Report on Preliminary Site Investigation (Contamination)

> Cranbrook School Redevelopment Victoria Road, Bellevue Hill

> > Prepared for Cranbrook School

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Report on Preliminary Site Investigation (Contamination) Cranbrook School Redevelopment Victoria Road, Bellevue Hill

1. Introduction

This report presents the results of a Preliminary Site Investigation (Contamination) undertaken for the proposed Cranbrook School redevelopment at Victoria Road, Bellevue Hill. The work was commissioned by Cranbrook School.

It is understood that the proposed development includes the construction of an underground sporting facility (swimming pool, sports courts) and basement parking area beneath the oval in the northern portion of the site. This will involve a deep excavation followed by the replacement of the oval on a suspended structure. A separate performing arts and indoor sporting facility (the 'Centenary Building') is also proposed to the south-east of the oval which will involve the demolition of several existing buildings followed by a deep excavation into the embankment.

The Preliminary Site Investigation was undertaken to:

- assess the previous land uses to determine the potential for soil and groundwater contamination on the site;
- provide a preliminary assessment of the suitability of the site for the proposed development; and
- provide recommendations for additional investigation, if required.

The Preliminary Site Investigation has been prepared to address the requirements of *State Environmental Planning Policy No 55 – Remediation of Land*. The overall approach for the Preliminary Site Investigation included a review of available historical information, an inspection of the site by an engineer, and a review of limited soil sampling and laboratory analysis undertaken for the project in 2015 and 2017. Details of the investigation are given in this report, as well as comments on the issues outlined above. This report has not specifically been prepared for review by a Site Auditor.

Geotechnical investigations were also undertaken for the project and are reported separately.

2. Site Description

The Cranbrook School senior campus is located on the northern side of a hill that dips in a northerly direction towards Point Piper. The school is bounded by New South Head Road to the north and west, residential properties to the west, Victoria Road to the south and Rose Bay Avenue to the east. Surface levels vary from approximately RL 40 m AHD along the southern boundary to RL 15 m AHD near the northern boundary.



At the time of the investigation there were numerous buildings of varying age occupying the southern portion of the school and a large sporting oval in the northern portion. Numerous retaining structures create terrace areas down the slope and some significant embankments are also present on the site, particularly along the southern side of the oval. The location of the site is shown on Drawing C1 in Appendix B.

The school oval is located on Lots 9 to 18 in DP 9005. The area in which the Centenary Building is proposed is on Lot 1 DP 663630.

3. Regional Geology and Hydrogeology

The Sydney 1:100 000 Geological Series Sheet shows that the site is underlain by Hawkesbury Sandstone with some overlying quaternary-aged marine sands with podsols. An extract of the geological map is shown in Figure 1.

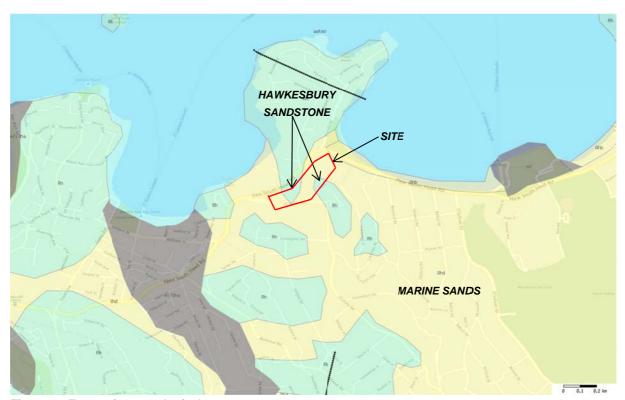


Figure 1: Extract from geological map

The topography of the site suggests that groundwater is likely to flow through the sands and along the bedrock surface towards Sydney Harbour.



4. Scope of Works

The scope of the Preliminary Site Investigation was as follows:

- Review various historical documents including aerial photographs, the EPA Contaminated Land register and groundwater bore licences to determine the nature of previous activities that may have occurred on the site;
- Undertake a site inspection to determine any obvious contamination risks;
- Review the results of previous sampling and laboratory analysis for a range of potential contaminants including:
 - Total recoverable hydrocarbons (TRH)
 - Benzene, Toluene, Ethylbenzene, Xylene (BTEX)
 - Polycyclic aromatic hydrocarbons (PAH)
 - Organochlorine pesticides and organophosphorus pesticides (OCP & OPP)
 - Polychlorinated biphenyls (PCB)
 - Phenol
 - Heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni and Zn)
 - Asbestos
- Provide a Preliminary Site Investigation report which comments on the historical uses of the site, the contaminant status of the samples tested, the potential for soil and groundwater contamination to be present, and provides recommendations for follow up action (if required).

5. Site History

5.1 Historical Land Uses

The site has been occupied by Cranbrook School since 1918. The site use for the previous 100 years has therefore been educational. Prior to this time it was a private residence.

5.2 Aerial Photographs

Aerial photographs from 1930, 1955, 1961, 1978, 1991 and 2002 were used to assess historical landuse patterns on the site. The 1930 photograph shows the school oval in the northern portion of the site and buildings in the elevated areas to the south of the oval. Trees are present where the Mansfield and War Memorial Hall buildings are now located which indicates they had yet to be constructed in 1930.

The 1955 photograph shows similar conditions to the 1930 image, although the War Memorial Hall appears to have been constructed immediately south of the oval. A small building is also evident to the north-east of the Perkins Building which may be part of the current Mansfield Building. The 1961 photograph is similar to the 1955 image.



The 1978 photograph shows the Mansfield Building between the Perkins Building and the oval. The 1991 image possibly shows the eastern extent of the Mansfield Building is yet to be completed. The 2002 image shows similar site conditions to present.

The aerial photographs are attached in Appendix C.

5.3 Contaminated Lands Register

The site is not identified as being significantly contaminated under the *Contaminated Lands Management Act 1997* as at 15 March 2018. Further, the site is not on the 9 February 2018 version of the 'List of NSW Contaminated Sites Notified to EPA'.

5.4 Licenced Groundwater Bores

A search of licenced groundwater bores indicates that a bore for irrigation purposes exists/existed near the oval. The bore was drilled to a depth of 102.5 m and the standing water level was noted at 16 m. The majority of the other bores in the area are located in the more low-lying sections of Rose Bay and Double Bay. The locations of nearby bores are shown in Figure 2.

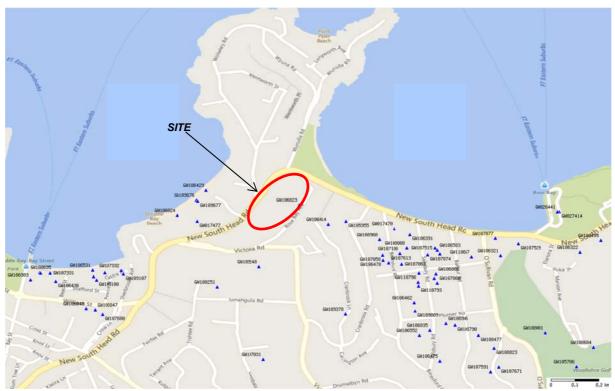


Figure 2: Locations of licenced groundwater bores



6. Preliminary Conceptual Site Model

The site history information indicates that the site has been used as a school since 1918. Its use prior to the time is understood to have been as a private home and vice-regal residence known as 'Cranbrook'. Activities of an educational nature have therefore been undertaken on the site for the last 100 years.

Potentially contaminating activities that may have occurred on the site include:

- The placement of filling on the site;
- Demolition of buildings containing hazardous building materials (e.g. Lead, asbestos in the latter half of the 20th Century etc.);
- Contaminants associated with building maintenance (e.g. pesticides);
- The placement of waste and/or incinerator ash which was prevalent in urban areas throughout the 19th and early to mid-20th Century; and
- Naturally occurring elements in the soils and rock underlying the site (e.g. heavy metals).

Groundwater/seepage is likely to vary in depth. Water is expected to be encountered in areas of the site where the soil-rock interface is at or close to the excavation levels, however is likely to be at considerable depth where rock is well below the ground/excavation level. The use of groundwater within the development is not proposed. The quality of the groundwater from a land-use perspective will therefore only be of significance if volatile contaminants are present.

Soil vapour intrusion and/or ground gas will only need to be considered if significant concentrations of volatile organic compounds are encountered on the site.

The human receptors to soil contamination are likely to be the teachers, students, support staff and visitors to the school. Construction personnel, nearby workers/students/residents and the general public may also be receptors during the construction phase of the redevelopment project.

The ecological receptors are likely to be limited to the flora and fauna that grow/live on the adjacent sites. The area is not known to be ecologically significant.

Exposure pathways are expected to be limited to dermal contact with soils on the site by humans, ingestion of soils and vegetation by fauna, and phytotoxic exposure to flora.

7. Results of Inspection

Douglas Partners has undertaken numerous inspections of the site since 2016. The school is a well-maintained facility and obvious signs of significant contamination have not been encountered during our recent inspections/investigations.



8. Field Work Methods

8.1 2015 Investigation

The 2015 field work included the drilling of three cored boreholes (BH2, BH4 and BH10), and the drilling of four augered boreholes (BH7, BH8, BH11 and BH12).

The cored boreholes were drilled to depths of between 14.3 m and 22.2 m using a DT250 geotechnical drilling rig. They were commenced using solid flight augers to drill through the overburden materials. Disturbed soil samples were collected from the tip of the auger and Standard penetrometer tests (SPTs) were undertaken at regular depth intervals throughout the filling/soil profile. Rotary drilling equipment was used to progress the bores to prevent hole collapse at depth. Once weathered rock was encountered, NMLC-sized diamond core drilling equipment was used to obtain 50 mm diameter continuous core samples of the rock for identification and strength testing purposes.

The augered boreholes were drilled to depths of between 2.4 m and 4.1 m using a hand-auger. Dynamic penetrometer tests were also undertaken at these locations.

The locations are shown on Drawing C1 in Appendix B. The ground surface levels at the CPTs and bores were measured to AHD using an automatic level, relative to temporary benchmarks on the site.

8.2 April 2017 Investigation

The April 2017 field work included the drilling of seven cored boreholes (BH101 to BH107) to depths of between 12.4 m and 17.5 m using geotechnical investigation rigs. They were commenced using solid flight augers to drill through the overburden materials. Disturbed soil samples were collected from the tip of the auger and SPTs were undertaken in selected boreholes. Rotary drilling equipment was used to progress the bores to prevent hole collapse at depth. Once weathered rock was encountered, NMLC-sized diamond core drilling equipment was used to obtain 50 mm diameter continuous core samples of the rock for identification and strength testing purposes.

Twenty (20) augered boreholes (BH111 to BH130) were drilled to depths of between 2.0 m and 4.0 m using geotechnical investigation rigs. The primary purpose of these boreholes was to collect samples for laboratory analysis associated with soil contamination assessment.

Two temporary groundwater wells (BH101 and BH106) were installed on the site following completion of drilling. The purpose of these wells was to allow groundwater level measurements to be made.

The test locations are shown on Drawing C1 in Appendix B. The ground surface levels have been measured relative to AHD using either an automatic level or a high-precision differential global positioning system (dGPS) receiver.



9. Field Work Results

The subsurface conditions encountered during the previous investigations are presented in the borehole logs in Appendix D. Notes defining descriptive terms and classification methods are included in Appendix A.

The boreholes typically encountered:

- FILLING typically silty sand, sand and silty clay filling to depths of between 0.2 m and 4.0 m;
- NATURAL SOILS sand/silty sand to depths of between 4.1 m and 20.5 m. The sand varies
 from very loose to loose in some areas of the site, to medium dense to dense in others. A thin
 layer of clayey material (probably weathered rock) was encountered in the base of several tests;
- BEDROCK sandstone which was typically low, medium and high strength, with some weaker bands, to the base of the cored bores at depths of between 12.4 m and 28.2 m.

Groundwater was observed at depths of between 3.7 m and 9.4 m (RL 6.7 m to RL 12.8 m AHD) in several boreholes during the time of the field work. Groundwater level measurements made during a recent site visit are provided in Table 2.

Table 2: Groundwater Level Measurements in Monitoring Wells

Date	Groundwater Observations in Wells (RL, m AHD)		
	BH101	BH106	
12 Feb 2018	<3.5*	<21.6*	

Note: *Well was dry therefore groundwater level is below these RLs

10. Laboratory Testing

Envirolab Services Pty Ltd (Envirolab) was commissioned to undertake the analysis of the soil samples. A summary of the results is provided in the following tables which are included in Appendix E:

- Table E1: Contaminant Concentrations in Filling
- Table E2: Contaminant Concentrations in Natural Soil

The detailed report sheets and chain-of-custody documentation are also included in Appendix E.



11. Selected Comparative Criteria

The National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1 – Guideline on Investigation Levels for Soil and Groundwater (NEPC, 2013) provides assessment levels for various soil, groundwater and vapour contaminants. The site is assumed to be a category 'C' site (i.e. HIL C) which uses include secondary schools.

Ecological-based assessment is based on the relevant screening levels/added concentrations for coarse-grained sites due to the sandy nature of the upper soil profile.

The preliminary quantitative site assessment criteria adopted are shown in Table E3 in Appendix E.

12. Conclusions and Recommendations

On the basis of the results of this Preliminary Site Investigation, the main contamination risks are considered to be associated with school operations including previous development works, day-to-day operations and maintenance. The laboratory testing indicates that the contaminant concentrations in the soil samples analysed were within the adopted health-based investigation levels. One sample (BH10/1.0 m) exceeded the ecological-based investigation level for carcinogenic PAHs (2.3 mg/kg), however this is considered insignificant as all other samples were within the adopted criterion which is a very conservative value in any case.

The use of groundwater is not currently proposed and groundwater will be handled using a drainage system, where required. The risk of groundwater contamination impacting upon the development is therefore considered to be low.

On the basis of the investigation undertaken to date it is considered that the risk of significant contamination being present, that prevents the redevelopment of the site without significant remediation, is low.

If any contamination is identified during construction (e.g. waste filling) then an appropriate response will need to be developed by an environmental consultant and actioned on site to ensure site suitability. This could be undertaken by enacting an Unexpected Finds Protocol (UFP) as part of the Construction Environmental Management Plan (CEMP).

Any materials required to be removed from the site will need to be classified in accordance with the current *Waste Classification Guidelines* (NSW EPA, 2014).

13. Limitations

Douglas Partners Pty Ltd (DP) has prepared this report for a redevelopment project at Cranbrook School, Bellevue Hill in accordance with DP's ongoing commission for this project. The report is provided for the use of Cranbrook School for this project only and for the purpose(s) described in the report. It should not be used for other projects or by a third party.



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

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

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

Douglas Partners Pty Ltd

Appendix A About this Report

About this Report Douglas Partners O

Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

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

Borehole and Test Pit Logs

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

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

Groundwater

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

 In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;

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

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

Reports

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

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

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

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

About this Report

Site Anomalies

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

Information for Contractual Purposes

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

Site Inspection

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

Sampling Methods Douglas Partners The sample of the samp

Sampling

Sampling is carried out during drilling or test pitting to allow engineering examination (and laboratory testing where required) of the soil or rock.

Disturbed samples taken during drilling provide information on colour, type, inclusions and, depending upon the degree of disturbance, some information on strength and structure.

Undisturbed samples are taken by pushing a thinwalled sample tube into the soil and withdrawing it to obtain a sample of the soil in a relatively undisturbed state. Such samples yield information on structure and strength, and are necessary for laboratory determination of shear strength and compressibility. Undisturbed sampling is generally effective only in cohesive soils.

Test Pits

Test pits are usually excavated with a backhoe or an excavator, allowing close examination of the insitu soil if it is safe to enter into the pit. The depth of excavation is limited to about 3 m for a backhoe and up to 6 m for a large excavator. A potential disadvantage of this investigation method is the larger area of disturbance to the site.

Large Diameter Augers

Boreholes can be drilled using a rotating plate or short spiral auger, generally 300 mm or larger in diameter commonly mounted on a standard piling rig. The cuttings are returned to the surface at intervals (generally not more than 0.5 m) and are disturbed but usually unchanged in moisture content. Identification of soil strata is generally much more reliable than with continuous spiral flight augers, and is usually supplemented by occasional undisturbed tube samples.

Continuous Spiral Flight Augers

The borehole is advanced using 90-115 mm diameter continuous spiral flight augers which are withdrawn at intervals to allow sampling or in-situ testing. This is a relatively economical means of drilling in clays and sands above the water table. Samples are returned to the surface, or may be collected after withdrawal of the auger flights, but they are disturbed and may be mixed with soils from the sides of the hole. Information from the drilling (as distinct from specific sampling by SPTs or undisturbed samples) is of relatively low

reliability, due to the remoulding, possible mixing or softening of samples by groundwater.

Non-core Rotary Drilling

The borehole is advanced using a rotary bit, with water or drilling mud being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be determined from the cuttings, together with some information from the rate of penetration. Where drilling mud is used this can mask the cuttings and reliable identification is only possible from separate sampling such as SPTs.

Continuous Core Drilling

A continuous core sample can be obtained using a diamond tipped core barrel, usually with a 50 mm internal diameter. Provided full core recovery is achieved (which is not always possible in weak rocks and granular soils), this technique provides a very reliable method of investigation.

Standard Penetration Tests

Standard penetration tests (SPT) are used as a means of estimating the density or strength of soils and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289, Methods of Testing Soils for Engineering Purposes - Test 6.3.1.

The test is carried out in a borehole by driving a 50 mm diameter split sample tube under the impact of a 63 kg hammer with a free fall of 760 mm. It is normal for the tube to be driven in three successive 150 mm increments and the 'N' value is taken as the number of blows for the last 300 mm. In dense sands, very hard clays or weak rock, the full 450 mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form.

 In the case where full penetration is obtained with successive blow counts for each 150 mm of, say, 4, 6 and 7 as:

> 4,6,7 N=13

In the case where the test is discontinued before the full penetration depth, say after 15 blows for the first 150 mm and 30 blows for the next 40 mm as:

15, 30/40 mm

Sampling Methods

The results of the SPT tests can be related empirically to the engineering properties of the soils.

Dynamic Cone Penetrometer Tests / Perth Sand Penetrometer Tests

Dynamic penetrometer tests (DCP or PSP) are carried out by driving a steel rod into the ground using a standard weight of hammer falling a specified distance. As the rod penetrates the soil the number of blows required to penetrate each successive 150 mm depth are recorded. Normally there is a depth limitation of 1.2 m, but this may be extended in certain conditions by the use of extension rods. Two types of penetrometer are commonly used.

- Perth sand penetrometer a 16 mm diameter flat ended rod is driven using a 9 kg hammer dropping 600 mm (AS 1289, Test 6.3.3). This test was developed for testing the density of sands and is mainly used in granular soils and filling.
- Cone penetrometer a 16 mm diameter rod with a 20 mm diameter cone end is driven using a 9 kg hammer dropping 510 mm (AS 1289, Test 6.3.2). This test was developed initially for pavement subgrade investigations, and correlations of the test results with California Bearing Ratio have been published by various road authorities.

Soil Descriptions Douglas Partners O

Description and Classification Methods

The methods of description and classification of soils and rocks used in this report are based on Australian Standard AS 1726, Geotechnical Site Investigations Code. In general, the descriptions include strength or density, colour, structure, soil or rock type and inclusions.

Soil Types

Soil types are described according to the predominant particle size, qualified by the grading of other particles present:

Туре	Particle size (mm)		
Boulder	>200		
Cobble	63 - 200		
Gravel	2.36 - 63		
Sand	0.075 - 2.36		
Silt	0.002 - 0.075		
Clay	<0.002		

The sand and gravel sizes can be further subdivided as follows:

Туре	Particle size (mm)
Coarse gravel	20 - 63
Medium gravel	6 - 20
Fine gravel	2.36 - 6
Coarse sand	0.6 - 2.36
Medium sand	0.2 - 0.6
Fine sand	0.075 - 0.2

The proportions of secondary constituents of soils are described as:

Term	Proportion	Example
And	Specify	Clay (60%) and Sand (40%)
Adjective	20 - 35%	Sandy Clay
Slightly	12 - 20%	Slightly Sandy Clay
With some	5 - 12%	Clay with some sand
With a trace of	0 - 5%	Clay with a trace of sand

Definitions of grading terms used are:

- Well graded a good representation of all particle sizes
- Poorly graded an excess or deficiency of particular sizes within the specified range
- Uniformly graded an excess of a particular particle size
- Gap graded a deficiency of a particular particle size with the range

Cohesive Soils

Cohesive soils, such as clays, are classified on the basis of undrained shear strength. The strength may be measured by laboratory testing, or estimated by field tests or engineering examination. The strength terms are defined as follows:

Description	Abbreviation	Undrained shear strength (kPa)
Very soft	VS	<12
Soft	S	12 - 25
Firm	f	25 - 50
Stiff	st	50 - 100
Very stiff	vst	100 - 200
Hard	h	>200

Cohesionless Soils

Cohesionless soils, such as clean sands, are classified on the basis of relative density, generally from the results of standard penetration tests (SPT), cone penetration tests (CPT) or dynamic penetrometers (PSP). The relative density terms are given below:

Relative Density	Abbreviation	SPT N value	CPT qc value (MPa)
Very loose	vl	<4	<2
Loose	1	4 - 10	2 -5
Medium dense	md	10 - 30	5 - 15
Dense	d	30 - 50	15 - 25
Very dense	vd	>50	>25

Soil Descriptions

Soil Origin

It is often difficult to accurately determine the origin of a soil. Soils can generally be classified as:

- Residual soil derived from in-situ weathering of the underlying rock;
- Transported soils formed somewhere else and transported by nature to the site; or
- Filling moved by man.

Transported soils may be further subdivided into:

- Alluvium river deposits
- Lacustrine lake deposits
- Aeolian wind deposits
- Littoral beach deposits
- Estuarine tidal river deposits
- Talus scree or coarse colluvium
- Slopewash or Colluvium transported downslope by gravity assisted by water. Often includes angular rock fragments and boulders.

Rock Strength

Rock strength is defined by the Point Load Strength Index $(Is_{(50)})$ and refers to the strength of the rock substance and not the strength of the overall rock mass, which may be considerably weaker due to defects. The test procedure is described by Australian Standard 4133.4.1 - 1993. The terms used to describe rock strength are as follows:

Term	Abbreviation	Point Load Index Is ₍₅₀₎ MPa	Approx Unconfined Compressive Strength MPa*
Extremely low	EL	<0.03	<0.6
Very low	VL	0.03 - 0.1	0.6 - 2
Low	L	0.1 - 0.3	2 - 6
Medium	M	0.3 - 1.0	6 - 20
High	Н	1 - 3	20 - 60
Very high	VH	3 - 10	60 - 200
Extremely high	EH	>10	>200

^{*} Assumes a ratio of 20:1 for UCS to Is(50)

Degree of Weathering

The degree of weathering of rock is classified as follows:

Term	Abbreviation	Description
Extremely weathered	EW	Rock substance has soil properties, i.e. it can be remoulded and classified as a soil but the texture of the original rock is still evident.
Highly weathered	HW	Limonite staining or bleaching affects whole of rock substance and other signs of decomposition are evident. Porosity and strength may be altered as a result of iron leaching or deposition. Colour and strength of original fresh rock is not recognisable
Moderately weathered	MW	Staining and discolouration of rock substance has taken place
Slightly weathered	SW	Rock substance is slightly discoloured but shows little or no change of strength from fresh rock
Fresh stained	Fs	Rock substance unaffected by weathering but staining visible along defects
Fresh	Fr	No signs of decomposition or staining

Degree of Fracturing

The following classification applies to the spacing of natural fractures in diamond drill cores. It includes bedding plane partings, joints and other defects, but excludes drilling breaks.

Term	Description
Fragmented	Fragments of <20 mm
Highly Fractured	Core lengths of 20-40 mm with some fragments
Fractured	Core lengths of 40-200 mm with some shorter and longer sections
Slightly Fractured	Core lengths of 200-1000 mm with some shorter and loner sections
Unbroken	Core lengths mostly > 1000 mm

Rock Descriptions

Rock Quality Designation

The quality of the cored rock can be measured using the Rock Quality Designation (RQD) index, defined as:

RQD % = <u>cumulative length of 'sound' core sections ≥ 100 mm long</u> total drilled length of section being assessed

where 'sound' rock is assessed to be rock of low strength or better. The RQD applies only to natural fractures. If the core is broken by drilling or handling (i.e. drilling breaks) then the broken pieces are fitted back together and are not included in the calculation of RQD.

Stratification Spacing

For sedimentary rocks the following terms may be used to describe the spacing of bedding partings:

Term	Separation of Stratification Planes
Thinly laminated	< 6 mm
Laminated	6 mm to 20 mm
Very thinly bedded	20 mm to 60 mm
Thinly bedded	60 mm to 0.2 m
Medium bedded	0.2 m to 0.6 m
Thickly bedded	0.6 m to 2 m
Very thickly bedded	> 2 m

Symbols & Abbreviations Douglas Partners

Introduction

These notes summarise abbreviations commonly used on borehole logs and test pit reports.

Drilling or Excavation Methods

Diamond core - 81 mm dia

C Core Drilling
R Rotary drilling
SFA Spiral flight augers
NMLC Diamond core - 52 mm dia
NQ Diamond core - 47 mm dia
HQ Diamond core - 63 mm dia

Water

PQ

Sampling and Testing

A Auger sample
 B Bulk sample
 D Disturbed sample
 E Environmental sample

U₅₀ Undisturbed tube sample (50mm)

W Water sample

pp pocket penetrometer (kPa)
 PID Photo ionisation detector
 PL Point load strength Is(50) MPa
 S Standard Penetration Test

V Shear vane (kPa)

Description of Defects in Rock

The abbreviated descriptions of the defects should be in the following order: Depth, Type, Orientation, Coating, Shape, Roughness and Other. Drilling and handling breaks are not usually included on the logs.

Defect Type

B Bedding plane
Cs Clay seam
Cv Cleavage
Cz Crushed zone
Ds Decomposed seam

F Fault
J Joint
Lam lamination
Pt Parting
Sz Sheared Zone

V Vein

Orientation

The inclination of defects is always measured from the perpendicular to the core axis.

h horizontal
v vertical
sh sub-horizontal
sv sub-vertical

Coating or Infilling Term

cln clean
co coating
he healed
inf infilled
stn stained
ti tight
vn veneer

Coating Descriptor

ca calcite
cbs carbonaceous
cly clay
fe iron oxide
mn manganese
slt silty

Shape

cu curved ir irregular pl planar st stepped un undulating

Roughness

po polished
ro rough
sl slickensided
sm smooth
vr very rough

Other

fg fragmented bnd band qtz quartz

Symbols & Abbreviations

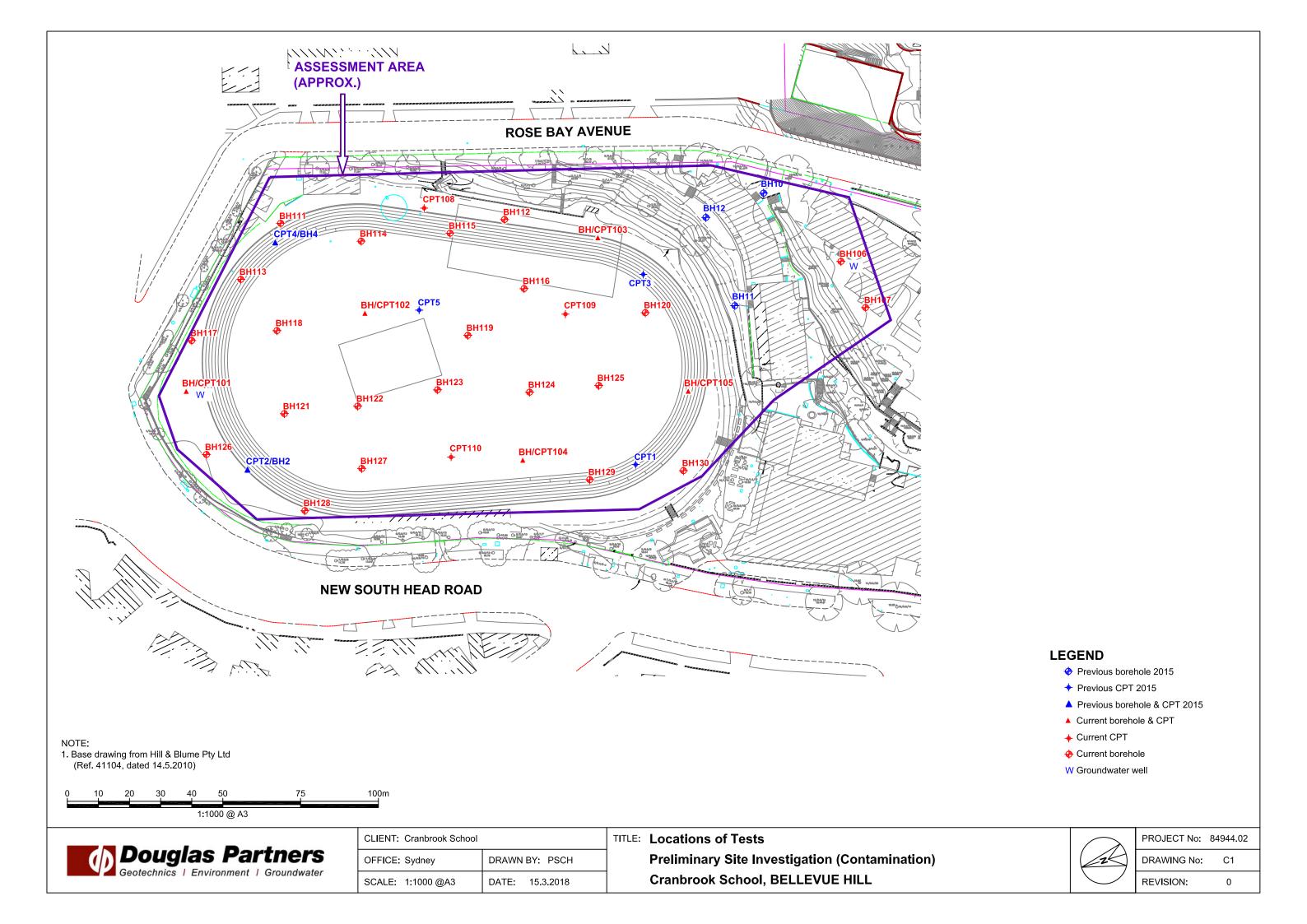
Graphic Symbols for Soil and Rock

Talus

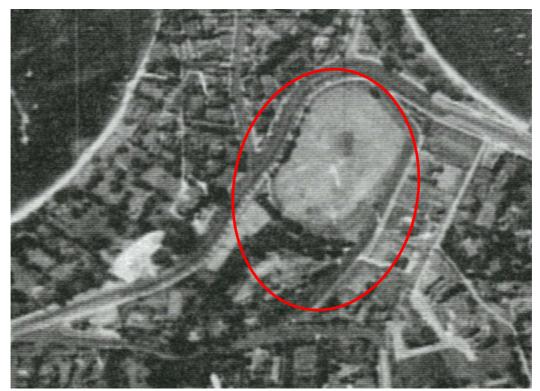
Graphic Syl	mbols for Soil and Rock		
General		Sedimentary	Rocks
	Asphalt	094	Boulder conglomerate
	Road base		Conglomerate
A. A. A. A.	Concrete		Conglomeratic sandstone
	Filling		Sandstone
Soils			Siltstone
	Topsoil		Laminite
	Peat		Mudstone, claystone, shale
	Clay		Coal
	Silty clay		Limestone
//////	Sandy clay	Metamorphic	Rocks
	Gravelly clay		Slate, phyllite, schist
-/-/-/-/- -/- -/-	Shaly clay	+ + + + + +	Gneiss
	Silt		Quartzite
	Clayey silt	Igneous Roc	ks
	Sandy silt	+ + + + + + + , + , +	Granite
	Sand	<	Dolerite, basalt, andesite
	Clayey sand	× × × × × × × × × × × × × × × × × × ×	Dacite, epidote
.	Silty sand	V V V	Tuff, breccia
	Gravel		Porphyry
	Sandy gravel		
	Cobbles, boulders		

