10/2018		22/10/2018	22/10/2018
TRH C_6 - C_9	mg/kg	25	Org-016	<25	1	<25	<25	0	103	98
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	1	<25	<25	0	103	98
Benzene	mg/kg	0.2	Org-016	<0.2	1	<0.2	<0.2	0	109	104
Toluene	mg/kg	0.5	Org-016	<0.5	1	<0.5	<0.5	0	101	95
Ethylbenzene	mg/kg	1	Org-016	<1	1	<1	<1	0	103	99
m+p-xylene	mg/kg	2	Org-016	<2	1	<2	<2	0	102	97
o-Xylene	mg/kg	1	Org-016	<1	1	<1	<1	0	103	98
naphthalene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	117	1	105	105	0	118	107

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	203424-25
Date extracted	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	11	22/10/2018	22/10/2018		22/10/2018	22/10/2018
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	11	<25	<25	0	104	96
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	11	<25	<25	0	104	96
Benzene	mg/kg	0.2	Org-016	[NT]	11	<0.2	<0.2	0	111	102
Toluene	mg/kg	0.5	Org-016	[NT]	11	<0.5	<0.5	0	100	92
Ethylbenzene	mg/kg	1	Org-016	[NT]	11	<1	<1	0	105	96
m+p-xylene	mg/kg	2	Org-016	[NT]	11	<2	<2	0	103	94
o-Xylene	mg/kg	1	Org-016	[NT]	11	<1	<1	0	104	96
naphthalene	mg/kg	1	Org-014	[NT]	11	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	11	103	111	7	114	105

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	203424-44
Date extracted	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	24	22/10/2018	22/10/2018		22/10/2018	22/10/2018
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	24	<25	<25	0	108	105
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	24	<25	<25	0	108	105
Benzene	mg/kg	0.2	Org-016	[NT]	24	<0.2	<0.2	0	116	101
Toluene	mg/kg	0.5	Org-016	[NT]	24	<0.5	<0.5	0	104	103
Ethylbenzene	mg/kg	1	Org-016	[NT]	24	<1	<1	0	109	108
m+p-xylene	mg/kg	2	Org-016	[NT]	24	<2	<2	0	106	107
o-Xylene	mg/kg	1	Org-016	[NT]	24	<1	<1	0	109	104
naphthalene	mg/kg	1	Org-014	[NT]	24	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	24	101	96	5	117	101

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]	34	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	34	22/10/2018	22/10/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	34	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	34	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	34	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	34	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	34	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	34	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	34	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	34	95	123	26	[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]	42	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	42	22/10/2018	22/10/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	42	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	42	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	42	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	42	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	42	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	42	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	42	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	42	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	42	101	98	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]	52	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	52	22/10/2018	22/10/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	52	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	52	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	52	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	52	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	52	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	52	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	52	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	52	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	52	102	99	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]	62	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	62	22/10/2018	22/10/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	62	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	62	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	62	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	62	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	62	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	62	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	62	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	62	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	62	106	99	7	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	203424-3
Date extracted	-			22/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			23/10/2018	1	19/10/2018	19/10/2018		19/10/2018	24/10/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	1	<50	<50	0	109	115
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	1	<100	<100	0	100	121
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	1	<100	<100	0	104	#
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	1	<50	<50	0	109	115
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	1	<100	<100	0	100	121
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	1	<100	<100	0	104	#
Surrogate o-Terphenyl	%		Org-003	76	1	96	96	0	109	98

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	203424-25
Date extracted	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	11	19/10/2018	20/10/2018		20/10/2018	20/10/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	11	<50	<50	0	105	100
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	11	<100	<100	0	96	91
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	11	<100	<100	0	100	98
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	11	<50	<50	0	105	100
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	11	<100	<100	0	96	91
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	11	<100	<100	0	100	98
Surrogate o-Terphenyl	%		Org-003	[NT]	11	92	92	0	106	92

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	203424-44
Date extracted	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	24	20/10/2018	20/10/2018		20/10/2018	24/10/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	24	<50	<50	0	104	103
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	24	<100	<100	0	92	91
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	24	<100	<100	0	108	#
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	24	<50	<50	0	104	103
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	24	<100	<100	0	92	91
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	24	<100	<100	0	108	#
Surrogate o-Terphenyl	%		Org-003	[NT]	24	96	97	1	105	97

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	34	20/10/2018	20/10/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	34	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	34	170	260	42	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	34	440	530	19	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	34	71	130	59	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	34	440	540	20	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	34	290	360	22	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	34	99	100	1	[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]	42	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	42	20/10/2018	20/10/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	42	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	42	<100	110	10	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	42	130	200	42	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	42	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	42	130	260	67	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	42	100	130	26	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	42	84	97	14	[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]	52	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	52	20/10/2018	20/10/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	52	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	52	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	52	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	52	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	52	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	52	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	52	90	90	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]	62	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	62	20/10/2018	20/10/2018		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	62	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	62	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	62	250	150	50	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	62	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	62	250	150	50	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	62	130	<100	26	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	62	96	91	5	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	203424-3
Date extracted	-			23/10/2018	1	19/10/2018	19/10/2018		23/10/2018	19/10/2018
Date analysed	-			24/10/2018	1	22/10/2018	22/10/2018		24/10/2018	22/10/2018
Naphthalene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	94	86
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	90	87
Phenanthrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	91	101
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	<0.1	<0.1	0	94	99
Pyrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	89	89
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	95	91
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	92	98
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	87	1	112	98	13	87	98

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	203424-25
Date extracted	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	11	22/10/2018	22/10/2018		22/10/2018	22/10/2018
Naphthalene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	106	92
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	108	88
Phenanthrene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	112	101
Anthracene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	11	<0.1	0.1	0	108	99
Pyrene	mg/kg	0.1	Org-012	[NT]	11	<0.1	0.1	0	98	91
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	101	94
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	11	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	11	<0.05	0.1	67	110	101
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	11	95	95	0	100	96

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	203424-44
Date extracted	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	24	22/10/2018	22/10/2018		22/10/2018	22/10/2018
Naphthalene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	105	101
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	106	106
Phenanthrene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	110	91
Anthracene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	107	105
Pyrene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	96	136
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	100	95
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	24	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	24	<0.05	<0.05	0	108	100
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	24	98	96	2	97	101

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	34	22/10/2018	22/10/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
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	97	98	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]	42	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	42	22/10/2018	22/10/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	42	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	42	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	42	92	96	4	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	52	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	52	22/10/2018	22/10/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	52	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	52	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	52	94	93	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]	62	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	62	22/10/2018	22/10/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	62	0.1	<0.1	0	[NT]	[NT]
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	0.2	<0.1	67	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	62	0.2	<0.1	67	[NT]	[NT]
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	[NT]	[NT]
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	0.1	0.05	67	[NT]	[NT]
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	96	93	3	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	203424-3
Date extracted	-			19/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			19/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
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	78	76
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	87	87
Heptachlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	83	81
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	81	82
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	86	92
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	87	91
Dieldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	86	87
Endrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	87	98
pp-DDD	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	87	92
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	80	91
Methoxychlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	102	1	86	85	1	111	109

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	203424-25
Date extracted	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
HCB	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	96	91
gamma-BHC	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	100	96
Heptachlor	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	93	90
delta-BHC	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	92	88
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	99	94
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	104	100
Dieldrin	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	102	97
Endrin	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	100	96
pp-DDD	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	89	84
Endosulfan II	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	102	96
Methoxychlor	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	11	79	80	1	125	118

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	203424-44
Date extracted	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
HCB	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	93	95
gamma-BHC	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	95	95
Heptachlor	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	88	92
delta-BHC	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	90	92
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	96	98
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	102	105
Dieldrin	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	99	99
Endrin	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	93	103
pp-DDD	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	86	89
Endosulfan II	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	96	93
Methoxychlor	mg/kg	0.1	Org-005	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	24	84	83	1	122	121

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	34	113	107	5	[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]	42	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	42	19/10/2018	19/10/2018		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	42	99	97	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]	52	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	52	19/10/2018	19/10/2018		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	52	92	90	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]	62	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	62	19/10/2018	19/10/2018		[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	62	0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	62	118	97	20	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	203424-3
Date extracted	-			19/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			19/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
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	98	86
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	108	93
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	120	99
Fenitrothion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	113	113
Malathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	95	91
Parathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	117	95
Ronnel	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	103	93
Surrogate TCMX	%		Org-008	102	1	86	85	1	89	93

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	203424-25
Date extracted	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	93	86
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	108	109
Dimethoate	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	117	88
Fenitrothion	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	116	113
Malathion	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	101	99
Parathion	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	100	89
Ronnel	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	103	95
Surrogate TCMX	%		Org-008	[NT]	11	79	80	1	97	92

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	203424-44
Date extracted	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	91	89
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	109	107
Dimethoate	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	111	109
Fenitrothion	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	109	108
Malathion	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	104	101
Parathion	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	111	86
Ronnel	mg/kg	0.1	Org-008	[NT]	24	<0.1	<0.1	0	100	101
Surrogate TCMX	%		Org-008	[NT]	24	84	83	1	94	93

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	34	113	107	5	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	42	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	42	19/10/2018	19/10/2018		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	42	99	97	2	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	52	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	52	19/10/2018	19/10/2018		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	52	92	90	2	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	62	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	62	19/10/2018	19/10/2018		[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	62	118	97	20	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	203424-3
Date extracted	-			19/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			19/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
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	99	102
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	102	1	86	85	1	89	93

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	203424-25
Date extracted	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	106	102
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	11	79	80	1	97	92

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	203424-44
Date extracted	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	24	<0.1	<0.1	0	93	#
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	24	84	83	1	94	93

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	34	113	107	5	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	42	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	42	19/10/2018	19/10/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	42	99	97	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]	44	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	44	19/10/2018	19/10/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	44	4.2	3.7	13	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	44	<1	<1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	44	114	109	4	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	52	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	52	19/10/2018	19/10/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	52	92	90	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]	62	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	62	19/10/2018	19/10/2018		[NT]	[NT]
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	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	62	118	97	20	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	203424-3
Date prepared	-			19/10/2018	1	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			22/10/2018	1	22/10/2018	22/10/2018		22/10/2018	22/10/2018
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	107	94
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	95	93
Chromium	mg/kg	1	Metals-020	<1	1	5	4	22	103	100
Copper	mg/kg	1	Metals-020	<1	1	5	4	22	110	107
Lead	mg/kg	1	Metals-020	<1	1	33	30	10	103	104
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	113	97
Nickel	mg/kg	1	Metals-020	<1	1	2	2	0	100	99
Zinc	mg/kg	1	Metals-020	<1	1	18	17	6	98	92

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	203424-25
Date prepared	-			[NT]	11	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	11	22/10/2018	22/10/2018		22/10/2018	22/10/2018
Arsenic	mg/kg	4	Metals-020	[NT]	11	<4	<4	0	111	94
Cadmium	mg/kg	0.4	Metals-020	[NT]	11	<0.4	<0.4	0	100	92
Chromium	mg/kg	1	Metals-020	[NT]	11	10	11	10	108	103
Copper	mg/kg	1	Metals-020	[NT]	11	12	11	9	116	106
Lead	mg/kg	1	Metals-020	[NT]	11	9	9	0	109	101
Mercury	mg/kg	0.1	Metals-021	[NT]	11	<0.1	<0.1	0	104	92
Nickel	mg/kg	1	Metals-020	[NT]	11	8	7	13	106	97
Zinc	mg/kg	1	Metals-020	[NT]	11	12	11	9	104	90

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	203424-44
Date prepared	-			[NT]	24	19/10/2018	19/10/2018		19/10/2018	19/10/2018
Date analysed	-			[NT]	24	22/10/2018	22/10/2018		22/10/2018	22/10/2018
Arsenic	mg/kg	4	Metals-020	[NT]	24	<4	<4	0	105	93
Cadmium	mg/kg	0.4	Metals-020	[NT]	24	<0.4	<0.4	0	96	92
Chromium	mg/kg	1	Metals-020	[NT]	24	7	7	0	102	97
Copper	mg/kg	1	Metals-020	[NT]	24	6	6	0	107	100
Lead	mg/kg	1	Metals-020	[NT]	24	17	17	0	104	84
Mercury	mg/kg	0.1	Metals-021	[NT]	24	<0.1	<0.1	0	100	108
Nickel	mg/kg	1	Metals-020	[NT]	24	5	5	0	101	97
Zinc	mg/kg	1	Metals-020	[NT]	24	24	25	4	99	74

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	34	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	34	22/10/2018	22/10/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	34	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	34	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	34	3	3	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	34	8	27	109	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	34	110	1800	177	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	34	3	3	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	34	18	16	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]	42	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	42	22/10/2018	22/10/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	42	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	42	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	42	8	8	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	42	7	7	0	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	42	21	21	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	42	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	42	1	1	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	42	19	17	11	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	52	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	52	22/10/2018	22/10/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	52	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	52	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	52	9	11	20	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	52	5	6	18	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	52	11	10	10	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	52	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	52	9	11	20	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	52	19	17	11	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	62	19/10/2018	19/10/2018		[NT]	[NT]
Date analysed	-			[NT]	62	22/10/2018	22/10/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	62	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	62	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	62	6	5	18	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	62	9	7	25	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	62	28	22	24	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	62	2	1	67	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	62	35	35	0	[NT]	[NT]

Result Definitions

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

Quality Control Definitions

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

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

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

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

TRH Soil C10-C40 NEPM - # Percent recovery for the matrix spike is not possible to report as the high concentration of analytes in the samples 3 and 44 have caused interference.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 203424-34 for Cu and Pb. Therefore a triplicate result has been issued as laboratory sample number 203424-96.

PCBs in Soil - PQL has been raised due to interference from analytes(other than those being tested) in the sample 34,34d,44,44d,55,76.

Andrew Fitzsimons

From: Mitchell Delaney <MDelaney@jkgroup.net.au>
Sent: Thursday, 25 October 2018 12:53 PM
To: Samplereceipt
Cc: Ken Nguyen
Subject: EIS additional analysis request 203424 E30259KM - Lindfield

Importance: High

ELS:203424-A
TAT: 2 days
Due: 29/10/18

Hi,

Can I please schedule to following additional analysis on a 2 day TA.

TP115 (0.1-0.2m)	35	Combo 6
TP123 (0.2-0.3m)	45	OCP & PCBs
TP123 (0.5-0.6m)	46	Combo 6
TP141 (0.3m)	75	Combo 6
TP142 (0.2-0.3m)	77	Combo 6
TP148 (0.1-0.2m)	82	Combo 6
TP115 (0-0.1m)	34	TCLP for lead
TP124 (0-0.1m)	47	TCLP for lead

Many thanks.