Appendix B

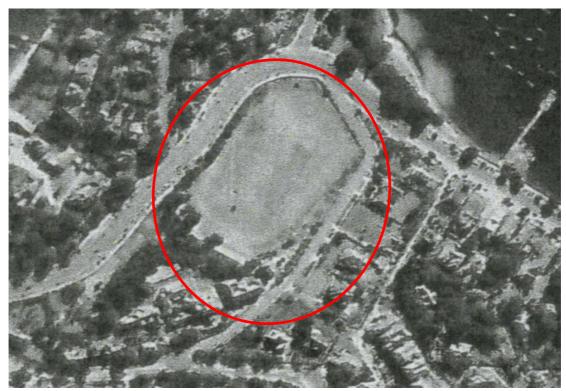
Drawing



Appendix C Site History Information



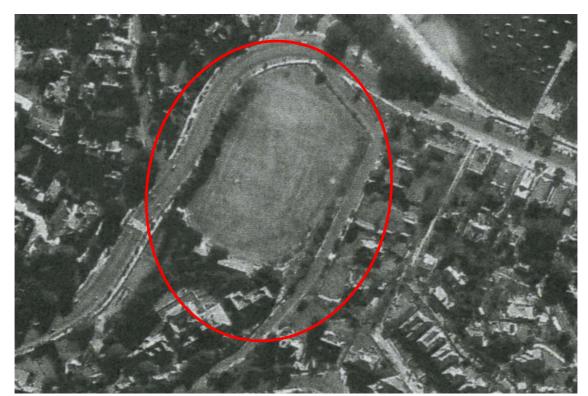
Aerial photograph from 1930



Aerial photograph from 1955



Historical Aerial Photographs	PROJECT:	84944.02
Cranbrook School	PLATE No:	A1
BELLEVUE HILL	REV:	0
CLIENT: Cranbrook School	DATE:	15-Mar-18



Aerial photograph from 1961



Aerial photograph from 1978



Historical Aerial Photographs	PROJECT:	84944.02
Cranbrook School	PLATE No:	A2
BELLEVUE HILL	REV:	0
CLIENT: Cranbrook School	DATE:	15-Mar-18



Aerial photograph from 1991



Aerial photograph from 2002



Historical Aerial Photographs	PROJECT:	84944.02
Cranbrook School	PLATE No:	А3
BELLEVUE HILL	REV:	0
CLIENT: Cranbrook School	DATE:	15-Mar-18

Appendix D Field Work Results

CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.13 AHD **EASTING:** 338378.84 **NORTHING:** 6250846.18

250846.18 **DATE**: 12/4/2017 90°/-- **SHEET** 1 OF 2

BORE No: BH101 **PROJECT No:** 84944.01

DIP/AZIMUTH: Degree of Weathering Rock Fracture Sampling & In Situ Testing Discontinuities Description Strength Core Rec. % Depth Spacing Test Results 굺 of Type B - Bedding J - Joint (m) S - Shear F - Fault Strata 99 Comments TOPSOIL - dark brown, fine to A/E medium silty sand topsoil, moist FILLING - yellow-brown, fine to medium sand filling, dry to moist A/E θ.7m: as above, grey-brown and yellow-brown 1.5m: as above, grey-brown and yellow brown mottled dark brown ΑÆ A/E . 3 3.2 SAND - yellow-brown, fine to medium sand, dry to moist Α/E 8 9

RIG: Scout 2 DRILLER: JS LOGGED: SI/RW CASING: HW to 5.4m

TYPE OF BORING: Solid flight auger to 5.5m; Rotary to 14.35m; NMLC-Coring to 17.4m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Standpipe installed to 13.7m (screen 10.7-13.7m; gravel 9.7-13.7m; bentonite 8.7-9.7m; backfill to 0.1m below ground level; grass over gatic

	00 (01)				
	SAMI	PLING	& IN SITU TESTING	LEGE	END
Α	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
В	Bulk sample	Р	Piston sample	PL(A) Point load axial test Is(50) (MPa)
BLK	Block sample	U,	Tube sample (x mm dia.)	PL(D	í) Point load diametral test ls(50) (MPa)
С	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	⊳	Water seep	S	Standard penetration test
Е	Environmental sample	¥	Water level	V	Shear vane (kPa)



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.13 AHD **EASTING**: 338378.84 **NORTHING**: 6250846.18

DIP/AZIMUTH: 90°/--

BORE No: BH101 PROJECT No: 84944.01 DATE: 12/4/2017 SHEET 2 OF 2

			Description	De	gree	e of	U	St Ex Low Very Low	Rock	(nth	L	F	ractur	e	Discontinuities	Sa	amplir	ng & I	n Situ Testing
R	[Depth	of	VV C	ati iC	illig	ap 8			<u> </u>	ate	S	pacing (m)	g	B - Bedding J - Joint	g.	% بو	D	Test Results
		(m)	Strata	≥ ≥	≥ ≥	o m	رق ا	K K K K K	<u> [</u>			0.01	0.05	00	S - Shear F - Fault	Type	Core Rec. %	RQ %	& Comments
- 9	-		SAND - yellow-brown, fine to medium sand, dry to moist	ÜΙ	≥ io				ני ביו		u .	0 1	30 d	1					Comments
ŀ	ļ		medium sand, dry to moist (continued)																
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	ţ.	.																	
ŧ	ļ				i	ii			ii	ii		i	ii i		Note: Unless otherwise				
ŀ	Ē						. : :								stated, rock is fractured along rough planar				
ŀ	Ē											i			bedding dipping 0°- 10°				
Ę	-1	14								11		1		1					
‡"	<u> </u>	14.35								11									
ŀ	F	14.00	SANDSTONE - medium and high strength, moderately weathered		ļ							1							
F	E		strength, moderately weathered, slightly fractured and unbroken,		ľ				1	┛ ╎		i	 		14.7m: B0°, fe				PL(A) = 4.14
E	-1	15	red-brown and brown, medium to coarse grained sandstone		į.				Ħ	11		Ì		1					
-	ŧ		3		ľ				ili			ľ			15.2m: B10°, cly vn, ti				
ŀ	Ē				ļ				!!!			1		1	10.2111. D10 , Gly VII, II				PL(A) = 0.66
F	E				ľ				Ш¦										
E	ļ			l i i	Į.	įį		ΙŢ	Ti	Ιij					15.72 & 15.75m: Cs	С	100	99	
	-1	16			ľ									H					
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ŀ	ŀ				ľ									H					PL(A) = 1.52
ŀ	ļ			l i i	Į.	ij		ijij	į	Ji i		į	ii i	į					
ŀ	-1	17			ľ				Ш					H					
-7	Ē			Шį	Į.	ij		ij	ijį	ij		į	ii i	į					PL(A) = 0.91
ŧ	F	17.4	Bore discontinued at 17.4m	H	4	1	*:•:•:•		11	++	-	1		#					
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RIG: Scout 2 DRILLER: JS LOGGED: SI/RW CASING: HW to 5.4m

TYPE OF BORING: Solid flight auger to 5.5m; Rotary to 14.35m; NMLC-Coring to 17.4m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Standpipe installed to 13.7m (screen 10.7-13.7m; gravel 9.7-13.7m; bentonite 8.7-9.7m; backfill to 0.1m below ground level; grass over gatic cover)

A Auger sample
B B Bulk sample
B LK Block sample
C C core drilling
D D Disturbed sample
E E Invironmental sample
E RAUGER SAMPLING & IN SITU TESTING LEGEND
G Gas sample
P Fiston sample
P Fiston sample
U T Tube sample (x mm dia.)
P Fiston sample
P Fiston sample
P Fiston sample
P Fiston sample
P Fiston sample
V Water sample
V Water sample
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CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.28 AHD **EASTING**: 338374.19 **NORTHING**: 6250784.3 **DIP/AZIMUTH**: 90°/--

BORE No: BH102 **PROJECT No:** 84944.01 **DATE:** 12/4/2017 **SHEET** 1 OF 2

		Description	Degree o Weatherin	f n .º	Rock Strength	Fracture	Discontinuities	Sá	ampling & l	n Situ Testing
RL	Depth (m)	of		a Ph	Strength Need Individual Strength Need Individ	Spacing (m)	B - Bedding J - Joint	Type	Core Rec. % RQD %	Test Results &
	(,	Strata	SW HW SW FS	₩ ©	Ex Low Very Lov Medium High Very High Ex High	0.05 0.10 0.50 1.00	S - Shear F - Fault	Ţ	12 % S	α Comments
	0.2	TOPSOIL - dark brown, fine to medium silty sand topsoil, dry to						A/E		
16	. 0.2	moist								
[0.6	FILLING - dark brown, fine to medium sand filling with clay, dry		XX]			A/E		
		SAND - dark brown, fine to medium								
	-1 1.1	sand, dry to moist (possibly filling)			1			Α/E		
-12		SAND - grey fine to medium sand, \(\dry \) to moist								
		1.4m: as above but becoming yellow-brown								
		1.8m: as above but grey-brown								
	-2				1			A/E		
-4										
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RIG: Scout 2 DRILLER: JS LOGGED: SI/RW CASING: HW 11.6m

TYPE OF BORING: Solid flight auger (TC-bit) to 5.5m; Rotary to 11.6m; NMLC-Coring to 17.45m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 U I ESTING
G Gas sample
P Piston sample
U Tube sample (x mm dia.)
W Water sample
Water seep
Water level

LEGENU
PID Photo ionisation detector (ppm)
PL(A) Point load axial test Is(50) (MPa)
PL(D) Point load diametral test Is(50) (MPa)
pp Pocket penetrometer (kPa)
S Standard penetration test
V Shear vane (kPa)



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.28 AHD **EASTING**: 338374.19 **NORTHING**: 6250784.3

PROJECT No: 84944.01 **DATE:** 12/4/2017 **SHEET** 2 OF 2

BORE No: BH102

DIP/AZIMUTH: 90°/-- SHEET 2 OF 2

	5	Description	Degree of Weathering	.ie	Rock Strength	Fracture	Discontinuities				n Situ Testing
RL	Depth (m)	of	Weathering	Srapt Log	Strength Needium Needi	Spacing (m)	B - Bedding J - Joint S - Shear F - Fault	Туре	Core Rec. %	gg %D	Test Results &
		SAND - grey fine to medium sand,	MW HW EW	·· :-	EX Very	00.00	5 - Snear F - Fault	-	O &	α	Comments
5	-11	dry to moist <i>(continued)</i> 11.35m: yellow brown, fine to					Note: Unless otherwise stated, rock is fractured along rough planar bedding dipping 0°- 10°				
	- 11.6	medium grained clayey sand SANDSTONE - medium strength,				 					PL(A) = 0.82
4	- -12 12.0 - - - - - 12.4	highly weathered, slightly fractured, brown, coarse grained sandstone with some quartz gravel					11.86m: CORE LOSS: 140mm	С	86	50	
	- 12.4 - - - -13	SANDSTONE - very low and low strength, highly to moderately weathered, slightly fractured, light grey and red-brown, fine to medium grained sandstone with some					12.4-12.6M: dS 12.8m: J60°, pl, ro, cln 12.85m: B0°, cly				PL(A) = 0.23
3	- - - - - - -14	extremely low strength bands					13.52-13.58m: Ds 13.65m: J60°- 70°, cu, ro, fe	С	100	92	PL(A) = 0.22
2	- - - - - - - - - - - - -	SANDSTONE - medium and medium to high strength, moderately weathered, slightly fractured, brown to red-brown, medium grained sandstone					14.35m: B0°, cly, 10mm 14.4-14.45m: Cs 14.5-14.62m: B (x3) 0°- 5°, fe, cly co				PL(A) = 0.83
	- - - - - - -16						15.4m: J30°, he	С	100	92	PL(A) = 0.55
0	-						16.15 & 16.42m: B (x2) 5°, fe				PL(A) = 2.87
-1	- - 17 - - - - - - 17.45						16.9m: B5°, fe, cly, 10mm				PL(A) = 0.84
	-18	Bore discontinued at 17.45m									
-3	- 19										
-	: :										

RIG: Scout 2 DRILLER: JS LOGGED: SI/RW CASING: HW 11.6m

TYPE OF BORING: Solid flight auger (TC-bit) to 5.5m; Rotary to 11.6m; NMLC-Coring to 17.45m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS:

	SAM	PLING	& IN SITU TESTING	3 LEGE	ND
Α	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
В		Р	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
В	LK Block sample	U,	Tube sample (x mm dia.)	PL(D)	Point load diametral test ls(50) (M
C		W	Water sample	pp	Pocket penetrometer (kPa)
D		⊳	Water seep	S	Standard penetration test
E	Environmental sample	¥	Water level	V	Shear vane (kPa)



Cranbrook School CLIENT: PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.75 AHD **EASTING:** 338361.5

NORTHING: 6250706.3 **DIP/AZIMUTH:** 90°/--

BORE No: BH103 **PROJECT No:** 84944.01 **DATE:** 11/4/2017

SHEET 1 OF 2

Dareth	Description	Degree of Weathering	از _	Rock Strength อั	Fracture Spacing	Discontinuities				n Situ Testing
Depth (m)	of Strata	Degree of Weathering A ≩ € 8 8 £ £	Graph	Strength Need In Need	(m) 0.00.00.1 0.00.1	B - Bedding J - Joint S - Shear F - Fault	Туре	Core Rec. %	RQD %	Test Results &
-	TOPSOIL - dark brown, silty clay topsoil with rootlets, dry		3				Α/E			Comments
- 0.5 - - - - - 1	SAND - yellow-brown mottled dark brown, iron indurated, fine to medium sand, dry to moist						A A/E			
1.3	SAND - yellow-brown, fine to medium sand, dry to moist			.	 					
-2					 		Α⁄Ε			
- - - -3					 					
- - - -					 					
- - -4 -										
				·						
-5 - -										
- - - - 6										
-7 -7										
-						Note: Unless otherwise stated, rock is fractured along rough planar bedding dipping 0°- 10°				
- 8 - - - - 8.5	SANDSTONE - medium strength,					Security dipping 0 - 10				
- - - -9	salphtly weathered then fresh stained, fractured and slightly fractured, light grey, medium grained sandstone with some					8.96m: B0°- 5°, un, ro,				PL(A) = 0.5
-	extremely low and very low strength bands and traces of carbonaceous laminations					fe stn 9.45m: J20°, pl, ro, fe ∫stn	С	93	89	PL(A) = 0.4
9.85						9.6m: Cs, 50mm 9.65m: CORE LOSS:				

DRILLER: JS LOGGED: RW/JN CASING: HQ to 8.5m RIG: Scout 2

TYPE OF BORING: Solid flight auger (TC-bit) to 8.5m; NMLC-Coring to 14.4m WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS:

	SAMPLING & IN SITU TESTING LEGEND										
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)						
	Bulk sample		Piston sample	PL(A)	Point load axial test Is(50) (MPa)						
BLK	Block sample	U,	Tube sample (x mm dia.)	PL(D)	Point load diametral test ls(50) (MPa)						
	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)						
D	Disturbed sample	⊳	Water seep	S	Standard penetration test						
E	Environmental sample	. ₹	Water level	V	Shear vane (kPa)						



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.75 AHD **EASTING:** 338361.5

NORTHING: 6250706.3 **DA DIP/AZIMUTH:** 90°/-- **SH**

BORE No: BH103 **PROJECT No:** 84944.01 **DATE:** 11/4/2017 **SHEET** 2 OF 2

		Description	Degree of	. l	Rock Strength	Fracture	Discontinuities	Sa	amplii	ng & I	n Situ Testing
R	Depth (m)	of	Weathering	를 망	Strength Strength Water Water	Spacing (m)	B - Bedding J - Joint	g	% بو	RQD %	Test Results
	(111)	Strata	EW HW SW RE EVEN	5 _	Ex Low Very Low Medium High Very High Ex High		S - Shear F - Fault	Туре	R S	RQ %	& Comments
9	-11	SANDSTONE - medium strength, slightly weathered then fresh stained, fractured and slightly fractured, light grey, medium grained sandstone with some extremely low and very low strength bands and traces of carbonaceous laminations (continued)					200mm 10.10, 10.15m: J45°, un, ro, cln 10.13m: J70°, un, ro, cln 10.26m: Ds, 20mm	С	93	89	PL(A) = 0.7
2	-12						11.66m: B0°- 5°, un, ro, cbs, st 11.68m: J0°- 30°, cu, ro, cbs, st 11.97m: J0°- 30°, cu, ro, fe stn				PL(A) = 0.36 PL(A) = 0.31
-4	12.52 12.52 13.12.97			X			12.52m: J30°, pl, ro, cln CORE LOSS: 450mm	С	85	75	(, ,
	- 13 12.07						አ 13.68m: Cs, 10mm				PL(A) = 0.54
-	- - 14 - - - - - - 14.4						13.72, 13.76m: J30°, pl, ro, cln 13.8m: Ds, 50mm 13.88m: Cs, 30mm 14.12m: Cs, 80mm				PL(A) = 0.47
2	- -15 -	Bore discontinued at 14.4m - target depth reached					,				
	- 16 										
-0	-17 -17 -										
	- 18 										
-2	-19 -19 -										
-ဗု											

RIG: Scout 2 DRILLER: JS LOGGED: RW/JN CASING: HQ to 8.5m

TYPE OF BORING: Solid flight auger (TC-bit) to 8.5m; NMLC-Coring to 14.4m **WATER OBSERVATIONS:** No free groundwater observed whilst augering

REMARKS:

	S	AMPLING	& IN SITU TESTIN	IG LEGE	ND
Α	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
В	Bulk sample	Р	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U,	Tube sample (x mm dia.)) PL(D)	Point load diametral test ls(50) (MPa
С	Core drilling	W	Water sample		Pocket penetrometer (kPa)
D	Disturbed sample	⊳	Water seep	S	Standard penetration test
E	Environmental samp	le ₹	Water level	V	Shear vane (kPa)



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI
LOCATION: New South Hood Book Bollon

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.34 AHD **EASTING**: 338308.87 **NORTHING**: 6250760.78

DIP/AZIMUTH: 90°/--

PROJECT No: 84944.01 **DATE:** 12/4/2017 **SHEET** 1 OF 2

BORE No: BH104

	Donth	Description	Degree of Weathering	ji ~	Rock Strength	٦	Fracture Spacing	Discontinuities	Sa	ampli	ng & I	n Situ Testing
-	Depth (m)	of		Graphic Log		Nat	(m)	B - Bedding J - Joint	Туре	ore	RQD %	Test Results &
	` ,	Strata	EW HW EW EW EW EW EW EW EW EW EW EW EW EW EW	اق	Ex Low Very Low Medium High Very High Ex High		0.01	S - Shear F - Fault	🖹	2 %	, R	Comments
0	0.2· ·1	TOPSOIL - dark brown, fine to medium silty sand topsoil, moist SAND - dark brown mottled brown, iron indurated, fine to medium sand, moist (possibly filling) 0.8m: as above but brown and grey-brown mottled dark brown	-						A/E A/E			
-	1.3	SAND - yellow brown mottled brown and dark brown, grey fine to medium sand, moist							A/E			
	3											
2	· 4											
7	- 5					Ţ						
	-6							Note: Unless otherwise stated, rock is fractured along rough planar bedding dipping 0°- 10°				
	6.8 6.9	SANDSTONE - medium strength, moderately weathered, fractured and slightly fractured, light grey and red-brown, medium grained sandstone						6.8m: CORE LOSS: 100mm 7.3-7.45m: B (x3) 0°, cly co, 1-2mm				PL(A) = 0.7
	8 8.0	SANDSTONE - high strength, fresh, slightly fractured and unbroken, light grey, medium grained sandstone						7.9 & 7.95m: B0°, fe	С	97	90	PL(A) = 0.3 PL(A) = 1.1
	-9							9.4m: B0°, cly, 5mm				1 L(A) - 1.1
-								· >>	С	100	100	PL(A) = 1.2

RIG: DT100 DRILLER: SS LOGGED: RW/SI CASING: HW to 6.8m

TYPE OF BORING: Solid flight auger (TC-bit) to 5.5m; Rotary to 6.8m; NMLC-Coring to 12.4m

WATER OBSERVATIONS: Free groundwater observed at 5.0m whilst augering

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 U I ESTING
G Gas sample
P Piston sample
U Tube sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.34 AHD **EASTING**: 338308.87 **NORTHING**: 6250760.78

DIP/AZIMUTH: 90°/--

PROJECT No: 84944.01 **DATE:** 12/4/2017 **SHEET** 2 OF 2

BORE No: BH104

					Dii	AZIIVIU I A.	30 / SHEET			1 2 OF 2		
		Description	Degree of Weathering	<u>.0</u>	Rock Strength 5	Fracture	Discontinuities				n Situ Testing	
RL	Depth (m)	of Strata	Degree of Weathering	Graph	Strength Nedium High Strigh Ex High Water	Spacing (m)	B - Bedding J - Joint S - Shear F - Fault	Туре	Core Rec. %	RQD %	Test Results & Comments	
9	- - - - - -11	SANDSTONE - high strength, fresh, slightly fractured and unbroken, light grey, medium grained sandstone (continued)									PL(A) = 1.17	
	-						44 Ora D0° als 40 ora	С	100	100	PL(A) = 1.01	
4	-12					 	11.9m: B0°, cly, 10mm				PL(A) = 1.08	
	12.4	Bore discontinued at 12.4m										
	- 13 -											
3	-											
	- - - - 14											
2												
1	- - -15 -											
. 0	- - 16 - -											
-1	- - - 17 -											
-2	- - - - 18 -											
3	- - - - 19											
	-											

RIG: DT100 DRILLER: SS LOGGED: RW/SI CASING: HW to 6.8m

TYPE OF BORING: Solid flight auger (TC-bit) to 5.5m; Rotary to 6.8m; NMLC-Coring to 12.4m

WATER OBSERVATIONS: Free groundwater observed at 5.0m whilst augering

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 D LESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School Cranbrook School ECI PROJECT:

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.54 AHD **EASTING**: 338303.82

NORTHING: 6250703.09 **DIP/AZIMUTH:** 90°/--

BORE No: BH105 **PROJECT No:** 84944.01 **DATE:** 10/4/2017

SHEET 1 OF 2

)4b	Description	Degree of Weathering	Rock Strength	Fracture Spacing	Discontinuities	Sa	ampli	ng & I	n Situ Testing
	Depth (m)	of Strata	Weathering	Graphic Log Ex Low Medium High High Water Ex High Water Pool of the Control of th	(m)	B - Bedding J - Joint S - Shear F - Fault	Туре	Core tec. %	RQD %	Test Results &
9	0.6	TOPSOIL - dark brown, silty sand topsoil filling with some rootlets, damp					A/E	ı ız		Comments
-1	0.6	SAND - grey-brown medium sand with some coarse graining, moist (possible filling)					A/E			
-2	1.5	SAND - brown to dark brown medium sand, damp (possible filling)					A/E			
-3	2.7	SAND - light brown to orange-brown medium sand, damp				Note: Unless otherwise stated, rock is fractured along rough planar bedding dipping 0°- 10°	A/E			
71 - 5	4.1 4.15/ 4.3′	4.1m: becoming extremely weathered sandstone SANDSTONE - medium strength, moderately to slightly weathered, slightly fractured, light grey-brown to red-brown, medium grained sandstone				4.1m: CORE LOSS: 50mm 4.15-4.3m: Cs 4.35m: J35°, he 4.4m: B20°, pl, ro, cln 4.93, 5.05 & 5.18m: B (x3) 0°- 5°, fe				PL(A) = 0.5
-6	;					5.28m: J70°, un, ro, fe 5.44, 5,81, 5.86m: B (x3) 0°- 5°, fe, cly 5.93m: J60° & 85°, st, ro, fe	С	98	84	PL(A) = 0.49 $PL(A) = 0.3^{\circ}$
-7	6.75	SANDSTONE - medium and high strength, moderately to slightly weathered and fresh, slightly fractured, light grey-brown, medium grained sandstone	-			6.63m: J (x2) 70°, un, ro, fe, partially he 6.75-6.77m: Cs 7.16m: J70°, he				PL(A) = 1.31
-8						7.82m: B0°, cly, 5mm 8.12m: J30°, pl, sm, cln				
9						8.6m: J20°, pl, ro, cln	С	100	91	PL(A) = 0.61
,						9.35m: B5°, fe, cly, 5mm 9.45m: J25°, pl, ro, fe 9.85-10.10m: Cs				PL(A) = 0.49

LOGGED: RM/SI CASING: HQ to 4.1m RIG: Scout 2 DRILLER: JS

TYPE OF BORING: Solid flight auger (TC-bit) to 4.1m; NMLC-Coring to 15.48m

WATER OBSERVATIONS: Some seepage from 0.5m

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

Gas sample
Piston sample
Piston sample
(x mm dia.)
Water sample
Water seep
Water level A Auger sample B Bulk sample BLK Block sample Core drilling
Disturbed sample
Environmental sample



CLIENT: Cranbrook School **PROJECT:** Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.54 AHD **EASTING**: 338303.82 **NORTHING**: 6250703.09

DIP/AZIMUTH: 90°/--

BORE No: BH105 **PROJECT No:** 84944.01 **DATE:** 10/4/2017 **SHEET** 2 OF 2

		Description	Degree of Weathering	<u>.</u> 2	Rock Strength	Fracture	Discontinuities	Sa	amplir	ng & I	n Situ Testing
R	Depth (m)	of Strata	Weathering A A A A A A A A A A A A A A A A A A A	Graph Log	Wate	Spacing (m)	B - Bedding J - Joint S - Shear F - Fault		Core Rec. %	RQD %	Test Results & Comments
. 9		SANDSTONE - medium and high strength, moderately to slightly weathered and fresh, slightly fractured, light grey-brown, medium					10.45-10.47m: Ds	С	100	91	PL(A) = 0.65 PL(A) = 0.1
	- 11 10.96	grained sandstone (continued) 10.35-10.66m: very low strength 10.66-10.96m: extremely low strength SANDSTONE - high then medium strength, slightly weathered and fresh, slightly fractured and unbroken, light grey to light grey-brown, medium grained sandstone with some extremely low to very low strength bands					10.66-10.96m: Ds 11.7m: J25°, ,pl, ro, cln 12.15m: J30°, pl, ro, fe, cly 12.22-12.36m: Cs 12.4-12.48m: Cs 12.6n: J70°, pl, ro, cln	С	100	72	PL(A) = 1.26 PL(A) = 1.06
3	-13						13.86m: B5°, cly, 10mm 14.15m: B5°, cbs co	С	100	88	PL(A) = 1.26
	- -15 - - - - - 15.48	Bore discontinued at 15.48m					14.75-14.9m: Cs				PL(A) = 1.03 PL(A) = 0.92
	-16 										
	-17 										
-5	- 19										
- 3	-					 					

RIG: Scout 2 DRILLER: JS LOGGED: RM/SI CASING: HQ to 4.1m

TYPE OF BORING: Solid flight auger (TC-bit) to 4.1m; NMLC-Coring to 15.48m

WATER OBSERVATIONS: Some seepage from 0.5m

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 U I ESTING
G Gas sample
P Piston sample
U Tube sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 38.47 AHD **EASTING:** 338318.63 **NORTHING:** 6250640.39 **DIP/AZIMUTH:** 90°/--

BORE No: BH106 PROJECT No: 84944.01 DATE: 12/4/2017 SHEET 1 OF 2

		Description	Degree of Weathering	. <u>o</u>	Rock Strength	_	Fracture	Discontinuities	S	ampli	ng & l	n Situ Testing
씸	Depth (m)	of		raph	Strength Strength Wedinm High Key High	Vate	Spacing (m)	B - Bedding J - Joint	Туре	e %	RQD %	Test Results &
		Strata	WH W W W H	O	Ex Lo Very High Ex High	>	0.05	S - Shear F - Fault	_ _	2 %	R _v	Comments
Π	0.08	FILLING - brick pavers		\times					Α			
38		FILLING - brown silty sand filling with some fine to medium grained sandstone gravel, moist							Α	-		
	0.65 0.8	FILLING - sandstone boulder filling FILLING - concrete slab	1						Α			
		SAND - very loose, light grey medium grained sand, moist							S			1,1,1 N = 2
37												
	-2				.							
38												
							 		S			1,1,2 N = 3
	-3											
35												
	4 4.0	SAND - loose, pale yellow medium	-							-		455
34		grained sand, moist							S			4,5,5 N = 10
	_											
	-5				.							
33	5.5	SAND - dense, yellow medium grained sand, moist	<u> </u>						s	_		2,3,3 N = 6
	-6											
32												
	-7				.					-		
31									S			5,10,10 N = 20
	-8						 					
-8					.		 		s	1		6,11,15 N = 26
	-9									_		N = 26
29]		 					

RIG: Bobcat DRILLER: GM LOGGED: JN CASING: HW to 8.5m; HQ to 12.45m

TYPE OF BORING: Solid flight auger (TC-bit) to 8.5m; Rotary (mud) to 12.45m; NMLC-Coring to 15.55m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Standpipe installed to 12.5m (screen 9.5-12.5m; gravel 8.5-12.5m; backfill to GL with gatic cover)

Ì			CAMPI INC	O IN CITH TECTIN	01505	ND
ı			SAMPLING	& IN SITU TESTIN		
ı	Α	Auger sample	G	Gas sample	PID	Photo ionisation dete
		Bulk sample	Р	Piston sample	PL(A)	Point load axial test I
ı	BI K	Rlock cample	- 11	Tube cample (v mm dia) DI (D)	Point load diametral t

Core drilling

Disturbed sample
Environmental sample

Water seep
Water level



CLIENT: Cranbrook School **PROJECT:** Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 38.47 AHD **EASTING:** 338318.63

NORTHING: 6250640.39 **DIP/AZIMUTH:** 90°/--

BORE No: BH106 **PROJECT No:** 84944.01 **DATE:** 12/4/2017

SHEET 2 OF 2

		Description	Degree of Weathering	<u>.</u>	Rock Strength	Fracture	Discontinuities				n Situ Testing
RL	Depth (m)	of Strata	Weathering A A A A A A A A	Graph	Nate	Spacing (m) 00:001	B - Bedding J - Joint S - Shear F - Fault	Туре	Core Rec. %	RQD %	Test Results & Comments
28		SAND - dense, yellow medium grained sand, moist (continued) 40.0m: becoming wet						S			10,17,19 N = 36
27	-12						Note: Unless otherwise stated, rock is fractured along rough planar bedding dipping 0°- 10°	s			10,14,18 N = 32
25	12.45	SANDSTONE - medium then low strength, slightly weathered then fresh stained, slightly fractured then unbroken, orange and light grey medium grained sandstone with traces of very low strength bands					12.85-13.08m: J60°- 90°, un, ro, cln, partially he 13.08m: Ds, 20mm 13.5, 13.9, 14.06m: B0°- 5°, pl, ro, cly, 1mm				PL(A) = 0.63 $PL(A) = 0.56$
24	-14 						14.5m: B5°, pl, ro, fe stn	С	100	99	PL(A) = 0.53
22 23	- 15.55 - 16 - 16	Bore discontinued at 15.55m - target depth reached									PL(A) = 0.28
21	- 18										
	- - 19 - - - - - - -										

RIG: Bobcat DRILLER: GM LOGGED: JN CASING: HW to 8.5m; HQ to 12.45m

TYPE OF BORING: Solid flight auger (TC-bit) to 8.5m; Rotary (mud) to 12.45m; NMLC-Coring to 15.55m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Standpipe installed to 12.5m (screen 9.5-12.5m; gravel 8.5-12.5m; backfill to GL with gatic cover)

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 D LESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 39.22 AHD **EASTING:** 338301.69 **NORTHING:** 6250640.1