Regards,

Mitchell Delaney
Senior Associate | Environmental Scientist

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JK Group is Re-branding. For more information, click here

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SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KM, Lindfield
Envirolab Reference	203424
Date Sample Received	18/10/2018
Date Instructions Received	18/10/2018
Date Results Expected to be Reported	24/10/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	95 Soil
Turnaround Time Requested	3 days
Temperature on Receipt (°C)	19.1
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:

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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	On Hold
TP101-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP101-0.4-0.5									✓
TP102-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP102-0.1-0.2	✓	✓	✓				✓	✓	
TP102-0.4-0.5									✓
TP103-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP103-0.45-0.5									✓
TP104-0.0-0.1	✓	✓	✓				✓	✓	
TP104-0.15-0.3									✓
TP105-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP105-0.4-0.5	✓	✓	✓	✓	✓	✓	✓	✓	
TP105-0.9-1.0									✓
TP106-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP106-0.6-0.7	✓	✓	✓	✓	✓	✓	✓	✓	
TP106-1.2-1.3	✓	✓	✓				✓		
TP107-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP107-0.4-0.5	✓	✓	✓	✓	✓	✓	✓	✓	
TP107-0.8-0.9									✓
TP108-0.0-0.1	✓	✓	✓				✓	✓	
TP108-0.3-0.4	✓	✓	✓	✓	✓	✓	✓	✓	
TP108-0.7-0.8									✓
TP109-0.0-0.1	✓	✓	✓				✓	✓	
TP109-0.3-0.4									✓
TP110-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP110-0.3-0.4	✓	✓	✓	✓	✓	✓	✓	✓	
TP110-1.3-1.4	✓	✓	✓				✓	✓	
TP112-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP112-0.4-0.5	✓	✓	✓				✓		
TP113-0.0-0.05	✓	✓	✓	✓	✓	✓	✓	✓	
TP113-0.1-0.2									✓
TP113-0.9-1.0	✓	✓	✓				✓	✓	
TP114-0.0-0.1	✓	✓	✓				✓	✓	

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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	On Hold
TP114-0.2-0.3									✓
TP115-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP115-0.1-0.2									✓
TP116-0.0-0.05	✓	✓	✓				✓	✓	
TP116-0.2-0.25									✓
TP117-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP117-0.3-0.4									✓
TP121-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP121-0.2-0.3									✓
TP122-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP122-0.2-0.3									✓
TP123-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP123-0.2-0.3	✓	✓	✓				✓	✓	
TP123-0.5-0.6									✓
TP124-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP124-0.2-0.3									✓
TP125-0.5-0.15	✓	✓	✓				✓	✓	
TP125-0.3-0.4									✓
TP126-0.0-0.1	✓	✓	✓				✓	✓	
TP126-0.2-0.3	✓	✓	✓	✓	✓	✓	✓	✓	
TP126-0.65-0.7									✓
TP128-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP129-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP129-0.3-0.4	✓	✓	✓	✓	✓	✓	✓	✓	
TP129-0.7-0.8									✓
TP129-0.95-1.0	✓	✓	✓				✓		
TP130-0.05-0.15	✓	✓	✓	✓	✓	✓	✓	✓	
TP130-0.7-0.8	✓	✓	✓				✓	✓	
TP130-1.4-1.5									✓
TP132-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP132-0.3-0.4	✓	✓	✓				✓	✓	
TP132-0.9-1.0	✓	✓	✓				✓		

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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	On Hold
TP133-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP133-0.3-0.4	✓	✓	✓				✓		
TP136-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP136-0.2-0.3									✓
TP137-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP137-0.2-0.3									✓
TP140-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP140-0.2-0.3	✓	✓	✓				✓		
TP141-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP141-0.15-0.3									✓
TP141-0.3									✓
TP142-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP142-0.2-0.3									✓
TP146-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP146-0.1-0.2									✓
TP146-0.3-0.4									✓
TP148-0.0-0.05	✓	✓	✓	✓	✓	✓	✓	✓	
TP148-0.1-0.2									✓
TP149-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP149-0.3-0.4	✓	✓	✓				✓		
TP150-0.0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP150-0.2-0.3									✓
TBS1	✓								
TS	✓								
DUPAMS1	✓	✓	✓	✓	✓	✓	✓		
DUPAMS2	✓	✓	✓				✓		
DUPAMS4	✓	✓	✓	✓	✓	✓	✓		
DUPAMS6									✓
DUPAMS7	✓	✓	✓				✓		
DUPAMS8									✓
DUPAMS10	✓	✓	✓	✓	✓	✓	✓		

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.

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CERTIFICATE OF ANALYSIS 203424-A

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KM, Lindfield**
Number of Samples	95 Soil
Date samples received	18/10/2018
Date completed instructions received	25/10/2018

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	29/10/2018
Date of Issue	29/10/2018

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Results Approved By
Jeremy Faircloth, Organics Supervisor
Long Pham, Team Leader, Metals
Steven Luong, Senior Chemist

Authorised By

Jacinta Hurst, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		203424-A-35	203424-A-46	203424-A-75	203424-A-77	203424-A-82
Your Reference	UNITS	TP115	TP123	TP141	TP142	TP148
Depth		0.1-0.2	0.5-0.6	0.3	0.2-0.3	0.1-0.2
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	29/10/2018	29/10/2018	29/10/2018	29/10/2018	29/10/2018
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	%	113	108	112	116	117

svTRH (C10-C40) in Soil						
Our Reference		203424-A-35	203424-A-46	203424-A-75	203424-A-77	203424-A-82
Your Reference	UNITS	TP115	TP123	TP141	TP142	TP148
Depth		0.1-0.2	0.5-0.6	0.3	0.2-0.3	0.1-0.2
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	26/10/2018	26/10/2018	26/10/2018	27/10/2018	27/10/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	51	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	360	<100	<100	<100	140
TRH >C_{10} -C_{16}	mg/kg	<50	<50	60	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	60	<50	<50
TRH >C_{16} -C_{34}	mg/kg	340	<100	<100	<100	180
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	340	<50	60	<50	180
Surrogate o-Terphenyl	%	90	89	97	96	86

PAHs in Soil						
Our Reference		203424-A-35	203424-A-46	203424-A-75	203424-A-77	203424-A-82
Your Reference	UNITS	TP115	TP123	TP141	TP142	TP148
Depth		0.1-0.2	0.5-0.6	0.3	0.2-0.3	0.1-0.2
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	29/10/2018	29/10/2018	29/10/2018	29/10/2018	29/10/2018
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	%	105	116	115	106	120

Organochlorine Pesticides in soil						
Our Reference		203424-A-35	203424-A-45	203424-A-46	203424-A-75	203424-A-77
Your Reference	UNITS	TP115	TP123	TP123	TP141	TP142
Depth		0.1-0.2	0.2-0.3	0.5-0.6	0.3	0.2-0.3
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
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	%	103	97	111	101	105

Organochlorine Pesticides in soil		
Our Reference		203424-A-82
Your Reference	UNITS	TP148
Depth		0.1-0.2
Date Sampled		17/10/2018
Type of sample		Soil
Date extracted	-	26/10/2018
Date analysed	-	26/10/2018
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Surrogate TCMX	%	104

Organophosphorus Pesticides						
Our Reference		203424-A-35	203424-A-46	203424-A-75	203424-A-77	203424-A-82
Your Reference	UNITS	TP115	TP123	TP141	TP142	TP148
Depth		0.1-0.2	0.5-0.6	0.3	0.2-0.3	0.1-0.2
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
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	%	103	111	101	105	104

PCBs in Soil						
Our Reference		203424-A-35	203424-A-45	203424-A-46	203424-A-75	203424-A-77
Your Reference	UNITS	TP115	TP123	TP123	TP141	TP142
Depth		0.1-0.2	0.2-0.3	0.5-0.6	0.3	0.2-0.3
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
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	%	103	97	111	101	105

PCBs in Soil		
Our Reference		203424-A-82
Your Reference	UNITS	TP148
Depth		0.1-0.2
Date Sampled		17/10/2018
Type of sample		Soil
Date extracted	-	26/10/2018
Date analysed	-	26/10/2018
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate TCLMX	%	104

Acid Extractable metals in soil						
Our Reference		203424-A-35	203424-A-46	203424-A-75	203424-A-77	203424-A-82
Your Reference	UNITS	TP115	TP123	TP141	TP142	TP148
Depth		0.1-0.2	0.5-0.6	0.3	0.2-0.3	0.1-0.2
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	17/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	4	2	2	5	7
Copper	mg/kg	1	<1	<1	1	4
Lead	mg/kg	15	4	2	6	19
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1	<1	1
Zinc	mg/kg	5	3	<1	9	11

Moisture						
Our Reference		203424-A-35	203424-A-45	203424-A-46	203424-A-75	203424-A-77
Your Reference	UNITS	TP115	TP123	TP123	TP141	TP142
Depth		0.1-0.2	0.2-0.3	0.5-0.6	0.3	0.2-0.3
Date Sampled		17/10/2018	16/10/2018	16/10/2018	16/10/2018	16/10/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	26/10/2018	26/10/2018	26/10/2018	26/10/2018	26/10/2018
Date analysed	-	29/10/2018	29/10/2018	29/10/2018	29/10/2018	29/10/2018
Moisture	%	9.2	13	16	7.3	11

Moisture		
Our Reference		203424-A-82
Your Reference	UNITS	TP148
Depth		0.1-0.2
Date Sampled		17/10/2018
Type of sample		Soil
Date prepared	-	26/10/2018
Date analysed	-	29/10/2018
Moisture	%	8.1

Metals in TCLP USEPA1311			
Our Reference		203424-A-34	203424-A-47
Your Reference	UNITS	TP115	TP124
Depth		0.0-0.1	0.0-0.1
Date Sampled		17/10/2018	17/10/2018
Type of sample		Soil	Soil
Date extracted	-	26/10/2018	26/10/2018
Date analysed	-	26/10/2018	26/10/2018
pH of soil for fluid# determ.	pH units	5.5	5.6
pH of soil TCLP (after HCl)	pH units	1.3	1.3
Extraction fluid used	-	1	1
pH of final Leachate	pH units	5.0	5.0
Lead in TCLP	mg/L	0.2	0.34

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.
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-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-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-3	[NT]
Date extracted	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			29/10/2018	[NT]	[NT]	[NT]	[NT]	29/10/2018	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	109	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	109	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	[NT]	[NT]	101	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	[NT]	[NT]	105	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	112	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	113	[NT]
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	110	[NT]
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	108	[NT]	[NT]	[NT]	[NT]	117	[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	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	110	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	110	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	115	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	110	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	110	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	115	[NT]
Surrogate o-Terphenyl	%		Org-003	98	[NT]	[NT]	[NT]	[NT]	120	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			29/10/2018	[NT]	[NT]	[NT]	[NT]	29/10/2018	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	102	[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]	104	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	108	[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]	108	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	98	[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]	99	[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	114	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[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]	82	[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]	90	[NT]
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	79	[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]	89	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	90	[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]	93	[NT]
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	87	[NT]
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	94	[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	110	[NT]	[NT]	[NT]	[NT]	119	[NT]

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[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]	89	[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]	83	[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]	101	[NT]
Fenitrothion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Malathion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	72	[NT]
Parathion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Ronnel	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Surrogate TCMX	%		Org-008	110	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[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]	91	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCLMX	%		Org-006	110	[NT]	[NT]	[NT]	[NT]	109	[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	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[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]	104	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	129	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]

QUALITY CONTROL: Metals in TCLP USEPA1311						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Date analysed	-			26/10/2018	[NT]	[NT]	[NT]	[NT]	26/10/2018	[NT]
Lead in TCLP	mg/L	0.03	Metals-020 ICP-AES	<0.03	[NT]	[NT]	[NT]	[NT]	111	[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.

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SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KM, Lindfield
Envirolab Reference	203424-A
Date Sample Received	18/10/2018
Date Instructions Received	25/10/2018
Date Results Expected to be Reported	29/10/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	95 Soil
Turnaround Time Requested	2 days
Temperature on Receipt (°C)	19.1
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:

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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	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Lead in TCLP	On Hold
TP101-0.0-0.1													✓
TP101-0.4-0.5													✓
TP102-0.0-0.1													✓
TP102-0.1-0.2													✓
TP102-0.4-0.5													✓
TP103-0.0-0.1													✓
TP103-0.45-0.5													✓
TP104-0.0-0.1													✓
TP104-0.15-0.3													✓
TP105-0.0-0.1													✓
TP105-0.4-0.5													✓
TP105-0.9-1.0													✓
TP106-0.0-0.1													✓
TP106-0.6-0.7													✓
TP106-1.2-1.3													✓
TP107-0.0-0.1													✓
TP107-0.4-0.5													✓
TP107-0.8-0.9													✓
TP108-0.0-0.1													✓
TP108-0.3-0.4													✓
TP108-0.7-0.8													✓
TP109-0.0-0.1													✓
TP109-0.3-0.4													✓
TP110-0.0-0.1													✓
TP110-0.3-0.4													✓
TP110-1.3-1.4													✓
TP112-0.0-0.1													✓
TP112-0.4-0.5													✓
TP113-0.0-0.05													✓
TP113-0.1-0.2													✓
TP113-0.9-1.0													✓
TP114-0.0-0.1													✓

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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	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Lead in TCLP	On Hold
TP114-0.2-0.3													✓
TP115-0.0-0.1								✓	✓	✓	✓	✓	
TP115-0.1-0.2	✓	✓	✓	✓	✓	✓	✓						
TP116-0.0-0.05													✓
TP116-0.2-0.25													✓
TP117-0.0-0.1													✓
TP117-0.3-0.4													✓
TP121-0.0-0.1													✓
TP121-0.2-0.3													✓
TP122-0.0-0.1													✓
TP122-0.2-0.3													✓
TP123-0.0-0.1													✓
TP123-0.2-0.3				✓		✓							
TP123-0.5-0.6	✓	✓	✓	✓	✓	✓	✓						
TP124-0.0-0.1								✓	✓	✓	✓	✓	
TP124-0.2-0.3													✓
TP125-0.5-0.15													✓
TP125-0.3-0.4													✓
TP126-0.0-0.1													✓
TP126-0.2-0.3													✓
TP126-0.65-0.7													✓
TP128-0.0-0.1													✓
TP129-0.0-0.1													✓
TP129-0.3-0.4													✓
TP129-0.7-0.8													✓
TP129-0.95-1.0													✓
TP130-0.05-0.15													✓
TP130-0.7-0.8													✓
TP130-1.4-1.5													✓
TP132-0.0-0.1													✓
TP132-0.3-0.4													✓
TP132-0.9-1.0													✓

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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	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Lead in TCLP	On Hold
TP133-0.0-0.1													✓
TP133-0.3-0.4													✓
TP136-0.0-0.1													✓
TP136-0.2-0.3													✓
TP137-0.0-0.1													✓
TP137-0.2-0.3													✓
TP140-0.0-0.1													✓
TP140-0.2-0.3													✓
TP141-0.0-0.1													✓
TP141-0.15-0.3													✓
TP141-0.3	✓	✓	✓	✓	✓	✓	✓						
TP142-0.0-0.1													✓
TP142-0.2-0.3	✓	✓	✓	✓	✓	✓	✓						
TP146-0.0-0.1													✓
TP146-0.1-0.2													✓
TP146-0.3-0.4													✓
TP148-0.0-0.05													✓
TP148-0.1-0.2	✓	✓	✓	✓	✓	✓	✓						
TP149-0.0-0.1													✓
TP149-0.3-0.4													✓
TP150-0.0-0.1													✓
TP150-0.2-0.3													✓
TBS1													✓
TS													✓
DUPAMS1													✓
DUPAMS2													✓
DUPAMS4													✓
DUPAMS6													✓
DUPAMS7													✓
DUPAMS8													✓
DUPAMS10													✓
TP115 - [TRIPLICATE]-0.0-0.1													✓

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.

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CERTIFICATE OF ANALYSIS 203424-B

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KM, Lindfield**
Number of Samples	95 Soil
Date samples received	18/10/2018
Date completed instructions received	26/10/2018

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	02/11/2018
Date of Issue	02/11/2018

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Results Approved By
Steven Luong, Senior Chemist

Authorised By

Jacinta Hurst, Laboratory Manager

sTPH in Soil (C10-C40)-Silica			
Our Reference		203424-B-34	203424-B-76
Your Reference	UNITS	TP115	TP142
Depth		0.0-0.1	0.0-0.1
Date Sampled		17/10/2018	16/10/2018
Type of sample		Soil	Soil
Date extracted	-	29/10/2018	29/10/2018
Date analysed	-	30/10/2018	30/10/2018
TPH C_{10} - C_{14}	mg/kg	<50	<50
TPH C_{15} - C_{28}	mg/kg	<100	<100
TPH C_{29} - C_{36}	mg/kg	<100	170
TPH >C_{10} -C_{16}	mg/kg	<50	<50
TPH >C_{16} -C_{34}	mg/kg	<100	210
TPH >C_{34} -C_{40}	mg/kg	<100	<100
Surrogate o-Terphenyl	%	98	96

Method ID	Methodology Summary
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.

QUALITY CONTROL: sTPH in Soil (C10-C40)-Silica						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date extracted	-			29/10/2018	34	29/10/2018	29/10/2018		29/10/2018	[NT]
Date analysed	-			29/10/2018	34	30/10/2018	30/10/2018		29/10/2018	[NT]
TPH C_{10} - C_{14}	mg/kg	50	Org-003	<50	34	<50	<50	0	104	[NT]
TPH C_{15} - C_{28}	mg/kg	100	Org-003	<100	34	<100	<100	0	102	[NT]
TPH C_{29} - C_{36}	mg/kg	100	Org-003	<100	34	<100	<100	0	130	[NT]
TPH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	34	<50	<50	0	104	[NT]
TPH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	34	<100	<100	0	102	[NT]
TPH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	34	<100	<100	0	130	[NT]
Surrogate o-Terphenyl	%		Org-003	103	34	98	112	13	102	[NT]

QUALITY CONTROL: sTPH in Soil (C10-C40)-Silica						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	76	29/10/2018	29/10/2018		[NT]	[NT]
Date analysed	-			[NT]	76	30/10/2018	30/10/2018		[NT]	[NT]
TPH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	76	<50	<50	0	[NT]	[NT]
TPH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	76	<100	<100	0	[NT]	[NT]
TPH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	76	170	<100	52	[NT]	[NT]
TPH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	76	<50	<50	0	[NT]	[NT]
TPH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	76	210	120	55	[NT]	[NT]
TPH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	76	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	76	96	96	0	[NT]	[NT]

Result Definitions

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

Quality Control Definitions

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

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

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.

Andrew Fitzsimons

From: Mitchell Delaney <MDelaney@jkgroup.net.au>
Sent: Friday, 26 October 2018 11:06 AM
To: Simon Song
Cc: Samplereceipt
Subject: RE: Sample Receipt for 203424-A E30259KM, Lindfield

Importance: High

Hi Simon,

Sorry, additionally, could we also please schedule TRH analysis with silica gel clean up on the following samples:

- TP115 (0-0.1m); and -34
- TP142 (0-0.1m). -76

Please call me if need be.

ELS: 203424-B
TAT: 5 days
Due: 2/11/18

Many thanks.

Regards,

Mitchell Delaney
Senior Associate | Environmental Scientist

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F: +612 9888 5001
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www.jkgroup.net.au

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ENVIRONMENTAL INVESTIGATION SERVICES
CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS
PO Box 976, North Ryde BC NSW 1670
115 Wicks Rd, Macquarie Park NSW 2113

From: Simon Song [mailto:SSong@envirolab.com.au]
Sent: Thursday, 25 October 2018 6:02 PM
To: Mitchell Delaney <MDelaney@jkgroup.net.au>
Subject: Sample Receipt for 203424-A E30259KM, Lindfield

Please refer to attached for:
a copy of our Sample Receipt Advice (SRA)
Please open and read the SRA as it contains important information.
Please let the lab know immediately if there are any issues.

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customerservice@envirolab.com.au
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SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KM, Lindfield
Envirolab Reference	203424-B
Date Sample Received	18/10/2018
Date Instructions Received	26/10/2018
Date Results Expected to be Reported	02/11/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	95 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	19.1
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:

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Sample ID	sTPH in Soil (C10-C40)-Silica	On Hold
TP101-0.0-0.1		✓
TP101-0.4-0.5		✓
TP102-0.0-0.1		✓
TP102-0.1-0.2		✓
TP102-0.4-0.5		✓
TP103-0.0-0.1		✓
TP103-0.45-0.5		✓
TP104-0.0-0.1		✓
TP104-0.15-0.3		✓
TP105-0.0-0.1		✓
TP105-0.4-0.5		✓
TP105-0.9-1.0		✓
TP106-0.0-0.1		✓
TP106-0.6-0.7		✓
TP106-1.2-1.3		✓
TP107-0.0-0.1		✓
TP107-0.4-0.5		✓
TP107-0.8-0.9		✓
TP108-0.0-0.1		✓
TP108-0.3-0.4		✓
TP108-0.7-0.8		✓
TP109-0.0-0.1		✓
TP109-0.3-0.4		✓
TP110-0.0-0.1		✓
TP110-0.3-0.4		✓
TP110-1.3-1.4		✓
TP112-0.0-0.1		✓
TP112-0.4-0.5		✓
TP113-0.0-0.05		✓
TP113-0.1-0.2		✓
TP113-0.9-1.0		✓
TP114-0.0-0.1		✓

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Sample ID	sTPH in Soil (C10-C40)-Silica	On Hold
TP114-0.2-0.3		✓
TP115-0.0-0.1	✓	
TP115-0.1-0.2		✓
TP116-0.0-0.05		✓
TP116-0.2-0.25		✓
TP117-0.0-0.1		✓
TP117-0.3-0.4		✓
TP121-0.0-0.1		✓
TP121-0.2-0.3		✓
TP122-0.0-0.1		✓
TP122-0.2-0.3		✓
TP123-0.0-0.1		✓
TP123-0.2-0.3		✓
TP123-0.5-0.6		✓
TP124-0.0-0.1		✓
TP124-0.2-0.3		✓
TP125-0.5-0.15		✓
TP125-0.3-0.4		✓
TP126-0.0-0.1		✓
TP126-0.2-0.3		✓
TP126-0.65-0.7		✓
TP128-0.0-0.1		✓
TP129-0.0-0.1		✓
TP129-0.3-0.4		✓
TP129-0.7-0.8		✓
TP129-0.95-1.0		✓
TP130-0.05-0.15		✓
TP130-0.7-0.8		✓
TP130-1.4-1.5		✓
TP132-0.0-0.1		✓
TP132-0.3-0.4		✓
TP132-0.9-1.0		✓

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Sample ID	sTPH in Soil (C10-C40)-Silica	On Hold
TP133-0.0-0.1		✓
TP133-0.3-0.4		✓
TP136-0.0-0.1		✓
TP136-0.2-0.3		✓
TP137-0.0-0.1		✓
TP137-0.2-0.3		✓
TP140-0.0-0.1		✓
TP140-0.2-0.3		✓
TP141-0.0-0.1		✓
TP141-0.15-0.3		✓
TP141-0.3		✓
TP142-0.0-0.1	✓	
TP142-0.2-0.3		✓
TP146-0.0-0.1		✓
TP146-0.1-0.2		✓
TP146-0.3-0.4		✓
TP148-0.0-0.05		✓
TP148-0.1-0.2		✓
TP149-0.0-0.1		✓
TP149-0.3-0.4		✓
TP150-0.0-0.1		✓
TP150-0.2-0.3		✓
TBS1		✓
TS		✓
DUPAMS1		✓
DUPAMS2		✓
DUPAMS4		✓
DUPAMS6		✓
DUPAMS7		✓
DUPAMS8		✓
DUPAMS10		✓
TP115 - [TRIPLICATE]-0.0-0.1		✓

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.

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melbourne@envirolab.com.au
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CERTIFICATE OF ANALYSIS 15166

Client Details

Client	Environmental Investigation Services
Attention	Mitch Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KM - Lindfield**
Number of Samples	3 Soil
Date samples received	22/10/2018
Date completed instructions received	22/10/2018

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	25/10/2018
Date of Issue	25/10/2018

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Results Approved By
Chris De Luca, Senior Chemist

Authorised By

Pamela Adams, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		15166-1	15166-2	15166-3
Your Reference	UNITS	DUPAMS3	DUPAMS5	DUPAMS9
Type of sample		Soil	Soil	Soil
Date Sampled		15/10/2018	15/10/2018	17/10/2018
Date extracted	-	23/10/2018	23/10/2018	23/10/2018
Date analysed	-	24/10/2018	24/10/2018	24/10/2018
vTRH C_6 - C_9	mg/kg	<25	<25	<25
vTRH C_6 - C_{10}	mg/kg	<25	<25	<25
TRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	91	90	92

TRH Soil C10-C40 NEPM				
Our Reference		15166-1	15166-2	15166-3
Your Reference	UNITS	DUPAMS3	DUPAMS5	DUPAMS9
Type of sample		Soil	Soil	Soil
Date Sampled		15/10/2018	15/10/2018	17/10/2018
Date extracted	-	23/10/2018	23/10/2018	23/10/2018
Date analysed	-	23/10/2018	23/10/2018	23/10/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	160
Total +ve TRH (C10-C36)	mg/kg	<50	<50	160
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	130
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	130
Surrogate o-Terphenyl	%	84	83	85

PAHs in Soil				
Our Reference	UNITS	15166-1	15166-2	15166-3
Your Reference		DUPAMS3	DUPAMS5	DUPAMS9
Type of sample		Soil	Soil	Soil
Date Sampled		15/10/2018	15/10/2018	17/10/2018
Date extracted	-	23/10/2018	23/10/2018	23/10/2018
Date analysed	-	25/10/2018	25/10/2018	25/10/2018
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	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1
Benzo(b,j&k)fluoranthene	mg/kg	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.05	0	0
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.1	0.1	0.1
Benzo(a)pyrene TEQ calc (PQL)	mg/kg	0.2	0.2	0.2
Surrogate p-Terphenyl-d_{14}	%	94	94	94

OCP in Soil		
Our Reference		15166-2
Your Reference	UNITS	DUPAMS5
Type of sample		Soil
Date Sampled		15/10/2018
Date extracted	-	23/10/2018
Date analysed	-	25/10/2018
alpha-BHC	mg/kg	<0.1
Hexachlorobenzene	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Total +ve reported DDT+DDD+DDE	mg/kg	<0.1
Surrogate p-Terphenyl-d_{14}	%	94

OP in Soil		
Our Reference		15166-2
Your Reference	UNITS	DUPAMS5
Type of sample		Soil
Date Sampled		15/10/2018
Date extracted	-	23/10/2018
Date analysed	-	25/10/2018
Azinphos-methyl	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Chlorpyrifos	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Dichlorovos	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Ethion	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Surrogate p-Terphenyl-d_{14}	%	94

PCBs in Soil		
Our Reference		15166-2
Your Reference	UNITS	DUPAMS5
Type of sample		Soil
Date Sampled		15/10/2018
Date extracted	-	23/10/2018
Date analysed	-	25/10/2018
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate p-Terphenyl-d_{14}	%	94

Acid Extractable metals in soil				
Our Reference	UNITS	15166-1	15166-2	15166-3
Your Reference		DUPAMS3	DUPAMS5	DUPAMS9
Type of sample		Soil	Soil	Soil
Date Sampled		15/10/2018	15/10/2018	17/10/2018
Date digested	-	23/10/2018	23/10/2018	23/10/2018
Date analysed	-	23/10/2018	23/10/2018	23/10/2018
Arsenic	mg/kg	<4	4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4
Chromium	mg/kg	3	7	5
Copper	mg/kg	3	10	14
Lead	mg/kg	30	20	110
Mercury	mg/kg	<0.1	0.2	<0.1
Nickel	mg/kg	1	4	2
Zinc	mg/kg	9	41	27

Moisture				
Our Reference		15166-1	15166-2	15166-3
Your Reference	UNITS	DUPAMS3	DUPAMS5	DUPAMS9
Type of sample		Soil	Soil	Soil
Date Sampled		15/10/2018	15/10/2018	17/10/2018
Date prepared	-	23/10/2018	23/10/2018	23/10/2018
Date analysed	-	24/10/2018	24/10/2018	24/10/2018
Moisture	%	23	24	18

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 12 hours.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Org-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	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Note, For OCs the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-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-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.

Method ID	Methodology Summary
Org-012	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD or GC-MS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-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. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			23/10/2018	[NT]	[NT]	[NT]	[NT]	23/10/2018	[NT]
Date analysed	-			24/10/2018	[NT]	[NT]	[NT]	[NT]	24/10/2018	[NT]
vTRH C_6 - C_9	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	98	[NT]
vTRH C_6 - C_{10}	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	98	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	[NT]	[NT]	105	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	[NT]	[NT]	100	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	95	[NT]
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	98	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: TRH Soil C10-C40 NEPM						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			23/10/2018	2	23/10/2018	23/10/2018		23/10/2018	[NT]
Date analysed	-			23/10/2018	2	23/10/2018	23/10/2018		23/10/2018	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	2	<50	<50	0	76	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	2	<100	<100	0	82	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	2	<100	<100	0	80	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	2	<50	<50	0	76	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	2	<100	<100	0	82	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	2	<100	<100	0	80	[NT]
Surrogate o-Terphenyl	%		Org-003	85	2	83	85	2	82	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			23/10/2018	2	23/10/2018	23/10/2018		23/10/2018	[NT]
Date analysed	-			25/10/2018	2	25/10/2018	25/10/2018		25/10/2018	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	88	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	76	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	80	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	88	[NT]
Anthracene	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	80	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	80	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	84	[NT]
Benzo(b,j&k)fluoranthene	mg/kg	0.2	Org-012	<0.2	2	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	2	<0.05	<0.05	0	76	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-012	98	2	94	90	4	96	[NT]

QUALITY CONTROL: OCP in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			23/10/2018	2	23/10/2018	23/10/2018		23/10/2018	[NT]
Date analysed	-			25/10/2018	2	25/10/2018	25/10/2018		25/10/2018	[NT]
alpha-BHC	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	80	[NT]
Hexachlorobenzene	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	72	[NT]
gamma-BHC	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	76	[NT]
delta-BHC	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	72	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	76	[NT]
gamma-Chlordane	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	76	[NT]
alpha-chlordane	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	72	[NT]
Dieldrin	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	64	[NT]
Endrin	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	80	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	68	[NT]
Methoxychlor	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-012	98	2	94	90	4	96	[NT]

QUALITY CONTROL: OP in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	15166-2
Date extracted	-			23/10/2018	2	23/10/2018	23/10/2018		23/10/2018	23/10/2018
Date analysed	-			25/10/2018	2	25/10/2018	25/10/2018		25/10/2018	25/10/2018
Azinphos-methyl	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	72	103
Chlorpyrifos-methyl	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Dichlorovos	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	68	135
Fenitrothion	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	72	135
Malathion	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-012	98	2	94	90	4	96	96

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			23/10/2018	2	23/10/2018	23/10/2018		23/10/2018	[NT]
Date analysed	-			25/10/2018	2	25/10/2018	25/10/2018		25/10/2018	[NT]
Aroclor 1016	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	110	[NT]
Aroclor 1260	mg/kg	0.1	Org-012	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-012	98	2	94	90	4	96	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date digested	-			23/10/2018	[NT]	[NT]	[NT]	[NT]	23/10/2018	[NT]
Date analysed	-			23/10/2018	[NT]	[NT]	[NT]	[NT]	23/10/2018	[NT]
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	[NT]	[NT]	104	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	[NT]	[NT]	106	[NT]
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	[NT]	[NT]	128	[NT]
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[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.

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E30259KM	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: ~~STANDARD~~ 3 DAYTA	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 4/4	Attention: Mitche Delaney
Attention: Aileen		

Location: Lindfield — Sample Preserved in Esky on Ice

Sampler: AM — Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6a	Combo 3a	pH, CEC and clay content	Combo 6	Combo 3	BTEX							
2034274																			
16/10/18	76	TP142	0-0.1	G, A	0	F: Sandy Silt	X												
↓	77	↓	0.2-0.3	↓	0	Clayey Soil	X												
	78	TP146	0-0.1		0	F: Silty Sand	X												
	79	↓	0.1-0.2		0	Sand													
↓	80		0.3-0.4		0	Clayey Sand													
17/10/18	81	TP148	0-0.05		0	FILL: Silty Clayey	X												
↓	82	↓	0.1-0.2		4.7	Silty Sand													
16/10/18	83	TP149	0-0.1		0	F: Silty Sand	X												
↓	84	↓	0.3-0.4		0	Sandy Clay					X								
17/10/18	85	TP150	0-0.1		0	F: Sandy Clayey Silt	X												
↓	86		0.2-0.3	↓	0	Clayey Sand													
12/10/18	87	TB51	—	G	—	Soil Blank						X							
15/10/18	88	TS	—	↓	—	Soil Spike						X							
15/10/18	89	DUPAMS1	—	G	—	Dup Soil				X									
15/10/18	90	DUPAMS2	—		—						X								
1 15/10/18	—	DUPAMS3	—		—						X		(send to ENV lab VIC).						
15/10/18	91	DUPAMS4	—		—					X									
2 15/10/18	—	DUPAMS5	—		—					X			(send to ENV VIC)						
16/10/18	92	DUPAMS6	—		—														
↓	93	DUPAMS7	—		—						X								
17/10/18	94	DUPAMS8	—		—														
3 17/10/18	—	DUPAMS9	—		—						X		(send to ENV VIC)						
17/10/18	95	DUPAMS10	—	↓	—	↓				X									

Envirolab Services
25 Research Drive
Croydon South VIC 3136
Ph: (03) 9762 2500

Job No: 15166
Date Received: 22/10/18
Time Received: 12.15
Received By: CF
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

20C

Remarks (comments/detection limits required):

ELS

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
AM Kevin Wong 17/10/18 11:00.	18/10/18		Ming Yan Zo	18/10/18 4:30

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
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melbourne@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitch Delaney

Sample Login Details

Your reference	E30259KM - Lindfield
Envirolab Reference	15166
Date Sample Received	22/10/2018
Date Instructions Received	22/10/2018
Date Results Expected to be Reported	25/10/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	3 Soil
Turnaround Time Requested	72hr
Temperature on Receipt (°C)	20
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Pamela Adams	Analisa Mathrick
Phone: 03 9763 2500	**Phone: 03 9763 2500**
Fax: 03 9763 2633	**Fax: 03 9763 2633**
Email: padams@envirolab.com.au	**Email: amathrick@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	OCP in Soil	OP in Soil	PCBsin Soil	Acid Extractable metalsin soil
DUPAM53	✓	✓	✓				✓
DUPAM55	✓	✓	✓	✓	✓	✓	✓
DUPAM59	✓	✓	✓				✓

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.