DIP/AZIMUTH: 90°/--

BORE No: BH107 **PROJECT No:** 84944.01 **DATE:** 13/4/2017 **SHEET** 1 OF 2

	. .:	Description	Degree of Weathering	. <u></u>	Rock Strength	Fracture	Discontinuities				n Situ Testing
집	Depth (m)	ol		Graphic Log	Strength Needium High High Kery High Kery High Water	Spacing (m)	B - Bedding J - Joint S - Shear F - Fault	Type	Core Rec. %	RAD %	Test Results &
\vdash	0.0	Strata O5 \FILLING - brick pavers	MW HWW BW BW BW BW BW BW BW BW BW BW BW BW B		Ker Ker Ker Ker Ker Ker Ker Ker Ker Ker	0.00 0.	o - oncar 1 - raun		~ <u>%</u>	4	Comments
39		FILLING - brown silty sand filling		XX				Α	-		
		with some fine to medium sandstone gravel, moist		\times				Α	-		
Ė		gravor, most		XX				Α			
F	- -1 1.	1.0 SAND - very loose then loose, light		XX		i ii ii l					
-88		grey medium grained sand, moist				 		s			1,1,1 N = 2
[-								1		., -
Ė											
	- -2					 					
37											
	-								-		
	-							s			1,1,1 N = 2
	-3								1		
36						i ii ii l					
+						 					
	-										
E	- -4					i ii ii l	Note: Unless otherwise stated, rock is fractured		-		00.5
35	-					 	along rough planar bedding dipping 0°- 10°	s			2,3,5 N = 8
E	-						bedding dipping 0 - 10		1		
-	- 4	4.9				i ii ii l		S			10/149mm
	-5 -	SANDSTONE - medium strength, slightly weathered, slightly fractured,						ے	1		refusal
-8		orange and light grey medium grained sandstone					5.3m: CORE LOSS:				PL(A) = 0.48
-	-			X			410mm	С	58	56	
	5.7 5.9			\times			5.73m: CORE LOSS: \ 180mm				
-	-6					 	^L 5.91m: J45°, pl, ro, cln				DI (A) = 0.54
33	-						6.2m: J20°, un, ro, cln				PL(A) = 0.54
-	-					i ii i i l					
[_					╎╠═╣╎	∫ 6.8m: J30°, pl, ro, cly,				
32	-7 -						_5mm 6.88m: J45°- 60°, un, ro,				
-"	-					i ii i l i l	cln				
						 	7.57, 7.64m: J20°, pl, ro,				PL(A) = 0.46
	-						cly, 2mm	С	100	92	r L(A) - 0.40
31	-8 - -						8.03-8.35m: J70°, un, ro, fe stn, partially he				
F	-						10, 10 out, partially lie				PL(A) = 0.45
	-										
ŧ	- -9 00						8.93, 8.94m: B10°, pl,				
30	9.0	SANDSTONE - medium strength, fresh, slightly fractured then					ro, cly, 1mm				
E		unbroken, light grey medium									
	-	grained sandstone with traces of carbonaceous laminations				i ii ii l l		С	100	100	PL(A) = 0.48

RIG: Bobcat DRILLER: GM LOGGED: JN CASING: HW to 4.9m; HQ to 4.9m

TYPE OF BORING: Solid flight auger (TC-bit) to 4.9m; NMLC-Coring to 14.0m **WATER OBSERVATIONS:** No free groundwater observed whilst augering

REMARKS:

	SAMPLING & IN SITU TESTING LEGEND										
Α	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)						
В	Bulk sample	Р	Piston sample	PL(A)	Point load axial test Is(50) (MPa)						
BLK	Block sample	U,	Tube sample (x mm dia.)	PL(D)	Point load diametral test ls(50) (MPa)						
С	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)						
D	Disturbed sample	⊳	Water seep	S	Standard penetration test						
E	Environmental sample	Ŧ	Water level	V	Shear vane (kPa)						



CLIENT: Cranbrook School PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 39.22 AHD **EASTING:** 338301.69 **NORTHING:** 6250640.1 **DIP/AZIMUTH:** 90°/--

BORE No: BH107 **PROJECT No:** 84944.01 **DATE:** 13/4/2017 SHEET 2 OF 2

П		Description	Degree of Weathering or Caro	Rock Strength	Fracture	Discontinuities	Sa	amplii	ng & I	n Situ Testing
씸	Depth (m)	of	aphiliping in	Strength High High High High High High High Hig	Spacing (m)	B - Bedding J - Joint	g	% و	ے ۵	Test Results
	(111)	Strata	WW WW SW SY SY ST	Ex Low Very Low Medium High Ex High Ex High On On On On On On On On On On On On On	0.05	S - Shear F - Fault	Туре	Core Rec. %	RQ %	& Comments
28 29	-11	SANDSTONE - medium strength, fresh, slightly fractured then unbroken, light grey medium grained sandstone with traces of carbonaceous laminations (continued)				10.4m: B0°, pl, ro, cly, 1mm 10.54m: Cs, 10mm	С	100		PL(A) = 0.5
27 2	-12					11.37m: B5°, pl, ro, cly, 2mm 11.87m: B5°, pl, ro, fe stn		100	100	PL(A) = 0.64
26	- 13						С	100	100	PL(A) = 0.49
	-14 14.0	Bore discontinued at 14.0m								PL(A) = 0.71
25		- target depth reached								
24	- 15									
23	- 16									
22	- 17									
21	- 18									
20	-19									

RIG: Bobcat DRILLER: GM LOGGED: JN CASING: HW to 4.9m; HQ to 4.9m

TYPE OF BORING: Solid flight auger (TC-bit) to 4.9m; NMLC-Coring to 14.0m WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

Gas sample
Piston sample
Tube sample (x mm dia.)
Water sample
Water seep
Water level A Auger sample B Bulk sample BLK Block sample Core drilling
Disturbed sample
Environmental sample



Cranbrook School CLIENT: Cranbrook School ECI PROJECT:

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.28 AHD **EASTING:** 338412.68 **NORTHING:** 6250794.55 **DIP/AZIMUTH:** 90°/--

BORE No: BH111 **PROJECT No:** 84944.01 **DATE:** 13/4/2017 SHEET 1 OF 1

			Description	.je		Sam		& In Situ Testing		Well
꿉	De (r	pth n)	of	Graphic Log	e e	oth	Sample	Results &	Water	Construction
	ζ.	,	Strata	ō	Туре	Depth	Sam	Results & Comments	>	Details
- 91	-	0.3	TOPSOIL - brown medium sand filling with trace red-brown clay and rootlets		_A/E_/	0.1 0.15				
	-	0.0	FILLING - dark brown medium sand filling (possibly natural)		_A/E_/	0.45 0.5				
-	- - - 1	0.8	FILLING - pale brown mottled dark brown, medium sand filling (possibly natural)		_A/E_/	1.0				_1
15	-					1.05				
-	-					4.0				
4	-2				_A/E_	1.9 2.0				-2
-	-	2.6	CAND and have and called an addition and are in							
[- - - 3		SAND - pale brown and yellow, medium sand, moist		_A/E_	2.9 3.0				-3
13	-	3.1	Bore discontinued at 3.1m - target depth reached							
2	-4 -									-4
	-									
	- - - 5									-5
-1-	-									
	-									
	-6 -									- - -
	-									
-	- - -7									7
-6	-									
-	-									
- 8	- 8 -									-8
-	-									
-	- - -9									9
- 4	-									
-	-									
L_										

LOGGED: AT **CASING:** Uncased **RIG:** DT100 DRILLER: SS

TYPE OF BORING: Auger to 3.1m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING & IN SIT	'U TESTING L	.EGE	ND
G Gas sampl	e	PID	Pho

A Auger sample
B Bulk sample
BLK Block sample
C Core drilling
D Disturbed sample
E Environmental sample Gas sample
Piston sample
Tube sample (x mm dia.)
Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.61 AHD **EASTING**: 338380.55 **NORTHING**: 6250730.19 **DIP/AZIMUTH**: 90°/--

BORE No: BH112 PROJECT No: 84944.01 DATE: 11/4/2017 SHEET 1 OF 1

П			Description	0		San	npling 8	& In Situ Testing		Well
R	De	pth	of	Graphic Log	a)				Water	Construction
	(n	n)	Strata	Gra	Туре	Depth	Sample	Results & Comments	>	Details
			TOPSOIL - dark brown, silty clay topsoil with rootlets, dry		ΑÆ	0.1	0)			
16		0.4	SAND - dark brown mottled yellow-brown, fine to medium grained sand, dry to moist (possibly filling)	() X) 	А	0.5			-	
	-1	1.0	SAND - yellow-brown mottled dark brown, fine to medium sand, dry to moist		ΑÆ	1.0				-1
15	0	2.0	1.5m: as above but yellow-brown		٨/٦	20				
	-2	2.0	Bore discontinued at 2.0m - target depth reached		-WE	 2.0				
14	2									
	-3									-3
13										
	-4									-4
12										
	-5									-5
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10										
	-7									7
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	-8									-8
- 8										
	-9									-9 -9

RIG: DT100 DRILLER: SS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 2.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING	& IN SITU	TESTING	LEGEND

A Auger sample
B Bulk sample
BLK Block sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 of IESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.22 AHD **EASTING:** 338402.54 **NORTHING:** 6250814

DIP/AZIMUTH: 90°/--

BORE No: BH113 **PROJECT No:** 84944.01 **DATE:** 13/4/2017 **SHEET** 1 OF 1

П			Description			Sam	ipling 8	& In Situ Testing		Well
R	Dep	oth	of	Graphic Log	0)				Water	Construction
ا ا	(m	۱)	Strata	Gra	Туре	Depth	Sample	Results & Comments	>	Details
9		0.2	FILLING - brown, medium grained sand filling (topsoil) with some red-brown clay, traces of rootlets		_A/E_/	0.1 0.15	S			
		0.7	FILLING - dark brown, medium sand filling		_A/E_/	0.5 0.55				
	1	0.7	FILLING - pale brown mottled dark brown, medium sand filling			1.0				[-1
15					_A/E_/	1.05				
4	2				A/E	1.95 2.0				-2
[-		2.3	SAND - pale brown and yellow, medium sand, moist							
[[3	3.0								
12	J	3.0	Bore discontinued at 3.0m - target depth reached		-A/E-	-3.0-				-
			- target deptir reacried							
F										
	4									-4
F										
	5									-5
=										
	6									-6
-2										
F										
[[7									-7
-6	•									
<u> </u>										
	8									-8
F										
F . F	9									<u>-</u> 9
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RIG: DT100 DRILLER: SS LOGGED: AT CASING: Uncased

TYPE OF BORING: Auger to 3.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

CAMPI INC	0 111	CITLI	TECTINO	LECEND
SAMPLING	ı & IN	2110	IESTING	LEGEND

A Auger sample
B Bulk sample
BLK Block sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 of IESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.40 AHD **EASTING**: 338395.64 **NORTHING**: 6250774.08

DIP/AZIMUTH: 90°/--

PROJECT No: 84944.01 **DATE:** 11/4/2017 **SHEET** 1 OF 1

BORE No: BH114

_		-			1			1		JILLI I OI I	
	Da	nth	Description	jë _				& In Situ Testing	ē	Well	
R	(n	pth n)	of	Graphic Log	Type	Depth	Sample	Results & Comments	Water	Construction	
			Strata	g	Þ	De	San	Comments		Details	
F		0.2	TOPSOIL - dark brown, fine to medium silty sand topsoil,	XX	A/E	0.1					
-9-		0.2	moist								
++			SAND - dark brown mottled-brown, fine to medium sand, moist (possibly filling)		ΑÆ	0.5					
ŧŧ										[
F	1				ΑÆ	1.0				<u>-</u> 1	
					}					-	
12					1					-	
E		1.8		<u> </u>	[[
<u> </u>	2	1.0	SAND - dark brown mottled yellow-brown, fine to medium sand with iron indurated pockets, moist		ΑÆ	2.0				-2	
			sand with non-indulated pockets, moist							-	
4										-	
E										[
1					1						
	3	3.0	Bore discontinued at 3.0m	1	-A/E-	-3.0-				+3	
[m]			- target depth reached							[
-											
										ļ	
F F	4									-4	
E										[
-2											
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RIG: Scout 2 DRILLER: JS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 3.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING	& IN SITU	TESTING	LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 U I ESTING
G Gas sample
P Piston sample
U Tube sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.43 AHD **EASTING:** 338384.73

NORTHING: 6250747.66 **DIP/AZIMUTH:** 90°/--

BORE No: BH115 PROJECT No: 84944.01 DATE: 11/4/2017 SHEET 1 OF 1

Depth (m) Depth (m) Depth (m) Depth (m) Depth (m) Depth (m) Depth (m) Of (m) Depth (m) Of (m) Depth (m) Of (m) Of (m) Depth (m) Of (m)	Construction Details
TOPSOIL - dark brown, fine to medium silty sand topsoil, A/E 0.1	Details
SAND - grey-brown fine to medium sand dry to moist	
SAND - grey-brown, fine to medium sand, dry to moist (possibly filling) 0.8m: as above but becoming dark brown and grey-brown	
[1 1 A/E 1.0	-1
SAND - pale grey, fine to medium sand, dry to moist	-
Bore discontinued at 2.0m	2
- target depth reached	
	-
	-3
	-4
	- - -5
	- -6
	-7
	-8
	ļ _
	-9 - -

RIG: DT100 DRILLER: SS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 2.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D D isturbed sample
E Environmental sample
W Water sample
W Water sample
W Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.45 AHD **EASTING**: 338357.98 **NORTHING**: 6250734.72

DIP/AZIMUTH: 90°/--

DATE: 11/4/2017 **SHEET** 1 OF 1

BORE No: BH116

PROJECT No: 84944.01

								11. 50 7		OHEET TOT T
	Da		Description	je r		San		& In Situ Testing	<u></u>	Well
집	De (n	ptn n)	of	Graphic Log	Type	Depth	Sample	Results & Comments	Water	Construction
	•		Strata	O	Ţ	<u>a</u>	San	Comments		Details
-		0.3	TOPSOIL - dark brown, fine to medium silty sand topsoil, dry to moist		ΑÆ	0.1				-
- 16	· ·	0.7	SAND - dark brown and yellow-brown, fine to medium sand, dry to moist (possibly filling)		ΑÆ	0.5				
	- - 1	0	SAND - dark grey, fine to medium sand, moist		A/E	1.0				-1 [
15	- 2		1.5m: as above but becoming pale grey		A/E	2.0				-2
-41	•	2.2	SAND - dark brown mottled brown, fine to medium sand, iron indurated, dry to moist							
	- 3	3.0		<u> </u>	-A/E-	-3.0-				
13		3.0	Bore discontinued at 3.0m - target depth reached		~L	3.0				
	- - - - 4									-4
-12	· · ·									
										_
-	- 5									-5 - -
-										
-	6									6
10										
-	-7									7
- - - -										
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-8										
	- 9									-9
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RIG: DT100 DRILLER: SS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 3.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
BLK Block sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 of IESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School Cranbrook School ECI PROJECT:

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.04 AHD **EASTING:** 338392.47 **NORTHING:** 6250837.21 **DIP/AZIMUTH:** 90°/--

BORE No: BH117 PROJECT No: 84944.01 **DATE:** 13/4/2017 SHEET 1 OF 1

	_		Description	:E_		Sam		& In Situ Testing		Well
R	De (n	ptn n)	of	Graphic Log	Туре	Depth	Sample	Results & Comments	Water	Construction
_9			Strata	0	F		Sar	Comments		Details
+		0.2	TOPSOIL - grey and dark brown, silty sand filling (topsoil), \traces of rootlets		_A/E_	0.1 0.15				
ŀ	-		FILLING - dark brown, medium sand filling		_A/E_	0.45 0.5				-
Ė	-					0.5				
15	- -1				A/E	0.95 1.0				-1
Ė	-									-
ŀ	-									
-	-									
-4	-2				A/E	1.95 2.0				-2
ŀ	-									
-	-	2.5	FILLING - pale grey and dark brown, medium sand filling							
-	- - -3				L.,	2.95				-3
13	- 3 - -	3.2	ONID I I I I I		AE	2.95 3.0				[-
ŀ			SAND - pale grey, brown and brown, medium sand (possibly filling)							
-										
-5	- -4	4.0	Bore discontinued at 4.0m							4
ŀ			- target depth reached							
-										
-	-									
-=	- 5 -									-5
-										
[-									
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-6	-6 -									-6 -
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LOGGED: AT **CASING:** Uncased RIG: Scout 2 DRILLER: JS

TYPE OF BORING: Auger to 4.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

Gas sample
Piston sample
Tube sample (x mm dia.)
Water sample
Water seep
Water level A Auger sample B Bulk sample BLK Block sample Core drilling
Disturbed sample
Environmental sample



CLIENT: Cranbrook School Cranbrook School ECI PROJECT:

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.14 AHD **EASTING:** 338382.59 **NORTHING:** 6250811.43 **DIP/AZIMUTH**: 90°/--

BORE No: BH118 **PROJECT No:** 84944.01 **DATE:** 13/4/2017 SHEET 1 OF 1

	_		Description	.je		Sam		& In Situ Testing		Well
R	Dep (m	oth i)	of	Graphic Log	Туре	Depth	Sample	Results & Comments	Water	Construction
H			Strata TOPSOIL grow brown medium silty cond (topsoil)	TVX			Sal	Comments		Details
16		0.2	Li doco di Todiloto, digarilo ododi		_A/E_/	0.1 0.15				
ŀ			FILLING - dark brown medium sand filling, traces of silt		_A/E_/	0.45 0.5				
		0.7	SAND - pale brown and yellow, medium sand, moist	T X X						
15	-1				A/E	0.95 1.0				-1 [
[]										
Ė	-2	1.8	SAND - pale brown and brown, medium sand, moist		A/E /	1.95 2.0				-2
-4						2.0				
-		2.5	Bore discontinued at 2.5m							
			- target depth reached							
13	-3									-3
Ė	-4									-4
17-										
-=	-5									-5
-	-6									-6
-2										
-6	-7									-7
Ė										
-										
	-8									-8
	-									[
	-9									- -9 -
-										

LOGGED: AT **CASING:** Uncased RIG: DT100 DRILLER: SS

TYPE OF BORING: Auger to 2.5m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

A Auger sample
B Bulk sample
BLK Block sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN SITU TESTING LEGEND

G Gas sample
P Piston sample (x mm dia.)
W Water sample (x mm dia.)
W Water seep
Water seep
Water seep
Water seep
Water seep
S Standard penetration test
V Shear vane (kPa)



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI
Cranbrook School ECI
Cranbrook School ECI
Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.38 AHD **EASTING:** 338353.07 **NORTHING:** 6250757.73 **DIP/AZIMUTH:** 90°/--

BORE No: BH119 **PROJECT No:** 84944.01 **DATE:** 10/4/2017 **SHEET** 1 OF 1

Depth (m) Depth (m) Depth (m) Description of Strata TOPSOIL - dark brown, fine to medium said, dry to moist (possibly filling) SAND - grey-brown, fine to medium sand, dry to moist 1.0m: as above but dark brown 1.5m: as above but dark grey Bore discontinued at 2.0m - target depth reached AE 1.0 AE 1.	Well	
TOPSOIL - dark brown, fine to medium silty sand topsoil, dry to moist SAND - gey-brown, fine to medium sand, dry to moist 1.0m: as above but dark brown 1.5m: as above but dark grey Bore discontinued at 2.0m - target depth reached 4 -4 -5 -5 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6		
SAND - grey-brown, fine to medium sand, dry to moist (possibly filling) SAND - yellow, fine to medium sand, dry to moist 1.0m: as above but dark brown 1.5m: as above but dark grey Bore discontinued at 2.0m - target depth reached 4 4 4 4 4 6 6 6 6 6 6 6		
SAND - yellow, fine to medium sand, dry to moist 1.0m: as above but dark brown 1.5m: as above but dark grey Bore discontinued at 2.0m - target depth reached 4 22 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		
1.0m: as above but dark brown 1.5m: as above but dark grey Bore discontinued at 2.0m - target depth reached 4 2 4 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		
1.5m: as above but grey-brown mottled yellow-brown 1.9m: as above but dark grey Bore discontinued at 2.0m - target depth reached		
1.9m: as above but dark grey Bore discontinued at 2.0m - target depth reached 4		
Bore discontinued at 2.0m - target depth reached		
- target depth reached - target depth reached - 4 - 4 - 4 - 5 - 5 - 5 - 5 - 6		

RIG: DT100 DRILLER: SS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 2.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING	& IN SITU	TESTING	LEGEND

A Auger sample
B Bulk sample
B Bulk Sample
C C Core drilling
D D isturbed sample
E Environmental sample

SAMPLING & IN SITU I ESTING L
G as sample
P Piston sample (x mm dia.)
W Water sample
W Water sample
W Water seep
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.70 AHD **EASTING**: 338333.04 **NORTHING**: 6250703.65

PROJECT No: 84944.01 **DATE:** 11/4/2017 **SHEET** 1 OF 1

BORE No: BH120

DIP/AZIMUTH: 90°/-- SHEET 1 OF 1

	Donath	Description	ji E				& In Situ Testing	_ h	Well
씸	Depth (m)	of Strata	Graphic Log	Type	Depth	Sample	Results & Comments	Water	Construction Details
F	-	TOPSOIL - dark brown, fine to medium silty sand topsoil,	XX	А	0.1	Š			Details
-	- 0.2 - -	dry to moist SAND - brown-yellow, fine to medium sand, dry to moist (possibly filling)		А	0.5				
16	0.7 - - -1	SAND - dark brown and yellow-brown, fine to medium sand, iron indurated, dry to moist		А	1.0				-1 -1
15	- - - -			Е	1.5				
	-2 2.0 - -	Bore discontinued at 2.0m - target depth reached	<u> 1231, 57</u>	-A/E-	-2.0-				2
-4	- - - -3								-3 -3
13	-								-4
-	-4 - - - -								-4 - - - -
-	- - - 5 -								-5 5
	- - - - - 6								-6 -1
	- - - - - - 7								-7 -7
- 6	- - - - - - - 8								-8
- 8	-								
	-9 - - - - -								-9
L	-								-

RIG: Scout 2 DRILLER: JS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 2.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING	& IN SITU	TESTING	LEGEND

A Auger sample G Gas sample I Bulk sample P Piston sample U, Tube sample (x mm dia.) I C C Core drilling W Water sample D Disturbed sample D Water seep E Environmental sample



Cranbrook School CLIENT: PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.11 AHD **EASTING:** 338357.75

NORTHING: 6250821.77 **DIP/AZIMUTH**: 90°/--

BORE No: BH121 **PROJECT No:** 84944.01 **DATE:** 12/4/2017

SHEET 1 OF 1

			Description	.je		Sam		& In Situ Testing		Well
RL) De	epth m)	of	Graphic Log	Туре	Depth	Sample	Results & Comments	Water	Construction
9			Strata TOPSOIL - dark brown, fine to medium silty sand topsoil,	1 VX	⊢ A/E	0.1	Sa	Comments		Details
-		0.2	∖dry to moist /		~-	0.1				<u> </u>
	-		FILLING - yellow-brown fine to medium sand filling, dry to moist		ΑÆ	0.5				
	- - - 1	0.75	SAND - yellow-brown and grey-brown mottled dark brown, fine to medium sand, dry to moist (possibly filling)	X X X	A/E	1.0				- - -
15	· '		ino to moduli ound, dry to most (poods), illing,		~-	1.0				[
-	-									
-	-									
14	-2 -	2.2			ΑÆ	2.0				-2
	-		SAND - yellow-brown, fine to medium sand, dry to moist							
	-									
13	- -3 -	3.0	Bore discontinued at 3.0m		-A/E-	-3.0-				3
	-		- target depth reached							
	-									
	- - -4									-4
12										
	- 									ļ _
1	-5 - -									-5
	-									
10	-6 -									-6
	-									
	-7									[-7
-	-									
										<u> </u>
	- - -8									- -8
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7	-9 -									-9 -
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	-									
	-									<u> </u>

LOGGED: RW **CASING:** Uncased **RIG:** DT100 DRILLER: SS

TYPE OF BORING: Auger to 3.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING & IN SITU TESTI	NG LEG	end
G Gas sample	PID	Pho

A Auger sample
B Bulk sample
BLK Block sample
C Core drilling
D Disturbed sample
E Environmental sample Gas sample
Piston sample
Tube sample (x mm dia.)
Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI
LOCATION: New South Hond Bond Bollow

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.22 AHD **EASTING**: 338349.17 **NORTHING**: 6250799.56 **DIP/AZIMUTH**: 90°/--

BORE No: BH122 PROJECT No: 84944.01 DATE: 11/4/2017 SHEET 1 OF 1

			Description	0		Sam	pling 8	& In Situ Testing		Well
귐	Dep	pth	of	aphic og	0				Water	Construction
ااا	(n	n)	Strata	Graphic Log	Type	Depth	Sample	Results & Comments	Š	Details
- 9			FILLING - dark brown, fine to medium silty sand filling, dry to moist		A/E	0.1	S			
		0.3	SAND - dark brown mottled grey, fine to medium sand, dry to moist (possibly filling)		ΑÆ	0.5				
	-1	1.2			ΑÆ	1.0				1
-			SAND - yellow-brown, fine to medium sand, dry to moist							
-					–					
-4	-2	2.0	Bore discontinued at 2.0m - target depth reached		-AVE	-2.0-				
13	-3									3
	-4									4
	-5									- - -5
=======================================										
	- -6									-6
-2										
										<u> </u>
6	. /									
-	8									8
	9									9
-										

RIG: DT100 DRILLER: SS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 2.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 U I ESTING
G Gas sample
P Piston sample
U Tube sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.31 AHD **EASTING**: 338341.92 **NORTHING**: 6250774.57

DIP/AZIMUTH: 90°/--

DATE: 11/4/2017 **SHEET** 1 OF 1

BORE No: BH123

PROJECT No: 84944.01

	_		Description	je _		Sam		& In Situ Testing	_	Well
씸	De _l (n	ptn n)	of	Graphic Log	Type	Depth	Sample	Results & Comments	Water	Construction
			Strata				Sal	Comments		Details
-9		0.2	TOPSOIL - dark brown, fine to medium silty sand topsoil, dry to moist	1/1/	ΑÆ	0.1				
-		0.7	SAND - grey-brown, fine to medium sand, dry to moist (possibly filling)		ΑÆ	0.5				
		0.7	SAND - dark brown, fine to medium sand, iron indurated,							
Ė	-1		dry to moist		ΑÆ	1.0				-1 [
15										
Ė		1.5	SAND - yellow-brown, fine to medium sand, dry to moist							
Ė	-2	2.0	Bore discontinued at 2.0m		-A/E-	-2.0-				-2
-4			- target depth reached							-
	-3									-3
-5										
F	- 4									-4
										-
-2										
										-
ŧ	- 5									-5
==										
E	-6									-6
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	-7									[-7
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	-8									[-8
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	-9									-9
										[
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										<u> </u>

RIG: DT100 DRILLER: SS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 2.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
BLK Block sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 of IESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.51 AHD EASTING: 338327.48 NORTHING: 6250748.48 DIP/AZIMUTH: 90°/--

BORE No: BH124 PROJECT No: 84944.01 DATE: 10/4/2017 SHEET 1 OF 1

			Description	jc _		Sam		& In Situ Testing		Well
꿉	D (epth (m)	of	Graphic Log	Туре	Depth	Sample	Results & Comments	Water	Construction
_	_		Strata TOPSOIL - dark brown, fine to medium silty sand topsoil,	1XX	A	0.1	Sa	Commente	+	Details -
-		0.3	dry to moist		1					
-9		0.75	SAND - grey-brown, fine to medium sand, dry to moist (possible filling)		A/E	0.5				
-	-1	0.75	SAND - grey-brown mottled yellow-brown, fine to medium sand with occasional dark brown pockets of iron indurated sand, dry to moist		A	1.0				- -1
-	-		sand, dry to moist		}					-
-15	-									
-		0.0]					
-	-2	2.0	Bore discontinued at 2.0m - target depth reached		-A/E-	-2.0-				
- 4			tai got copa i i casillos							
[
-	-3									-3
- 2	-									-
-	-									-
-	4									-4
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-	[
[-5									- -5
-										
-=	-									
-	-6									-6
-										
-2	-									
-	-									-7
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-6										
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Ė	-8									-8
	-									
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F	ŀ									<u> </u>

RIG: DT100 DRILLER: SS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 2.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING	& IN SITU	TESTING	LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D D isturbed sample
E Environmental sample
W Water sample
W Water sample
W Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.50 AHD **EASTING**: 338319.11 **NORTHING**: 6250727.97

DIP/AZIMUTH: 90°/--

BORE No: BH125 PROJECT No: 84944.01 DATE: 10/4/2017 SHEET 1 OF 1

	D	-41-	Description	ji _		Sam		& In Situ Testing	<u>_</u>	Well
RL	De _l	ptn n)	of Other	Graphic Log	Type	Depth	Sample	Results & Comments	Water	Construction
H	-		Strata TOPSOIL - dark brown, fine to medium silty sand topsoil,	XX	A	0.1	Sa		+	Details -
	-	0.2	`\dry to moist	<i>// // /</i>						
16	-	0.7	SAND - dark brown and grey-brown, fine to medium sand, dry to moist (possibly filling)		Α	0.5				
	- - - 1		SAND - grey mottled yellow-brown, fine to medium sand, dry to moist		A/E	1.0				-1
	-		1.2m: as above but yellow-brown mottled brown							
15	-									
	-									
	-2 -	2.0	Bore discontinued at 2.0m - target depth reached		-A/E-	-2.0-				
-4	-		- target departeached							
	-3									-3
3	-									
Ĺ	-									
	- - 4									-4
	-									-
12	-									-
	- - -5									-5
	-									
1	-									
	-									
	-6 - -									-6 -
10										
-	-									
	-7 -									-7 [
- 6	-									
	-									
	- - 8 -									-8
	-									
-8	-									
	- - -9									- -9
	-									
-	-									
	-								1	

RIG: DT100 DRILLER: SS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 2.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 U I ESTING
G Gas sample
P Piston sample
U Tube sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.10 AHD **EASTING:** 338357.72 **NORTHING:** 6250849.98 **DIP/AZIMUTH:** 90°/--

BORE No: BH126 PROJECT No: 84944.01 DATE: 12/4/2017 SHEET 1 OF 1

			Description	.je		Sam		& In Situ Testing	_	Well
R	e (ı	epth m)	of	Graphic Log	Туре	Depth	Sample	Results & Comments	Water	Construction
L			Strata	U			Sar	Comments		Details
-9	-	0.3	TOPSOIL - dark brown, fine to medium silty sand topsoil, trace gravel, dry to moist		ΑÆ	0.1				
-	-	0.3	FILLING - yellow brown, fine to medium sand filling, dry to moist		ΑÆ	0.5				
15	- - - 1				A/E	1.0				1
-	-		1.3m: as above but grey-brown							
- 4	- - - 2				ΑÆ	2.0				2
-	- - -		2.4m: as above but becoming grey-brown and dark brown							-
[- - - 3				ΑÆ	3.0				-3
- 13	-	3.4	SAND - yellow-brown, fine to medium sand, moist							
-	-									
12	- 4 -	4.0	Bore discontinued at 4.0m - target depth reached	<u> </u>	<u>—</u> А—	4.0				4
	- - -		• •							
	- - - 5 -									-5 [
-	- - -									
. 0	- - - 6									6
- - -	- - -									-
-	- - - - 7									7
-6 -										
-	-									
	- 8 - -									-8
-	-									
-	- -9 -									9
<u>-</u>	-									
-										

RIG: DT100 DRILLER: SS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 4.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
BLK Block sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 of IESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.07 AHD EASTING: 338330.67 NORTHING: 6250807.63 DIP/AZIMUTH: 90°/--

BORE No: BH127 PROJECT No: 84944.01 DATE: 11/4/2017 SHEET 1 OF 1

Г	_		Description	jc _		Sam		& In Situ Testing	<u></u>	Well
R	De (r	epth m)	of Strata	Graphic Log	Туре	Depth	Sample	Results & Comments	Water	Construction Details
-19	-		TOPSOIL - dark brown, fine to medium silty sand topsoil, dry to moist	M	ΑÆ	0.1	S			-
	-	0.3	SAND - dark brown mottled yellow-brown, fine to medium sand with iron indurated pockets, dry to moist (possibly filling)		ΑÆ	0.5				-
- 22	-1	1.0	9)		ΑÆ	1.0				-1 -1
ŀ		1.2	SAND - yellow-brown, fine to medium sand, moist							
ŀ		2.0			,,_	0.0				
14	-2	2.0	Bore discontinued at 2.0m - target depth reached		-AE-	-2.0-				
-										
13-	-3 -									-3
ŀ	-									-
1-2-	-4									-4
ŀ										
ŀ	-5									-5
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-6	-6									6
-										
	-7									7
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	-8 -									-8 - -
E	-									
-	-9									9
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ŧ	-									

RIG: DT100 DRILLER: SS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 2.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

	SAMPLING	& IN SITU	TESTING	LEGEND
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A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D D isturbed sample
E Environmental sample
W Water sample
W Water sample
W Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 15.95 AHD **EASTING**: 338327.14 **NORTHING**: 6250830.2