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CERTIFICATE OF ANALYSIS 15166-A

Client Details

Client	Environmental Investigation Services
Attention	Mitch Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KM - Lindfield**
Number of Samples	3 Soil
Date samples received	22/10/2018
Date completed instructions received	26/10/2018

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	30/10/2018
Date of Issue	30/10/2018

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Results Approved By
Chris De Luca, Senior Chemist

Authorised By

Pamela Adams, Laboratory Manager

Metals in ASLP		
Our Reference		15166-A-3
Your Reference	UNITS	DUPAMS9
Type of sample		Soil
Date Sampled		17/10/2018
Date extracted	-	29/10/2018
Date analysed	-	30/10/2018
pH of soil for ASLP	pH units	5.2
pH of soil ASLP (after HCl)	pH units	1.6
Extraction fluid used	-	1
pH of final Leachate	pH units	5.0
Lead in ASLP	mg/L	0.06

Method ID	Methodology Summary
EXTRACT.7	Toxicity Characteristic Leaching Procedure (TCLP).
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 AS 4439 and USEPA 1311. Samples are stored at 2-6oC before and after leachate preparation.
Metals-020 ASLP	Determination of various metals by ICP-MS following leaching using neutralised deionised water by AS 4439.3 - 1997.

QUALITY CONTROL: Metals in ASLP					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			29/10/2018	[NT]	[NT]	[NT]	[NT]	29/10/2018	[NT]
Date analysed	-			30/10/2018	[NT]	[NT]	[NT]	[NT]	30/10/2018	[NT]
Lead in ASLP	mg/L	0.03	Metals-020 ASLP	<0.03	[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.

Due: 30/10/18 15166-A

Pamela Adams

From: Mitchell Delaney <MDelaney@jkgroup.net.au>
Sent: Friday, 26 October 2018 11:32 AM
To: Chris De Luca
Cc: MelbourneMailbox
Subject: RE: Results for Registration 15166 E30259KM - Lindfield

Importance: High

Hi Chris,

Can we please schedule TCLP analysis for lead on a 2 day TA for the sample DUPAMS9. #3

Many thanks.

Regards,

Mitchell Delaney
Senior Associate | Environmental Scientist

T: +612 9888 5000
F: +612 9888 5001
MDelaney@jkgroup.net.au
www.jkgroup.net.au

JK Group is Re-branding. For more information, click here

ENVIRONMENTAL INVESTIGATION SERVICES
CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS
PO Box 976, North Ryde BC NSW 1670
115 Wicks Rd, Macquarie Park NSW 2113

From: Chris De Luca [mailto:CDeLuca@envirolab.com.au]
Sent: Thursday, 25 October 2018 5:30 PM
To: Mitchell Delaney <MDelaney@jkgroup.net.au>
Subject: Results for Registration 15166 E30259KM - Lindfield

Please refer to attached for:
a copy of the Certificate of Analysis
a copy of the COC/paperwork received from you
ESDAT Extracts
an Excel or .csv file containing the results
Please note that a hard copy will not be posted.

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

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitch Delaney

Sample Login Details

Your reference	E30259KM - Lindfield
Envirolab Reference	15166-A
Date Sample Received	22/10/2018
Date Instructions Received	26/10/2018
Date Results Expected to be Reported	30/10/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	3 Soil
Turnaround Time Requested	48hr
Temperature on Receipt (°C)	20
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Pamela Adams	Analisa Mathrick
Phone: 03 9763 2500	**Phone: 03 9763 2500**
Fax: 03 9763 2633	**Fax: 03 9763 2633**
Email: padams@envirolab.com.au	**Email: amathrick@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	Metals in ASLP	On Hold
DUPAMS3		✓
DUPAMS5		✓
DUPAMS9	✓	

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.

Envirolab Services Pty Ltd
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www.envirolab.com.au

CERTIFICATE OF ANALYSIS 204970

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KD, Linfield**
Number of Samples	35 Soil, 2 Water
Date samples received	06/11/2018
Date completed instructions received	06/11/2018

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	12/11/2018
Date of Issue	12/11/2018

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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
Leon Ow, Chemist
Long Pham, Team Leader, Metals
Lucy Zhu, Asbsestos Analyst
Nancy Zhang, Assistant Lab Manager
Nick Sarlamis, Inorganics Supervisor
Steven Luong, Senior Chemist

Authorised By

Jacinta Hurst, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		204970-1	204970-2	204970-4	204970-5	204970-6
Your Reference	UNITS	TP111	BH118	BH119	BH119	BH119
Depth		0-0.2	0-0.2	0.15-0.35	0.6-0.8	1.3-1.5
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	%	91	93	94	90	96

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		204970-7	204970-9	204970-10	204970-11	204970-12
Your Reference	UNITS	BH120	TP127	TP127	TP131	BH134
Depth		0.1-0.3	0-0.2	0.3-0.4	0-0.15	0.1-0.3
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	%	92	90	91	94	96

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		204970-14	204970-15	204970-16	204970-17	204970-18
Your Reference	UNITS	TP135	BH138	BH138	BH143	BH143
Depth		0-0.15	0.05-0.1	0.2-0.3	0.2-0.4	0.5-0.8
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	98	92	85

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		204970-19	204970-20	204970-21	204970-22	204970-23
Your Reference	UNITS	TP144	BH145	BH145	BH147	BH147
Depth		0-0.2	0.1-0.2	0.3-0.6	0.1-0.4	0.5-0.65
Date Sampled		05/11/2018	05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	95	89	91

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		204970-29	204970-30	204970-32	204970-34	204970-36
Your Reference	UNITS	BH139	DUP4	DUPMDE	TSR2	TBR2
Depth		0.2-0.35	-	-	-	-
Date Sampled		02/11/2018	02/11/2018	02/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	07/11/2018	07/11/2018
TRH C_6 - C_9	mg/kg	<25	<25	<25	[NA]	[NA]
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	[NA]	[NA]
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	[NA]	[NA]
Benzene	mg/kg	<0.2	<0.2	<0.2	90%	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	91%	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	92%	<1
m+p-xylene	mg/kg	<2	<2	<2	93%	<2
o-Xylene	mg/kg	<1	<1	<1	91%	<1
naphthalene	mg/kg	<1	<1	<1	[NA]	[NA]
Total +ve Xylenes	mg/kg	<1	<1	<1	[NA]	<1
Surrogate aaa-Trifluorotoluene	%	93	89	93	93	101

svTRH (C10-C40) in Soil						
Our Reference		204970-1	204970-2	204970-4	204970-5	204970-6
Your Reference	UNITS	TP111	BH118	BH119	BH119	BH119
Depth		0-0.2	0-0.2	0.15-0.35	0.6-0.8	1.3-1.5
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	08/11/2018	08/11/2018	08/11/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	130	200	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	220	270	<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	280	400	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	190	340	160	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	470	740	160	<50	<50
Surrogate o-Terphenyl	%	100	79	76	75	73

svTRH (C10-C40) in Soil						
Our Reference		204970-7	204970-9	204970-10	204970-11	204970-12
Your Reference	UNITS	BH120	TP127	TP127	TP131	BH134
Depth		0.1-0.3	0-0.2	0.3-0.4	0-0.15	0.1-0.3
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	190	<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	180	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	110	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	290	<50
Surrogate o-Terphenyl	%	72	72	64	69	77

svTRH (C10-C40) in Soil						
Our Reference		204970-14	204970-15	204970-16	204970-17	204970-18
Your Reference	UNITS	TP135	BH138	BH138	BH143	BH143
Depth		0-0.15	0.05-0.1	0.2-0.3	0.2-0.4	0.5-0.8
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	240	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	430	<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	570	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	250	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	820	<50	<50	<50	<50
Surrogate o-Terphenyl	%	90	78	78	73	71

svTRH (C10-C40) in Soil						
Our Reference		204970-19	204970-20	204970-21	204970-22	204970-23
Your Reference	UNITS	TP144	BH145	BH145	BH147	BH147
Depth		0-0.2	0.1-0.2	0.3-0.6	0.1-0.4	0.5-0.65
Date Sampled		05/11/2018	05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	120	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	120	<50	<50	<50	<50
Surrogate o-Terphenyl	%	74	64	67	77	76

svTRH (C10-C40) in Soil				
Our Reference		204970-29	204970-30	204970-32
Your Reference	UNITS	BH139	DUP4	DUPMDE
Depth		0.2-0.35	-	-
Date Sampled		02/11/2018	02/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	250
TRH C_{29} - C_{36}	mg/kg	<100	<100	510
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	670
TRH >C_{34} -C_{40}	mg/kg	<100	<100	250
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	920
Surrogate o-Terphenyl	%	77	74	79

PAHs in Soil						
Our Reference		204970-1	204970-2	204970-4	204970-5	204970-6
Your Reference	UNITS	TP111	BH118	BH119	BH119	BH119
Depth		0-0.2	0-0.2	0.15-0.35	0.6-0.8	1.3-1.5
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	%	72	72	79	76	77

PAHs in Soil						
Our Reference		204970-7	204970-9	204970-10	204970-11	204970-12
Your Reference	UNITS	BH120	TP127	TP127	TP131	BH134
Depth		0.1-0.3	0-0.2	0.3-0.4	0-0.15	0.1-0.3
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	0.07	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	0.3	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	74	74	66	64	79

PAHs in Soil						
Our Reference		204970-14	204970-15	204970-16	204970-17	204970-18
Your Reference	UNITS	TP135	BH138	BH138	BH143	BH143
Depth		0-0.15	0.05-0.1	0.2-0.3	0.2-0.4	0.5-0.8
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	1.4	0.2	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.3	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	1.7	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	1.4	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.6	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.7	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	1	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.70	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.3	<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	0.3	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	8.7	0.3	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.9	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	1	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	1.0	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	82	80	82	73	74

PAHs in Soil						
Our Reference		204970-19	204970-20	204970-21	204970-22	204970-23
Your Reference	UNITS	TP144	BH145	BH145	BH147	BH147
Depth		0-0.2	0.1-0.2	0.3-0.6	0.1-0.4	0.5-0.65
Date Sampled		05/11/2018	05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	%	72	60	86	76	78

PAHs in Soil				
Our Reference		204970-29	204970-30	204970-32
Your Reference	UNITS	BH139	DUP4	DUPMDE
Depth		0.2-0.35	-	-
Date Sampled		02/11/2018	02/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018
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	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	70	70	71

Organochlorine Pesticides in soil						
Our Reference		204970-1	204970-2	204970-4	204970-7	204970-9
Your Reference	UNITS	TP111	BH118	BH119	BH120	TP127
Depth		0-0.2	0-0.2	0.15-0.35	0.1-0.3	0-0.2
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	87	96	89	87

Organochlorine Pesticides in soil						
Our Reference		204970-11	204970-12	204970-14	204970-15	204970-16
Your Reference	UNITS	TP131	BH134	TP135	BH138	BH138
Depth		0-0.15	0.1-0.3	0-0.15	0.05-0.1	0.2-0.3
Date Sampled		05/11/2018	06/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	%	84	88	86	91	99

Organochlorine Pesticides in soil						
Our Reference		204970-17	204970-19	204970-20	204970-21	204970-22
Your Reference	UNITS	BH143	TP144	BH145	BH145	BH147
Depth		0.2-0.4	0-0.2	0.1-0.2	0.3-0.6	0.1-0.4
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	84	76	87	99

Organochlorine Pesticides in soil					
Our Reference		204970-23	204970-29	204970-30	204970-32
Your Reference	UNITS	BH147	BH139	DUP4	DUPMDE
Depth		0.5-0.65	0.2-0.35	-	-
Date Sampled		06/11/2018	02/11/2018	02/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	%	88	89	78	80

Organophosphorus Pesticides						
Our Reference		204970-1	204970-2	204970-4	204970-7	204970-9
Your Reference	UNITS	TP111	BH118	BH119	BH120	TP127
Depth		0-0.2	0-0.2	0.15-0.35	0.1-0.3	0-0.2
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	87	96	89	87

Organophosphorus Pesticides						
Our Reference		204970-11	204970-12	204970-14	204970-15	204970-16
Your Reference	UNITS	TP131	BH134	TP135	BH138	BH138
Depth		0-0.15	0.1-0.3	0-0.15	0.05-0.1	0.2-0.3
Date Sampled		05/11/2018	06/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	<0.2	<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	%	84	88	86	91	99

Organophosphorus Pesticides						
Our Reference		204970-17	204970-19	204970-20	204970-21	204970-22
Your Reference	UNITS	BH143	TP144	BH145	BH145	BH147
Depth		0.2-0.4	0-0.2	0.1-0.2	0.3-0.6	0.1-0.4
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	84	76	87	99

Organophosphorus Pesticides					
Our Reference		204970-23	204970-29	204970-30	204970-32
Your Reference	UNITS	BH147	BH139	DUP4	DUPMDE
Depth		0.5-0.65	0.2-0.35	-	-
Date Sampled		06/11/2018	02/11/2018	02/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	%	88	89	78	80

PCBs in Soil						
Our Reference		204970-1	204970-2	204970-4	204970-7	204970-9
Your Reference	UNITS	TP111	BH118	BH119	BH120	TP127
Depth		0-0.2	0-0.2	0.15-0.35	0.1-0.3	0-0.2
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	87	96	89	87

PCBs in Soil						
Our Reference		204970-11	204970-12	204970-14	204970-15	204970-16
Your Reference	UNITS	TP131	BH134	TP135	BH138	BH138
Depth		0-0.15	0.1-0.3	0-0.15	0.05-0.1	0.2-0.3
Date Sampled		05/11/2018	06/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	%	84	88	86	91	99

PCBs in Soil						
Our Reference		204970-17	204970-19	204970-20	204970-21	204970-22
Your Reference	UNITS	BH143	TP144	BH145	BH145	BH147
Depth		0.2-0.4	0-0.2	0.1-0.2	0.3-0.6	0.1-0.4
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	84	76	87	99

PCBs in Soil						
Our Reference		204970-23	204970-24	204970-25	204970-26	204970-27
Your Reference	UNITS	BH147	TP151	TP152	TP153	TP153
Depth		0.5-0.65	0.1-0.15	0-0.2	0-0.1	0.1-0.2
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	1.1	1.9	0.6
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	1.1	1.9	0.6
Surrogate TCLMX	%	88	96	117	93	82

PCBs in Soil					
Our Reference		204970-28	204970-29	204970-30	204970-32
Your Reference	UNITS	TP154	BH139	DUP4	DUPMDE
Depth		0-0.15	0.2-0.35	-	-
Date Sampled		05/11/2018	02/11/2018	02/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018
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	1.1	<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	1.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	91	89	78	80

Acid Extractable metals in soil						
Our Reference		204970-1	204970-2	204970-4	204970-5	204970-6
Your Reference	UNITS	TP111	BH118	BH119	BH119	BH119
Depth		0-0.2	0-0.2	0.15-0.35	0.6-0.8	1.3-1.5
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	30	18	7	9
Copper	mg/kg	7	35	8	1	2
Lead	mg/kg	30	9	7	9	10
Mercury	mg/kg	0.2	0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	41	15	1	2
Zinc	mg/kg	16	39	14	9	10

Acid Extractable metals in soil						
Our Reference		204970-7	204970-9	204970-10	204970-11	204970-12
Your Reference	UNITS	BH120	TP127	TP127	TP131	BH134
Depth		0.1-0.3	0-0.2	0.3-0.4	0-0.15	0.1-0.3
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Arsenic	mg/kg	<4	8	<4	6	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	15	10	8	13
Copper	mg/kg	3	16	5	10	4
Lead	mg/kg	4	35	17	29	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	15	3	4	9
Zinc	mg/kg	7	64	17	38	9

Acid Extractable metals in soil						
Our Reference		204970-14	204970-15	204970-16	204970-17	204970-18
Your Reference	UNITS	TP135	BH138	BH138	BH143	BH143
Depth		0-0.15	0.05-0.1	0.2-0.3	0.2-0.4	0.5-0.8
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
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	66	3	6	4
Copper	mg/kg	5	40	<1	2	<1
Lead	mg/kg	23	6	1	3	3
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	71	<1	3	<1
Zinc	mg/kg	25	42	<1	4	2

Acid Extractable metals in soil						
Our Reference		204970-19	204970-20	204970-21	204970-22	204970-23
Your Reference	UNITS	TP144	BH145	BH145	BH147	BH147
Depth		0-0.2	0.1-0.2	0.3-0.6	0.1-0.4	0.5-0.65
Date Sampled		05/11/2018	05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Arsenic	mg/kg	4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	37	7	6	5
Copper	mg/kg	21	35	4	<1	<1
Lead	mg/kg	42	4	2	2	8
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	67	6	2	<1
Zinc	mg/kg	160	34	5	2	7

Acid Extractable metals in soil				
Our Reference		204970-29	204970-30	204970-32
Your Reference	UNITS	BH139	DUP4	DUPMDE
Depth		0.2-0.35	-	-
Date Sampled		02/11/2018	02/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018
Arsenic	mg/kg	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	0.6
Chromium	mg/kg	22	38	10
Copper	mg/kg	110	38	49
Lead	mg/kg	4	4	170
Mercury	mg/kg	0.1	<0.1	0.1
Nickel	mg/kg	25	67	7
Zinc	mg/kg	31	32	180

Moisture						
Our Reference		204970-1	204970-2	204970-4	204970-5	204970-6
Your Reference	UNITS	TP111	BH118	BH119	BH119	BH119
Depth		0-0.2	0-0.2	0.15-0.35	0.6-0.8	1.3-1.5
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Moisture	%	17	5.8	4.5	4.1	3.4

Moisture						
Our Reference		204970-7	204970-9	204970-10	204970-11	204970-12
Your Reference	UNITS	BH120	TP127	TP127	TP131	BH134
Depth		0.1-0.3	0-0.2	0.3-0.4	0-0.15	0.1-0.3
Date Sampled		06/11/2018	05/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Moisture	%	5.9	10	9.2	7.2	4.4

Moisture						
Our Reference		204970-14	204970-15	204970-16	204970-17	204970-18
Your Reference	UNITS	TP135	BH138	BH138	BH143	BH143
Depth		0-0.15	0.05-0.1	0.2-0.3	0.2-0.4	0.5-0.8
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Moisture	%	5.8	9.9	4.4	15	15

Moisture						
Our Reference		204970-19	204970-20	204970-21	204970-22	204970-23
Your Reference	UNITS	TP144	BH145	BH145	BH147	BH147
Depth		0-0.2	0.1-0.2	0.3-0.6	0.1-0.4	0.5-0.65
Date Sampled		05/11/2018	05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Moisture	%	15	10	8.1	5.8	4.3

Moisture						
Our Reference		204970-24	204970-25	204970-26	204970-27	204970-28
Your Reference	UNITS	TP151	TP152	TP153	TP153	TP154
Depth		0.1-0.15	0-0.2	0-0.1	0.1-0.2	0-0.15
Date Sampled		05/11/2018	05/11/2018	05/11/2018	05/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Moisture	%	13	16	10	4.4	8.9

Moisture				
Our Reference		204970-29	204970-30	204970-32
Your Reference	UNITS	BH139	DUP4	DUPMDE
Depth		0.2-0.35	-	-
Date Sampled		02/11/2018	02/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil
Date prepared	-	07/11/2018	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018
Moisture	%	5.7	7.5	12

Asbestos ID - soils						
Our Reference		204970-1	204970-2	204970-4	204970-5	204970-7
Your Reference	UNITS	TP111	BH118	BH119	BH119	BH120
Depth		0-0.2	0-0.2	0.15-0.35	0.6-0.8	0.1-0.3
Date Sampled		05/11/2018	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Sample mass tested	g	Approx. 20g	Approx. 45g	Approx. 30g	Approx. 40g	Approx. 40g
Sample Description	-	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy 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		204970-9	204970-10	204970-11	204970-12	204970-14
Your Reference	UNITS	TP127	TP127	TP131	BH134	TP135
Depth		0-0.2	0.3-0.4	0-0.15	0.1-0.3	0-0.15
Date Sampled		05/11/2018	05/11/2018	05/11/2018	06/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Sample mass tested	g	Approx. 20g	Approx. 35g	Approx. 35g	Approx. 40g	Approx. 25g
Sample Description	-	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Beige sandy soil & rocks	Brown sandy 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		204970-15	204970-17	204970-19	204970-20	204970-22
Your Reference	UNITS	BH138	BH143	TP144	BH145	BH147
Depth		0.05-0.1	0.2-0.4	0-0.2	0.1-0.2	0.1-0.4
Date Sampled		06/11/2018	06/11/2018	05/11/2018	05/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Sample mass tested	g	Approx. 45g	Approx. 20g	Approx. 25g	Approx. 45g	Approx. 35g
Sample Description	-	Brown sandy soil & rocks	Beige sandy soil & rocks	Brown sandy soil & rocks	Grey coarse-grained soil & rocks	Beige sandy 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		204970-29
Your Reference	UNITS	BH139
Depth		0.2-0.35
Date Sampled		02/11/2018
Type of sample		Soil
Date analysed	-	08/11/2018
Sample mass tested	g	Approx. 55g
Sample Description	-	Brown sandy soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected

Misc Inorg - Soil					
Our Reference		204970-1	204970-9	204970-12	204970-17
Your Reference	UNITS	TP111	TP127	BH134	BH143
Depth		0-0.2	0-0.2	0.1-0.3	0.2-0.4
Date Sampled		05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018
pH 1:5 soil:water	pH Units	5.2	6.9	7.8	6.8

CEC					
Our Reference		204970-1	204970-9	204970-12	204970-17
Your Reference	UNITS	TP111	TP127	BH134	BH143
Depth		0-0.2	0-0.2	0.1-0.3	0.2-0.4
Date Sampled		05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Date analysed	-	08/11/2018	08/11/2018	08/11/2018	08/11/2018
Exchangeable Ca	meq/100g	2.4	9.4	2.5	0.8
Exchangeable K	meq/100g	0.2	0.4	<0.1	<0.1
Exchangeable Mg	meq/100g	0.99	1.1	1.2	0.57
Exchangeable Na	meq/100g	<0.1	<0.1	0.25	<0.1
Cation Exchange Capacity	meq/100g	3.7	11	4.0	1.6

Clay 50-120g					
Our Reference		204970-1	204970-9	204970-12	204970-17
Your Reference	UNITS	TP111	TP127	BH134	BH143
Depth		0-0.2	0-0.2	0.1-0.3	0.2-0.4
Date Sampled		05/11/2018	05/11/2018	06/11/2018	06/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	12/11/2018	12/11/2018	12/11/2018	12/11/2018
Date analysed	-	12/11/2018	12/11/2018	12/11/2018	12/11/2018
Clay in soils <2µm	% (w/w)	11	11	9	11

BTEX in Water			
Our Reference		204970-35	204970-37
Your Reference	UNITS	FR2	FR3
Depth		-	-
Date Sampled		05/11/2018	06/11/2018
Type of sample		Water	Water
Date extracted	-	07/11/2018	07/11/2018
Date analysed	-	08/11/2018	08/11/2018
Benzene	µg/L	<1	<1
Toluene	µg/L	<1	<1
Ethylbenzene	µg/L	<1	<1
m+p-xylene	µg/L	<2	<2
o-xylene	µg/L	<1	<1
Surrogate Dibromofluoromethane	%	93	94
Surrogate toluene-d8	%	95	99
Surrogate 4-BFB	%	103	101

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.
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-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
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.
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-13	204970-2
Date extracted	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			08/11/2018	1	08/11/2018	08/11/2018		08/11/2018	08/11/2018
TRH C_6 - C_9	mg/kg	25	Org-016	<25	1	<25	<25	0	90	96
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	1	<25	<25	0	90	96
Benzene	mg/kg	0.2	Org-016	<0.2	1	<0.2	<0.2	0	82	85
Toluene	mg/kg	0.5	Org-016	<0.5	1	<0.5	<0.5	0	88	93
Ethylbenzene	mg/kg	1	Org-016	<1	1	<1	<1	0	94	102
m+p-xylene	mg/kg	2	Org-016	<2	1	<2	<2	0	93	101
o-Xylene	mg/kg	1	Org-016	<1	1	<1	<1	0	95	101
naphthalene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	93	1	91	92	1	96	98

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	204970-30
Date extracted	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			[NT]	14	08/11/2018	08/11/2018		08/11/2018	08/11/2018
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	14	<25	<25	0	93	89
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	14	<25	<25	0	93	89
Benzene	mg/kg	0.2	Org-016	[NT]	14	<0.2	<0.2	0	82	81
Toluene	mg/kg	0.5	Org-016	[NT]	14	<0.5	<0.5	0	86	83
Ethylbenzene	mg/kg	1	Org-016	[NT]	14	<1	<1	0	98	95
m+p-xylene	mg/kg	2	Org-016	[NT]	14	<2	<2	0	99	94
o-Xylene	mg/kg	1	Org-016	[NT]	14	<1	<1	0	99	94
naphthalene	mg/kg	1	Org-014	[NT]	14	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	14	98	95	3	96	91

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Date analysed	-			[NT]	29	08/11/2018	08/11/2018		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	29	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	29	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	29	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	29	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	29	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	29	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	29	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	29	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	29	93	95	2	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	204970-2
Date extracted	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			08/11/2018	1	07/11/2018	07/11/2018		07/11/2018	08/11/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	1	<50	<50	0	87	90
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	1	130	200	42	88	95
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	1	220	380	53	93	#
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	1	<50	67	29	87	90
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	1	280	470	51	88	95
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	1	190	300	45	93	#
Surrogate o-Terphenyl	%		Org-003	95	1	100	69	37	108	79

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	204970-30
Date extracted	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			[NT]	14	08/11/2018	08/11/2018		08/11/2018	08/11/2018
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	14	<50	50	0	116	105
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	14	240	300	22	122	109
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	14	430	510	17	111	111
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	14	<50	51	2	116	105
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	14	570	690	19	122	109
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	14	250	330	28	111	111
Surrogate o-Terphenyl	%		Org-003	[NT]	14	90	86	5	101	74

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	204970-2
Date extracted	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			08/11/2018	1	08/11/2018	08/11/2018		08/11/2018	08/11/2018
Naphthalene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	101	103
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	101	103
Phenanthrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	108	110
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	<0.1	<0.1	0	97	100
Pyrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	87	90
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	104	105
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	104	108
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	96	1	72	67	7	91	90

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	204970-30
Date extracted	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			[NT]	14	08/11/2018	08/11/2018		08/11/2018	08/11/2018
Naphthalene	mg/kg	0.1	Org-012	[NT]	14	<0.1	<0.1	0	103	104
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	14	0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	14	0.1	<0.1	0	100	102
Phenanthrene	mg/kg	0.1	Org-012	[NT]	14	1.4	0.9	43	110	111
Anthracene	mg/kg	0.1	Org-012	[NT]	14	0.3	0.2	40	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	14	1.7	1.3	27	97	100
Pyrene	mg/kg	0.1	Org-012	[NT]	14	1.4	1.1	24	88	90
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	14	0.6	0.5	18	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	14	0.7	0.5	33	107	108
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	14	1	0.8	22	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	14	0.70	0.52	30	117	117
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	14	0.3	0.2	40	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	14	0.3	0.2	40	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	14	82	85	4	92	90

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Date analysed	-			[NT]	29	08/11/2018	08/11/2018		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	29	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	29	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	29	70	70	0	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	204970-2
Date extracted	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
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	88	88
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	96	93
Heptachlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	87	90
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	89	89
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	91	90
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	98	96
Dieldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	94	92
Endrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	94	100
pp-DDD	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	83	81
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	90	92
Methoxychlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	99	1	75	80	6	100	102

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	204970-30
Date extracted	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
HCB	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	89	93
gamma-BHC	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	93	97
Heptachlor	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	77	86
delta-BHC	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	90	93
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	90	95
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	96	105
Dieldrin	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	93	97
Endrin	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	90	99
pp-DDD	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	79	116
Endosulfan II	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	86	83
Methoxychlor	mg/kg	0.1	Org-005	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	14	86	105	20	103	104

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Date analysed	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	29	89	76	16	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	204970-2
Date extracted	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
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	100	93
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	104	106
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	104	109
Fenitrothion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	103	99
Malathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	78	81
Parathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	118	110
Ronnel	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	103	102
Surrogate TCMX	%		Org-008	99	1	75	80	6	78	76

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	204970-30
Date extracted	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	98	95
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	103	85
Dimethoate	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	14	<0.2	<0.2	0	109	103
Fenitrothion	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	102	96
Malathion	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	79	71
Parathion	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	103	99
Ronnel	mg/kg	0.1	Org-008	[NT]	14	<0.1	<0.1	0	102	101
Surrogate TCMX	%		Org-008	[NT]	14	86	105	20	73	70

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Date analysed	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	29	89	76	16	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	204970-2
Date extracted	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
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	101
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	99	1	75	80	6	78	76

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	204970-30
Date extracted	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	14	<0.1	<0.1	0	100	105
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	14	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	14	86	105	20	73	70

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	27	07/11/2018	07/11/2018		[NT]	[NT]
Date analysed	-			[NT]	27	07/11/2018	07/11/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	27	0.6	0.3	67	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	27	82	102	22	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Date analysed	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	29	89	76	16	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	204970-2
Date prepared	-			07/11/2018	1	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			08/11/2018	1	08/11/2018	08/11/2018		08/11/2018	08/11/2018
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	105	81
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	98	78
Chromium	mg/kg	1	Metals-020	<1	1	9	10	11	100	86
Copper	mg/kg	1	Metals-020	<1	1	7	7	0	109	117
Lead	mg/kg	1	Metals-020	<1	1	30	31	3	102	84
Mercury	mg/kg	0.1	Metals-021	<0.1	1	0.2	0.2	0	108	111
Nickel	mg/kg	1	Metals-020	<1	1	2	2	0	99	85
Zinc	mg/kg	1	Metals-020	<1	1	16	17	6	95	63

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	204970-30
Date prepared	-			[NT]	14	07/11/2018	07/11/2018		07/11/2018	07/11/2018
Date analysed	-			[NT]	14	08/11/2018	08/11/2018		08/11/2018	08/11/2018
Arsenic	mg/kg	4	Metals-020	[NT]	14	4	6	40	104	81
Cadmium	mg/kg	0.4	Metals-020	[NT]	14	<0.4	<0.4	0	98	76
Chromium	mg/kg	1	Metals-020	[NT]	14	7	10	35	101	92
Copper	mg/kg	1	Metals-020	[NT]	14	5	6	18	109	110
Lead	mg/kg	1	Metals-020	[NT]	14	23	27	16	103	78
Mercury	mg/kg	0.1	Metals-021	[NT]	14	<0.1	<0.1	0	101	117
Nickel	mg/kg	1	Metals-020	[NT]	14	2	2	0	99	73
Zinc	mg/kg	1	Metals-020	[NT]	14	25	29	15	97	71

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	29	07/11/2018	07/11/2018		[NT]	[NT]
Date analysed	-			[NT]	29	08/11/2018	08/11/2018		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	29	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	29	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	29	22	26	17	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	29	110	150	31	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	29	4	4	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	29	0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	29	25	25	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	29	31	30	3	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			08/11/2018	1	08/11/2018	08/11/2018		08/11/2018	[NT]
Date analysed	-			08/11/2018	1	08/11/2018	08/11/2018		08/11/2018	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	1	5.2	5.2	0	97	[NT]

QUALITY CONTROL: CEC					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
Date analysed	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Exchangeable K	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	109	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Exchangeable Na	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: BTEX in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			07/11/2018	[NT]	[NT]	[NT]	[NT]	07/11/2018	[NT]
Date analysed	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	99	[NT]
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate Dibromofluoromethane	%		Org-016	92	[NT]	[NT]	[NT]	[NT]	95	[NT]
Surrogate toluene-d8	%		Org-016	99	[NT]	[NT]	[NT]	[NT]	110	[NT]
Surrogate 4-BFB	%		Org-016	109	[NT]	[NT]	[NT]	[NT]	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: >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

Asbestos: Excessive sample volume was provided for asbestos analysis. A portion of the supplied sample was sub-sampled according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.
Note: Samples 204970-2, 4, 5, 7, 9, 10, 11, 12, 14, 15, 19, 20, 22, 29 were sub-sampled from bags provided by the client.