DIP/AZIMUTH: 90°/--

BORE No: BH128 PROJECT No: 84944.01 DATE: 12/4/2017 SHEET 1 OF 1

_		Description	ji _		San		& In Situ Testing	_	Well
(n	ptn n)	of Strata	Grapt	Type)epth	ample	Results & Comments	Wate	Construction Details
	\dashv	TOPSOIL - dark brown, fine to medium silty sand topsoil,	XX.	A/E	0.1	Š			Details
	0.3	moist FILLING - yellow-brown mottled dark brown, fine to medium sand filling, dry to moist		ΑÆ	0.5				
- 1				ΑÆ	1.0				-1
-2	1.4	SAND - mottled yellow-brown, dark brown and grey-brown, fine to medium sand, dry to moist (possibly filling)		A/E	2.0				
	2.2	SAND - yellow-brown, fine to medium grained sand, dry to moist							
-3	3.0	Bore discontinued at 3.0m - target depth reached	<u> </u>	-A/E-	-3.0-			-	3
-4									-4
-5									-5 -5
-6									-6
-7									7
-8									-8
-9									-9
-									
	-1 -2 -3 -4 -5 -6	1 1.4- 2 2.2- 3 3.0- 4 5	Depth (m) Strata TOPSOIL - dark brown, fine to medium silty sand topsoil, moist FILLING - yellow-brown mottled dark brown, fine to medium sand filling, dry to moist SAND - mottled yellow-brown, dark brown and grey-brown, fine to medium sand, dry to moist (possibly filling) SAND - yellow-brown, fine to medium grained sand, dry to moist Bore discontinued at 3.0m - target depth reached Bore discontinued at 3.0m - target depth reached	Depth (m) Strata TOPSOIL - dark brown, fine to medium silty sand topsoil, moist FILLING - yellow-brown mottled dark brown, fine to medium sand filling, dry to moist SAND - mottled yellow-brown, dark brown and grey-brown, fine to medium sand, dry to moist (possibly filling) SAND - yellow-brown, fine to medium grained sand, dry to moist SAND - yellow-brown, fine to medium grained sand, dry to moist Bore discontinued at 3.0m - target depth reached	TOPSOIL - dark brown, fine to medium silty sand topsoil, moist FILLING - yellow-brown mottled dark brown, fine to medium sand filling, dry to moist A/E A/E 1.4 SAND - mottled yellow-brown, dark brown and grey-brown, fine to medium sand, dry to moist (possibly filling) 2.2 SAND - yellow-brown, fine to medium grained sand, dry to moist Bore discontinued at 3.0m - target depth reached A/E 4. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6.	Depth (m) Strata TOPSOIL - dark brown, fine to medium silty sand topsoil, moist FILLING - yellow-brown mottled dark brown, fine to medium sand filling, dry to moist A/E 0.5 A/E 0.5 A/E 1.0 A/E 1.0 A/E 2.0 SAND - mottled yellow-brown, dark brown and grey-brown, fine to medium sand, dry to moist (possibly filling) Bore discontinued at 3.0m - target depth reached A/E 3.0— A/E	Depth (m) Strata TOPSOIL - dark brown, fine to medium silty sand topsoil, moist FILLING - yellow-brown mottled dark brown, fine to medium sand filling, dry to moist SAND - mottled yellow-brown, dark brown and grey-brown, fine to medium sand, dry to moist (possibly filling) SAND - yellow-brown, fine to medium grained sand, dry to moist Bore discontinued at 3.0m - target depth reached A/E 3.0	TOPSOIL - dark brown, fine to medium silty sand topsoil, moist TOPSOIL - dark brown, fine to medium silty sand topsoil, moist FILLING - yellow-brown mottled dark brown, fine to medium sand filling, dry to moist SAND - mottled yellow-brown, dark brown and grey-brown, fine to medium sand, dry to moist (possibly filling) SAND - yellow-brown, fine to medium grained sand, dry to moist SAND - yellow-brown, fine to medium grained sand, dry to moist A/E 2.0 SAND - yellow-brown, fine to medium grained sand, dry to moist A/E 3.0 A/E 3.0 A/E 3.0 A/E 3.0	Depth (m) of Strata

RIG: DT100 DRILLER: SS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 3.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING	& IN SITU	TESTING	LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 U I ESTING
G Gas sample
P Piston sample
U Tube sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI
LOCATION: New South Head Boad Rollow

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.35 AHD EASTING: 338293.77 NORTHING: 6250744.3 DIP/AZIMUTH: 90°/--

BORE No: BH129 **PROJECT No:** 84944.01 **DATE:** 10/4/2017 **SHEET** 1 OF 1

	D-	41-	Description	jic _		San		& In Situ Testing		Well
RL	(r	pth n)	of Strata	Graphic Log	Type	Depth	Sample	Results & Comments	Water	Construction Details
			TOPSOIL - dark brown, fine to medium silty sand topsoil, dry to moist	M	A/E	0.1	S			
16		0.3	SAND - grey-dark brown, fine to medium sand, dry to moist (possibly filling)		A/E	0.5				
	- 1	1.2			A/E	1.0				-1
15		1.2	SAND - mottled grey-brown and yellow-brown sand with pockets of iron induration, moist							
	-2				ΑÆ	2.0				-2
4			2 Francis above but are unbarre							
	-3		2.5m: as above but grey-brown		A	3.0				-3
13		3.5								
			SAND - yellow-brown, fine to medium sand with clay, wet 3.9m: as above but pale-grey			4.0				
12	-4	4.0	Bore discontinued at 4.0m - target depth reached		 A	 4.0				-
	- 5									-5 - - -
	-6									-6
9										
	7									7
6										
	8									-8
- 8										
	9									-9
-										

RIG: DT100 DRILLER: SS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 4.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
BLK Block sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 of IESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Cranbrook School ECI

LOCATION: New South Head Road, Bellevue Hill

SURFACE LEVEL: 16.44 AHD **EASTING**: 338282.32

NORTHING: 6250716.51 **DIP/AZIMUTH:** 90°/--

BORE No: BH130 PROJECT No: 84944.01 DATE: 10/4/2017 SHEET 1 OF 1

			Description	. <u>으</u>		Sam		& In Situ Testing	L	Well
씸	De (r	pth n)	of	Graphic Log	Туре	Depth	Sample	Results & Comments	Water	Construction
	`		Strata	G	Ž	Del	San	Comments		Details
F		0.2	TOPSOIL - dark brown, fine to medium silty sand topsoil, dry to moist	<i>YY</i> ,	A/E	0.1				
16	-		SAND - yellow-brown mottled dark brown, fine to medium sand, dry to moist (possible filling)		А	0.5				
[-1		1.0m: as above but dark brown		ΑÆ	1.0				-1 -1
15		1.3	SAND - yellow-brown and grey-brown, fine to medium sand with clay, wet							
F			sand with clay, wet							
F	-2	2.0	Bore discontinued at 2.0m	<u> </u>	-A/E-	-2.0-				2
-4-			- target depth reached							
F										
F	-3									-3
ر ا										-
ŧ	-4									-4
ŧ	-									
12	-									
ŧ	-5									-5
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ŧ	-6									-6
- <u>6</u>	-									
F										
F	-7									-7
E										
E										-
E	-8									- -8
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RIG: DT100 DRILLER: SS LOGGED: RW CASING: Uncased

TYPE OF BORING: Auger to 2.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

	SAMPLING	& IN SITU	TESTING	LEGEND
--	----------	-----------	----------------	--------

A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D D isturbed sample
E Environmental sample
W Water sample
W Water sample
W Water level



CLIENT: Cranbrook School
PROJECT: Stage 1 Development

LOCATION: Victoria Road, Bellevue Hill

SURFACE LEVEL: 16.10 AHD

EASTING: NORTHING: DIP/AZIMUTH: 90°/-- BORE No: 2

PROJECT No: 84944 **DATE:** 7/7/2015 **SHEET** 1 OF 2

		Description	Degree of Weathering	. <u>o</u>	Rock Strength	Fracture	Discontinuities	S	ampling & I	n Situ Testing
씸	Depth (m)	of	auromig	Log	Strength Nedium High Very High Stringh Water Water	Spacing (m)	B - Bedding J - Joint	Туре	Core Rec. % RQD %	Test Results &
		Strata	EW MW SW FS	Ŋ	Ex Low Very Lov Low Medium High Very High Ex High	0.00	S - Shear F - Fault	Ţ	Rec C	Comments
15 16	0.15	TOPSOIL - dark brown, silty sand topsoil with trace rootlets, damp FILLING - poorly compacted, dark brown and light grey-brown mottled, silty sand, damp						<u>E</u> S		1,0,1 N = 1
14	2							E		0,0,1
13	-3							S E		0,0,1 N = 1
12	4.85	CAND light calley begun madium						S S	-	1,1,1 N = 2
- = -	5	SAND - light yellow-brown, medium grained sand, damp						E		
-2-	6									
- 6										
7	-8									

RIG: Bobcat DRILLER: SY LOGGED: MP/SI CASING: HQ to 9.5m

TYPE OF BORING: Solid flight auger to 9.5m; Rotary to 11.25m; NMLC-Coring to 14.3m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
BLK Block sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 of IESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School PROJECT: Stage 1 Development Victoria Road, Bellevue Hill LOCATION:

SURFACE LEVEL: 16.10 AHD **EASTING:** NORTHING:

BORE No: 2 **PROJECT No: 84944 DATE:** 7/7/2015 SHEET 2 OF 2

NONTHING.	
DIP/AZIMUTH:	90°/

		Description	Degree of Weathering	ပ	Rock Strength	Fracture	Discontinuities	Sa	amplii	ng & I	n Situ Testing
귒	Depth	of	vveauleilig	Graphic Log	Strength High High High High High High High Hig	Spacing (m)	B - Bedding J - Joint	ψ.	% e.		Test Results
	(m)	Strata	H HW EW SW RE	يقا	Ex Low Very Low Low Medium High Very High Ex High Wate	0.05 (111)	S - Shear F - Fault	Туре	Se Co	RQD %	& Comments
9 -	10.85	SAND - light yellow-brown, medium grained sand, damp <i>(continued)</i>					Note: Unless otherwise stated, rock is fractured along rough planar bedding dipping 0°- 10°				Gommento
2	11	SILTY CLAY - light grey, silty clay									
4	11.25 - 12	SANDSTONE - medium and medium to high strength, moderately weathered then fresh, slightly fractured and unbroken, red-brown then light grey-brown, medium grained sandstone with some very low strength bands					40.04.40.07				PL(A) = 0.5
	13						12.34-12.37m: Cs 12.58-12.60m: fg	С	100	86	PL(A) = 0.7
2	14 14.3	13.85-14.15m: very low strength siltstone bands					13.83m: J65°, un, ro, cly 14.1m: B5°, cly co 14.15m: J30°, pl, sm, cly,				PL(A) = 1.2 PL(A) = 0.4
		Bore discontinued at 14.3m									
	15										
-0-	16										
	17										
	18										
ကို -	19										

CASING: HQ to 9.5m RIG: Bobcat DRILLER: SY LOGGED: MP/SI

TYPE OF BORING: Solid flight auger to 9.5m; Rotary to 11.25m; NMLC-Coring to 14.3m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
BLK Block sample
C Core drilling
D Disturbed sample
E Environmental sample Gas sample
Piston sample
Tube sample (x mm dia.)
Water sample
Water seep
Water level



CLIENT: Cranbrook School PROJECT:

Stage 1 Development LOCATION: Victoria Road, Bellevue Hill SURFACE LEVEL: 16.35 AHD

EASTING: PROJECT No: 84944 NORTHING: DATE: 3/7/2015 SHEET 1 OF 3

BORE No: 4

NORTHING.	
DIP/AZIMUTH:	90°/

		Description	Degree of Weathering	Rock Strength	Fracture	Discontinuities			n Situ Testing
귐	Depth (m)	of	Weathering Did E	Nat I I I I	Spacing (m) 0501	B - Bedding J - Joint	Type	Rec. % RQD %	Test Results &
\sqcup		Strata TOPSOIL - dark brown, silty sand	WH H W W T H	Kery Very Very Very Very Very Very Very V	0.00	S - Shear F - Fault	F 0	R R	Comments
16	0.6	topsoil with trace rootlets, damp					E		
		FILLING - dark brown and grey-brown, silty sand filling, damp							2.22
15 1	2	hecoming slightly silty and					S		2,2,3 N = 5
45		- becoming slightly silty and yellow-brown mottled below 2.0m					S		3,4,4 N = 8
13	3								
12	4	4.0-4.5m: trace organic material					S		1,2,3 N = 5
	4.5 - 5	SILTY SAND - brown and brown-grey, fine to medium grained sand, damp							
10 10	6								
6		SAND - yellow-brown, medium grained sand, damp							
-8	9								

LOGGED: MP/SI CASING: HW to 11.5m RIG: Bobcat DRILLER: SY

TYPE OF BORING: Solid flight auger to 9.5m; Rotary to 18.0m; NMLC-Coring to 21.1m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
BLK Block sample
C Core drilling
D Disturbed sample
E Environmental sample Gas sample
Piston sample
Tube sample (x mm dia.)
Water sample
Water seep
Water level



CLIENT: Cranbrook School PROJECT:

Stage 1 Development LOCATION: Victoria Road, Bellevue Hill SURFACE LEVEL: 16.35 AHD

EASTING: PROJECT No: 84944 **NORTHING: DATE:** 3/7/2015

DIP/AZIMUTH: 90°/--SHEET 2 OF 3

BORE No: 4

		Description	Degree of Weathering	. <u>o</u>	Rock Strength	Fracture	Discontinuities	Sa	ampling	& In Situ Testing
귐	Depth (m)	of	, vocationing	iraph Log	Ex Low Very Low Low Medium High Ex High Ex High	Spacing (m)	B - Bedding J - Joint	Туре	Core Rec. %	Test Results &
Ц		Strata	MW HEW SW FS		EX LOW Medi High Very Very EX H	0.00	S - Shear F - Fault	F	O S K	Comments
9	- - - - - - - - -	SAND - yellow-brown, medium grained sand, damp (continued)								
4	-12 12									
3-	- -13 - - - - - -									
2	- -14 - - - - -									
-	- -15 - - - -									
0	- -16 - - - -									
-	- 16.8 - 17 - 17 	SILTY CLAY - light grey, silty clay					Note: Unless otherwise stated, rock is fractured along rough planar bedding dipping 0°- 10°			
-2	-18 18.04	light grey-brown, fine to medium grained sandstone SANDSTONE - low and medium strength, highly to moderately then slightly weathered, slightly fractured, red-brown then light brown, medium grained sandstone with some very					18.27 & 18.46m: B (x2) 5°- 10°, cly vn, ti	С	100 9	PL(A) = 0.5
	- - - - - -	low strength bands					19.2m: B10°, fe, cly 19.5-19.55m: Cs			PL(A) = 0.2

LOGGED: MP/SI CASING: HW to 11.5m DRILLER: SY

TYPE OF BORING: Solid flight auger to 9.5m; Rotary to 18.0m; NMLC-Coring to 21.1m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS:

	SAMPLING	& IN SITU	TESTING	LEGE	ND
Auger sample	G	Gas sample		PID	Pho

A Auger sample
B Bulk sample
BLK Block sample
C Core drilling
D Disturbed sample
E Environmental sample Gas sample
Piston sample
Tube sample (x mm dia.)
Water sample
Water seep
Water level



CLIENT: Cranbrook School **PROJECT:** Stage 1 Development

LOCATION: Victoria Road, Bellevue Hill

SURFACE LEVEL: 16.35 AHD

EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 4

PROJECT No: 84944 **DATE:** 3/7/2015 **SHEET** 3 OF 3

		Description	Degree Weather	of ing .º		Rock Strength 5	Fracture	Discontinuities			n Situ Testing	
귒	Depth (m)	of	VVCatricii	aphila	핡	Ex Low Very Low Low High High Ex High Ex High Strater	Spacing (m)	B - Bedding J - Joint	g	Core Rec. %	۵ ۵	Test Results
	(111)	Strata	MH M S	ر قرا	_	Ex Low Very Low Mediul Very High) 0.00 0.10 0.50 0.50 0.10	S - Shear F - Fault	Туре	28	S.	& Comments
4	· 21 21.1 ·	SANDSTONE - low and medium strength, highly to moderately then slightly weathered, slightly fractured, red-brown then light brown, medium grained sandstone with some very low strength bands (continued) Bore discontinued at 21.1m						20.2m: B10°, cly vn, ti 20.45m: J70°, pl, ro, fe, cly 20.82m: B0°, cly	С	100		PL(A) = 0.5 PL(A) = 0.4
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14				i		iiiiii						
F F				i		iiiiii						
<u> </u>	-29			İ								
-13				İ								
F F							 					
 												

RIG: Bobcat DRILLER: SY LOGGED: MP/SI CASING: HW to 11.5m

TYPE OF BORING: Solid flight auger to 9.5m; Rotary to 18.0m; NMLC-Coring to 21.1m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
BLK Block sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 of IESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Stage 1 Development
LOCATION: Victoria Road, Bellevue Hill

SURFACE LEVEL: 32.4 AHD EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 10 **PROJECT No:** 84944 **DATE:** 6/7/2015 **SHEET** 1 OF 3

		Description	Degree of Weathering	Rock Strength	Fracture	Discontinuities		g & In Situ Testing
씸	Depth (m)	of	Lapping Laboratory	Ex Low Very Low Medium High Very High Ex High Water	Spacing (m)	B - Bedding J - Joint	Type Core Rec. %	Test Results &
		Strata	MW HW SW SW SW SW SW SW SW SW SW SW SW SW SW	Ex Low Medin Medin Very Very Very Very Very Very Very Very	0.05 0.10 0.50 1.00	S - Shear F - Fault	Rec 1	Comments
	0.05	CONCRETE SLAB		X				
32	0.55	FILLING - dark brown, silty sand, medium to coarse grained sand, damp						
	: -1	FILLING - light grey, medium grained sand with trace of silt, damp					E	
_							s	3,3,3 N = 6
	1.95	SAND - vellow-brown, medium					E	
30		SAND - yellow-brown, medium grained sand with a trace of silt, damp						
	· ·	- loose					s	6,8,11*
	-3							refusal
29	· ·							
	3.5	- medium dense below about 3.5m						
	- -4							7040
28	· ·						S	7,9,12 N = 21
	- -5							
27								
	· ·						s	9,12,14 N = 26
	-6							
26	· ·							
	-7		i i i i i i. i i i i i i i:				s	8,13,16 N = 29
25								14 = 29
	-8 8.0 - -	- dense below about 8.0m						
24							S	13,20,20/100mm
	-9							refusal
ε,								
2								
	10.0							

RIG: Bobcat DRILLER: SY LOGGED: MP/SI CASING: HW to 8.5m; HQ to 17.5m

TYPE OF BORING: Solid flight auger to 8.5m; Rotary to 20.3m; NMLC-Coring to 22.18m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: *SPT pushed 0.5m in collapsed sand prior to SPT. Numbers higher than realistic

SAMPLING & IN SITU TESTING LEGEND

A Auger sample G G Gas sample
B Bulk sample P P Piston sample (x mm dia.)
BLK Block sample U, Tube sample (x mm dia.)
C Core drilling W Water sample (properties)
D Disturbed sample D Water seep S Standard penetroin test (kPa)
E Environmental sample ▼ Water level V Shear vane (kPa)



CLIENT: Cranbrook School
PROJECT: Stage 1 Development
LOCATION: Victoria Road, Bellevue Hill

SURFACE LEVEL: 32.4 AHD EASTING: NORTHING: DIP/AZIMUTH: 90°/--

BORE No: 10 **PROJECT No:** 84944 **DATE:** 6/7/2015 **SHEET** 2 OF 3

		Description Degree of Weathering		Description of Strata Degree of Weathering Strength Strength Strength Strength Strength Strength Strength Strength Strength Strength Strength Strength Strength Strength Strength Strength Space (m		Fracture	Discontinuities	Sampling & In Situ Testing				
씸	Depth (m)	of	vvcau ici ii ig	raphi Log	Ex Low Very Low Medium High Kyery High Ex High Ex High Stranger St	Spacing (m)	B - Bedding J - Joint					
	(111)	Strata	MW HW SW FS FS FS	<u>ნ</u>	Ex Lov Very L Mediu Mediu Very F Ex High	0.00 0.00 0.10 0.50 0.50 0.50 0.50 0.50	S - Shear F - Fault	Туре	Core Rec. % RQD %	& Comments		
		SAND - yellow-brown, medium grained sand with a trace of silt,						s		12,26/150mm refusal		
22	:	damp							1	reiusai		
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	-11											
21						 						
Ė	·									13,24,24 N = 48		
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13						1 11 11	Note: Unless otherwise stated, rock is fractured					
	19.8					 	along rough planar bedding dipping 0°- 10°					
Ш	-											

RIG: Bobcat DRILLER: SY LOGGED: MP/SI CASING: HW to 8.5m; HQ to 17.5m

TYPE OF BORING: Solid flight auger to 8.5m; Rotary to 20.3m; NMLC-Coring to 22.18m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: *SPT pushed 0.5m in collapsed sand prior to SPT. Numbers higher than realistic

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 U I ESTING
G Gas sample
P Piston sample
U Tube sample (x mm dia.)
W Water sample
Water seep
Water level



CLIENT: Cranbrook School
PROJECT: Stage 1 Development
LOCATION: Victoria Road, Bellevue Hill

SURFACE LEVEL: 32.4 AHD EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 10 **PROJECT No:** 84944 **DATE:** 6/7/2015 **SHEET** 3 OF 3

		Description	Degree of Weathering A € € % & £ £	. <u>ö</u>	Rock Strength	_	Fracture	Discontinuities	Sa	ampli	ng & I	n Situ Testing
귐	Depth (m)	of		Srapt Log	Strength Very Low High Kx High Ex High Kx High	Wate	Spacing (m)	B - Bedding J - Joint	Type	ore c. %	RQD %	Test Results &
Ц		Strata	M M M M M M M M M M M M M M M M M M M		Ex L Ned High Ex H	0.0	0.05	S - Shear F - Fault	Ę.	S S	α -	Comments
	00.0	SILTY CLAY - light grey and red-brown, silty clay with trace		//	∤ ¦ ¦ ¦ ¦ ¦	l						
12	20.3	ironstone bands (continued)						20.40.20.6m; D.(v2).0°				PL(A) = 0.2
;		SANDSTONE - low and very low strength, highly to moderately then slightly weathered, slightly fractured,				į		20.48-20.6m: B (x3) 0°- 10°, fe, cly co				
[[-21	light grey-brown, medium to coarse				i		20.86m: B0°, cly				
ĖĖ		grained sandstone						21.18m: B5°, fe	С	100	80	PL(A) = 0.2
==						į						1 L(A) - 0.2
ĒĒ						į		21.55m: B10°, fe, cly				
;	-22							21.93-22.18m: J80°, pl,				PL(A) = 0.1
E	22.18	Bore discontinued at 22.18m	 		1 	+	- 	ro, cly inf				(,, , ,
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RIG: Bobcat DRILLER: SY LOGGED: MP/SI CASING: HW to 8.5m; HQ to 17.5m

TYPE OF BORING: Solid flight auger to 8.5m; Rotary to 20.3m; NMLC-Coring to 22.18m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: *SPT pushed 0.5m in collapsed sand prior to SPT. Numbers higher than realistic

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN S11 D LESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
Water seep
Water level



Appendix E	:
Laboratory Test Results	}



Table E1: Contaminant Concentrations in Filling

Sample/	В	т	E	X	F1	F2	+PAH	B.TEQ	+OCP	+PCB	Phenol	Asbestos	As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	рН	EC
Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	(Y/N)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	units	dS/m
Filling (2015)		•															1	•				
BH2/1.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	41	<0.4	3	5	3	<0.1	<1	36	6.3	0.021
BH2/2.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	< 5	N	<4	<0.4	2	1	3	<0.1	<1	3	6.5	0.013
BH2/3.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	< 5	N	<4	<0.4	1	<1	1	<0.1	<1	1	6.5	0.013
BH2/4.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	< 5	N	<4	<0.4	2	<1	1	<0.1	<1	<1	5.8	0.014
BH4/1.0	<0.2	<0.5	<1	<3	<25	<50	5.8	<0.5	NIL	NIL	<5	N	<4	<0.4	2	2	5	<0.1	<1	3	6.3	0.014
BH4/2.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	1	1	9	<0.1	<1	3	6.1	0.012
BH4/3.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	1	<1	4	<0.1	<1	2	6.0	0.011
BH4/4.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	2	1	14	<0.1	<1	4	6.2	0.014
BH10/1.0	<0.2	<0.5	<1	<3	<25	<50	29	2.3	NIL	NIL	<5	N	<4	<0.4	2	22	10	<0.1	1	10	9.9	0.087
Filling (2017)																						
BH101/0.5	<0.2	<0.5	<1	<3	<25	<50	3.0	<0.5	NIL	NIL	<5	N	6	<0.4	2	18	22	<0.1	1	12	6.4	0.022
BH102/0.5	<0.2	<0.5	<1	<3	<25	<50	1.2	<0.5	NIL	NIL	<5	N	11	<0.4	7	18	28	0.3	3	24	6.2	0.027
BH103/0.1	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	42	15	14	<0.1	21	24	5.3	0.200
BH111/0.45-0.5	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	<1	<1	1	<0.1	<1	1	6.3	0.012
BH113/1.0-1.05	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	41	<0.4	1	2	2	<0.1	<1	4	6.1	0.012
BH115/0.1	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	14	<0.4	5	5	6	<0.1	3	16	6.1	0.032
BH117/1.95-2.0	<0.2	<0.5	<1	<3	<25	<50	0.2	<0.5	NIL	NIL	<5	N	<4	<0.4	1	3	7	<0.1	<1	6	6.1	0.014
BH118/0.1-0.15	<0.2	<0.5	<1	<3	<25	<50	0.78	<0.5	NIL	NIL	<5	N	5	<0.4	4	5	11	0.2	2	9	5.8	0.027
BH124/0.1	<0.2	<0.5	<1	<3	<25	<50	0.59	<0.5	NIL	NIL	<5	N	5	<0.4	4	5	12	0.2	2	13	6.2	0.028
BH126/2.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	<1	1	2	<0.1	<1	3	6.4	0.008
BH128/1.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	1	2	1	<0.1	<1	5	6.2	0.011
BH130/0.1	<0.2	<0.5	<1	<3	<25	<50	2.3	<0.5	NIL	NIL	<5	N	19	0.5	9	19	50	<0.1	4	42	5.7	0.025
Statistical Analysis	s of Conta	minant Co	ncentratio	ons in Filli	ng (mg/kg)																
Maximum	NA	NA	NA	NA	NA	NA	29	2.3	NA	NA	NA	NA	41	0.5	42	22	50	0.3	21	42	9.9	0.200
Minimum	NA	NA	NA	NA	NA	NA	NIL	<0.5	NA	NA	NA	NA	<4	<0.4	<1	<1	1	<0.1	<1	<1	5.3	0.008
Average	NA	NA	NA	NA	NA	NA	2.0	NA	NA	NA	NA	NA	6.8	NA	4.4	6.0	9.8	0.03	1.8	10.5	6.3	0.029
Std. Deviation	NA	NA	NA	NA	NA	NA	6.3	NA	NA	NA	NA	NA	12.6	NA	8.9	7.4	11.7	0.11	4.6	11.8	0.9	0.043
95% UCL	NA	NA	NA	NA	NA	NA	8.1	NA	NA	NA	NA	NA	18.7	NA	12.9	13.0	15.7	0.20	6.1	21.7	6.6	0.070

Notes: B = Benzene; T = Toluene; E = Ethylbenzene; X = Xylene; Napth. = Naphthalene; F1 = (C₆ - C₁₀) - BTEX; F2 = (C₁₁ - C₁₆) - Naphthalene; +PAH = Positive polycyclic aromatic hydrocarbons; B.TEQ = Carcinogenic PAHs (as B(a)P TEQ); OCP = Organochlorine pesticides; OPP = Organophosphorus pesticides; PCB = Polychlorinated biphenyls; CEC = cation exchange capacity; ACM = asbestos containing material; As = Arsenic; Cd = Cadmium; Cr = Chromium; C



Table E2: Contaminant Concentrations in Natural Soil

Sample/	В	Т	E	X	F1	F2	+PAH	B.TEQ	+OCP	+PCB	Phenol	Asbestos	As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	рН	EC
Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	(Y/N)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	units	dS/m
Natural Soil (2015)																						
BH10/2.0	<0.2	<0.5	<1	<3	<25	<50	0.1	<0.5	NIL	NIL	<5	NT	<4	<0.4	2	<1	2	<0.1	1	1	7.2	0.036
Natural Soil (2017)																						
BH101/4.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	1	2	<1	<0.1	<1	2	6.1	0.008
BH102/2.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	1	2	3	<0.1	<1	3	6.0	0.009
BH103/1.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	<1	2	<1	<0.1	<1	3	5.7	0.031
BH104/1.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	1	<1	2	<0.1	<1	4	5.8	0.011
BH105/1.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	1	3	3	<0.1	<1	4	6.5	0.018
BH111/2.9-3.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	1	<1	3	<0.1	<1	2	6.1	0.010
BH112/0.5	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	4	4	10	<0.1	2	11	5.6	0.064
BH114/1.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	2	1	3	<0.1	<1	4	6.0	0.013
BH116/1.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	0.6	<1	1	7	<0.1	<1	3	6.4	0.014
BH119/0.5	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	<1	2	2	<0.1	<1	5	5.8	0.012
BH120/0.5	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	9	<0.4	8	7	16	0.1	3	17	8.0	0.130
BH121/1.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	1	2	3	<0.1	<1	7	6.6	0.012
BH122/1.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	8	4	6	<0.1	8	7	6.6	0.018
BH123/0.5	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	<1	1	3	<0.1	<1	2	6.4	0.015
BH125/0.5	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	2	7	4	<0.1	2	9	6.1	0.017
BH127/0.5	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	1	2	3	<0.1	1	13	5.9	0.013
BH129/0.5	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	2	2	2	<0.1	1	12	6.0	0.016
BH129/2.0	<0.2	<0.5	<1	<3	<25	<50	NIL	<0.5	NIL	NIL	<5	N	<4	<0.4	2	<1	1	<0.1	<1	1	6.1	0.015
Statistical Analysi	s of Conta	minant Co	ncentratio	ons in Nati	ural Soil (ı	ng/kg)																
Maximum	NA	NA	NA	NA	NA	NA	0.1	NA	NA	NA	NA	NA	9	0.6	8	7	16	0.1	8	17	8.0	0.130
Minimum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4	<0.4	<1	<1	<1	<0.1	<1	1	5.6	0.008
Average	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.9	2.3	3.9	NA	0.9	6.1	6.2	23.7
Std. Deviation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.4	2.1	3.9	NA	2.0	4.6	0.5	29.4
95% UCL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.4	4.4	7.9	NA	3.0	8.7	6.4	53.9

Notes: B = Benzene; T = Toluene; E = Ethylbenzene; X = Xylene; Napth. = Naphthalene; F1 = (C₆ - C₁₀) - BTEX; F2 = (C₁₁ - C₁₆) - Naphthalene; +PAH = Positive polycyclic aromatic hydrocarbons; B.TEQ = Carcinogenic PAHs (as B(a)P TEQ); OCP = Organochlorine pesticides; OPP = Organophosphorus pesticides; PCB = Polychlorinated biphenyls; CEC = cation exchange capacity; ACM = asbestos containing material; As = Arsenic; Cd = Cadmium; Cr = Chromium; Cu = Copper; Pb = Lead; Hg = Mercury; Ni = Nickel; Zn = Zinc;



Table E3: Adopted Comparative Criteria for Soils

Sample/	В	Т	E	X	F1	F2	+PAH	B.TEQ	+OCP	+PCB	Phenol	Asbestos	As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	рН	EC
Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	(Y/N)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	units	dS/m
Adopted Investiga	Adopted Investigation/Screening Levels (mg/kg)																					
Health-Based ¹							300	3	Various	1	40000		300	90	300	17000	600	80	1200	30000		
Ecological ²	50	85	70	105	180	120		0.7					100		190	95	1100		30	230		

Notes: B = Benzene; T = Toluene; E = Ethylbenzene; X = Xylene; Napth. = Naphthalene; F1 = (C₆ - C₁₀) - BTEX; F2 = (C₁₁ - C₁₆) - Naphthalene; +PAH = Positive polycyclic aromatic hydrocarbons; B.TEQ = Carcinogenic PAHs (as B(a)P TEQ); OCP = Organochlorine pesticides; OPP = Organophosphorus pesticides; PCB = Polychlorinated biphenyls; CEC = cation exchange capacity; ACM = asbestos containing material; As = Arsenic; Cd = Cadmium; Cr = Chromium; Cu = Copper; Pb = Lead; Hg = Mercury; Ni = Nickel; Zn = Zinc;

1Based on NEPM HIL C Sites; Based on NEPM ACL and assumed pH = 6.5/CEC = 5%; 182 Based on NEPM coarse-grained soils



ENVIROLAB SERVICES

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Envirolab Services Pty Ltd - Sydney | ABN 37 112 535 645

CERTIFICATE OF ANALYSIS 165477

Client:

Douglas Partners Pty Ltd 96 Hermitage Rd West Ryde NSW 2114

Attention: Peter Oitmaa

Sample log in details:

Your Reference: 84944.01, Bellevue Hill

No. of samples: 30 soils

Date samples received / completed instructions received 19/04/17 / 19/04/17

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: / Issue Date: 27/04/17 / 27/04/17

Date of Preliminary Report: Not Issued

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Tests not covered by NATA are denoted with *.