OP's in Soil - PQL has been raised due to interference from analytes(other than those being tested) in the sample14 and 14d.

TRH Soil C10-C40 NEPM - # Percent recovery is not possible to report as the high concentration of analytes in sample 2 has caused interference.

Acid Extractable Metals in Soil - Spike recovery for Zn in sample #2 at 63% which is outside lab acceptance criteria (70-130%), however, the LCS recovery is acceptable at 95%, sample heterogeneity suspected

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E30259KD	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: Mitch Delaney
Attention: Aileen	Page: 1/2	

Location: Lindfield

Sampler: MD

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	pH, CEC, Clay Content	PCB's
	5/11/18	1	TP111	0-0.2	G, A	0	F				X						X	
G	6/11/18	2	BH119	0-0.2		1.5	F				X							
	↓	3	BH118	0.3-0.5		0	N											
		4	BH119	0.15-0.35		0.4	F				X							
		5	BH119	0.6-0.8		0	F		X									
		6	BH119	1.3-1.5			N	X										
		7	BH120	0.1-0.3			F				X			7				
	↓	8	BH120	0.5-0.7			N											
	5/11/18	9	TP127	0-0.2			F				X						X	
	↓	10	TP127	0.3-0.4			F		X									
	↓	11	TP131	0-0.15			F				X							
F	6/11/18	12	BH134	0.1-0.3		↓	F				X						X	
	↓	13	BH134	0.5-0.7			N											
D	5/11/18	14	TP135	0-0.15		1.0	F				X							
	6/11/18	15	BH138	0.05-0.1		0	F				X							
	↓	16	BH138	0.2-0.3			N			X								
		17	BH143	0.2-0.4			F				X						X	
	↓	18	BH143	0.5-0.8			N	X										
	5/11/18	19	TP144	0-0.2		↓	F				X							
A	5/11/18	20	BH145	0.1-0.2		1.2	F				X							
	↓	21	BH145	0.3-0.6		0	N			X								
	6/11/18	22	BH147	0.1-0.4			N				X							
	↓	23	BH147	0.5-0.65			N			X								
E	5/11/18	24	TP151	0-0.5	↓	↓	F											X
	↓	25	TP152	0-0.2			F											X

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

ENVIROLAB

Job No: 204970

Date Received: 6-11-18

Time Received: 16:20

Received By: TO

Temp: Cool/Ambient 11.0°C

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:	Date:	Time:	Received By:	Date:
MD	6/11/18		Tanya Delaney	06.11.18

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E30259KD	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: ~~STANDARD~~ ESDAT	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 2/2	Attention: Mitch Delaney
Attention: Aileen		

Location:	Lindfield	Sample Preserved in Esky on Ice
Sampler:	MD	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	PCB's		
5/11/18	26	TP53	0-0.1	G, A	0	F										X		
↓	27	TP53	0.1-0.2	↓	↓	N										X		
↓	28	TP54	0-0.15	↓	↓	F										X		
2/11/18	29	BH39	0-2-0.35	↓	↓	F				X								
2-6/11/18	30	QC1	–	G	5.4	Soil			X									
↓	31	QC2	–	↓	0	↓												
↓	↓	QC3	–	↓	↓	↓			X	Please Send to Envirolab-VIC.								
↓	32	QC4	–	↓	↓	↓			X							X		
↓	33	QC5	–	↓	↓	↓												
↓	↓	QC6	–	↓	1.3	↓			X	Please Send to Envirolab-VIC.								
6/11/18	34	TS/R2	–	Bleve	–	Soil								X				
5/11/18	35	FR2	–	"	–	Water								X				
6/11/18	36	TS/R2	–	G	–	Soil								X				
6/11/18	37	FR3	–	Bleve	–	Water								X				

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:
MD	6/11/18			

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

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KD, Linfield
Envirolab Reference	204970
Date Sample Received	06/11/2018
Date Instructions Received	06/11/2018
Date Results Expected to be Reported	08/11/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	35 Soil, 2 Water
Turnaround Time Requested	2 days
Temperature on Receipt (°C)	19.0
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils	Misc Inorg - Soil	CEC	Clay 50-120g	BTEX in Water	On Hold
TP111-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH118-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓					
BH118-0.3-0.5													✓
BH119-0.15-0.35	✓	✓	✓	✓	✓	✓	✓	✓					
BH119-0.6-0.8	✓	✓	✓				✓	✓					
BH119-1.3-1.5	✓	✓	✓				✓						
BH120-0.1-0.3	✓	✓	✓	✓	✓	✓	✓	✓					
BH120-0.5-0.7													✓
TP127-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
TP127-0.3-0.4	✓	✓	✓				✓	✓					
TP131-0-0.15	✓	✓	✓	✓	✓	✓	✓	✓					
BH134-0.1-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH134-0.5-0.7													✓
TP135-0-0.15	✓	✓	✓	✓	✓	✓	✓	✓					
BH138-0.05-0.1	✓	✓	✓	✓	✓	✓	✓	✓					
BH138-0.2-0.3	✓	✓	✓	✓	✓	✓	✓						
BH143-0.2-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH143-0.5-0.8	✓	✓	✓				✓						
TP144-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓					
BH145-0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓					
BH145-0.3-0.6	✓	✓	✓	✓	✓	✓	✓						
BH147-0.1-0.4	✓	✓	✓	✓	✓	✓	✓	✓					
BH147-0.5-0.65	✓	✓	✓	✓	✓	✓	✓						
TP151-0.1-0.15						✓							
TP152-0-0.2						✓							
TP153-0-0.1						✓							
TP153-0.1-0.2						✓							
TP154-0-0.15						✓							
BH139-0.2-0.35	✓	✓	✓	✓	✓	✓	✓	✓					
DUP4	✓	✓	✓	✓	✓	✓	✓						
DUPMDC													✓
DUPMDE	✓	✓	✓	✓	✓	✓	✓						

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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	Misc Inorg - Soil	CEC	Clay 50-120g	BTEX in Water	On Hold
DUPMDF													✓
TSR2	✓												
FR2												✓	
TSR2	✓												
FR3												✓	

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.

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CERTIFICATE OF ANALYSIS 204970-A

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KD, Linfield**
Number of Samples	35 Soil, 2 Water
Date samples received	06/11/2018
Date completed instructions received	09/11/2018

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	12/11/2018
Date of Issue	12/11/2018

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Results Approved By
Jaimie Loa-Kum-Cheung, Senior Chemist

Authorised By

Jacinta Hurst, Laboratory Manager

Metals in TCLP USEPA1311					
Our Reference		204970-A-2	204970-A-15	204970-A-20	204970-A-32
Your Reference	UNITS	BH118	BH138	BH145	DUPMDE
Depth		0-0.2	0.05-0.1	0.1-0.2	-
Date Sampled		06/11/2018	06/11/2018	05/11/2018	02/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	12/11/2018	12/11/2018	12/11/2018	12/11/2018
Date analysed	-	12/11/2018	12/11/2018	12/11/2018	12/11/2018
pH of soil for fluid# determ.	pH units	9.5	9.7	9.6	6.8
pH of soil TCLP (after HCl)	pH units	1.7	1.8	1.9	1.7
Extraction fluid used	-	1	1	1	1
pH of final Leachate	pH units	5.2	5.3	5.1	4.9
Lead in TCLP	mg/L	[NA]	[NA]	[NA]	0.06
Nickel in TCLP	mg/L	0.04	0.08	0.04	[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. Please note that the mass used may be scaled down from the default based on sample mass available.
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	-			12/11/2018	15	12/11/2018	12/11/2018		12/11/2018	[NT]
Date analysed	-			12/11/2018	15	12/11/2018	12/11/2018		12/11/2018	[NT]
Lead in TCLP	mg/L	0.03	Metals-020 ICP-AES	<0.03	[NT]	[NT]	[NT]	[NT]	101	[NT]
Nickel in TCLP	mg/L	0.02	Metals-020 ICP-AES	<0.02	15	0.08	0.08	0	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.

Andrew Fitzsimons

From: Mitchell Delaney <MDelaney@jkgroup.net.au>
Sent: Friday, 9 November 2018 11:51 AM
To: Samplereceipt
Subject: Additional TCLP Analysis 204970 E3029KD - Fast TA

Hi Guys,

Could I please schedule some TCLPs with the result to be provided asap.

BH118 (0-0.2m) - Nickel - 2
BH138 (0.05-0.1m) - Nickel - 15
BH145 (0.1-0.2m) - Nickel - 20
DUPMDE - lead - 32

ELS: 204970-A
TAT: 1 day
Due: 12/11/18

Many thanks

Regards,

Mitchell Delaney
Senior Associate | Environmental Scientist

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SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KD, Linfield
Envirolab Reference	204970-A
Date Sample Received	06/11/2018
Date Instructions Received	09/11/2018
Date Results Expected to be Reported	12/11/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	35 Soil, 2 Water
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	19.0
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:

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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	Lead in TCLP	Nickel in TCLP	On Hold
TP111-0-0.2							✓
BH118-0-0.2	✓	✓	✓	✓		✓	
BH118-0.3-0.5							✓
BH119-0.15-0.35							✓
BH119-0.6-0.8							✓
BH119-1.3-1.5							✓
BH120-0.1-0.3							✓
BH120-0.5-0.7							✓
TP127-0-0.2							✓
TP127-0.3-0.4							✓
TP131-0-0.15							✓
BH134-0.1-0.3							✓
BH134-0.5-0.7							✓
TP135-0-0.15							✓
BH138-0.05-0.1	✓	✓	✓	✓		✓	
BH138-0.2-0.3							✓
BH143-0.2-0.4							✓
BH143-0.5-0.8							✓
TP144-0-0.2							✓
BH145-0.1-0.2	✓	✓	✓	✓		✓	
BH145-0.3-0.6							✓
BH147-0.1-0.4							✓
BH147-0.5-0.65							✓
TP151-0.1-0.15							✓
TP152-0-0.2							✓
TP153-0-0.1							✓
TP153-0.1-0.2							✓
TP154-0-0.15							✓
BH139-0.2-0.35							✓
DUP4							✓
DUPMDC							✓
DUPMDE	✓	✓	✓	✓	✓		

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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	Lead in TCLP	Nickel in TCLP	On Hold
DUPMDF							✓
TSR2							✓
FR2							✓
TBR2							✓
FR3							✓

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.

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CERTIFICATE OF ANALYSIS 15316

Client Details

Client	Environmental Investigation Services
Attention	Mitch Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KD - Lindfield**
Number of Samples	2 Soil
Date samples received	08/11/2018
Date completed instructions received	08/11/2018

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	12/11/2018
Date of Issue	12/11/2018

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Results Approved By
Chris De Luca, Senior Chemist

Authorised By

Pamela Adams, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		15316-1	15316-2
Your Reference	UNITS	DUPMDD	DUPMDG
Type of sample		Soil	Soil
Date extracted	-	08/11/2018	08/11/2018
Date analysed	-	09/11/2018	09/11/2018
vTRH C_6 - C_9	mg/kg	<25	<25
vTRH C_6 - C_{10}	mg/kg	<25	<25
TRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
Naphthalene	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<1	<1
Surrogate aaa-Trifluorotoluene	%	94	91

TRH Soil C10-C40 NEPM			
Our Reference	UNITS	15316-1	15316-2
Your Reference		DUPMDD	DUPMDG
Type of sample		Soil	Soil
Date extracted	-	08/11/2018	08/11/2018
Date analysed	-	10/11/2018	10/11/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50
TRH C_{15} - C_{28}	mg/kg	170	130
TRH C_{29} - C_{36}	mg/kg	340	260
Total +ve TRH (C10-C36)	mg/kg	510	390
TRH >C_{10} -C_{16}	mg/kg	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50
TRH >C_{16} -C_{34}	mg/kg	380	280
TRH >C_{34} -C_{40}	mg/kg	210	320
Total +ve TRH (>C10-C40)	mg/kg	590	600
Surrogate o-Terphenyl	%	86	81

PAHs in Soil			
Our Reference		15316-1	15316-2
Your Reference	UNITS	DUPMDD	DUPMDG
Type of sample		Soil	Soil
Date extracted	-	08/11/2018	08/11/2018
Date analysed	-	12/11/2018	12/11/2018
Naphthalene	mg/kg	<0.1	0.2
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.2	<0.1
Phenanthrene	mg/kg	0.8	0.1
Anthracene	mg/kg	0.2	<0.1
Fluoranthene	mg/kg	1.2	<0.1
Pyrene	mg/kg	1.0	0.1
Benzo(a)anthracene	mg/kg	0.4	<0.1
Chrysene	mg/kg	0.4	<0.1
Benzo(b,j&k)fluoranthene	mg/kg	0.7	<0.2
Benzo(a)pyrene	mg/kg	0.46	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.2	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	<0.1
Total +ve PAH's	mg/kg	5.5	0.4
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.6	0
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.6	0.1
Benzo(a)pyrene TEQ calc (PQL)	mg/kg	0.7	0.2
Surrogate p-Terphenyl-d_{14}	%	92	114

OCP in Soil			
Our Reference		15316-1	15316-2
Your Reference	UNITS	DUPMDD	DUPMDG
Type of sample		Soil	Soil
Date extracted	-	08/11/2018	08/11/2018
Date analysed	-	12/11/2018	12/11/2018
alpha-BHC	mg/kg	<0.1	<0.1
Hexachlorobenzene	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Total +ve reported DDT+DDD+DDE	mg/kg	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	92	114

OP in Soil			
Our Reference		15316-1	15316-2
Your Reference	UNITS	DUPMDD	DUPMDG
Type of sample		Soil	Soil
Date extracted	-	08/11/2018	08/11/2018
Date analysed	-	12/11/2018	12/11/2018
Azinphos-methyl	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1
Dichlorovos	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	92	114

PCBs in Soil			
Our Reference		15316-1	15316-2
Your Reference	UNITS	DUPMDD	DUPMDG
Type of sample		Soil	Soil
Date extracted	-	08/11/2018	08/11/2018
Date analysed	-	12/11/2018	12/11/2018
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	92	114

Acid Extractable metals in soil			
Our Reference	UNITS	15316-1	15316-2
Your Reference		DUPMDD	DUPMDG
Type of sample		Soil	Soil
Date digested	-	08/11/2018	08/11/2018
Date analysed	-	08/11/2018	08/11/2018
Arsenic	mg/kg	5	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	8	35
Copper	mg/kg	5	37
Lead	mg/kg	24	9
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	2	42
Zinc	mg/kg	27	33

Moisture			
Our Reference		15316-1	15316-2
Your Reference	UNITS	DUPMDD	DUPMDG
Type of sample		Soil	Soil
Date prepared	-	08/11/2018	08/11/2018
Date analysed	-	09/11/2018	09/11/2018
Moisture	%	5.7	4.8

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 12 hours.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Org-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. Note, For OCs the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-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-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.

Method ID	Methodology Summary
Org-012	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD or GC-MS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-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. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
Date analysed	-			09/11/2018	[NT]	[NT]	[NT]	[NT]	09/11/2018	[NT]
vTRH C_6 - C_9	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	92	[NT]
vTRH C_6 - C_{10}	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	92	[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]	95	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	90	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	90	[NT]
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	89	[NT]
Naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	95	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: TRH Soil C10-C40 NEPM						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
Date analysed	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	92	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	92	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
Surrogate o-Terphenyl	%		Org-003	85	[NT]	[NT]	[NT]	[NT]	84	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
Date analysed	-			10/11/2018	[NT]	[NT]	[NT]	[NT]	10/11/2018	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[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]	84	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	84	[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]	88	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[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]	96	[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]	92	[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-d_{14}	%		Org-012	90	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: OCP in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
Date analysed	-			10/11/2018	[NT]	[NT]	[NT]	[NT]	10/11/2018	[NT]
alpha-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Hexachlorobenzene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
gamma-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	76	[NT]
delta-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
gamma-Chlordane	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
alpha-chlordane	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Dieldrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Endrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Methoxychlor	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-012	90	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: OP in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
Date analysed	-			10/11/2018	[NT]	[NT]	[NT]	[NT]	10/11/2018	[NT]
Azinphos-methyl	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dichlorovos	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Fenitrothion	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Malathion	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-012	90	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
Date analysed	-			10/11/2018	[NT]	[NT]	[NT]	[NT]	10/11/2018	[NT]
Aroclor 1016	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Aroclor 1260	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-012	90	[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-1	[NT]
Date digested	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
Date analysed	-			08/11/2018	[NT]	[NT]	[NT]	[NT]	08/11/2018	[NT]
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	[NT]	[NT]	96	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	[NT]	[NT]	101	[NT]
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	97	[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.

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E30259KD	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~~ 24HR TAT	P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201		Attention: Mitch Delaney
Attention: Aileen	Page: 1/2	

Location: Lindfield
Sampler: MD

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	PH,cec, Clay cont	PCB's	
	5/11/18	1	TP111	0-0.2	G, A	0	FILL				X						X		
G	6/11/18	2	BH118	0-0.2		1.5	F				X								
	↓	3	BH118	0.3-0.5		0	N												
		4	BH119	0.15-0.35		0.4	F				X								
		5	BH119	0.60.8		0	F		X										
		6	BH119	1.3-1.5			N	X											
		7	BH120	0.1-0.3			F				X								
	↓	8	BH120	0.5-0.7			N												
	5/11/18	9	TP127	0-0.2			F				X						X		
		10	TP127	0.3-0.4			F		X										
	↓	11	TP131	0-0.15			F				X								
F	6/11/18	12	BH134	0.1-0.3			F				X							X	
	↓	13	BH134	0.5-0.7		↓	N												
D	5/11/18	14	TP135	0-0.15		1.0	F				X								
	6/11/18	15	BH138	0.05-0.1		0	F				X								
	↓	16	BH138	0.2-0.3		↓	N			X									
		17	BH143	0.2-0.4			F				X						X		
	↓	18	BH143	0.5-0.8		↓	N	X											
	5/11/18	19	TP144	0-0.2		↓	F				X								
A	5/11/18	20	BH145	0.1-0.2		1.2	F				X								
	↓	21	BH145	0.3-0.6		0	N			X									
	6/11/18	22	BH147	0.1-0.4		↓	N				X								
	↓	23	BH147	0.5-0.65			N			X									
E	5/11/18	24	TP151	0-0.05			F											X	
	↓	25	TP152	0-0.2	↓	↓	F											X	

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200
Job No: 204970
Date Received: 06-11-18
Time Received: 16:20
Received By: TD
Temp: Cool/Ambient 11°C
Cooling: Ice/Icepack
Security: Intact/Broken/None

Envirolab Services
25 Research Drive
Croydon South VIC 3136
Ph: (03) 9763 2500
Job No: 153116
Date Received: 06/11
Time Received: 12:00
Received By: SL
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:	Date:	Time:	Received By:	Date:
MD	6/11/18		Tanya Doherty	06.11.18

Relinquished: Tanya Doherty ELS 07.11.18 11:55

Sophie ELS 8/11

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: E30259KD

Date Results Required: ~~STANDARD~~ 48H TA

Page: 2/2

FROM:
ENVIRONMENTAL INVESTIGATION SERVICES
REAR OF 115 WICKS ROAD
MACQUARIE PARK, NSW 2113
P: 02-9888 5000 F: 02-9888 5001
Attention: Mitch Delaney

Location: Lindfield
Sampler: MD

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	PCB's		
5/11/18	26	TP53	0-0.1	G, A	0	F										X		
↓	27	TP53	0.1-0.2	↓	↓	N										X		
↓	28	TP54	0-0.15	↓	↓	F										X		
2/11/18	29	BH39	0-2-2.35	↓	↓	F			X	X								
2-6/11/18	30	DUP4	–	G	5.4	Soil			X									
↓	31	DUPMDC	–	↓	0	↓												
1	\	DUPMDO	–	↓	↓	↓			X	Please send DUPMDO to Envirolab VIC.								
↓	32	DUPMDE	–	↓	↓	↓			X							X		
↓	33	DUPMDF	–	↓	↓	↓												
↓ 2	\	DUPMDG	–	↓	1.3	↓			X	Please send DUPMDG to Envirolab VIC.								
6/11/18	34	TSR2	–	Bleg	–	Soil								X				
5/11/18	35	FR2	–	"	–	Water								X				
6/11/18	36	TSR2	–	G	–	Soil								X				
6/11/18	37	FR3	–	Bleg	–	Water								X				

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:
MD	6/11/18		Sophie ELS	8/11

Relinquished: Tanya Doherty ELS
07.11.18 11:55

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitch Delaney

Sample Login Details

Your reference	E30259KD - Lindfield
Envirolab Reference	15316
Date Sample Received	08/11/2018
Date Instructions Received	08/11/2018
Date Results Expected to be Reported	12/11/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	2 Soil
Turnaround Time Requested	48hr
Temperature on Receipt (°C)	13.8
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Pamela Adams	Analisa Mathrick
Phone: 03 9763 2500	**Phone: 03 9763 2500**
Fax: 03 9763 2633	**Fax: 03 9763 2633**
Email: padams@envirolab.com.au	**Email: amathrick@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	OCP in Soil	OP in Soil	PCBsin Soil	Acid Extractable metalsin soil
DUPMDD	✓	✓	✓	✓	✓	✓	✓
DUPMDG	✓	✓	✓	✓	✓	✓	✓

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.

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

CERTIFICATE OF ANALYSIS 204813

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KD, Lindfield**
Number of Samples	4 Soil
Date samples received	05/11/2018
Date completed instructions received	05/11/2018

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	06/11/2018
Date of Issue	06/11/2018

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

Results Approved By
Long Pham, Team Leader, Metals
Phalak Inthakesone, Organics Development Manager, Sydney

Authorised By

Jacinta Hurst, Laboratory Manager

PFAS in Soils Extended					
Our Reference		204813-1	204813-2	204813-3	204813-4
Your Reference	UNITS	SS1	SS2	SS3	DUPMDA
Date Sampled		05/11/2018	05/11/2018	05/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Date analysed	-	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	0.6	0.5	0.3	0.3
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1
10:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorooctane sulfonamide	µg/kg	<1	<1	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1	<1	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1	<1	<1	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1	<1	<1	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5	<5	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	104	101	110	112
Surrogate $^{13}C_2$ *PFOA*	%	102	93	96	96
Extracted ISTD $^{13}C_3$ *PFBS*	%	90	80	88	90
Extracted ISTD $^{18}O_2$ *PFHxS*	%	88	75	84	89
Extracted ISTD $^{13}C_4$ *PFOS*	%	82	73	74	79
Extracted ISTD $^{13}C_4$ *PFBA*	%	90	82	87	89
Extracted ISTD $^{13}C_3$ *PFPeA*	%	88	79	83	84

PFAS in Soils Extended					
Our Reference		204813-1	204813-2	204813-3	204813-4
Your Reference	UNITS	SS1	SS2	SS3	DUPMDA
Date Sampled		05/11/2018	05/11/2018	05/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_2$ *PFHxA*	%	94	80	90	91
Extracted ISTD $^{13}C_4$ *PFHpA*	%	92	73	86	87
Extracted ISTD $^{13}C_4$ *PFOA*	%	98	65	90	89
Extracted ISTD $^{13}C_5$ *PFNA*	%	102	61	82	86
Extracted ISTD $^{13}C_2$ *PFDA*	%	73	41	53	51
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	84	40	56	61
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	97	43	54	72
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	96	37	67	77
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	157	#	#	#
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	#	#	#	#
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	#	155	#	#
Extracted ISTD $^{13}C_8$ *FOSA*	%	77	40	51	60
Extracted ISTD d_3 *N MeFOSA*	%	83	42	61	69
Extracted ISTD d_5 *N EtFOSA*	%	75	39	56	63
Extracted ISTD d_7 *N MeFOSE*	%	94	48	76	87
Extracted ISTD d_9 *N EtFOSE*	%	108	77	97	103
Extracted ISTD d_3 *N MeFOSAA*	%	78	53	55	74
Extracted ISTD d_5 *N EtFOSAA*	%	148	49	84	107
Total Positive PFHxS & PFOS	µg/kg	0.6	0.5	0.3	0.3
Total Positive PFOS & PFOA	µg/kg	0.6	0.5	0.3	0.3
Total Positive PFAS	µg/kg	0.6	0.5	0.3	0.3

Moisture					
Our Reference		204813-1	204813-2	204813-3	204813-4
Your Reference	UNITS	SS1	SS2	SS3	DUPMDA
Date Sampled		05/11/2018	05/11/2018	05/11/2018	05/11/2018
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	05/11/2018	05/11/2018	05/11/2018	05/11/2018
Date analysed	-	06/11/2018	06/11/2018	06/11/2018	06/11/2018
Moisture	%	6.8	8.4	7.1	6.1

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Org-035	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.1 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			06/11/2018	[NT]	[NT]	[NT]	[NT]	06/11/2018	[NT]
Date analysed	-			06/11/2018	[NT]	[NT]	[NT]	[NT]	06/11/2018	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-035	<0.2	[NT]	[NT]	[NT]	[NT]	112	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-035	<0.2	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-035	<0.2	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-035	<0.5	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-035	<0.5	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-035	<0.5	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-035	<0.5	[NT]	[NT]	[NT]	[NT]	127	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-035	<5	[NT]	[NT]	[NT]	[NT]	108	[NT]
4:2 FTS	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	115	[NT]
6:2 FTS	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
8:2 FTS	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	113	[NT]
10:2 FTS	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-035	<1	[NT]	[NT]	[NT]	[NT]	92	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-035	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-035	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-035	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-035	<5	[NT]	[NT]	[NT]	[NT]	99	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-035	<0.2	[NT]	[NT]	[NT]	[NT]	105	[NT]
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-035	<0.2	[NT]	[NT]	[NT]	[NT]	103	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-035	97	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-035	94	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-035	101	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: PFAS in Soils Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-035	99	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-035	99	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-035	102	[NT]	[NT]	[NT]	[NT]	94	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-035	101	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-035	99	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-035	104	[NT]	[NT]	[NT]	[NT]	94	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-035	105	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-035	109	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-035	104	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-035	93	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-035	93	[NT]	[NT]	[NT]	[NT]	94	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-035	131	[NT]	[NT]	[NT]	[NT]	127	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-035	109	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-035	127	[NT]	[NT]	[NT]	[NT]	115	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-035	129	[NT]	[NT]	[NT]	[NT]	124	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-035	99	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-035	101	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-035	110	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-035	125	[NT]	[NT]	[NT]	[NT]	117	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-035	151	[NT]	[NT]	[NT]	[NT]	132	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-035	112	[NT]	[NT]	[NT]	[NT]	103	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-035	119	[NT]	[NT]	[NT]	[NT]	112	[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

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

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: E30259KD Date Results Required: 24H TA Page: 1 of 1	ENVIRONMENTAL INVESTIGATION SERVICES REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitch Delaney

Location:	Lindfield	Sample Preserved in Esky on Ice
Sampler:	MD	Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	PFAS
5/11/2018	1	SS1	NA	P	0	Fill	X
5/11/2018	2	SS2	NA	P	0	Fill	X
5/11/2018	3	SS3	NA	P	0	Fill	X
5/11/2018	4	DUPMDA	NA	P	0	Fill	X
5/11/2018	—	DUPMDB	NA	P	0	Fill	X

Please Split DUPMDB to ALS.

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

Job No: 204813

Date Received: 05.11.18
Time Received: 15:30
Received By: KO
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Remarks (comments/detection limits required):
PFAS - Routine level (extended)

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By: MD	Date: 5-11-18	Time:	Received By: ELS	Date: 05.11.18 15:30

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

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KD, Lindfield
Envirolab Reference	204813
Date Sample Received	05/11/2018
Date Instructions Received	05/11/2018
Date Results Expected to be Reported	06/11/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	4 Soil
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	18.6
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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

Sample ID	PFAS in Soils Extended
SS1	✓
SS2	✓
SS3	✓
DUPMDA	✓

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.

Appendix E: Statistical Calculations

UCL Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	ProUCL 5.126/11/2018 8:53:18 AM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Lead

General Statistics

Total Number of Observations	68	Number of Distinct Observations	42
		Number of Missing Observations	0
Minimum	2	Mean	53.44
Maximum	1800	Median	20.5
SD	216.5	Std. Error of Mean	26.25
Coefficient of Variation	4.05	Skewness	8.074

Normal GOF Test

Shapiro Wilk Test Statistic	0.195	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.406	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.107	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	97.22	95% Adjusted-CLT UCL (Chen-1995)	124.1
		95% Modified-t UCL (Johnson-1978)	101.5

Gamma GOF Test

A-D Test Statistic	6.197	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.804	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.242	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.113	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

39											
40					**Gamma Statistics**						
41					k hat (MLE)	0.627			k star (bias corrected MLE)		0.609
42					Theta hat (MLE)	85.22			Theta star (bias corrected MLE)		87.72
43					nu hat (MLE)	85.28			nu star (bias corrected)		82.85
44					MLE Mean (bias corrected)	53.44			MLE Sd (bias corrected)		68.47
45									Approximate Chi Square Value (0.05)		62.88
46					Adjusted Level of Significance	0.0465			Adjusted Chi Square Value		62.5
47											
48					**Assuming Gamma Distribution**						
49				95% Approximate Gamma UCL (use when n>=50))		70.42			95% Adjusted Gamma UCL (use when n<50)		70.84
50											
51					**Lognormal GOF Test**						
52					Shapiro Wilk Test Statistic	0.95			**Shapiro Wilk Lognormal GOF Test**		
53					5% Shapiro Wilk P Value	0.0189			Data Not Lognormal at 5% Significance Level		
54					Lilliefors Test Statistic	0.0848			**Lilliefors Lognormal GOF Test**		
55					5% Lilliefors Critical Value	0.107			Data appear Lognormal at 5% Significance Level		
56					**Data appear Approximate Lognormal at 5% Significance Level**						
57											
58					**Lognormal Statistics**						
59					Minimum of Logged Data	0.693			Mean of logged Data		3
60					Maximum of Logged Data	7.496			SD of logged Data		1.061
61											
62					**Assuming Lognormal Distribution**						
63					95% H-UCL	47.25			90% Chebyshev (MVUE) UCL		51.06
64					95% Chebyshev (MVUE) UCL	58.42			97.5% Chebyshev (MVUE) UCL		68.63
65					99% Chebyshev (MVUE) UCL	88.68					
66											
67					**Nonparametric Distribution Free UCL Statistics**						
68					**Data appear to follow a Discernible Distribution at 5% Significance Level**						
69											
70					**Nonparametric Distribution Free UCLs**						
71					95% CLT UCL	96.62			95% Jackknife UCL		97.22
72					95% Standard Bootstrap UCL	96.25			95% Bootstrap-t UCL		357.9
73					95% Hall's Bootstrap UCL	262.1			95% Percentile Bootstrap UCL		104.7
74					95% BCA Bootstrap UCL	137.1					
75					90% Chebyshev(Mean, Sd) UCL	132.2			95% Chebyshev(Mean, Sd) UCL		167.9
76					97.5% Chebyshev(Mean, Sd) UCL	217.4			99% Chebyshev(Mean, Sd) UCL		314.6
77											
78					**Suggested UCL to Use**						
79					95% H-UCL	47.25					
80											

ENVIRONMENTAL INVESTIGATION SERVICES

15 January 2019
Report Ref: E30259KDlet2-WC-Addendum

Department of Education
C/- Savills (Australia) Pty Ltd
Level 25, Governor Phillip Tower
1 Farrer Place
SYDNEY NSW 2000

Attention: Mr Chris Laity

WASTE CLASSIFICATION ASSESSMENT - ADDENDUM
PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT
100 ETON ROAD, LINDFIELD, NSW, 2070

1 INTRODUCTION

In 2018, Savills (Australia) Pty Ltd on behalf of the Department of Education ('the client') commissioned Environmental Investigation Services (EIS)[1] to assign a waste classification in accordance with the NSW EPA Waste Classification Guidelines - Part 1: Classifying Waste (2014)[2] to the in-situ soil located at 100 Eton Road, Lindfield, NSW, 2070 ('the site'). The results were presented by EIS in a Waste Classification Assessment report (Ref: E30259KDlet2-WC, dated 26 November 2018). The site location is shown on Figure 1 and sampling for the assessment was confined to the in-situ soil in the investigation area / as shown on Figure 2 attached in the appendices.