Results Approved By:

David Springer General Manager



	1	I	1	ı	I	ı
vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	165477-1	165477-2	165477-3	165477-4	165477-5
Your Reference		BH101	BH101	BH102	BH102	BH103
	-					
Depth		0.5	4.0	0.5	2.0	0.1
Date Sampled		12/04/2017	12/04/2017	12/04/2017	12/04/2017	11/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 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
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	98	92	100	93	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	165477-6	165477-7	165477-8	165477-9	165477-10
Your Reference		BH103	BH104	BH105	BH111	BH111
	-					
Depth		1.0	1.0	1.0	0.45-0.5	2.9-3.0
Date Sampled		11/04/2017	12/04/2017	10/04/2017	13/04/2017	13/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 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
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	103	94	93	99	97

						1
vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	165477-11	165477-12	165477-13	165477-14	165477-15
Your Reference		BH112	BH113	BH114	BH115	BH116
	-					
Depth		0.5	1.0-1.05	1.0	0.1	1.0
Date Sampled		11/04/2017	13/04/2017	11/04/2017	11/04/2017	11/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 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
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	98	101	100	94	100

vTRH(C6-C10)/BTEXN in Soil Our Reference: Your Reference	UNITS	165477-16 BH117	165477-17 BH118	165477-18 BH119	165477-19 BH120	165477-20 BH121
Depth Date Sampled Type of sample		1.95-2.0 13/04/2017 Soil	0.1-0.15 13/04/2017 Soil	0.5 10/04/2017 Soil	0.5 11/04/2017 Soil	1.0 12/04/2017 Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 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
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	99	97	102	98	86

	1	T	T	T		1
vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	165477-21	165477-22	165477-23	165477-24	165477-25
Your Reference		BH122	BH123	BH124	BH125	BH126
	-					
Depth		1.0	0.5	0.1	0.5	2.0
Date Sampled		11/04/2017	11/04/2017	10/04/2017	10/04/2017	12/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 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
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	101	98	100	94	91

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	165477-26	165477-27	165477-28	165477-29	165477-30
Your Reference		BH127	BH128	BH129	BH129	BH130
	-					
Depth		0.5	1.0	0.5	2.0	0.1
Date Sampled		11/04/2017	12/04/2017	10/04/2017	10/04/2017	10/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	21/04/2017	21/04/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 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
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	94	87	96	96	94

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	165477-1	165477-2	165477-3	165477-4	165477-5
Your Reference		BH101	BH101	BH102	BH102	BH103
	-					
Depth		0.5	4.0	0.5	2.0	0.1
Date Sampled		12/04/2017	12/04/2017	12/04/2017	12/04/2017	11/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
TRHC10 - C14	mg/kg	<50	<50	<50	<50	<50
TRHC 15 - C28	mg/kg	<100	<100	<100	<100	<100
TRHC29 - C36	mg/kg	<100	<100	<100	<100	<100
TRH>C10-C16	mg/kg	<50	<50	<50	<50	<50
TRH>C10 - C16 less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C16-C34	mg/kg	<100	<100	<100	<100	<100
TRH>C34-C40	mg/kg	<100	<100	<100	<100	<100
Total+veTRH(>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	84	84	85	82	87
svTRH (C10-C40) in Soil						
371111(010-040)1113011						

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	165477-6	165477-7	165477-8	165477-9	165477-10
Your Reference		BH103	BH104	BH105	BH111	BH111
Depth Date Sampled Type of sample	-	1.0 11/04/2017 Soil	1.0 12/04/2017 Soil	1.0 10/04/2017 Soil	0.45-0.5 13/04/2017 Soil	2.9-3.0 13/04/2017 Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
TRHC 10 - C 14	mg/kg	<50	<50	<50	<50	<50
TRHC 15 - C28	mg/kg	<100	<100	<100	<100	<100
TRHC29 - C36	mg/kg	<100	<100	<100	<100	<100
TRH>C10-C16	mg/kg	<50	<50	<50	<50	<50
TRH>C10 - C16 less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C16-C34	mg/kg	<100	<100	<100	<100	<100
TRH>C34-C40	mg/kg	<100	<100	<100	<100	<100
Total+veTRH(>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	83	83	84	83	82

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	165477-11	165477-12	165477-13	165477-14	165477-15
Your Reference		BH112	BH113	BH114	BH115	BH116
Depth Date Sampled Type of sample		0.5 11/04/2017 Soil	1.0-1.05 13/04/2017 Soil	1.0 11/04/2017 Soil	0.1 11/04/2017 Soil	1.0 11/04/2017 Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	21/04/2017
TRHC 10 - C14	mg/kg	<50	<50	<50	<50	<50
TRHC 15 - C28	mg/kg	<100	<100	<100	<100	<100
TRHC29 - C36	mg/kg	<100	<100	<100	<100	<100
TRH>C10-C16	mg/kg	<50	<50	<50	<50	<50
TRH>C10 - C16 less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C16-C34	mg/kg	<100	<100	<100	<100	<100
TRH>C34-C40	mg/kg	<100	<100	<100	<100	<100
Total+veTRH(>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	82	84	85	84	81

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	165477-16	165477-17	165477-18	165477-19	165477-20
Your Reference		BH117	BH118	BH119	BH120	BH121
	-					
Depth		1.95-2.0	0.1-0.15	0.5	0.5	1.0
Date Sampled		13/04/2017	13/04/2017	10/04/2017	11/04/2017	12/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
TRHC 10 - C14	mg/kg	<50	<50	<50	<50	<50
TRHC 15 - C28	mg/kg	<100	<100	<100	<100	<100
TRHC29 - C36	mg/kg	<100	<100	<100	<100	<100
TRH>C10-C16	mg/kg	<50	<50	<50	<50	<50
TRH>C10 - C16 less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C16-C34	mg/kg	<100	<100	<100	<100	<100
TRH>C34-C40	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	83	81	83	81	83

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	165477-21	165477-22	165477-23	165477-24	165477-25
Your Reference		BH122	BH123	BH124	BH125	BH126
	-					
Depth		1.0	0.5	0.1	0.5	2.0
Date Sampled		11/04/2017	11/04/2017	10/04/2017	10/04/2017	12/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
TRHC10 - C14	mg/kg	<50	<50	<50	<50	<50
TRHC15 - C28	mg/kg	<100	<100	<100	<100	<100
TRHC29 - C36	mg/kg	<100	<100	<100	<100	<100
TRH>C10-C16	mg/kg	<50	<50	<50	<50	<50
TRH>C10 - C16 less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C16-C34	mg/kg	<100	<100	<100	<100	<100
TRH>C34-C40	mg/kg	<100	<100	<100	<100	<100
Total+veTRH(>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	86	82	83	82	83

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	165477-26	165477-27	165477-28	165477-29	165477-30
Your Reference		BH127	BH128	BH129	BH129	BH130
	-					
Depth		0.5	1.0	0.5	2.0	0.1
Date Sampled		11/04/2017	12/04/2017	10/04/2017	10/04/2017	10/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
TRHC10 - C14	mg/kg	<50	<50	<50	<50	<50
TRHC 15 - C28	mg/kg	<100	<100	<100	<100	<100
TRHC29 - C36	mg/kg	<100	<100	<100	<100	<100
TRH>C10-C16	mg/kg	<50	<50	<50	<50	<50
TRH>C10 - C16 less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C16-C34	mg/kg	<100	<100	<100	<100	<100
TRH>C34-C40	mg/kg	<100	<100	<100	<100	<100
Total+veTRH(>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	84	84	86	85	86

PAHs in Soil						
Our Reference:	UNITS	165477-1	165477-2	165477-3	165477-4	165477-5
Your Reference		BH101	BH101	BH102	BH102	BH103
	-					
Depth		0.5	4.0	0.5	2.0	0.1
Date Sampled		12/04/2017	12/04/2017	12/04/2017	12/04/2017	11/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
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	0.6	<0.1	0.2	<0.1	<0.1
Pyrene	mg/kg	0.5	<0.1	0.3	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.3	<0.1	0.2	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.5	<0.2	0.3	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.3	<0.05	0.2	<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	0.2	<0.1	<0.1	<0.1	<0.1
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
Total +ve PAH's	mg/kg	3.0	<0.05	1.2	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	97	90	94	93	99

PAHs in Soil						
Our Reference:	UNITS	165477-6	165477-7	165477-8	165477-9	165477-10
Your Reference		BH103	BH104	BH105	BH111	BH111
	-					
Depth		1.0	1.0	1.0	0.45-0.5	2.9-3.0
Date Sampled		11/04/2017	12/04/2017	10/04/2017	13/04/2017	13/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
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
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
Total+ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	95	92	92	95	94

PAHs in Soil						
Our Reference:	UNITS	165477-11	165477-12	165477-13	165477-14	165477-15
Your Reference		BH112	BH113	BH114	BH115	BH116
	-					
Depth		0.5	1.0-1.05	1.0	0.1	1.0
Date Sampled Type of sample		11/04/2017 Soil	13/04/2017 Soil	11/04/2017 Soil	11/04/2017 Soil	11/04/2017 Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
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
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
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	98	93	95	93	92

PAHs in Soil						
Our Reference:	UNITS	165477-16	165477-17	165477-18	165477-19	165477-20
Your Reference		BH117	BH118	BH119	BH120	BH121
	-					
Depth		1.95-2.0	0.1-0.15	0.5	0.5	1.0
Date Sampled		13/04/2017	13/04/2017	10/04/2017	11/04/2017	12/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	0.2	<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	0.06	<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
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
Total +ve PAH's	mg/kg	0.2	0.78	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	94	94	95	97	91

PAHs in Soil						
Our Reference:	UNITS	165477-21	165477-22	165477-23	165477-24	165477-25
Your Reference		BH122	BH123	BH124	BH125	BH126
	-					
Depth		1.0	0.5	0.1	0.5	2.0
Date Sampled Type of sample		11/04/2017 Soil	11/04/2017 Soil	10/04/2017 Soil	10/04/2017 Soil	12/04/2017 Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.1	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
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
Total +ve PAH's	mg/kg	<0.05	<0.05	0.59	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	93	91	98	93	91

PAHs in Soil						
Our Reference:	UNITS	165477-26	165477-27	165477-28	165477-29	165477-30
Your Reference		BH127	BH128	BH129	BH129	BH130
	-					
Depth		0.5	1.0	0.5	2.0	0.1
Date Sampled Type of sample		11/04/2017 Soil	12/04/2017 Soil	10/04/2017 Soil	10/04/2017 Soil	10/04/2017 Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
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	0.4
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.4
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	0.3
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	0.5
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
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
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	2.3
Surrogate p-Terphenyl-d14	%	97	93	97	93	93

Organochlorine Pesticides in soil						
Our Reference:	UNITS	165477-1	165477-2	165477-3	165477-4	165477-5
Your Reference		BH101	BH101	BH102	BH102	BH103
Depth	-	0.5	4.0	0.5	2.0	0.1
Date Sampled		12/04/2017	12/04/2017	12/04/2017	12/04/2017	11/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
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
HeptachlorEpoxide	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+veDDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	99	102	100	99	99

Organochlorine Pesticides in soil						
Our Reference:	UNITS	165477-6	165477-7	165477-8	165477-9	165477-10
Your Reference		BH103	BH104	BH105	BH111	BH111
Depth	-	1.0	1.0	1.0	0.45-0.5	2.9-3.0
Date Sampled		11/04/2017	12/04/2017	10/04/2017	13/04/2017	13/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
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+veDDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	98	102	96	98	99

Organochlorine Pesticides in soil						
Our Reference:	UNITS	165477-11	165477-12	165477-13	165477-14	165477-15
Your Reference		BH112	BH113	BH114	BH115	BH116
	-					
Depth		0.5	1.0-1.05	1.0	0.1	1.0
Date Sampled Type of sample		11/04/2017 Soil	13/04/2017 Soil	11/04/2017 Soil	11/04/2017 Soil	11/04/2017 Soil
7						
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
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+veDDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
	/ ////////////////////////////////////	98	97	98	98	97
Surrogate TCMX	/0	30	31	30	30	31

Organochlorine Pesticides in soil						
Our Reference:	UNITS	165477-16	165477-17	165477-18	165477-19	165477-20
Your Reference		BH117	BH118	BH119	BH120	BH121
5 "	-	4.05.0.0	0.4.0.45	0.5	0.5	
Depth Date Sampled		1.95-2.0 13/04/2017	0.1-0.15 13/04/2017	0.5 10/04/2017	0.5 11/04/2017	1.0 12/04/2017
Type of sample		13/04/2017 Soil	13/04/2017 Soil	Soil	Soil	12/04/2017 Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
HCB	-	<0.1	<0.1	<0.1	<0.1	<0.1
-	mg/kg	_	_	_	_	_
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+veDDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	100	94	100	96	95

Organochlorine Pesticides in soil						
Our Reference:	UNITS	165477-21	165477-22	165477-23	165477-24	165477-25
Your Reference		BH122	BH123	BH124	BH125	BH126
	-					
Depth		1.0	0.5	0.1	0.5	2.0
Date Sampled		11/04/2017	11/04/2017	10/04/2017	10/04/2017	12/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
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+veDDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	99	103	97	99	99

Organochlorine Pesticides in soil						
Our Reference:	UNITS	165477-26	165477-27	165477-28	165477-29	165477-30
Your Reference		BH127	BH128	BH129	BH129	BH130
	-					
Depth Sevented		0.5 11/04/2017	1.0 12/04/2017	0.5 10/04/2017	2.0 10/04/2017	0.1 10/04/2017
Date Sampled Type of sample		11/04/2017 Soil	12/04/2017 Soil	10/04/2017 Soil	10/04/2017 Soil	10/04/2017 Soil
7		20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date extracted	-					
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
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+veDDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	,g/kg %	100	101	99	100	96
Surrogate TONIA	/0	100	101	53	100	30

Organophosphorus Pesticides						
Our Reference:	UNITS	165477-1	165477-2	165477-3	165477-4	165477-5
Your Reference		BH101	BH101	BH102	BH102	BH103
Depth		0.5	4.0	0.5	2.0	0.1
Date Sampled		12/04/2017	12/04/2017	12/04/2017	12/04/2017	11/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	99	102	100	99	99

Organophosphorus Pesticides						
Our Reference:	UNITS	165477-6	165477-7	165477-8	165477-9	165477-10
Your Reference		BH103	BH104	BH105	BH111	BH111
Depth Date Sampled Type of sample	-	1.0 11/04/2017 Soil	1.0 12/04/2017 Soil	1.0 10/04/2017 Soil	0.45-0.5 13/04/2017 Soil	2.9-3.0 13/04/2017 Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
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	%	98	102	96	98	99

	T		T	T		
Organophosphorus Pesticides	LINITO	405477 44	105477 10	405477 40	405477 44	465477.45
Our Reference:	UNITS	165477-11	165477-12	165477-13	165477-14	165477-15
Your Reference		BH112	BH113	BH114	BH115	BH116
Donth	-	0.5	1.0-1.05	1.0	0.1	1.0
Depth Depth				_		_
Date Sampled		11/04/2017	13/04/2017	11/04/2017	11/04/2017	11/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
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	%	98	97	98	98	97

Organophosphorus Pesticides Our Reference: Your Reference	UNITS	165477-16 BH117	165477-17 BH118	165477-18 BH119	165477-19 BH120	165477-20 BH121
Depth Date Sampled Type of sample	-	1.95-2.0 13/04/2017 Soil	0.1-0.15 13/04/2017 Soil	0.5 10/04/2017 Soil	0.5 11/04/2017 Soil	1.0 12/04/2017 Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
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	%	100	94	100	96	95

	I		I			<u> </u>
Organophosphorus Pesticides						
Our Reference:	UNITS	165477-21	165477-22	165477-23	165477-24	165477-25
Your Reference		BH122	BH123	BH124	BH125	BH126
	-					
Depth		1.0	0.5	0.1	0.5	2.0
Date Sampled		11/04/2017	11/04/2017	10/04/2017	10/04/2017	12/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	99	103	97	99	99

Organophosphorus Pesticides Our Reference: Your Reference	UNITS	165477-26 BH127	165477-27 BH128	165477-28 BH129	165477-29 BH129	165477-30 BH130
Depth Date Sampled Type of sample		0.5 11/04/2017 Soil	1.0 12/04/2017 Soil	0.5 10/04/2017 Soil	2.0 10/04/2017 Soil	0.1 10/04/2017 Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
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	%	100	101	99	100	96

PCBs in Soil						
Our Reference:	UNITS	165477-1	165477-2	165477-3	165477-4	165477-5
Your Reference		BH101	BH101	BH102	BH102	BH103
Depth	-	0.5	4.0	0.5	2.0	0.1
Date Sampled		12/04/2017	12/04/2017	12/04/2017	12/04/2017	11/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	99	102	100	99	99
	1					
PCBs in Soil						
Our Reference:	UNITS	165477-6	165477-7	165477-8	165477-9	165477-10
Your Reference		BH103	BH104	BH105	BH111	BH111
Depth		1.0	1.0	1.0	0.45-0.5	2.9-3.0
Date Sampled		11/04/2017	12/04/2017	10/04/2017	13/04/2017	13/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
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

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Total +ve PCBs (1016-1260)

Surrogate TCLMX

mg/kg

%

<0.1

98

<0.1

102

<0.1

96

<0.1

98

<0.1

99

	1					
PCBs in Soil						
Our Reference:	UNITS	165477-11	165477-12	165477-13	165477-14	165477-15
Your Reference		BH112	BH113	BH114	BH115	BH116
Double	-	0.5	40405	4.0	0.4	4.0
Depth Sempled		0.5 11/04/2017	1.0-1.05 13/04/2017	1.0 11/04/2017	0.1 11/04/2017	1.0 11/04/2017
Date Sampled Type of sample		11/04/2017 Soil	13/04/2017 Soil	11/04/2017 Soil	11/04/2017 Soil	11/04/2017 Soil
турс от заттрю		0011			Ooli	0011
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
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	%	98	97	98	98	97
PCBs in Soil						
Our Reference:	UNITS	165477-16	165477-17	165477-18	165477-19	165477-20
Your Reference		BH117	BH118	BH119	BH120	BH121
	-					
Depth		1.95-2.0	0.1-0.15	0.5	0.5	1.0
Date Sampled		13/04/2017	13/04/2017	10/04/2017	11/04/2017	12/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil

20/04/2017

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

94

20/04/2017

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

100

20/04/2017

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

96

20/04/2017

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

95

20/04/2017

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

100

mg/kg

mg/kg

mg/kg

mg/kg

mg/kg

mg/kg

mg/kg

mg/kg

%

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Date analysed

Aroclor 1016

Aroclor 1221

Aroclor 1232

Aroclor 1242

Aroclor 1248

Aroclor 1254

Aroclor 1260

Total +ve PCBs (1016-1260)

Surrogate TCLMX

PCBs in Soil						
Our Reference:	UNITS	165477-21	165477-22	165477-23	165477-24	165477-25
Your Reference		BH122	BH123	BH124	BH125	BH126
Depth		1.0	0.5	0.1	0.5	2.0
Date Sampled Type of sample		11/04/2017 Soil	11/04/2017 Soil	10/04/2017 Soil	10/04/2017 Soil	12/04/2017 Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
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
	%	99	103	97	99	99

PCBs in Soil						
Our Reference:	UNITS	165477-26	165477-27	165477-28	165477-29	165477-30
Your Reference		BH127	BH128	BH129	BH129	BH130
	-					
Depth		0.5	1.0	0.5	2.0	0.1
Date Sampled		11/04/2017	12/04/2017	10/04/2017	10/04/2017	10/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
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	101	99	100	96

Acid Extractable metals in soil						
Our Reference:	UNITS	165477-1	165477-2	165477-3	165477-4	165477-5
Your Reference		BH101	BH101	BH102	BH102	BH103
	-					
Depth		0.5	4.0	0.5	2.0	0.1
Date Sampled		12/04/2017	12/04/2017	12/04/2017	12/04/2017	11/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Arsenic	mg/kg	6	<4	11	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	2	1	7	1	42
Copper	mg/kg	18	2	18	2	15
Lead	mg/kg	22	<1	28	3	14
Mercury	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
Nickel	mg/kg	1	<1	3	<1	21
Zinc	mg/kg	12	2	24	3	24

Acid Extractable metals in soil						
Our Reference:	UNITS	165477-6	165477-7	165477-8	165477-9	165477-10
Your Reference		BH103	BH104	BH105	BH111	BH111
	-					
Depth		1.0	1.0	1.0	0.45-0.5	2.9-3.0
Date Sampled		11/04/2017	12/04/2017	10/04/2017	13/04/2017	13/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	1	1	<1	1
Copper	mg/kg	2	<1	3	<1	<1
Lead	mg/kg	<1	2	3	1	3
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1	<1	<1
Zinc	mg/kg	3	4	4	1	2

Acid Extractable metals in soil						
Our Reference:	UNITS	165477-11	165477-12	165477-13	165477-14	165477-15
Your Reference		BH112	BH113	BH114	BH115	BH116
	-					
Depth		0.5	1.0-1.05	1.0	0.1	1.0
Date Sampled		11/04/2017	13/04/2017	11/04/2017	11/04/2017	11/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Arsenic	mg/kg	<4	41	<4	14	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	0.6
Chromium	mg/kg	4	1	2	5	<1
Copper	mg/kg	4	2	1	5	1
Lead	mg/kg	10	2	3	6	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	<1	<1	3	<1
Zinc	mg/kg	11	4	4	16	3

Acid Extractable metals in soil						
Our Reference:	UNITS	165477-16	165477-17	165477-18	165477-19	165477-20
Your Reference		BH117	BH118	BH119	BH120	BH121
Depth Date Sampled Type of sample	-	1.95-2.0 13/04/2017 Soil	0.1-0.15 13/04/2017 Soil	0.5 10/04/2017 Soil	0.5 11/04/2017 Soil	1.0 12/04/2017 Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Arsenic	mg/kg	<4	5	<4	9	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	1	4	<1	8	1
Copper	mg/kg	3	5	2	7	2
Lead	mg/kg	7	11	2	16	3
Mercury	mg/kg	<0.1	0.2	<0.1	0.1	<0.1
Nickel	mg/kg	<1	2	<1	3	<1
Zinc	mg/kg	6	9	5	17	7

Acid Extractable metals in soil						
Our Reference:	UNITS	165477-21	165477-22	165477-23	165477-24	165477-25
Your Reference		BH122	BH123	BH124	BH125	BH126
	-					
Depth		1.0	0.5	0.1	0.5	2.0
Date Sampled		11/04/2017	11/04/2017	10/04/2017	10/04/2017	12/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Arsenic	mg/kg	<4	<4	5	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	<1	4	2	<1
Copper	mg/kg	4	1	5	7	1
Lead	mg/kg	6	3	12	4	2
Mercury	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Nickel	mg/kg	8	<1	2	2	<1
Zinc	mg/kg	7	2	13	9	3

Acid Extractable metals in soil						
Our Reference:	UNITS	165477-26	165477-27	165477-28	165477-29	165477-30
Your Reference		BH127	BH128	BH129	BH129	BH130
	-					
Depth		0.5	1.0	0.5	2.0	0.1
Date Sampled		11/04/2017	12/04/2017	10/04/2017	10/04/2017	10/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Arsenic	mg/kg	<4	<4	<4	<4	19
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	0.5
Chromium	mg/kg	1	1	2	2	9
Copper	mg/kg	2	2	2	<1	19
Lead	mg/kg	3	1	2	1	50
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	1	<1	1	<1	4
Zinc	mg/kg	13	5	12	1	42

Acid Extractable metals in soil				
Our Reference:	UNITS	165477-31	165477-32	165477-33
Your Reference		BH101 -	BH112 -	BH122 -
	-	[TRIPLICATE]	[TRIPLICATE]	[TRIPLICATE]
Depth		0.5	0.5	1.0
Date Sampled		12/04/2017	11/04/2017	11/04/2017
Type of sample		Soil	Soil	Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017
Arsenic	mg/kg	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4
Chromium	mg/kg	2	2	53
Copper	mg/kg	14	1	5
Lead	mg/kg	11	7	6
Mercury	mg/kg	<0.1	<0.1	<0.1
Nickel	mg/kg	1	<1	16
Zinc	mg/kg	7	6	8

Misc Soil - Inorg						
Our Reference:	UNITS	165477-1	165477-2	165477-3	165477-4	165477-5
Your Reference		BH101	BH101	BH102	BH102	BH103
	-					
Depth		0.5	4.0	0.5	2.0	0.1
Date Sampled		12/04/2017	12/04/2017	12/04/2017	12/04/2017	11/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
		20/04/2047	20/04/2017	20/04/2047	20/04/2047	20/04/2047
Date prepared	-	20/04/2017		20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5
Misc Soil - Inorg			1			
Our Reference:	UNITS	165477-6	165477-7	165477-8	165477-9	165477-10
	ONITS					
Your Reference		BH103	BH104	BH105	BH111	BH111
Depth		1.0	1.0	1.0	0.45-0.5	2.9-3.0
Date Sampled		11/04/2017	12/04/2017	10/04/2017	13/04/2017	13/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5
Misc Soil - Inorg						
Our Reference:	UNITS	165477-11	165477-12	165477-13	165477-14	165477-15
	ONITS					
Your Reference		BH112	BH113	BH114	BH115	BH116
Depth		0.5	1.0-1.05	1.0	0.1	1.0
Date Sampled		11/04/2017	13/04/2017	11/04/2017	11/04/2017	11/04/2017
Type of sample		11/04/2017 Soil	13/04/2017 Soil	Soil	Soil	11/04/2017 Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5
Mico Coil Incre						
Misc Soil - Inorg	LINITO	405477 40	405477.47	405477.40	405477.40	405477.00
Our Reference:	UNITS	165477-16	165477-17	165477-18	165477-19	165477-20
Your Reference		BH117	BH118	BH119	BH120	BH121
Depth		1.95-2.0	0.1-0.15	0.5	0.5	1.0
Date Sampled		13/04/2017	13/04/2017	10/04/2017	11/04/2017	12/04/2017
Type of sample		13/04/2017 Soil	Soil	Soil	Soil	12/04/2017 Soil
Date prepared	_	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

						T
Misc Soil - Inorg						
Our Reference:	UNITS	165477-21	165477-22	165477-23	165477-24	165477-25
Your Reference		BH122	BH123	BH124	BH125	BH126
	-					
Depth		1.0	0.5	0.1	0.5	2.0
Date Sampled		11/04/2017	11/04/2017	10/04/2017	10/04/2017	12/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5
						_
Misc Soil - Inorg						
Our Reference:	UNITS	165477-26	165477-27	165477-28	165477-29	165477-30
Your Reference		BH127	BH128	BH129	BH129	BH130
	-					
Depth		0.5	1.0	0.5	2.0	0.1
Date Sampled		11/04/2017	12/04/2017	10/04/2017	10/04/2017	10/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

	Olichi	Reference.	04944.01, Delle	vuc IIII		
Moisture Our Reference: Your Reference	UNITS	165477-1 BH101	165477-2 BH101	165477-3 BH102	165477-4 BH102	165477-5 BH103
Depth Date Sampled Type of sample		0.5 12/04/2017 Soil	4.0 12/04/2017 Soil	0.5 12/04/2017 Soil	2.0 12/04/2017 Soil	0.1 11/04/2017 Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
Moisture	%	9.7	9.7	15	18	20
Majatura			1		T	T
Moisture Our Reference: Your Reference	UNITS	165477-6 BH103	165477-7 BH104	165477-8 BH105	165477-9 BH111	165477-10 BH111
Depth Date Sampled Type of sample		1.0 11/04/2017 Soil	1.0 12/04/2017 Soil	1.0 10/04/2017 Soil	0.45-0.5 13/04/2017 Soil	2.9-3.0 13/04/2017 Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
Moisture	%	5.5	9.0	17	5.6	5.5
Moisture						
Our Reference: Your Reference	UNITS	165477-11 BH112	165477-12 BH113	165477-13 BH114	165477-14 BH115	165477-15 BH116
Depth Date Sampled Type of sample		0.5 11/04/2017 Soil	1.0-1.05 13/04/2017 Soil	1.0 11/04/2017 Soil	0.1 11/04/2017 Soil	1.0 11/04/2017 Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
Moisture	%	6.7	4.0	5.1	15	10
Moisture Our Reference: Your Reference	UNITS	165477-16 BH117	165477-17 BH118	165477-18 BH119	165477-19 BH120	165477-20 BH121
Depth Date Sampled Type of sample		1.95-2.0 13/04/2017 Soil	0.1-0.15 13/04/2017 Soil	0.5 10/04/2017 Soil	0.5 11/04/2017 Soil	1.0 12/04/2017 Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
Moisture	%	6.3	15	4.0	9.5	19

Moisture						
Our Reference:	UNITS	165477-21	165477-22	165477-23	165477-24	165477-25
Your Reference		BH122	BH123	BH124	BH125	BH126
	-					
Depth		1.0	0.5	0.1	0.5	2.0
Date Sampled		11/04/2017	11/04/2017	10/04/2017	10/04/2017	12/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
Moisture	%	5.0	4.4	9.2	6.3	20
	_					
Moisture						
Our Reference:	UNITS	165477-26	165477-27	165477-28	165477-29	165477-30
Your Reference		BH127	BH128	BH129	BH129	BH130
	-					
Depth		0.5	1.0	0.5	2.0	0.1
Date Sampled		11/04/2017	12/04/2017	10/04/2017	10/04/2017	10/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/04/2017	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date analysed	-	21/04/2017	21/04/2017	21/04/2017	21/04/2017	21/04/2017
Moisture	%	4.1	20	6.2	7.0	15

Asbestos ID - soils						
Our Reference:	UNITS	165477-1	165477-2	165477-3	165477-4	165477-5
Your Reference		BH101	BH101	BH102	BH102	BH103
5 "	-	0.5		0.5		
Depth		0.5	4.0	0.5	2.0	0.1
Date Sampled		12/04/2017	12/04/2017	12/04/2017	12/04/2017	11/04/2017 Soil
Type of sample		Soil	Soil	Soil	Soil	3011
Date analysed	-	26/04/2017	26/04/2017	26/04/2017	26/04/2017	26/04/2017
Sample mass tested	g	Approx. 40g	Approx. 30g	Approx. 40g	Approx. 35g	Approx. 40g
Sample Description	-	Brown sandy	Brown sandy	Brown sandy	Brown sandy	Brown
		soil	soil	soil	soil	coarse-grained
						soil & rocks
Asbestos ID in soil	-	No asbestos	No asbestos	No asbestos	No asbestos	No asbestos
		detected at				
		reporting limit of				
		0.1g/kg Organic fibres	0.1g/kg Organic fibres	0.1g/kg Organic fibres	0.1g/kg Organic fibres	0.1g/kg Organic fibres
		detected	detected	detected	detected	detected
Trace Analysis		No asbestos				
Trace Analysis		detected	detected	detected	detected	detected
Asbestos ID - soils						
Our Reference:	UNITS	165477-6	165477-7	165477-8	165477-9	165477-10
Your Reference		BH103	BH104	BH105	BH111	BH111
	-					
Depth		1.0	1.0	1.0	0.45-0.5	2.9-3.0
Date Sampled		11/04/2017	12/04/2017	10/04/2017	13/04/2017	13/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	26/04/2017	26/04/2017	26/04/2017	26/04/2017	26/04/2017
Sample mass tested	g	Approx. 35g	Approx. 20g	Approx. 40g	Approx. 30g	Approx. 30g
Sample Description	-	Brown sandy	Brown sandy	Brown sandy	Brown sandy	Brown sandy
		soil	soil	soil	soil	soil
Asbestos ID in soil	-	No asbestos	No asbestos	No asbestos	No asbestos	No asbestos
		detected at				
		reporting limit of				
		0.1g/kg	0.1g/kg	0.1g/kg	0.1g/kg	0.1g/kg
		Organic fibres				
		detected	detected	detected	detected	detected
Trace Analysis	-	No asbestos	No asbestos	No asbestos	No asbestos	No asbestos
	1	detected	detected	detected	detected	detected

Asbestos ID - soils						
Our Reference:	UNITS	165477-11	165477-12	165477-13	165477-14	165477-15
Your Reference		BH112	BH113	BH114	BH115	BH116
	-					
Depth		0.5	1.0-1.05	1.0	0.1	1.0
Date Sampled		11/04/2017	13/04/2017	11/04/2017	11/04/2017	11/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	26/04/2017	26/04/2017	26/04/2017	26/04/2017	26/04/2017
Sample mass tested	g	Approx. 40g	Approx. 30g	Approx. 30g	Approx. 30g	Approx. 30g
Sample Description	-	Brown sandy	Brown sandy	Brown sandy	Brown sandy	Brown sandy
		soil	soil	soil	soil	soil
Asbestos ID in soil	-	No asbestos	No asbestos	No asbestos	No asbestos	No asbestos
		detected at				
		reporting limit of				
		0.1g/kg Organic fibres	0.1g/kg Organic fibres	0.1g/kg Organic fibres	0.1g/kg Organic fibres	0.1g/kg Organic fibres
		detected	detected	detected	detected	detected
Trace Analysis	_	No asbestos	No asbestos	No asbestos	No asbestos	No asbestos
1.000 / 1.10.190.0		detected	detected	detected	detected	detected
		L	L	L		
Asbestos ID - soils						
Our Reference:	UNITS	165477-16	165477-17	165477-18	165477-19	165477-20
Your Reference		BH117	BH118	BH119	BH120	BH121
	-					
Depth		1.95-2.0	0.1-0.15	0.5	0.5	1.0
Date Sampled		13/04/2017	13/04/2017	10/04/2017	11/04/2017	12/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	26/04/2017	26/04/2017	26/04/2017	26/04/2017	26/04/2017
Sample mass tested	g	Approx. 30g	Approx. 30g	Approx. 50g	Approx. 50g	Approx. 40g
Sample Description	-	Brown sandy	Brown sandy	Brown sandy	Brown sandy	Brown sandy
		soil	soil	soil	soil	soil
Asbestos ID in soil	-	No asbestos	No asbestos	No asbestos	No asbestos	No asbestos
		detected at				
		reporting limit of				
		0.1g/kg	0.1g/kg	0.1g/kg	0.1g/kg	0.1g/kg
		Organic fibres detected	Organic fibres detected	Organic fibres detected	Organic fibres detected	Organic fibres detected
Trace Analysis						
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
		actocieu	GCICCIEU	GCIGCIGG	detected	detected

Asbestos ID - soils						
Our Reference:	UNITS	165477-21	165477-22	165477-23	165477-24	165477-25
Your Reference		BH122	BH123	BH124	BH125	BH126
	-					
Depth		1.0	0.5	0.1	0.5	2.0
Date Sampled		11/04/2017	11/04/2017	10/04/2017	10/04/2017	12/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	26/04/2017	26/04/2017	26/04/2017	26/04/2017	26/04/2017
Sample mass tested	g	Approx. 30g	Approx. 30g	Approx. 50g	Approx. 40g	Approx. 40g
Sample Description	-	Brown sandy	Brown sandy	Brown sandy	Brown sandy	Brown sandy
		soil	soil	soil	soil	soil
Asbestos ID in soil	-	No asbestos	No asbestos	No asbestos	No asbestos	No asbestos
		detected at				
		reporting limit of				
		0.1g/kg Organic fibres	0.1g/kg Organic fibres	0.1g/kg Organic fibres	0.1g/kg Organic fibres	0.1g/kg Organic fibres
		detected	detected	detected	detected	detected
Trace Analysis	_	No asbestos	No asbestos	No asbestos	No asbestos	No asbestos
		detected	detected	detected	detected	detected
Asbestos ID - soils						
Our Reference:	UNITS	165477-26	165477-27	165477-28	165477-29	165477-30
Your Reference		BH127	BH128	BH129	BH129	BH130
	-					
Depth		0.5	1.0	0.5	2.0	0.1
Date Sampled		11/04/2017	12/04/2017 Soil	10/04/2017 Soil	10/04/2017	10/04/2017
Type of sample		Soil	5011	5011	Soil	Soil
Date analysed	-	26/04/2017	26/04/2017	26/04/2017	26/04/2017	26/04/2017
Sample mass tested	g	Approx. 30g	Approx. 40g	Approx. 40g	Approx. 35g	Approx. 35g
Sample Description	-	Brown sandy	Brown sandy	Brown sandy	Brown sandy	Brown sandy
		soil	soil	soil	soil	soil
Asbestos ID in soil	-	No asbestos	No asbestos	No asbestos	No asbestos	No asbestos
		detected at				
		reporting limit of				
		0.1g/kg Organic fibres	0.1g/kg Organic fibres	0.1g/kg Organic fibres	0.1g/kg Organic fibres	0.1g/kg Organic fibres
		detected	detected	detected	detected	detected
Trace Analysis	_	No asbestos	No asbestos	No asbestos	No asbestos	No asbestos
Trace Analysis		detected	detected	detected	detected	detected
	1	========		========	========	========

	1					
Misc Inorg - Soil						
Our Reference:	UNITS	165477-1	165477-2	165477-3	165477-4	165477-5
Your Reference		BH101	BH101	BH102	BH102	BH103
Depth		0.5	4.0	0.5	2.0	0.1
Date Sampled		12/04/2017	12/04/2017	12/04/2017	12/04/2017	11/04/2017
Type of sample		12/04/2017 Soil	Soil	Soil	Soil	Soil
Date prepared	-	22/04/2017	22/04/2017	22/04/2017	22/04/2017	22/04/2017
Date analysed	-	22/04/2017	22/04/2017	22/04/2017	22/04/2017	22/04/2017
pH 1:5 soil:water	pH Units	6.4	6.1	6.2	6.0	5.3
Electrical Conductivity 1:5 soil:water	μS/cm	22	8	27	9	200
Misc Inorg - Soil	LINUTO	405477.0	405477.7	405477.0	405477.0	405477.40
Our Reference:	UNITS	165477-6 BH103	165477-7 BH104	165477-8 BH105	165477-9 BH111	165477-10
Your Reference		BH 103	BH104	BH 105	BHIII	BH111
Depth		1.0	1.0	1.0	0.45-0.5	2.9-3.0
Date Sampled		11/04/2017	12/04/2017	10/04/2017	13/04/2017	13/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	_	22/04/2017	22/04/2017	22/04/2017	22/04/2017	22/04/2017
Date analysed	_	22/04/2017	22/04/2017	22/04/2017	22/04/2017	22/04/2017
•	nH I Inita	5.7	5.8	6.5		6.1
pH 1:5 soil:water	pHUnits				6.3	
Electrical Conductivity 1:5 soil:water	μS/cm	31	11	18	12	10
Misc Inorg - Soil						
Our Reference:	UNITS	165477-11	165477-12	165477-13	165477-14	165477-15
Your Reference		BH112	BH113	BH114	BH115	BH116
	-					
Depth		0.5	1.0-1.05	1.0	0.1	1.0
Date Sampled		11/04/2017	13/04/2017	11/04/2017	11/04/2017	11/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	22/04/2017	22/04/2017	22/04/2017	22/04/2017	22/04/2017
Date analysed	-	22/04/2017	22/04/2017	22/04/2017	22/04/2017	22/04/2017
pH 1:5 soil:water	pH Units	5.6	6.1	6.0	6.1	6.4
Electrical Conductivity 1:5	μS/cm	64	12	13	32	14
soil:water	μο/σπ	U -1	14	15	J2	14
Misc Inorg - Soil						
Our Reference:	UNITS	165477-16	165477-17	165477-18	165477-19	165477-20
Your Reference		BH117	BH118	BH119	BH120	BH121
	-					
Depth		1.95-2.0	0.1-0.15	0.5	0.5	1.0
Date Sampled		13/04/2017	13/04/2017	10/04/2017	11/04/2017	12/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	22/04/2017	22/04/2017	22/04/2017	22/04/2017	22/04/2017
Date analysed	_	22/04/2017	22/04/2017	22/04/2017	22/04/2017	22/04/2017
pH 1:5 soil:water	pH Units	6.1	5.8	5.8	8.0	6.6
Electrical Conductivity 1:5	μS/cm	14	27	12	130	12
soil:water	μο/σπ	14	21	12	130	12

Misc Inorg - Soil						
Our Reference:	UNITS	165477-21	165477-22	165477-23	165477-24	165477-25
Your Reference		BH122	BH123	BH124	BH125	BH126
	-					
Depth		1.0	0.5	0.1	0.5	2.0
Date Sampled		11/04/2017	11/04/2017	10/04/2017	10/04/2017	12/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	22/04/2017	22/04/2017	22/04/2017	22/04/2017	22/04/2017
Date analysed	-	22/04/2017	22/04/2017	22/04/2017	22/04/2017	22/04/2017
pH 1:5 soil:water	pH Units	6.6	6.4	6.2	6.1	6.4
Electrical Conductivity 1:5 soil:water	μS/cm	18	15	28	17	8
Misc Inorg - Soil						
Our Reference:	UNITS	165477-26	165477-27	165477-28	165477-29	165477-30
Your Reference		BH127	BH128	BH129	BH129	BH130
	-					
Depth		0.5	1.0	0.5	2.0	0.1
Date Sampled		11/04/2017	12/04/2017	10/04/2017	10/04/2017	10/04/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	22/04/2017	22/04/2017	22/04/2017	22/04/2017	22/04/2017
Date analysed	-	22/04/2017	22/04/2017	22/04/2017	22/04/2017	22/04/2017
pH 1:5 soil:water	pH Units	5.9	6.2	6.0	6.1	5.7
Electrical Conductivity 1:5 soil:water	μS/cm	13	11	16	15	25

Method ID	Methodology Summary
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.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
	F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
	F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
	Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-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. 'TEQ PQL' values are assuming all contributing PAHs reported as <pql actually="" and="" approach="" are="" at="" be="" calculation="" can="" conservative="" contribute="" false="" give="" given="" is="" may="" most="" not="" pahs="" positive="" pql.="" present.<="" td="" teq="" teqs="" that="" the="" this="" to=""></pql>
	2. 'TEQ zero' values are assuming all contributing PAHs reported as <pql and="" approach="" are="" below="" but="" calculation="" conservative="" contribute="" false="" is="" least="" more="" negative="" pahs="" pql.<="" present="" susceptible="" td="" teq="" teqs="" that="" the="" this="" to="" when="" zero.=""></pql>
	3. 'TEQ half PQL' values are assuming all contributing PAHs reported as <pql a="" above.<="" and="" approaches="" are="" between="" conservative="" half="" hence="" least="" mid-point="" most="" pql.="" stipulated="" td="" the=""></pql>
	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-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-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
	Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.

Method ID	Methodology Summary
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell at 25°C in accordance with APHA latest edition 2510 and Rayment & Lyons.

Client Reference: 84944.01, Bellevue Hill QUALITYCONTROL UNITS PQL **METHOD** Blank Duplicate Duplicate results Spike Sm# Spike % Sm# Recovery vTRH(C6-C10)/BTEXNin Base II Duplicate II %RPD Soil 20/04/2 165477-1 20/04/2017 | 20/04/2017 LCS-6 20/04/2017 Date extracted 017 Date analysed 21/04/2 165477-1 20/04/2017 || 20/04/2017 LCS-6 21/04/2017 017 Org-016 TRHC6 - C9 mg/kg 25 <25 165477-1 <25||<25 LCS-6 111% Org-016 25 <25 165477-1 <25||<25 LCS-6 111% TRHC6 - C10 mg/kg Org-016 <0.2 165477-1 116% Benzene mg/kg 0.2 <0.2||<0.2 LCS-6 Toluene mg/kg 0.5 Org-016 < 0.5 165477-1 <0.5||<0.5 LCS-6 103% Ethylbenzene 1 Org-016 <1 165477-1 <1||<1 LCS-6 110% mg/kg 2 Org-016 <2 m+p-xylene 165477-1 <2||<2 LCS-6 113% mg/kg o-Xylene mg/kg 1 Org-016 <1 165477-1 <1||<1 LCS-6 110% naphthalene 1 Org-014 <1 165477-1 [NR] [NR] mg/kg <1||<1 % Org-016 100 165477-1 98 | 97 | RPD: 1 LCS-6 104% Surrogate aaa-Trifluorotoluene QUALITYCONTROL UNITS PQL Blank **METHOD** Duplicate Duplicate results Spike Sm# Spike % Sm# Recovery svTRH (C10-C40) in Soil Base II Duplicate II %RPD 20/04/2 165477-1 20/04/2017 || 20/04/2017 LCS-6 Date extracted 20/04/2017 017 21/04/2 165477-1 20/04/2017 || 20/04/2017 LCS-6 21/04/2017 Date analysed 017 TRHC₁₀ - C₁₄ mg/kg 50 Org-003 <50 165477-1 <50 || <50 LCS-6 110% TRHC15 - C28 mg/kg 100 Org-003 <100 165477-1 <100 | | <100 LCS-6 104% Org-003 165477-1 <100 | | <100 LCS-6 94% TRHC29 - C36 mg/kg 100 <100 Org-003 TRH>C10-C16 mg/kg 50 <50 165477-1 <50 || <50 LCS-6 110% TRH>C16-C34 mg/kg 100 Org-003 <100 165477-1 <100 || <100 LCS-6 104% Org-003 <100 <100 || <100 LCS-6 94% TRH>C34-C40 mg/kg 100 165477-1 Surrogate o-Terphenyl % Org-003 87 165477-1 84 | 87 | RPD: 4 LCS-6 104% QUALITYCONTROL UNITS PQL METHOD Blank Duplicate **Duplicate results** Spike Sm# Spike % Sm# Recovery PAHs in Soil Base II Duplicate II %RPD 20/04/2 165477-1 Date extracted 20/04/2017 || 20/04/2017 LCS-6 20/04/2017 017 21/04/2 21/04/2017 || 21/04/2017 Date analysed 165477-1 LCS-6 21/04/2017 017 Naphthalene 0.1 Org-012 <0.1 165477-1 <0.1||<0.1 LCS-6 89% mg/kg Org-012 <0.1 165477-1 [NR] Acenaphthylene 0.1 <0.1||<0.1 [NR] mg/kg Org-012 Acenaphthene mg/kg 0.1 < 0.1 165477-1 <0.1||<0.1 [NR] [NR] Fluorene 0.1 Org-012 <0.1 165477-1 <0.1||<0.1 LCS-6 84% mg/kg Org-012 <0.1 LCS-6 89% Phenanthrene 0.1 165477-1 0.1||<0.1 mg/kg Anthracene 0.1 Org-012 < 0.1 165477-1 <0.1||<0.1 [NR] [NR] mg/kg Fluoranthene 0.1 Org-012 <0.1 165477-1 0.6 || 0.4 || RPD: 40 LCS-6 85% mg/kg Org-012 LCS-6 82% Pyrene 0.1 <0.1 165477-1 0.5 | | 0.3 | | RPD: 50 mg/kg Benzo(a)anthracene 0.1 Org-012 < 0.1 165477-1 0.2 | | 0.1 | | RPD: 67 [NR] [NR] mg/kg Chrysene 0.1 Org-012 <0.1 165477-1 0.3 || 0.2 || RPD: 40 LCS-6 79% mg/kg

<0.2

165477-1

0.5 || 0.3 || RPD: 50

Envirolab Reference: 165477 Revision No: R 00

mg/kg

0.2

Org-012

Benzo(b,j+k)

fluoranthene

[NR]

[NR]

Client Reference: 84944.01, Bellevue Hill									
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery	
PAHs in Soil						Base II Duplicate II %RPD			
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	165477-1	0.3 0.2 RPD:40	LCS-6	83%	
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	165477-1	0.3 0.2 RPD:40	[NR]	[NR]	
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	165477-1	<0.1 <0.1	[NR]	[NR]	
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	165477-1	0.2 0.1 RPD:67	[NR]	[NR]	
Surrogate p-Terphenyl- d14	%		Org-012	96	165477-1	97 96 RPD:1	LCS-6	122%	
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery	
Organochlorine Pesticides in soil					G.T.	Base II Duplicate II %RPD		ricocvery	
Date extracted	-			20/04/2 017	165477-1	20/04/2017 20/04/2017	LCS-6	20/04/2017	
Date analysed	-			20/04/2 017	165477-1	20/04/2017 20/04/2017	LCS-6	20/04/2017	
HCB	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	[NR]	[NR]	
alpha-BHC	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	LCS-6	103%	
gamma-BHC	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	[NR]	[NR]	
beta-BHC	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	LCS-6	96%	
Heptachlor	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	LCS-6	100%	
delta-BHC	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	[NR]	[NR]	
Aldrin	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	LCS-6	92%	
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	LCS-6	103%	
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	[NR]	[NR]	
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	[NR]	[NR]	
Endosulfan I	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	[NR]	[NR]	
pp-DDE	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	LCS-6	114%	
Dieldrin	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	LCS-6	110%	
Endrin	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	LCS-6	104%	
pp-DDD	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	LCS-6	109%	
Endosulfan II	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	[NR]	[NR]	
pp-DDT	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	[NR]	[NR]	
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	[NR]	[NR]	
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	LCS-6	81%	
Methoxychlor	mg/kg	0.1	Org-005	<0.1	165477-1	<0.1 <0.1	[NR]	[NR]	
Surrogate TCMX	%		Org-005	101	165477-1	99 98 RPD:1	LCS-6	114%	

Client Reference: 84944.01, Bellevue Hill QUALITYCONTROL UNITS **PQL** METHOD Blank Duplicate Duplicate results Spike Sm# Spike % Sm# Recovery Organophosphorus Base II Duplicate II %RPD Pesticides Date extracted 20/04/2 165477-1 20/04/2017 | 20/04/2017 LCS-6 20/04/2017 017 Date analysed 20/04/2 165477-1 20/04/2017 || 20/04/2017 LCS-6 20/04/2017 017 Org-008 Azinphos-methyl mg/kg 0.1 <0.1 165477-1 <0.1||<0.1 [NR] [NR] (Guthion) Org-008 Bromophos-ethyl mg/kg 0.1 <0.1 165477-1 <0.1||<0.1 [NR] [NR] 0.1 Org-008 <0.1 165477-1 92% Chlorpyriphos mg/kg <0.1||<0.1 LCS-6 Org-008 Chlorpyriphos-methyl mg/kg 0.1 <0.1 165477-1 <0.1||<0.1 [NR] [NR] Diazinon Org-008 mg/kg 0.1 <0.1 165477-1 <0.1||<0.1 [NR] [NR] Org-008 <0.1 84% Dichlorvos mg/kg 0.1 165477-1 <0.1||<0.1 LCS-6 Dimethoate mg/kg 0.1 Org-008 <0.1 165477-1 <0.1||<0.1 [NR] [NR] **Ethion** 0.1 Org-008 <0.1 165477-1 <0.1||<0.1 LCS-6 105% mg/kg Fenitrothion 0.1 Org-008 <0.1 165477-1 <0.1||<0.1 LCS-6 111% mg/kg Malathion mg/kg 0.1 Org-008 <0.1 165477-1 <0.1||<0.1 LCS-6 79% Parathion 0.1 Org-008 <0.1 165477-1 <0.1||<0.1 LCS-6 90% mg/kg <0.1 LCS-6 83% Ronnel 0.1 Org-008 165477-1 <0.1||<0.1 mg/kg % Org-008 101 165477-1 99 | 98 | RPD: 1 LCS-6 98% Surrogate TCMX QUALITYCONTROL UNITS PQL METHOD Blank Duplicate **Duplicate results** Spike Sm# Spike % Sm# Recovery PCBs in Soil Base II Duplicate II %RPD 20/04/2 165477-1 20/04/2017 || 20/04/2017 Date extracted LCS-6 20/04/2017 017 20/04/2 Date analysed 165477-1 20/04/2017 | 20/04/2017 LCS-6 20/04/2017 017 Aroclor 1016 mg/kg 0.1 Org-006 <0.1 165477-1 <0.1||<0.1 [NR] [NR]

165477-1

165477-1

165477-1

165477-1

165477-1

165477-1

165477-1

<0.1||<0.1

<0.1||<0.1

<0.1||<0.1

<0.1||<0.1

<0.1||<0.1

<0.1||<0.1

99 | 98 | RPD: 1

[NR]

[NR]

[NR]

[NR]

LCS-6

[NR]

LCS-6

[NR]

[NR]

[NR]

[NR]

109%

[NR]

98%

Org-006

Org-006

Org-006

Org-006

Org-006

Org-006

Org-006

<0.1

<0.1

<0.1

<0.1

<0.1

<0.1

101

Envirolab Reference: 165477 Revision No: R 00

Aroclor 1221

Aroclor 1232

Aroclor 1242

Aroclor 1248

Aroclor 1254

Aroclor 1260

Surrogate TCLMX

mg/kg

mg/kg

mg/kg

mg/kg

mg/kg

mg/kg

%

0.1

0.1

0.1

0.1

0.1

0.1

Client Reference: 84944.01, Bellevue Hill QUALITYCONTROL UNITS **PQL METHOD** Blank Duplicate Duplicate results Spike Sm# Spike % Sm# Recovery Acid Extractable metals Base II Duplicate II %RPD in soil 20/04/2 165477-1 20/04/2017 | 20/04/2017 LCS-6 20/04/2017 Date prepared 017 20/04/2 165477-1 20/04/2017 || 20/04/2017 LCS-6 20/04/2017 Date analysed 017 Arsenic mg/kg 4 Metals-020 <4 165477-1 6||5||RPD:18 LCS-6 108% Metals-020 Cadmium 0.4 < 0.4 165477-1 <0.4 || <0.4 LCS-6 96% mg/kg Metals-020 165477-1 2||2||RPD:0 105% Chromium LCS-6 mg/kg 1 <1 Copper mg/kg 1 Metals-020 <1 165477-1 18 | 15 | RPD: 18 LCS-6 104% Metals-020 1 <1 165477-1 22 | 11 | RPD: 67 LCS-6 99% Lead mg/kg Metals-021 108% 0.1 <0.1 165477-1 <0.1||<0.1 LCS-6 Mercury mg/kg Nickel 1 Metals-020 <1 165477-1 1||1||RPD:0 LCS-6 96% mg/kg Zinc 1 Metals-020 <1 165477-1 12||7||RPD:53 LCS-6 98% mg/kg QUALITYCONTROL UNITS PQL Blank Spike % METHOD Duplicate **Duplicate results** Spike Sm# Sm# Recovery Base II Duplicate II % RPD Misc Soil - Inorg 20/04/2 165477-1 20/04/2017 || 20/04/2017 LCS-1 Date prepared 20/04/2017 017 20/04/2 20/04/2017 | 20/04/2017 Date analysed 165477-1 LCS-1 20/04/2017 017 Total Phenolics (as 5 Inorg-031 <5 165477-1 LCS-1 100% mg/kg <5||<5 Phenol) QUALITYCONTROL UNITS PQL Blank METHOD Duplicate Duplicate results Spike Sm# Spike % Recovery Misc Inorg - Soil Base II Duplicate II %RPD Date prepared 22/04/2 165477-1 22/04/2017 || 22/04/2017 LCS-6 22/04/2017 017 22/04/2 165477-1 22/04/2017 | 22/04/2017 LCS-6 22/04/2017 Date analysed 017 Inorg-001 pH 1:5 soil:water pH Units [NT] 165477-1 6.4 | | 6.1 | | RPD: 5 LCS-6 102% **Electrical Conductivity** Inorg-002 165477-1 107% µS/cm 1 <1 22 || 21 || RPD: 5 LCS-6 1:5 soil:water QUALITYCONTROL **UNITS** Dup. Sm# Duplicate Spike Sm# Spike % Recovery vTRH(C6-C10)/BTEXNin Base + Duplicate + %RPD Soil Date extracted 165477-11 20/04/2017 || 20/04/2017 LCS-5 20/04/2017 Date analysed 165477-11 20/04/2017 | 20/04/2017 LCS-5 20/04/2017 LCS-5 102% 165477-11 <25||<25 TRHC6 - C9 mg/kg 102% 165477-11 <25||<25 LCS-5 TRHC6 - C10 mg/kg Benzene mg/kg 165477-11 <0.2||<0.2 LCS-5 108% LCS-5 94% Toluene mg/kg 165477-11 <0.5||<0.5 Ethylbenzene 165477-11 LCS-5 101% mg/kg <1||<1 m+p-xylene mg/kg 165477-11 <2||<2 LCS-5 103% o-Xylene mg/kg 165477-11 <1||<1 LCS-5 100% naphthalene [NR] [NR] mg/kg 165477-11 <1||<1 98 || 97 || RPD: 1 LCS-5 97% % 165477-11 Surrogate aaa-

Envirolab Reference: 165477 Revision No: R 00

Trifluorotoluene

		Client Referenc	e: 84944.01, Bellevue	e Hill	
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup.Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	165477-11	20/04/2017 20/04/2017	LCS-5	20/04/2017
Date analysed	-	165477-11	20/04/2017 20/04/2017	LCS-5	20/04/2017
TRHC10 - C14	mg/kg	165477-11	<50 <50	LCS-5	109%
TRHC15 - C28	mg/kg	165477-11	<100 <100	LCS-5	104%
TRHC29 - C36	mg/kg	165477-11	<100 <100	LCS-5	106%
TRH>C10-C16	mg/kg	165477-11	<50 <50	LCS-5	109%
TRH>C16-C34	mg/kg	165477-11	<100 <100	LCS-5	104%
TRH>C34-C40	mg/kg	165477-11	<100 <100	LCS-5	106%
Surrogate o-Terphenyl	%	165477-11	82 83 RPD:1	LCS-5	105%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	165477-11	20/04/2017 20/04/2017	LCS-5	20/04/2017
Date analysed	-	165477-11	21/04/2017 21/04/2017	LCS-5	21/04/2017
Naphthalene	mg/kg	165477-11	<0.1 <0.1	LCS-5	88%
Acenaphthylene	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	165477-11	<0.1 <0.1	LCS-5	83%
Phenanthrene	mg/kg	165477-11	<0.1 <0.1	LCS-5	89%
Anthracene	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	165477-11	<0.1 <0.1	LCS-5	85%
Pyrene	mg/kg	165477-11	<0.1 <0.1	LCS-5	81%
Benzo(a)anthracene	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	165477-11	<0.1 <0.1	LCS-5	79%
Benzo(b,j+k)fluoranthene	mg/kg	165477-11	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	165477-11	<0.05 <0.05	LCS-5	80%
Indeno(1,2,3-c,d)pyrene	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	165477-11	98 97 RPD:1	LCS-5	118%

		Client Reference	e: 84944.01, Bellevue	e Hill	
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup.Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	165477-11	20/04/2017 20/04/2017	LCS-5	20/04/2017
Date analysed	-	165477-11	20/04/2017 20/04/2017	LCS-5	20/04/2017
HCB	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	165477-11	<0.1 <0.1	LCS-5	103%
gamma-BHC	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	165477-11	<0.1 <0.1	LCS-5	95%
Heptachlor	mg/kg	165477-11	<0.1 <0.1	LCS-5	99%
delta-BHC	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	165477-11	<0.1 <0.1	LCS-5	90%
Heptachlor Epoxide	mg/kg	165477-11	<0.1 <0.1	LCS-5	102%
gamma-Chlordane	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	165477-11	<0.1 <0.1	LCS-5	111%
Dieldrin	mg/kg	165477-11	<0.1 <0.1	LCS-5	108%
Endrin	mg/kg	165477-11	<0.1 <0.1	LCS-5	103%
pp-DDD	mg/kg	165477-11	<0.1 <0.1	LCS-5	107%
Endosulfan II	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	165477-11	<0.1 <0.1	LCS-5	82%
Methoxychlor	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Surrogate TCMX	%	165477-11	98 98 RPD:0	LCS-5	112%

84944.01, Bellevue Hill **Client Reference:** Dup.Sm# QUALITYCONTROL Spike % Recovery UNITS Spike Sm#

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	165477-11	20/04/2017 20/04/2017	LCS-5	20/04/2017
Date analysed	-	165477-11	20/04/2017 20/04/2017	LCS-5	20/04/2017
Azinphos-methyl (Guthion)	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Bromophos-ethyl	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	165477-11	<0.1 <0.1	LCS-5	93%
Chlorpyriphos-methyl	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Diazinon	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Dichlorvos	mg/kg	165477-11	<0.1 <0.1	LCS-5	101%
Dimethoate	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Ethion	mg/kg	165477-11	<0.1 <0.1	LCS-5	105%
Fenitrothion	mg/kg	165477-11	<0.1 <0.1	LCS-5	112%
Malathion	mg/kg	165477-11	<0.1 <0.1	LCS-5	79%
Parathion	mg/kg	165477-11	<0.1 <0.1	LCS-5	94%
Ronnel	mg/kg	165477-11	<0.1 <0.1	LCS-5	85%
Surrogate TCMX	%	165477-11	98 98 RPD:0	LCS-5	100%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	165477-11	20/04/2017 20/04/2017	LCS-5	20/04/2017
Date analysed	-	165477-11	20/04/2017 20/04/2017	LCS-5	20/04/2017
Aroclor 1016	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Aroclor 1221	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Aroclor 1232	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Aroclor 1242	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Aroclor 1248	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Aroclor 1254	mg/kg	165477-11	<0.1 <0.1	LCS-5	111%
Aroclor 1260	mg/kg	165477-11	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%	165477-11	98 98 RPD:0	LCS-5	100%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	SpikeSm#	Spike % Recovery
Date prepared	-	165477-11	20/04/2017 20/04/2017	LCS-5	20/04/2017
Date analysed	-	165477-11	20/04/2017 20/04/2017	LCS-5	20/04/2017
Arsenic	mg/kg	165477-11	<4 <4	LCS-5	107%
Cadmium	mg/kg	165477-11	<0.4 <0.4	LCS-5	99%
Chromium	mg/kg	165477-11	4 2 RPD:67	LCS-5	104%
Copper	mg/kg	165477-11	4 1 RPD:120	LCS-5	103%
Lead	mg/kg	165477-11	10 4 RPD:86	LCS-5	100%
Mercury	mg/kg	165477-11	<0.1 <0.1	LCS-5	111%
Nickel	mg/kg	165477-11	2 <1	LCS-5	95%
Zinc	mg/kg	165477-11	11 5 RPD:75	LCS-5	96%

	Client Reference: 84944.01, Bellevue Hill				
QUALITY CONTROL Misc Soil - Inorg	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	165477-11	20/04/2017 20/04/2017	LCS-2	20/04/2017
Date analysed	-	165477-11	20/04/2017 20/04/2017	LCS-2	20/04/2017
Total Phenolics (as Phenol)	mg/kg	165477-11	<5 <5	LCS-2	101%
QUALITY CONTROL Misc Inorg - Soil	UNITS	Dup.Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	165477-11	22/04/2017 22/04/2017	LCS-7	22/04/2017
Date analysed	-	165477-11	22/04/2017 22/04/2017	LCS-7	22/04/2017
pH 1:5 soil:water	pH Units	165477-11	5.6 5.9 RPD:5	LCS-7	102%
Electrical Conductivity 1:5 soil:water	μS/cm	165477-11	64 68 RPD:6	LCS-7	98%
QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	165477-21	20/04/2017 20/04/2017	165477-2	20/04/2017
Date analysed	-	165477-21	20/04/2017 20/04/2017	165477-2	20/04/2017
TRHC6 - C9	mg/kg	165477-21	<25 <25	165477-2	106%
TRHC6 - C10	mg/kg	165477-21	<25 <25	165477-2	106%
Benzene	mg/kg	165477-21	<0.2 <0.2	165477-2	110%
Toluene	mg/kg	165477-21	<0.5 <0.5	165477-2	99%
Ethylbenzene	mg/kg	165477-21	<1 <1	165477-2	105%
m+p-xylene	mg/kg	165477-21	<2 <2	165477-2	108%
o-Xylene	mg/kg	165477-21	<1 <1	165477-2	105%
naphthalene	mg/kg	165477-21	<1 <1	[NR]	[NR]
<i>Surrogate</i> aaa- Trifluorotoluene	%	165477-21	101 97 RPD:4	165477-2	100%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	165477-21	20/04/2017 20/04/2017	165477-2	20/04/2017
Date analysed	-	165477-21	21/04/2017 21/04/2017	165477-2	20/04/2017
TRHC10 - C14	mg/kg	165477-21	<50 <50	165477-2	100%
TRHC 15 - C28	mg/kg	165477-21	<100 <100	165477-2	92%
TRHC29 - C36	mg/kg	165477-21	<100 <100	165477-2	73%
TRH>C10-C16	mg/kg	165477-21	<50 <50	165477-2	100%
TRH>C16-C34	mg/kg	165477-21	<100 <100	165477-2	92%
TRH>C34-C40	mg/kg	165477-21	<100 <100	165477-2	73%
Surrogate o-Terphenyl	%	165477-21	86 82 RPD:5	165477-2	84%