This letter is an Addendum to the above Waste Classification Assessment report and has been prepared due to an unexpected find of asbestos containing material (ACM) during current landscaping works in the north-east section of the site. ACM was not previously encountered in this section of the site and therefore the fill material was classified by EIS as General Soil Waste (non-putrescible) in accordance with the Waste Classification Guidelines 2014.

1.1 Proposed Development Details

The proposed development includes refurbishment of the existing site and buildings for use as a primary and high school. Minor excavation works are required mostly for services. Landscaping works are proposed.

[1] Environmental consulting division of Jeffery & Katauskas Pty Ltd (J&K)
[2] NSW EPA, (2014). *Waste Classification Guidelines, Part 1: Classifying Waste.* (referred to as Waste Classification Guidelines 2014)

Postal Address: PO Box 976, North Ryde BC NSW 1670
Tel: 02 9888 5000 ● Fax: 9888 5004
EIS is a division of Jeffery and Katauskas Pty Ltd ● ABN 17 003 550 801

2 SITE INFORMATION

2.1 Site Identification and Description

Table 2-1: Site Identification

Site Address:	100 Eton Road, Lindfield, NSW
Lot & Deposited Plan:	Lot 2 and Lot 4 DP1151638
Land Use:	Construction site - Proposed primary and high school
Approximate Area Applicable to Waste Classification Addendum (m^2):	Approximately 9 (3m x3m)
Approximate Volume of Applicable to Waste Classification Addendum (m^3):	Approximately 5
Geographical Location (approx.):	Latitude: -33.7899690 Longitude: 151.1606190

The site is located on the crest of a hill, which in the vicinity of the site generally slopes downwards towards the south-west, south and south-east.

A walkover inspection of the site was undertaken by EIS on 14 January 2019. The inspection was limited to the north section of the site.

At the time of the inspection, the internal refurbishment works were well underway, excavations associated with service trenching had commenced and mostly been completed and landscaping works were being undertaken in the north section of the site. Approximately five fibre cement fragments (FCF) were observed on the surface in the north-east section of the site. The FCF appeared to be partially buried within the fill material. The approximate location of the FCF are shown in Figure 2 attached in the appendices. Photographs obtained during the site inspection are attached in the appendices.

3 SUMMARY OF ACM SAMPLING AND LABORATORY RESULTS

Two representative FCF (HWF1 and HWF2) were obtained from the surface in the north-east section of the site. The FCF sampling locations are shown on Figure 2 attached in the appendices.

The FCF samples were placed in zip-lock plastic bags. Sampling personnel used disposable nitrile gloves during sampling activities. The samples were labelled with the job number, sampling location and date.

The samples were analysed by Envirolab Services (NATA Accreditation Number – 2901) using the analytical methods detailed in the National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013[3]). Reference should be made to the laboratory report (Ref: 209410) attached in the appendices for further information.

The laboratory results indicated that the FCF HWF1 and HWF2 contained chrysotile asbestos.

4 CONCLUSIONS

Based on the results of the investigation, and at the time of reporting, the fill material has been classified into the following waste streams as outlined in the table below.

Table 4-1: Waste Classification

Material	Classification	Comments
Fill material in the north-east area of the site and identified as Area D (see Figure 2)	**General Solid Waste (non-putrescible) containing Special Waste asbestos**	EIS completed a RAP for the proposed development in 2018 (Report Ref: E30259KMrpt3_RAP, dated 16 August 2018[4]). An Addendum Letter to the EIS RAP 2018 (Ref: E30259KMrpt3_RAP_Addendum, dated 21 November 2018)[5] was subsequently issued. The detection of Asbestos (associated with a FCF) in the north-east section of the site is considered to be an unexpected find under Section 10 of the EIS RAP 2018. The asbestos impacted area (Area D) will subsequently be remediated in accordance with the above reports by via excavation and validation, with the fill material excavated from Area D to be disposed as General Solid Waste (non-putrescible) containing Special Waste (asbestos) to a suitably licensed NSW EPA Landfill. In NSW, the transport of Asbestos Waste weighing more than 100 kilograms, must be tracked and reported to the NSW EPA using the WasteLocate system.

Fill to be disposed of off-site must be transported of to a landfill that is licensed by the NSW EPA to receive the waste stream. The landfill should be contacted to obtain the required approvals prior to commencement of excavation.

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

[4] EIS, (2017b). *Report to Designinc Sydney Pty Ltd on Remediation Action Plan for Proposed Lindfield Learning Village Development at Eton Road, Lindfield, NSW.* (referred to as EIS RAP 2018).

[5] EIS (2018c) *Remediation Action Plan - Addendum for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt3_RAP_Addendum dated 21 November 2018) (referred to as EIS RAP Addendum 2018)

4.1 Recommendations

Any unexpected finds encountered during the site works should be inspected by a suitably qualified contaminated land consultant[6].

Following removal of the fill material, additional tests should be undertaken on the natural soil underlying the contaminated fill material in Area D in order to classify the material as VENM (if required).

4.2 General Information

The fill material must be disposed of to a facility licensed by the NSW EPA to accept the waste. It is the responsibility of the receiving facility to ensure that the material meets their EPA license conditions. EIS accepts no liability whatsoever for illegal or inappropriate disposal of material.

Material classed as VENM must not be mixed with any fill material (including building rubble) as this will invalidate the VENM classification. Where doubt exists about the difference between fill and VENM material an environmental/geotechnical engineer should be contacted for advice.

Section 143 of the POEO Act 1997 states that if waste is transported to a place that cannot lawfully be used as a waste facility for that waste, then the transporter and owner of the waste are each guilty of an offence. The transporter and owner of the waste have a duty to ensure that the waste is disposed of in an appropriate manner. EIS accepts no liability whatsoever for the unlawful disposal of any waste from any site.

5 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;
- 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;

[6] EIS recommend that the consultancy engaged for the work be a member of the Australian Contaminated Land Consultants Associated (ACLCA), and/or the individual undertaking the works be certified under one of the NSW EPA endorsed certified practitioner schemes

- 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;
- 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;
- Copyright in this report is the property of EIS. EIS has used a degree of care, skill and diligence normally exercised by consulting professionals in similar circumstances and locality. No other warranty expressed or implied is made or intended. Subject to payment of all fees due for the investigation, the client alone shall have a licence to use this report;
- If the client, or any person, provides a copy of this report to any third party, such third party must not rely on this report except with the express written consent of EIS; and
- Any third party who seeks to rely on this report without the express written consent of EIS does so entirely at their own risk and to the fullest extent permitted by law, EIS accepts no liability whatsoever, in respect of any loss or damage suffered by any such third party.

If you have any questions concerning the contents of this letter please do not hesitate to contact us.

Kind Regards

Mitchell Delaney
Senior Associate

Vittal Boggaram
Senior Principal

Appendices:

Appendix A: Report Figures

Appendix B: Laboratory Summary Tables

Appendix C: Site Photographs obtained 14-1-19

Appendix A: Report Figures

AERIAL IMAGE SOURCE: GOOGLE EARTH PRO 7.1.5.1557
AERIAL IMAGE ©: 2015 GOOGLE INC.

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

Title: **SITE LOCATION PLAN**

Location: 100 ETON ROAD
LINDFIELD, NSW

Report No: E30259KDlet2-WC-Addendum

Figure No: 1

ENVIRONMENTAL INVESTIGATION SERVICES

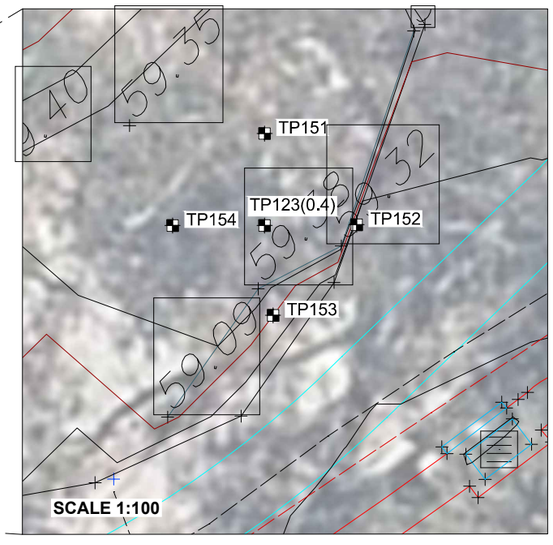
EIS

PLOT DATE: 19/11/2018 10:32:23 AM DWG FILE: S:\S EIS\SC EIS JOBS\30000'S\SE30259KM LINDFIELD\CADE30259KMRPT3_RAP_ADDENDUM.DWG

CHARLES BEAN SPORTS FIELD

TP150(0.2)
BH/MW156(1.1)
TP148(0.05)
TP149(0.1)
BH/MW157(0.4)
BH/MW115(0.3)
TP144(>0.2)
TP146(0.1)
BH147(>0.08)
BH/MW138(0.4)
TP142(0.1)
BH143(0.2)
TP141(0.3)
TP140(0.2)
SS1
AREA D -3m x 3m
(GSW-containing asbestos)
HWF1 and HWF2 sample
location
TP136(0.1)
TP137(0.1)
BH138(0.1)
TP135(>0.15)
TP111(0.2)
TP133(0.3)
TP132(0.8)
BH134(0.4)
TP131(>0.15)
TP130(1.4)
TP126(0.6)
TP128(>0.1)
TP129(0.95)
TP127(>0.4)
SS2
TP154(0.4)
TP125(0.15)
TP122(0.2)
BH118(0.2)
BH/MW155(0.4)
BH119(1.3)
TP121(0.2)
TP116(0.05)
TP117(0.2)
TP113(>1.0)
TP115(0.1)
SS3
TP110(>1.4)
TP112(0.2)
TP114(0.2)
TP109(0.1)
BH3(0.35)
BH1(0.3)
BH/MW2(0.5)
BH5(0.2)
BH/MW4(0.2)
TP104(0.15)
TP105(0.7)
TP106(0.8)
TP107(0.7)
TP108(>0.9)
TP101(0.2)
TP102(0.3)
TP103(0.4)

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM, 23 OCT 2018.



LEGEND

- APPROXIMATE SITE BOUNDARY
- BH/MW(Fill Depth) — BOREHOLE AND GROUND WATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
- BH (Fill Depth) — GROUND WATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
- TP(Fill Depth) — TEST PIT LOCATION, NUMBER AND DEPTH OF FILL (m)
- SS — SURFACE SOIL SAMPLE

0 12 24 36 48 60
SCALE 1:1200 @A3 METRES

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

Title: **SAMPLE LOCATION PLAN**

Location: 100 ETON ROAD
LINDFIELD, NSW

Report No: E30259KDlet2-WC-Addendum

Figure No: 2

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

PLOT DATE: 19/11/2018 11:11:10 AM DWG FILE: S:\5 EIS\5C EIS JOBS\30000'S\E30259KM LINDFIELD\CAD\E30259KMRPT3_RAP_ADDENDUM.DWG

Appendix B: Laboratory Report/s & COC Documents

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

CERTIFICATE OF ANALYSIS 209410

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E30259KD, Lindfield**
Number of Samples	2 Material
Date samples received	14/01/2019
Date completed instructions received	14/01/2019

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	14/01/2019
Date of Issue	14/01/2019

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

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

Asbestos Approved By
Analysed by Asbestos Approved Identifier: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu
Results Approved By
Lucy Zhu, Asbestos Analyst

Authorised By

Jacinta Hurst, Laboratory Manager

Asbestos ID - materials			
Our Reference		209410-1	209410-2
Your Reference	UNITS	HWF1	HWF2
Date Sampled		14/01/2019	14/01/2019
Type of sample		Material	Material
Date analysed	-	14/01/2019	14/01/2019
Mass / Dimension of Sample	-	135x80x5mm	40x30x5mm
Sample Description	-	Grey fibre cement material	Grey fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected	Chrysotile 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.

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

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

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E30259KD, Lindfield
Envirolab Reference	209410
Date Sample Received	14/01/2019
Date Instructions Received	14/01/2019
Date Results Expected to be Reported	14/01/2019

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	2 Material
Turnaround Time Requested	Same day
Temperature on Receipt (°C)	NA
Cooling Method	None
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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

Sample ID	Asbestos ID - materials
HWF1	✓
HWF2	✓

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

TO:		FROM:
ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E30259KD Date Results Required: ~~STANDARD~~ AS AD Page: 1 of 1	ENVIRONMENTAL INVESTIGATION SERVICES REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitch Delaney mdelaney@jkgeotechnics.com.au

Location:	Lindfield	Sample Preserved in Esky on Ice
Sampler:	HW	Tests Required

Date Sampled	Lab Ref:	Sample Number	Sample Container	Sample Description	Asbestos								
14.1.2019	1	HWF1	P	Material	X								
↓	2	HWF2	P	Material	X								

ENVIROLAB

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

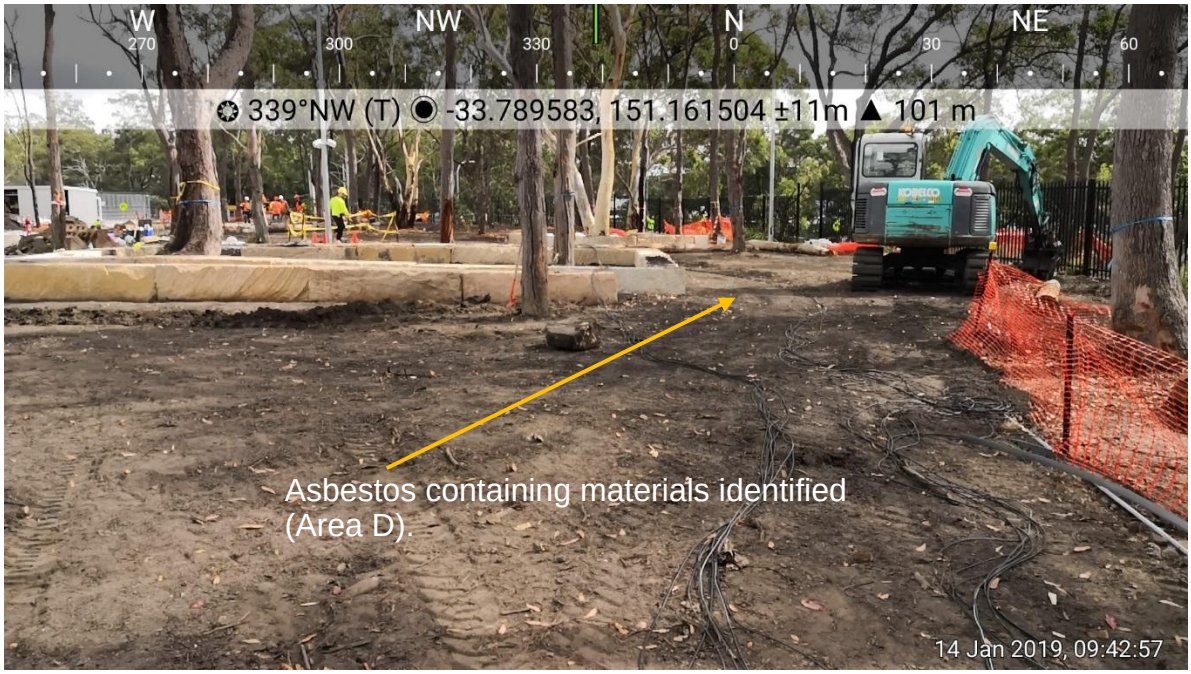
Job No: 209416

Date Received: 14-1-19
Time Received: 15:40
Received by: KG
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Remarks (comments/detection limits required):	Sample Containers:
PLEASE REPORT LEAD IN PAINT AS mg/kg	G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
MD	14/1/19	15:40	KG EJS	14-1-19

Appendix C: Site Photographs obtained 14-1-19


W
270
NW
300
330
N
0
30
NE
60
339°NW (T) -33.789583, 151.161504 ±11m 101 m
Asbestos containing materials identified
(Area D).
14 Jan 2019, 09:42:57


NW
330
N
0
30
NE
60
E
90
28°N (T) -33.789483, 151.161413 ±32m 118 m
14 Jan 2019, 11:04:13


N
NE
E
SE
330
0
30
60
90
120
50°NE (T) -33.789347, 151.161518 ±24m 113 m
14 Jan 2019, 11:04:40

Appendix I: Guidelines and Reference Documents

Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia (ANZG), (2018). 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)

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)

Protection of the Environment Operations Act 1997 (NSW)

State Environmental Planning Policy No.55 – Remediation of Land 1998 (NSW)