Client Reference: 84944.01, Bellevue Hill QUALITYCONTROL **UNITS** Dup. Sm# **Duplicate** Spike Sm# Spike % Recovery PAHs in Soil Base + Duplicate + %RPD 20/04/2017 | 20/04/2017 Date extracted 165477-21 165477-2 20/04/2017 Date analysed 165477-21 21/04/2017 | 21/04/2017 165477-2 21/04/2017 Naphthalene 165477-21 <0.1||<0.1 165477-2 84% mg/kg Acenaphthylene mg/kg 165477-21 <0.1||<0.1 [NR] [NR] Acenaphthene mg/kg 165477-21 <0.1||<0.1 [NR] [NR] Fluorene 165477-21 <0.1||<0.1 165477-2 78% mg/kg Phenanthrene <0.1||<0.1 165477-2 76% mg/kg 165477-21 Anthracene mg/kg 165477-21 <0.1||<0.1 [NR] [NR] Fluoranthene 165477-21 <0.1||<0.1 165477-2 73% mg/kg 165477-21 165477-2 75% Pyrene mg/kg <0.1||<0.1 Benzo(a)anthracene 165477-21 <0.1||<0.1 [NR] [NR] mg/kg Chrysene mg/kg 165477-21 <0.1||<0.1 165477-2 70% 165477-21 Benzo(b,j+k)fluoranthene mg/kg <0.2||<0.2 [NR] [NR] 165477-2 165477-21 <0.05||<0.05 76% Benzo(a)pyrene mg/kg [NR] Indeno(1,2,3-c,d)pyrene mg/kg 165477-21 <0.1||<0.1 [NR] 165477-21 Dibenzo(a,h)anthracene <0.1||<0.1 [NR] [NR] mg/kg Benzo(g,h,i)perylene mg/kg 165477-21 <0.1||<0.1 [NR] [NR] % 165477-21 93 || 97 || RPD: 4 165477-2 115% Surrogate p-Terphenyl-d14 QUALITYCONTROL **UNITS** Dup.Sm# Duplicate Spike Sm# Spike % Recovery Organochlorine Pesticides Base + Duplicate + %RPD in soil Date extracted 165477-21 20/04/2017 | 20/04/2017 165477-2 20/04/2017 Date analysed 165477-21 20/04/2017 | 20/04/2017 165477-2 20/04/2017 **HCB** mg/kg 165477-21 <0.1||<0.1 [NR] [NR] alpha-BHC 165477-21 <0.1||<0.1 165477-2 120% mg/kg gamma-BHC 165477-21 <0.1||<0.1 [NR] [NR] mg/kg beta-BHC 165477-21 <0.1||<0.1 165477-2 96% mg/kg Heptachlor 165477-21 <0.1||<0.1 165477-2 100% mg/kg delta-BHC mg/kg 165477-21 <0.1||<0.1 [NR] [NR] Aldrin 165477-21 165477-2 92% mg/kg <0.1||<0.1 Heptachlor Epoxide mg/kg 165477-21 <0.1||<0.1 165477-2 103% gamma-Chlordane mg/kg 165477-21 <0.1||<0.1 [NR] [NR] alpha-chlordane mg/kg 165477-21 <0.1||<0.1 [NR] [NR] Endosulfan I 165477-21 <0.1||<0.1 [NR] [NR] mg/kg pp-DDE 113% 165477-21 <0.1||<0.1 165477-2 mg/kg Dieldrin mg/kg 165477-21 <0.1||<0.1 165477-2 109% Endrin mg/kg 165477-21 <0.1||<0.1 165477-2 103% pp-DDD 165477-21 <0.1||<0.1 165477-2 108% mg/kg

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mg/kg

mg/kg

mg/kg

mg/kg

165477-21

165477-21

165477-21

165477-21

<0.1||<0.1

<0.1||<0.1

<0.1||<0.1

<0.1||<0.1

[NR]

[NR]

[NR]

165477-2

Endosulfan II

pp-DDT

Endrin Aldehyde

Endosulfan Sulphate

[NR]

[NR]

[NR]

79%

		Client Reference	ce: 84944.01, Bellevue	e Hill	
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup.Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Methoxychlor	mg/kg	165477-21	<0.1 <0.1	[NR]	[NR]
Surrogate TCMX	%	165477-21	99 100 RPD:1	165477-2	112%
QUALITYCONTROL Organophosphorus Pesticides	UNITS	Dup.Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	165477-21	20/04/2017 20/04/2017	165477-2	20/04/2017
Date analysed	-	165477-21	20/04/2017 20/04/2017	165477-2	20/04/2017
Azinphos-methyl (Guthion)	mg/kg	165477-21	<0.1 <0.1	[NR]	[NR]
Bromophos-ethyl	mg/kg	165477-21	<0.1 <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	165477-21	<0.1 <0.1	165477-2	89%
Chlorpyriphos-methyl	mg/kg	165477-21	<0.1 <0.1	[NR]	[NR]
Diazinon	mg/kg	165477-21	<0.1 <0.1	[NR]	[NR]
Dichlorvos	mg/kg	165477-21	<0.1 <0.1	165477-2	86%
Dimethoate	mg/kg	165477-21	<0.1 <0.1	[NR]	[NR]
Ethion	mg/kg	165477-21	<0.1 <0.1	165477-2	111%
Fenitrothion	mg/kg	165477-21	<0.1 <0.1	165477-2	101%
Malathion	mg/kg	165477-21	<0.1 <0.1	165477-2	75%
Parathion	mg/kg	165477-21	<0.1 <0.1	165477-2	86%
Ronnel	mg/kg	165477-21	<0.1 <0.1	165477-2	80%
Surrogate TCMX	%	165477-21	99 100 RPD:1	165477-2	97%
QUALITY CONTROL PCBs in Soil	UNITS	Dup.Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	165477-21	20/04/2017 20/04/2017	165477-2	20/04/2017
Date analysed	-	165477-21	20/04/2017 20/04/2017	165477-2	20/04/2017
Aroclor 1016	mg/kg	165477-21	<0.1 <0.1	[NR]	[NR]
Aroclor 1221	mg/kg	165477-21	<0.1 <0.1	[NR]	[NR]
Aroclor 1232	mg/kg	165477-21	<0.1 <0.1	[NR]	[NR]
Aroclor 1242	mg/kg	165477-21	<0.1 <0.1	[NR]	[NR]
Aroclor 1248	mg/kg	165477-21	<0.1 <0.1	[NR]	[NR]
Aroclor 1254	mg/kg	165477-21	<0.1 <0.1	165477-2	107%
Aroclor 1260	mg/kg	165477-21	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%	165477-21	99 100 RPD:1	165477-2	97%

Client Reference: 84944.01, Bellevue Hill QUALITYCONTROL UNITS Dup. Sm# Duplicate Spike Sm# Spike % Recovery Acid Extractable metals in Base + Duplicate + %RPD 165477-21 20/04/2017 || 20/04/2017 165477-2 20/04/2017 Date prepared Date analysed 165477-21 20/04/2017 || 20/04/2017 165477-2 20/04/2017 Arsenic mg/kg 165477-21 <4||<4 165477-2 99% <0.4||<0.4 104% Cadmium mg/kg 165477-21 165477-2 165477-2 Chromium mg/kg 165477-21 8 | 14 | RPD: 55 107% 4||5||RPD:22 104% Copper mg/kg 165477-21 165477-2 6||5||RPD:18 Lead 165477-21 165477-2 101% mg/kg Mercury mg/kg 165477-21 <0.1||<0.1 165477-2 108% Nickel 8||12||RPD:40 mg/kg 165477-21 165477-2 103% Zinc 165477-21 7||10||RPD:35 165477-2 102% mg/kg **UNITS** QUALITYCONTROL Dup.Sm# Duplicate Spike Sm# Spike % Recovery Misc Soil - Inorg Base + Duplicate + %RPD

20/04/2017 || 20/04/2017

20/04/2017 || 20/04/2017

<5||<5

Duplicate

Base + Duplicate + %RPD 22/04/2017 || 22/04/2017

22/04/2017 || 22/04/2017

165477-2

165477-2

165477-2

20/04/2017

20/04/2017

93%

165477-21

165477-21

165477-21

Dup.Sm#

165477-21 165477-21

mg/kg

UNITS

•			••		
pH 1:5 soil:water	pH Units	165477-21	6.6 6.6 RPD:0		
Electrical Conductivity 1:5 soil:water	μS/cm	165477-21	18 18 RPD:0		
QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup.Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	165477-22	20/04/2017
Date analysed	-	[NT]	[NT]	165477-22	20/04/2017
TRHC6 - C9	mg/kg	[NT]	[NT]	165477-22	101%
TRHC6 - C10	mg/kg	[NT]	[NT]	165477-22	101%
Benzene	mg/kg	[NT]	[NT]	165477-22	106%
Toluene	mg/kg	[NT]	[NT]	165477-22	92%
Ethylbenzene	mg/kg	[NT]	[NT]	165477-22	100%
m+p-xylene	mg/kg	[NT]	[NT]	165477-22	103%
o-Xylene	mg/kg	[NT]	[NT]	165477-22	100%
naphthalene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate aaa- Trifluorotoluene	%	[NT]	[NT]	165477-22	96%

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Date prepared

Date analysed

Total Phenolics (as Phenol)

QUALITYCONTROL

Misc Inorg - Soil

Date prepared

Date analysed

		Client Reference	e: 84944.01, Bellevue	e Hill	
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	165477-22	20/04/2017
Date analysed	-	[NT]	[NT]	165477-22	21/04/2017
TRHC10 - C14	mg/kg	[NT]	[NT]	165477-22	105%
TRHC15 - C28	mg/kg	[NT]	[NT]	165477-22	98%
TRHC29 - C36	mg/kg	[NT]	[NT]	165477-22	103%
TRH>C10-C16	mg/kg	[NT]	[NT]	165477-22	105%
TRH>C16-C34	mg/kg	[NT]	[NT]	165477-22	98%
TRH>C34-C40	mg/kg	[NT]	[NT]	165477-22	103%
Surrogate o-Terphenyl	%	[NT]	[NT]	165477-22	93%
QUALITY CONTROL PAHs in Soil	UNITS	Dup.Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	165477-22	20/04/2017
Date analysed	-	[NT]	[NT]	165477-22	21/04/2017
Naphthalene	mg/kg	[NT]	[NT]	165477-22	84%
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	165477-22	78%
Phenanthrene	mg/kg	[NT]	[NT]	165477-22	77%
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	165477-22	73%
Pyrene	mg/kg	[NT]	[NT]	165477-22	74%
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	165477-22	67%
Benzo(b,j+k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	165477-22	77%
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	[NT]	[NT]	165477-22	117%

		Client Reference	e: 84944.01, Bellevu	e Hill	
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup.Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	165477-22	20/04/2017
Date analysed	-	[NT]	[NT]	165477-22	20/04/2017
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	165477-22	109%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	165477-22	98%
Heptachlor	mg/kg	[NT]	[NT]	165477-22	101%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	165477-22	94%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	165477-22	106%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	165477-22	116%
Dieldrin	mg/kg	[NT]	[NT]	165477-22	113%
Endrin	mg/kg	[NT]	[NT]	165477-22	104%
pp-DDD	mg/kg	[NT]	[NT]	165477-22	110%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	165477-22	78%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	165477-22	116%

		Client Referenc	e: 84944.01, Bellevue	e Hill	
QUALITYCONTROL	UNITS	Dup.Sm#	Duplicate	Spike Sm#	Spike % Recovery
Organophosphorus Pesticides			Base + Duplicate + %RPD		
Date extracted	-	[NT]	[NT]	165477-22	20/04/2017
Date analysed	-	[NT]	[NT]	165477-22	20/04/2017
Azinphos-methyl (Guthion)	mg/kg	[NT]	[NT]	[NR]	[NR]
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos	mg/kg	[NT]	[NT]	165477-22	93%
Chlorpyriphos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dichlorvos	mg/kg	[NT]	[NT]	165477-22	84%
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	165477-22	113%
Fenitrothion	mg/kg	[NT]	[NT]	165477-22	75%
Malathion	mg/kg	[NT]	[NT]	165477-22	77%
Parathion	mg/kg	[NT]	[NT]	165477-22	86%
Ronnel	mg/kg	[NT]	[NT]	165477-22	83%
Surrogate TCMX	%	[NT]	[NT]	165477-22	98%
QUALITYCONTROL	UNITS	Dup.Sm#	Duplicate	Spike Sm#	Spike % Recovery
PCBs in Soil			Base + Duplicate + %RPD		
Date extracted	-	[NT]	[NT]	165477-22	20/04/2017
Date analysed	-	[NT]	[NT]	165477-22	20/04/2017
Aroclor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	mg/kg	[NT]	[NT]	165477-22	110%
Aroclor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	165477-22	98%
QUALITYCONTROL	UNITS	Dup.Sm#	Duplicate	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil			Base + Duplicate + %RPD		
Date prepared	-	[NT]	[NT]	165477-22	20/04/2017
Date analysed	-	[NT]	[NT]	165477-22	20/04/2017
Arsenic	mg/kg	[NT]	[NT]	165477-22	97%
Cadmium	mg/kg	[NT]	[NT]	165477-22	100%
Chromium	mg/kg	[NT]	[NT]	165477-22	100%
Copper	mg/kg	[NT]	[NT]	165477-22	104%
Lead	mg/kg	[NT]	[NT]	165477-22	100%
Mercury	mg/kg	[NT]	[NT]	165477-22	116%
Nickel	mg/kg	[NT]	[NT]	165477-22	98%
Zinc	mg/kg	[NT]	[NT]	165477-22	101%
	•	•			

QUALITY CONTROL Misc Soil - Inorg	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	[NT]	[NT]	165477-22	20/04/2017
Date analysed	-	[NT]	[NT]	165477-22	20/04/2017
Total Phenolics (as Phenol)	mg/kg	[NT]	[NT]	165477-22	96%

Report Comments:

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 165477-1 for Pb and Zn. Therefore a triplicate result has been issued as laboratory sample number 165477-31.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 165477-11 for Pb and Zn. Therefore a triplicate result has been issued as laboratory sample number 165477-32.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 165477-21 for Cr. Therefore a triplicate result has been issued as laboratory sample number 165477-33.

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.

Note: Samples 165477-11, 19, 23, 24 were sub-sampled from jars and Samples 165477-1 to 10, 12 to 18, 20 to 22, 25 to 30 were sub-sampled from bags provided by the client.

Asbestos ID was analysed by Approved Identifier: Lucy Zhu
Asbestos ID was authorised by Approved Signatory: Paul Ching

INS: Insufficient sample for this test PQL: Practical Quantitation Limit NT: Not tested

NR: Test not required RPD: Relative Percent Difference NA: Test not required

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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.

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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SAMPLE RECEIPT ADVICE

Client Details	
Client	Douglas Partners Pty Ltd
Attention	Peter Oitmaa

Sample Login Details	
Your Reference	84944.01, Bellevue Hill
Envirolab Reference	165477
Date Sample Received	19/04/2017
Date Instructions Received	19/04/2017
Date Results Expected to be Reported	27/04/2017

Sample Condition	
Samples received in appropriate condition for analysis	YES
No. of Samples Provided	30 soils
Turnaround Time Requested	Standard
Temperature on receipt (°C)	16.0
Cooling Method	Ice
Sampling Date Provided	YES

Comments
Samples will be held for 1 month for water samples and 2 months for soil samples from date of
receipt of samples

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@envirolabservices.com.au	Email: jhurst@envirolabservices.com.au		

Sample and Testing Details on 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
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

Sample Id	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides	PCBs in Soil	Acid Extractable metals in soil	Total Phenolics (as Phenol)	Asbestos ID - soils	Electrical Conductivity 1:5 soil:water	pH 1:5 soil:water
BH101-0.5	✓	√	√	√	√	√	√	✓	✓	√	√
BH101-4.0	√	√	√	√	√	√	√	√	✓	√	√
BH102-0.5	√	√	✓	√	√	√	√	√	√	✓	√
BH102-2.0	√	√		√	✓		✓	√	√	✓	√
BH103-0.1	✓	√	√	√	√	✓	√	<	√	✓	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
BH103-1.0	√	\	✓	\	✓	\	√	\	\checkmark	\	\
BH104-1.0	✓	√	✓	√	√	✓	√	√	√	√	√
BH105-1.0	✓	√	√	√	✓	√	√	√	√	√	✓
BH111-0.45- 0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BH111-2.9-3.0	√	✓	√	✓	✓	✓	✓	✓	✓	✓	✓
BH112-0.5	√	√	√	√	√	√	\	√	√	✓	√
BH113-1.0- 1.05	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BH114-1.0	✓	√	√	√	√	√	√	✓	√	√	√
BH115-0.1	√	✓	✓	✓	√	√	√	√	√	√	√
BH116-1.0	√	✓	√	✓	√	√	√	✓	√	√	√
BH117-1.95- 2.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BH118-0.1- 0.15	✓	✓	\	✓	✓	✓	✓	\	\	✓	✓
BH119-0.5	✓	✓	√	✓	\	\	✓	√	√	✓	✓
BH120-0.5	✓	✓	√	✓	√	√	✓	√	√	✓	✓
BH121-1.0	✓	✓	\	✓	✓	✓	✓	✓	✓	✓	√
BH122-1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BH123-0.5	✓	✓	√	√	√	✓	✓	√	✓	✓	✓
BH124-0.1	✓	√	√	√	√	√	✓	√	✓	✓	✓
BH125-0.5	✓	√	√	√	√	√	√	√	√	√	✓
BH126-2.0	✓	✓	✓	✓	✓	✓	√	✓	✓	✓	✓
BH127-0.5	✓	✓	✓	✓	✓	√	✓	✓	✓	✓	✓ ✓ ✓
BH128-1.0	✓	✓	✓	✓	✓	✓	√	✓	✓	✓	√
BH129-0.5	✓	√	✓	√	✓	✓	✓	✓	✓	✓	√
BH129-2.0	✓	√	√	√	√	√	✓	√	√	√	√
BH130-0.1	✓	\checkmark	✓	\checkmark	✓	✓	✓	\checkmark	\checkmark	✓	\checkmark



12 Ashley Street, Chatswood NSW 2068 Email: tnotaras@envirolabservices.com.au Phone: 02 9910 6200 Fax: 02 9910 6201 Attn: Tania Notaras **Envirolab Services** <u>ان</u> Bellevue Hill Standard t/a Lab Quote No. 84944.01.....Sampler:R Wong..... Peter.Oitmaa@DouglasPartners.com.au...... Date Required: Project Name: Project Mgr: Project No: Email:

	S												10.00				
	Notes													(02) 9809 0666	(02) 9809 4095	ie:	e: 19/12
					St St	90								Phone: (02) 98	Fax: (02)	Date & Time:	Date & Time: 1911
				Envirolan	Chatswood New 2005	Job No: / Ph: (02) 9910 62	Date Received: 197	Time Received: 15-150.	emp: Soulampient	Security: Intact/Broken/None)			hA Ph	st Ryde 2114	By:	By: A.Z.
Analytes					9	<u> </u>	Dé	Tir	fer	Sec					96 Hermitage Road, West Ryde 2114	Received By:	Received By:
	pH, EC	×	·×	×	×	×	. ×	. x	. X	×	×	×	×		Address:	Date & Time:	Date & Time:
	Combo 8a	×	×	×	×	×	×	×	×	×	×	×	×		com.au		
	Container type	Jar/bag	Jar/bag	Jar/bag	Jar/bag	Jar/bag	Jar/bag	Jar/bag	Jar/bag	Jar/bag	Jar/bag	Jar/bag	Jar/bag		Peter.Oitmaa@DouglasPartners.com.au		
Sample Type	S - soil W - water	S	S	S	S	S	S	S	S	S	S	S	S		Douglas	Signed:	Signed:
	Sampling Date	12/4	12/4	12/4	12/4	11/4	11/4	12/4	10/4	13/4	13/4	11/4	.13/4		tmaa@	Sig	Sign
	Lab ID	1	7	M	4	4	9	+	8	6	2	=	7		eter.Oi		
	Sample Depth (m)	0.5	4.0	0.5	2.0	0.1	1.0	1.0	1.0	0.45-0.5	2.9-3.0	0.5	1.0-1.05	t No		ed by:	ed by:
	Sample	BH101	BH101	BH102	BH102	BH103	BH103	BH104	BH105	BH111	BH111	BH112	BH113	Lab Report No.	Send Results to:	Relinquished by:	Relinquished by:



12 Ashley Street, Chatswood NSW 2068 Phone: 02 9910 6200 Fax: 02 9910 6201 Attn: Tania Notaras **Envirolab Services** Bellevue Hill Standard t/a Lab Quote No. 84944.01......Sampler:R Wong..... Peter.Oitmaa@DouglasPartners.com.au...... Date Required: Project Name: Project Mgr: Project No: Email:

Email: tnotaras@envirolabservices.com.au

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	Notes													(02) 9809 0666	(02) 9809 4095	Date & Time: 19/4	ime:
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Analytes															96 Hermitage Road, West Ryde 2114	Received By:	Received By:
	bH' EC	×	×	×	×	×	×	×	×	×	×	×	×		Address: 96 h	Date & Time:	Date & Time:
	Combo 8a	×	×	×	×	×	×	×	×	×	×	×	×		com.au		
	Container type	Jar/bag	Jar/bag	Jar/bag	Jar/bag	Jar/bag	Jar/bag	Jar/hag.	Jar/bag	Jar/bag	Jar/bag	Jar/bag	Jar/bag		Peter.Oitmaa@DouglasPartners.com.au		
Sample Type	S - soil W - water	S	S	S	S	S	S	S	S	S	S	S	S		Douglas	Signed:	Signed:
	Sampling Date	11/4	11/4	11/4	13/4	13/4	10/4	11/4	12/4	11/4	11/4	10/4	10/4		itmaa@	Siç	Sig
	D Pa	B	14	15.	91	ŁJ	18	6)	20	I	な	73	74		eter.0		
	Sample Depth (m)	1.0	0.1	1.0	1.95-2.0	0.1-0.15	0.5	9.0	1.0	1.0	0.5	0.1	0.5	t No		ed by:	d by:
	Sample Sai ID De (m)	BH114	BH115	BH116	BH117	BH118	BH119	BH120	BH121	BH122	BH123	BH124	BH125	Lab Report No.	Send Results to:	Relinquished by:	Relinquished by:

Page 2 of



12 Ashley Street, Chatswood NSW 2068 Email: tnotaras@envirolabservices.com.au Phone: 02 9910 6200 Fax: 02 9910 6201 Attn: Tania Notaras **Envirolab Services** <u>۔</u> Standard t/a Lab Quote No. 84944.01......Sampler:R Wong..... Peter.Oitmaa@DouglasPartners.com.au...... Bellevue Hill Date Required: Project Name: Project Mgr: Project No: Email:

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ytes												d, West Ryde	Received By:	Received By:
Analytes												96 Hermitage Road, West Ryde 2114	R	Re
												Address: 96	Date & Time:	Date & Time:
	pH, EC	×	×	×	×	×	×					_	Date	Date
	Combo 8a	×	×	×	×	×	×		No. of the last			com.al		
	Container type	Jar/bag	Jar/bag	Jar/bag	Jar/bag	Jar/bag	Jar/bag					Peter.Oitmaa@DouglasPartners.com.au		
Sample Type	S - soil W - water	S	S	S	S	S	S					Douglas	Signed:	ed:
	Sampling Date	12/4	11/4	12/4	10/4	10/4	10/4					:maa@	Sign	Signed:
	Lab ID	52	97	17	28	A	30					eter.Oil		
	Sample Depth (m)	2.0	0.5	1.0	0.5	2.0	0.1				t No.		d by:	d by:
	Sample ID 1657	BH126	BH127	BH128	BH129	BH129	BH130				Lab Report No.	Send Results to:	Relinquished by:	Relinquished by:



Envirolab Services Pty Ltd

ABN 37 112 535 645 12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 enquiries@envirolabservices.com.au www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 130980

Client:

Douglas Partners Pty Ltd 96 Hermitage Rd West Ryde NSW 2114

Attention: Peter Oitmaa

Sample log in details:

Your Reference: 84944.00, Bellevue Hill

No. of samples: 10 Soils

Date samples received / completed instructions received 10/07/2015 / 10/07/2015

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: / Issue Date: 17/07/15 / 17/07/15

Date of Preliminary Report: Not Issued

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

Results Approved By:

Jacinta/Hurst Laboratory Manager



	1	T	T	T		T
vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	130980-1	130980-2	130980-3	130980-4	130980-5
Your Reference		BH2	BH2	BH2	BH2	BH4
Depth		1.0	2.0	3.0	4.0	1.0
Date Sampled		7/07/2015	7/07/2015	7/07/2015	7/07/2015	3/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 lessBTEX(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
Surrogate aaa-Trifluorotoluene	%	110	111	112	111	117

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	130980-6	130980-7	130980-8	130980-9	130980-10
Your Reference		BH4	BH4	BH4	BH10	BH10
Depth		2.0	3.0	4.0	1.0	2.0
Date Sampled		3/07/2015	3/07/2015	3/07/2015	6/07/2015	6/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 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
Surrogate aaa-Trifluorotoluene	%	110	121	106	117	120

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	130980-1	130980-2	130980-3	130980-4	130980-5
Your Reference		BH2	BH2	BH2	BH2	BH4
Depth		1.0	2.0	3.0	4.0	1.0
Date Sampled		7/07/2015	7/07/2015	7/07/2015	7/07/2015	3/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	14/07/2015
Date analysed	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
TRHC 10 - C14	mg/kg	<50	<50	<50	<50	<50
TRHC 15 - C28	mg/kg	<100	<100	<100	<100	<100
TRHC29 - C36	mg/kg	<100	<100	<100	<100	<100
TRH>C10-C16	mg/kg	<50	<50	<50	<50	<50
TRH>C10 - C16 less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C16-C34	mg/kg	<100	<100	<100	<100	<100
TRH>C34-C40	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	81	72	79	76	117

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	130980-6	130980-7	130980-8	130980-9	130980-10
Your Reference		BH4	BH4	BH4	BH10	BH10
Depth		2.0	3.0	4.0	1.0	2.0
Date Sampled Type of sample		3/07/2015 Soil	3/07/2015 Soil	3/07/2015 Soil	6/07/2015 Soil	6/07/2015 Soil
Date extracted	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
TRHC 10 - C14	mg/kg	<50	<50	<50	<50	<50
TRHC 15 - C28	mg/kg	<100	<100	<100	<100	<100
TRHC29 - C36	mg/kg	<100	<100	<100	<100	<100
TRH>C10-C16	mg/kg	<50	<50	<50	<50	<50
TRH>C10 - C16 less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C16-C34	mg/kg	<100	<100	<100	<100	<100
TRH>C34-C40	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	80	76	78	82	78

PAHs in Soil						
Our Reference:	UNITS	130980-1	130980-2	130980-3	130980-4	130980-5
Your Reference		BH2	BH2	BH2	BH2	BH4
Depth		1.0	2.0	3.0	4.0	1.0
Date Sampled		7/07/2015	7/07/2015	7/07/2015	7/07/2015	3/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	14/07/2015
Date analysed	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	14/07/2015
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
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	1.4
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.9
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.9
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.4
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.4
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	0.5
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	0.3
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
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
Total Positive PAHs	mg/kg	NIL(+)VE	NIL(+)VE	NIL(+)VE	NIL(+)VE	5.8
Surrogate p-Terphenyl-d14	%	95	84	101	96	95

PAHs in Soil						
Our Reference:	UNITS	130980-6	130980-7	130980-8	130980-9	130980-10
Your Reference		BH4	BH4	BH4	BH10	BH10
Depth		2.0	3.0	4.0	1.0	2.0
Date Sampled		3/07/2015	3/07/2015	3/07/2015	6/07/2015	6/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
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	0.7	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	0.5	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	6.5	0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	1.8	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	5.0	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	4.7	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	2.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	1.8	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	2.4	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	1.6	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.9	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	0.7	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	2.3	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	2.3	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	2.3	<0.5
Total Positive PAHs	mg/kg	NIL(+)VE	NIL(+)VE	NIL(+)VE	29	0.10
Surrogate p-Terphenyl-d14	%	95	95	104	105	96

Organochlorine Pesticides in soil						
Our Reference:	UNITS	130980-1	130980-2	130980-3	130980-4	130980-5
Your Reference		BH2	BH2	BH2	BH2	BH4
Depth		1.0	2.0	3.0	4.0	1.0
Date Sampled		7/07/2015	7/07/2015	7/07/2015	7/07/2015	3/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
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
Surrogate TCMX	%	89	79	88	83	87

	1	I	1		I	I
Organochlorine Pesticides in soil Our Reference:	UNITS	130980-6	130980-7	130980-8	130980-9	130980-10
Your Reference	OINITS	BH4	BH4	BH4	BH10	BH10
Depth		2.0	3.0	4.0	1.0	2.0
Date Sampled		3/07/2015	3/07/2015	3/07/2015	6/07/2015	6/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
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
Surrogate TCMX	%	79	86	85	83	84

Organophosphorus Pesticides						
Our Reference:	UNITS	130980-1	130980-2	130980-3	130980-4	130980-5
Your Reference		BH2	BH2	BH2	BH2	BH4
Depth		1.0	2.0	3.0	4.0	1.0
Date Sampled		7/07/2015	7/07/2015	7/07/2015	7/07/2015	3/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
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	%	89	79	88	83	87

Organophosphorus Pesticides						
Our Reference:	UNITS	130980-6	130980-7	130980-8	130980-9	130980-10
Your Reference		BH4	BH4	BH4	BH10	BH10
Depth		2.0	3.0	4.0	1.0	2.0
Date Sampled		3/07/2015	3/07/2015	3/07/2015	6/07/2015	6/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
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	86	85	83	84

PCBs in Soil						
Our Reference:	UNITS	130980-1	130980-2	130980-3	130980-4	130980-5
Your Reference		BH2	BH2	BH2	BH2	BH4
Depth		1.0	2.0	3.0	4.0	1.0
Date Sampled		7/07/2015	7/07/2015	7/07/2015	7/07/2015	3/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
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
Surrogate TCLMX	%	89	79	88	83	87

PCBs in Soil						
Our Reference:	UNITS	130980-6	130980-7	130980-8	130980-9	130980-10
Your Reference		BH4	BH4	BH4	BH10	BH10
Depth		2.0	3.0	4.0	1.0	2.0
Date Sampled		3/07/2015	3/07/2015	3/07/2015	6/07/2015	6/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
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
Surrogate TCLMX	%	79	86	85	83	84

Acid Extractable metals in soil						
Our Reference:	UNITS	130980-1	130980-2	130980-3	130980-4	130980-5
Your Reference		BH2	BH2	BH2	BH2	BH4
Depth		1.0	2.0	3.0	4.0	1.0
Date Sampled		7/07/2015	7/07/2015	7/07/2015	7/07/2015	3/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Arsenic	mg/kg	41	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	3	2	1	2	2
Copper	mg/kg	5	1	<1	<1	2
Lead	mg/kg	3	3	1	1	5
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1	<1	<1
Zinc	mg/kg	36	3	1	<1	3

Acid Extractable metals in soil						
Our Reference:	UNITS	130980-6	130980-7	130980-8	130980-9	130980-10
Your Reference		BH4	BH4	BH4	BH10	BH10
Depth		2.0	3.0	4.0	1.0	2.0
Date Sampled		3/07/2015	3/07/2015	3/07/2015	6/07/2015	6/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	1	1	2	2	2
Copper	mg/kg	1	<1	1	22	<1
Lead	mg/kg	9	4	14	10	2
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1	1	1
Zinc	mg/kg	3	2	4	10	1

Acid Extractable metals in soil		
Our Reference:	UNITS	130980-11
Your Reference		BH2 - TRIPLICATE
Depth		1.0
Date Sampled		07/07/2015
Type of sample		Soil
Date digested	-	13/07/2015
Date analysed	-	13/07/2015
Arsenic	mg/kg	20
Cadmium	mg/kg	<0.4
Chromium	mg/kg	2
Copper	mg/kg	4
Lead	mg/kg	5
Mercury	mg/kg	<0.1
Nickel	mg/kg	1

Acid Extractable metals in soil		
Our Reference:	UNITS	130980-11
Your Reference		BH2 - TRIPLICATE
Depth		1.0
Date Sampled Type of sample		07/07/2015 Soil
Zinc	mg/kg	25

Misc Soil - Inorg						
Our Reference:	UNITS	130980-1	130980-2	130980-3	130980-4	130980-5
Your Reference		BH2	BH2	BH2	BH2	BH4
Depth		1.0	2.0	3.0	4.0	1.0
Date Sampled		7/07/2015	7/07/2015	7/07/2015	7/07/2015	3/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5
		.	T		.	T
Misc Soil - Inorg						
Our Reference:	UNITS	130980-6	130980-7	130980-8	130980-9	130980-10
Your Reference		BH4	BH4	BH4	BH10	BH10
Depth		2.0	3.0	4.0	1.0	2.0
Date Sampled		3/07/2015	3/07/2015	3/07/2015	6/07/2015	6/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Inorg - Soil						
Our Reference:	UNITS	130980-1	130980-2	130980-3	130980-4	130980-5
Your Reference		BH2	BH2	BH2	BH2	BH4
Depth		1.0	2.0	3.0	4.0	1.0
Date Sampled		7/07/2015	7/07/2015	7/07/2015	7/07/2015	3/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
Date analysed	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
pH 1:5 soil:water	pH Units	6.3	6.5	6.5	5.8	6.3
Electrical Conductivity 1:5 soil:water	μS/cm	21	13	13	14	14
Chloride, Cl 1:5 soil:water	mg/kg	<10	<10	<10	<10	<10
Sulphate, SO4 1:5 soil:water	mg/kg	<10	<10	<10	<10	<10

Misc Inorg - Soil						
Our Reference:	UNITS	130980-6	130980-7	130980-8	130980-9	130980-10
Your Reference		BH4	BH4	BH4	BH10	BH10
Depth		2.0	3.0	4.0	1.0	2.0
Date Sampled		3/07/2015	3/07/2015	3/07/2015	6/07/2015	6/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
Date analysed	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
pH 1:5 soil:water	pH Units	6.1	6.0	6.2	9.9	7.2
Electrical Conductivity 1:5 soil:water	μS/cm	12	11	14	87	36
Chloride, Cl 1:5 soil:water	mg/kg	<10	<10	<10	<10	<10
Sulphate, SO4 1:5 soil:water	mg/kg	<10	<10	<10	38	31

Moisture						
Our Reference:	UNITS	130980-1	130980-2	130980-3	130980-4	130980-5
Your Reference		BH2	BH2	BH2	BH2	BH4
Depth		1.0	2.0	3.0	4.0	1.0
Date Sampled		7/07/2015	7/07/2015	7/07/2015	7/07/2015	3/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
Moisture	%	7.7	4.0	4.6	5.5	4.4
Moisture						
Our Reference:	UNITS	130980-6	130980-7	130980-8	130980-9	130980-10
Your Reference		BH4	BH4	BH4	BH10	BH10
Depth		2.0	3.0	4.0	1.0	2.0
Date Sampled		3/07/2015	3/07/2015	3/07/2015	6/07/2015	6/07/2015
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/07/2015	13/07/2015	13/07/2015	13/07/2015	13/07/2015
Date analysed	-	14/07/2015	14/07/2015	14/07/2015	14/07/2015	14/07/2015
Moisture	%	7.4	6.3	20	1.5	1.9

	Client Refere	nce: 8494	4.00, Bellevue	HIII		
Asbestos ID - soils Our Reference: Your Reference	UNITS	130980-1 BH2	130980-2 BH2	130980-3 BH2	130980-4 BH2	130980-5 BH4
Depth Date Sampled Type of sample		1.0 7/07/2015 Soil	2.0 7/07/2015 Soil	3.0 7/07/2015 Soil	4.0 7/07/2015 Soil	1.0 3/07/2015 Soil
Date analysed	-	16/07/2015	16/07/2015	16/07/2015	16/07/2015	16/07/2015
Sample mass tested	g	Approx 60g	Approx 70g	Approx 70g	Approx 75g	Approx 65g
Sample Description	-	Brown coarse- grained sandy soil				
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						7
Our Reference:	UNITS	130980-6	130980-7	130980-8	130980-9	
Your Reference		BH4	BH4	BH4	BH10	
Depth		2.0	3.0	4.0	1.0	
Date Sampled Type of sample		3/07/2015 Soil	3/07/2015 Soil	3/07/2015 Soil	6/07/2015 Soil	
Date analysed	-	16/07/2015	16/07/2015	16/07/2015	16/07/2015	
Sample mass tested	g	Approx 75g	Approx 75g	Approx 60g	Approx 40g	
Sample Description	-	Brown coarse- grained sandy soil	Brown coarse- grained sandy soil	Grey coarse- grained sandy soil	Brown coarse- grained sandy soil	
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres				

detected

No asbestos

detected

detected

No asbestos

detected

detected

No asbestos

detected

detected

No asbestos

detected

Envirolab Reference: 130980 Revision No: R 00

Trace Analysis

Method ID	Methodology Summary
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-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-012 subset	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. 'TEQ PQL' values are assuming all contributing PAHs reported as <pql actually="" and="" approach="" are="" at="" can="" conservative="" contribute="" false="" give="" given="" is="" most="" pahs="" positive="" pql.="" td="" teq<="" teqs="" that="" the="" this="" to=""></pql>
	calculation may not be present. 2. 'TEQ zero' values are assuming all contributing PAHs reported as <pql 'teq="" +ve="" 3.="" <pql="" a="" above.="" all="" and="" approach="" approaches="" are="" as="" assuming="" below="" between="" but="" calculation="" conservative="" contribute="" contributing="" false="" half="" hence="" individual="" is="" least="" lowest="" mid-point="" more="" most="" negative="" note,="" of="" pahs="" pahs"="" pahs.<="" positive="" pql="" pql'="" pql.="" present="" reflective="" reported="" simply="" stipulated="" sum="" susceptible="" td="" teq="" teqs="" that="" the="" therefore"="" this="" to="" total="" values="" when="" zero.=""></pql>
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020 ICP- AES	Determination of various metals by ICP-AES.
Metals-021 CV- AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell at 25oC in accordance with APHA latest edition 2510 and Rayment & Lyons.
Inorg-081	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA latest edition, 4110-B.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.
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.

Client Reference: 84944.00, Bellevue Hill QUALITYCONTROL **UNITS** PQL **METHOD** Blank Duplicate **Duplicate results** Spike Sm# Spike % Sm# Recovery vTRH(C6-C10)/BTEXNin Base II Duplicate II %RPD Soil 13/07/2 130980-1 13/07/2015 || 13/07/2015 LCS-3 13/07/2015 Date extracted 015 Date analysed 14/07/2 130980-1 14/07/2015 || 14/07/2015 LCS-3 14/07/2015 015 TRHC6 - C9 mg/kg 25 Org-016 <25 130980-1 <25||<25 LCS-3 124% 130980-1 25 Org-016 <25 <25||<25 LCS-3 124% TRHC6 - C10 mg/kg Org-016 130980-1 125% Benzene 0.2 < 0.2 <0.2||<0.2 LCS-3 mg/kg Toluene mg/kg 0.5 Org-016 < 0.5 130980-1 <0.5||<0.5 LCS-3 122% Ethylbenzene 1 Org-016 <1 130980-1 <1||<1 LCS-3 122% mg/kg 2 Org-016 130980-1 125% m+p-xylene <2 <2||<2 LCS-3 mg/kg o-Xylene mg/kg 1 Org-016 <1 130980-1 <1||<1 LCS-3 120% naphthalene 1 Org-014 <1 130980-1 <1||<1 [NR] [NR] mg/kg 130980-1 % Org-016 119 110 || 115 || RPD: 4 LCS-3 117% Surrogate aaa-Trifluorotoluene QUALITYCONTROL **UNITS** PQL Blank METHOD Duplicate **Duplicate results** Spike Sm# Spike % Sm# Recovery svTRH (C10-C40) in Soil Base II Duplicate II %RPD 13/07/2 130980-1 13/07/2015 || 13/07/2015 LCS-3 13/07/2015 Date extracted 015 14/07/2 130980-1 14/07/2015 || 14/07/2015 LCS-3 14/07/2015 Date analysed 015 TRHC10 - C14 mg/kg 50 Org-003 <50 130980-1 <50 | | <50 LCS-3 90% TRHC15 - C28 mg/kg 100 Org-003 <100 130980-1 <100 || <100 LCS-3 95% Org-003 130980-1 LCS-3 77% TRHC29 - C36 mg/kg 100 <100 <100 || 210 TRH>C10-C16 mg/kg 50 Org-003 <50 130980-1 <50 | | <50 LCS-3 90% TRH>C16-C34 mg/kg 100 Org-003 <100 130980-1 <100 || 160 LCS-3 95% Org-003 <100 130980-1 LCS-3 77% TRH>C34-C40 mg/kg 100 <100 || 210 Surrogate o-Terphenyl % Org-003 82 130980-1 81 || 87 || RPD: 7 LCS-3 89% QUALITYCONTROL UNITS PQL METHOD Blank Duplicate **Duplicate results** Spike Sm# Spike % Sm# Recovery PAHs in Soil Base II Duplicate II %RPD Date extracted 13/07/2 130980-1 13/07/2015 || 13/07/2015 LCS-3 13/07/2015 015 13/07/2 13/07/2015 || 13/07/2015 Date analysed 130980-1 LCS-3 13/07/2015 015 Org-012 Naphthalene 0.1 < 0.1 130980-1 <0.1||<0.1 LCS-3 113% mg/kg subset Org-012 130980-1 Acenaphthylene <0.1 <0.1||<0.1 [NR] [NR] mg/kg 0.1 subset Org-012 Acenaphthene 0.1 < 0.1 130980-1 <0.1||<0.1 [NR] [NR] mg/kg subset Org-012 Fluorene mg/kg 0.1 < 0.1 130980-1 <0.1||<0.1 LCS-3 95% subset Org-012 LCS-3 105% Phenanthrene < 0.1 130980-1 <0.1||<0.1 mg/kg 0.1 subset Anthracene 0.1 Org-012 < 0.1 130980-1 <0.1||<0.1 [NR] [NR] mg/kg subset Fluoranthene mg/kg 0.1 Org-012 <0.1 130980-1 <0.1||<0.1 LCS-3 98% subset

Client Reference: 84944.00, Bellevue Hill PQL QUALITYCONTROL **UNITS** METHOD Blank Duplicate **Duplicate results** Spike Sm# Spike % Sm# Recovery PAHs in Soil Base II Duplicate II %RPD Org-012 <0.1 130980-1 <0.1||<0.1 LCS-3 103% Pyrene mg/kg 0.1 subset Org-012 130980-1 Benzo(a)anthracene mg/kg 0.1 < 0.1 <0.1||<0.1 [NR] [NR] subset Org-012 97% Chrysene mg/kg 0.1 < 0.1 130980-1 <0.1||<0.1 LCS-3 subset Org-012 Benzo(b,j+k) 0.2 < 0.2 130980-1 <0.2||<0.2 [NR] [NR] mg/kg fluoranthene subset 0.05 Org-012 <0.05 130980-1 <0.05||<0.05 LCS-3 105% Benzo(a)pyrene mg/kg subset Org-012 Indeno(1,2,3-c,d)pyrene 0.1 < 0.1 130980-1 <0.1||<0.1 [NR] [NR] mg/kg subset Org-012 Dibenzo(a,h)anthracene mg/kg 0.1 <0.1 130980-1 <0.1||<0.1 [NR] [NR] subset Org-012 <0.1 Benzo(g,h,i)perylene 0.1 130980-1 <0.1||<0.1 [NR] [NR] mg/kg subset % Org-012 101 130980-1 95 || 125 || RPD: 27 LCS-3 104% Surrogate p-Terphenylsubset QUALITYCONTROL UNITS PQL METHOD Blank Duplicate **Duplicate results** Spike Sm# Spike % Sm# Recovery Organochlorine Base II Duplicate II %RPD Pesticides in soil 13/07/2 130980-1 LCS-3 13/07/2015 Date extracted 13/07/2015 || 13/07/2015 015 14/07/2 14/07/2015 || 14/07/2015 Date analysed 130980-1 LCS-3 14/07/2015 015 **HCB** mg/kg 0.1 Org-005 <0.1 130980-1 <0.1||<0.1 [NR] [NR] Org-005 130980-1 LCS-3 88% alpha-BHC mg/kg 0.1 <0.1 <0.1||<0.1 gamma-BHC mg/kg 0.1 Org-005 <0.1 130980-1 <0.1||<0.1 [NR] [NR] beta-BHC 0.1 Org-005 <0.1 130980-1 <0.1||<0.1 LCS-3 85% mg/kg 88% Heptachlor mg/kg 0.1 Org-005 <0.1 130980-1 <0.1||<0.1 LCS-3 delta-BHC mg/kg 0.1 Org-005 <0.1 130980-1 <0.1||<0.1 [NR] [NR] Aldrin 0.1 Org-005 <0.1 130980-1 <0.1||<0.1 LCS-3 96% mg/kg Heptachlor Epoxide mg/kg 0.1 Org-005 <0.1 130980-1 <0.1||<0.1 LCS-3 86% gamma-Chlordane mg/kg 0.1 Org-005 <0.1 130980-1 <0.1||<0.1 [NR] [NR] 0.1 Org-005 <0.1 130980-1 <0.1||<0.1 [NR] alpha-chlordane mg/kg [NR] 0.1 Endosulfan I mg/kg Org-005 <0.1 130980-1 <0.1||<0.1 [NR] [NR] pp-DDE 0.1 Org-005 <0.1 130980-1 <0.1||<0.1 LCS-3 87% mg/kg Dieldrin 0.1 Org-005 <0.1 130980-1 LCS-3 89% mg/kg <0.1||<0.1 Endrin mg/kg 0.1 Org-005 <0.1 130980-1 <0.1||<0.1 LCS-3 97% pp-DDD 0.1 Org-005 <0.1 130980-1 LCS-3 94% mg/kg <0.1||<0.1 Org-005 [NR] Endosulfan II mg/kg 0.1 <0.1 130980-1 <0.1||<0.1 [NR] pp-DDT mg/kg 0.1 Org-005 <0.1 130980-1 <0.1||<0.1 [NR] [NR] Endrin Aldehyde 0.1 Org-005 <0.1 130980-1 [NR] mg/kg <0.1||<0.1 [NR] Endosulfan Sulphate mg/kg 0.1 Org-005 <0.1 130980-1 <0.1||<0.1 LCS-3 86%

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mg/kg

%

0.1

Org-005

Org-005

<0.1

87

130980-1

130980-1

<0.1||<0.1

89||96||RPD:8

Methoxychlor

Surrogate TCMX

[NR]

82%

[NR]

LCS-3

Client Reference: 84944.00, Bellevue Hill PQL QUALITYCONTROL **UNITS** METHOD Blank Duplicate **Duplicate results** Spike Sm# Spike % Sm# Recovery Organophosphorus Base II Duplicate II %RPD Pesticides Date extracted 13/07/2 130980-1 13/07/2015 || 13/07/2015 LCS-3 13/07/2015 015 Date analysed 14/07/2 130980-1 14/07/2015 || 14/07/2015 LCS-3 14/07/2015 015 Org-008 Azinphos-methyl mg/kg 0.1 <0.1 130980-1 <0.1||<0.1 LCS-3 99% (Guthion) Org-008 Bromophos-ethyl mg/kg 0.1 < 0.1 130980-1 <0.1||<0.1 [NR] [NR] Org-008 <0.1 130980-1 103% Chlorpyriphos mg/kg 0.1 <0.1||<0.1 LCS-3 Org-008 Chlorpyriphos-methyl mg/kg 0.1 <0.1 130980-1 <0.1||<0.1 [NR] [NR] Org-008 Diazinon mg/kg 0.1 < 0.1 130980-1 <0.1||<0.1 [NR] [NR] Org-008 <0.1 130980-1 104% Dichlorvos mg/kg 0.1 <0.1||<0.1 LCS-3 Dimethoate mg/kg 0.1 Org-008 <0.1 130980-1 <0.1||<0.1 [NR] [NR] **Ethion** 0.1 Org-008 <0.1 130980-1 <0.1||<0.1 LCS-3 123% mg/kg 130980-1 LCS-3 101% Fenitrothion 0.1 Org-008 < 0.1 <0.1||<0.1 mg/kg Malathion mg/kg 0.1 Org-008 <0.1 130980-1 <0.1||<0.1 LCS-3 78% Parathion 0.1 Org-008 <0.1 130980-1 <0.1||<0.1 LCS-3 108% mg/kg <0.1 Ronnel 0.1 Org-008 130980-1 <0.1||<0.1 [NR] [NR] mg/kg % Org-008 87 130980-1 89 | 96 | RPD: 8 LCS-3 84% Surrogate TCMX QUALITYCONTROL UNITS PQL METHOD Blank Duplicate **Duplicate results** Spike Sm# Spike % Sm# Recovery PCBs in Soil Base II Duplicate II %RPD 13/07/2 Date extracted 130980-1 13/07/2015 || 13/07/2015 LCS-3 13/07/2015 015 14/07/2 14/07/2015 || 14/07/2015 Date analysed 130980-1 LCS-3 14/07/2015 015 Aroclor 1016 mg/kg 0.1 Org-006 <0.1 130980-1 <0.1||<0.1 [NR] [NR] Org-006 130980-1 Aroclor 1221 mg/kg 0.1 < 0.1 <0.1||<0.1 [NR] [NR] Aroclor 1232 mg/kg 0.1 Org-006 <0.1 130980-1 <0.1||<0.1 [NR] [NR] Aroclor 1242 0.1 Org-006 <0.1 130980-1 <0.1||<0.1 [NR] [NR] mg/kg

Envirolab Reference: 130980 Revision No: R 00

mg/kg

mg/kg

mg/kg % 0.1

0.1

0.1

Org-006

Org-006

Org-006

Org-006

<0.1

<0.1

<0.1

87

130980-1

130980-1

130980-1

130980-1

<0.1||<0.1

<0.1||<0.1

<0.1||<0.1

89 | 96 | RPD: 8

[NR]

LCS-3

[NR]

LCS-3

[NR]

122%

[NR]

83%

Aroclor 1248

Aroclor 1254

Aroclor 1260

Surrogate TCLMX

Client Reference: 84944.00, Bellevue Hill									
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery	
Acid Extractable metals in soil						Base II Duplicate II %RPD			
Date digested	-			13/07/2 015	130980-1	13/07/2015 13/07/2015	LCS-8	13/07/2015	
Date analysed	-			13/07/2 015	130980-1	13/07/2015 13/07/2015	LCS-8	13/07/2015	
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	130980-1	41 14 RPD: 98	LCS-8	106%	
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	130980-1	<0.4 <0.4	LCS-8	94%	
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	130980-1	3 2 RPD:40	LCS-8	103%	
Copper	mg/kg	1	Metals-020 ICP-AES	<1	130980-1	5 5 RPD:0	LCS-8	104%	
Lead	mg/kg	1	Metals-020 ICP-AES	<1	130980-1	3 7 RPD:80	LCS-8	98%	
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	130980-1	<0.1 <0.1	LCS-8	90%	
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	130980-1	<1 1	LCS-8	100%	
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	130980-1	36 21 RPD: 53	LCS-8	102%	
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery	
Misc Soil - Inorg						Base II Duplicate II %RPD			
Date prepared	-			13/07/2 015	130980-1	13/07/2015 13/07/2015	LCS-1	13/07/2015	
Date analysed	-			13/07/2 015	130980-1	13/07/2015 13/07/2015	LCS-1	13/07/2015	
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	130980-1	<5 <5	LCS-1	109%	
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery	
Misc Inorg - Soil						Base II Duplicate II %RPD			
Date prepared	-			14/07/2 015	130980-1	14/07/2015 14/07/2015	LCS-1	14/07/2015	
Date analysed	-			14/07/2 015	130980-1	14/07/2015 14/07/2015	LCS-1	14/07/2015	
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	130980-1	6.3 6.4 RPD:2	LCS-1	102%	
Electrical Conductivity 1:5 soil:water	μS/cm	1	Inorg-002	<1	130980-1	21 23 RPD:9	LCS-1	100%	
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	<10	130980-1	<10 <10	LCS-1	95%	
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	<10	130980-1	<10 <10	LCS-1	98%	

		Client Referenc	e: 84944.00, Bellevu	e HIII	
QUALITYCONTROL	UNITS	Dup.Sm#	Duplicate	Spike Sm#	Spike % Recovery
vTRH(C6-C10)/BTEXN in Soil			Base + Duplicate + %RPD		
3011					
Date extracted	-	[NT]	[NT]	130980-2	13/07/2015
Date analysed	-	[NT]	[NT]	130980-2	14/07/2015
TRHC6 - C9	mg/kg	[NT]	[NT]	130980-2	118%
TRHC6 - C10	mg/kg	[NT]	[NT]	130980-2	118%
Benzene	mg/kg	[NT]	[NT]	130980-2	118%
Toluene	mg/kg	[NT]	[NT]	130980-2	116%
Ethylbenzene	mg/kg	[NT]	[NT]	130980-2	116%
m+p-xylene	mg/kg	[NT]	[NT]	130980-2	120%
o-Xylene	mg/kg	[NT]	[NT]	130980-2	114%
naphthalene	mg/kg	[NT]	[NT]	[NR]	[NR]
<i>Surrogate</i> aaa- Trifluorotoluene	%	[NT]	[NT]	130980-2	115%
QUALITYCONTROL	UNITS	Dup.Sm#	Duplicate	Spike Sm#	Spike % Recovery
svTRH (C10-C40) in Soil			Base + Duplicate + %RPD		
Date extracted	-	130980-5	14/07/2015 13/07/2015	130980-2	13/07/2015
Date analysed	-	130980-5	14/07/2015 14/07/2015	130980-2	14/07/2015
TRHC10 - C14	mg/kg	130980-5	<50 <50	130980-2	95%
TRHC15 - C28	mg/kg	130980-5	<100 810	130980-2	98%
TRHC29 - C36	mg/kg	130980-5	<100 310	130980-2	68%
TRH>C10-C16	mg/kg	130980-5	<50 50	130980-2	95%
TRH>C16-C34	mg/kg	130980-5	<100 1000	130980-2	98%
TRH>C34-C40	mg/kg	130980-5	<100 140	130980-2	68%
Surrogate o-Terphenyl	%	130980-5	117 105 RPD:11	130980-2	99%
QUALITYCONTROL	UNITS	Dup.Sm#	Duplicate	Spike Sm#	Spike % Recovery
PAHs in Soil			Base + Duplicate + %RPD		
Date extracted	-	130980-5	14/07/2015 13/07/2015	130980-2	13/07/2015
Date analysed	-	130980-5	14/07/2015 13/07/2015	130980-2	13/07/2015
Naphthalene	mg/kg	130980-5	0.2 0.4 RPD:67	130980-2	104%
Acenaphthylene	mg/kg	130980-5	<0.1 0.3	[NR]	[NR]
Acenaphthene	mg/kg	130980-5	0.1 5.6 RPD:193	[NR]	[NR]
Fluorene	mg/kg	130980-5	<0.1 3.7	130980-2	90%
Phenanthrene	mg/kg	130980-5	1.4 52 RPD: 190	130980-2	96%
Anthracene	mg/kg	130980-5	0.3 14 RPD: 192	[NR]	[NR]
Fluoranthene	mg/kg	130980-5	0.9 44 RPD: 192	130980-2	94%
Pyrene	mg/kg	130980-5	0.9 42 RPD: 192	130980-2	99%
Benzo(a)anthracene	mg/kg	130980-5	0.4 18 RPD:191	[NR]	[NR]
Chrysene	mg/kg	130980-5	0.4 14 RPD:189	130980-2	88%
Benzo(b,j+k)fluoranthene	mg/kg	130980-5	0.5 15 RPD:187	[NR]	[NR]
Benzo(a)pyrene	mg/kg	130980-5	0.3 14 RPD: 192	130980-2	87%
Indeno(1,2,3-c,d)pyrene	mg/kg	130980-5	0.2 6.2 RPD:188	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	130980-5	<0.1 1.2	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	130980-5	<0.1 1.2	[NR]	[NR]

		Client Referenc	e: 84944.00, Bellevue	e Hill	
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(g,h,i)perylene	mg/kg	130980-5	0.2 4.6 RPD:183	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	130980-5	95 104 RPD:9	130980-2	101%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	SpikeSm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	130980-2	13/07/2015
Date analysed	-	[NT]	[NT]	130980-2	14/07/2015
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	130980-2	90%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	130980-2	87%
Heptachlor	mg/kg	[NT]	[NT]	130980-2	98%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	130980-2	88%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	130980-2	90%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	130980-2	88%
Dieldrin	mg/kg	[NT]	[NT]	130980-2	98%
Endrin	mg/kg	[NT]	[NT]	130980-2	98%
pp-DDD	mg/kg	[NT]	[NT]	130980-2	95%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	130980-2	86%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	130980-2	88%

		Client Referenc	e: 84944.00, Bellevue	e Hill	
QUALITYCONTROL	UNITS	Dup. Sm#	Duplicate	Spike Sm#	Spike % Recovery
Organophosphorus Pesticides			Base + Duplicate + %RPD		
Date extracted	-	[NT]	[NT]	130980-2	13/07/2015
Date analysed	-	[NT]	[NT]	130980-2	14/07/2015
Azinphos-methyl (Guthion)	mg/kg	[NT]	[NT]	130980-2	91%
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos	mg/kg	[NT]	[NT]	130980-2	106%
Chlorpyriphos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dichlorvos	mg/kg	[NT]	[NT]	130980-2	123%
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	130980-2	120%
Fenitrothion	mg/kg	[NT]	[NT]	130980-2	100%
Malathion	mg/kg	[NT]	[NT]	130980-2	85%
Parathion	mg/kg	[NT]	[NT]	130980-2	100%
Ronnel	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	130980-2	74%
QUALITYCONTROL	UNITS	Dup.Sm#	Duplicate	Spike Sm#	Spike % Recovery
PCBs in Soil			Base + Duplicate + %RPD		
Date extracted	-	[NT]	[NT]	130980-2	13/07/2015
Date analysed	-	[NT]	[NT]	130980-2	14/07/2015
Aroclor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	mg/kg	[NT]	[NT]	130980-2	117%
Aroclor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	130980-2	75%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	[NT]	[NT]	130980-2	13/07/2015
Date analysed	-	[NT]	[NT]	130980-2	13/07/2015
Arsenic	mg/kg	[NT]	[NT]	130980-2	101%
Cadmium	mg/kg	[NT]	[NT]	130980-2	103%
Chromium	mg/kg	[NT]	[NT]	130980-2	105%
Copper	mg/kg	[NT]	[NT]	130980-2	110%
Lead	mg/kg	[NT]	[NT]	130980-2	105%
Mercury	mg/kg	[NT]	[NT]	130980-2	91%
Nickel	mg/kg	[NT]	[NT]	130980-2	105%
Zinc	mg/kg	[NT]	[NT]	130980-2	108%
	<u> </u>				<u> </u>

		Onone Rolorono	o. 01011100, Bollova		
QUALITY CONTROL Misc Soil - Inorg	UNITS	Dup. Sm#	Duplicate Base+Duplicate+%RPD	Spike Sm#	Spike % Recovery
Date prepared	-	[NT]	[NT]	130980-2	13/07/2015
Date analysed	-	[NT]	[NT]	130980-2	13/07/2015
Total Phenolics (as Phenol)	mg/kg	[NT]	[NT]	130980-2	107%
QUALITYCONTROL	UNITS	Dup. Sm#	Duplicate	Spike Sm#	Spike % Recovery
Misc Inorg - Soil			Base + Duplicate + %RPD		
Date prepared	-	[NT]	[NT]	130980-2	14/07/2015
Date analysed	-	[NT]	[NT]	130980-2	14/07/2015
pH 1:5 soil:water	pH Units	[NT]	[NT]	[NR]	[NR]
Electrical Conductivity 1:5 soil:water	μS/cm	[NT]	[NT]	[NR]	[NR]
Chloride, Cl 1:5 soil:water	mg/kg	[NT]	[NT]	130980-2	101%
Sulphate, SO4 1:5 soil:water	mg/kg	[NT]	[NT]	130980-2	103%

Report Comments:

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 130980-1 for As, Pb and Zn. Therefore a triplicate result has been issued as laboratory sample number 130980-11.

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 130980-1 to 8 were sub-sampled from bags and 130980-9 from jar provided by the client.

sTRH/PAH in soil: The RPD for duplicate results is accepted due to the non homogenous nature of the sample/s.

Asbestos ID was analysed by Approved Identifier: Paul Ching Asbestos ID was authorised by Approved Signatory: Paul Ching

INS: Insufficient sample for this test PQL: Practical Quantitation Limit NT: Not tested

NA: Test not required RPD: Relative Percent Difference NA: Test not required

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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.

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

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

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

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SAMPLE RECEIPT ADVICE

Client Details	
Client	Douglas Partners Pty Ltd
Attention	Peter Oitmaa

Sample Login Details	
Your Reference	84944.00, Bellevue Hill
Envirolab Reference	130980
Date Sample Received	10/07/2015
Date Instructions Received	10/07/2015
Date Results Expected to be Reported	17/07/2015

Sample Condition	
Samples received in appropriate condition for analysis	YES
No. of Samples Provided	10 Soils
Turnaround Time Requested	Standard
Temperature on receipt (°C)	4.0
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments	
Samples will be held for 1 month for water samples and 2 months for soil samples from date of receipt of samples	

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@envirolabservices.com.au	Email: jhurst@envirolabservices.com.au

Sample and Testing Details on 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
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

Sample Id	Acid Extractable metals in soil	Asbestos ID - soils	Chloride, Cl 1:5 soil:water	Electrical Conductivity 1:5 soil:water	Organochlorine Pesticides in soil	Organophosphorus Pesticides	PAHs in Soil	PCBs in Soil	pH 1:5 soil:water	Sulphate, SO4 1:5 soil:water	svTRH (C10-C40) in Soil	Total Phenolics (as Phenol)	vTRH(C6-C10)/BTEXN in Soil
BH2-1.0	✓	1	✓	✓	✓	✓	\	✓	✓	\	✓	✓	1
BH2-2.0	✓	\	✓	✓	✓	✓	<	✓	✓	<	/	✓	1
BH2-3.0	✓	\	✓	✓	✓	✓	<	✓	✓	<	✓	✓	1
BH2-4.0	✓	✓	✓	✓	✓	✓	✓	1	✓	✓	✓	✓	1
BH4-1.0	✓	1	✓	✓	✓	✓	✓	/	✓	✓	1	✓	1
BH4-2.0	✓	✓	✓	✓	✓	✓	✓	1	✓	✓	✓	✓	1
BH4-3.0	1	1	1	✓	✓	✓	1	1	✓	1	1	1	1
BH4-4.0	1	1	1	✓	✓	✓	1	1	✓	1	1	1	✓
BH10-1.0	1	1	✓	✓	✓	✓	✓	✓	✓	✓	1	✓	1
BH10-2.0	./		./	1	./	./	./	./	./	./	./	./	1



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Envirolab Services 12 Ashley Street, Chatswood NSW 2067 Attn: Tania Notaras Phone: 02 9910 6200 Fax: 02 9910 6201 Email: tnotaras@envirolabservices.com.au	tswood N Fax: 0 olabservic	vices eet, Chat lotaras 10 6200	Envirolab Services 12 Ashley Street, Cha Attn: Tania Notaras Phone: 02 9910 6200 Email: tnotaras@envi		То:		4 518	Sampler: MP Mob. Phone: 0412 574 518 aspartners.com.au Lab Quote No.	Bellevue Hill 84944.00 Sampler M F Peter Oitmaa Mob. Phone: 0412 peter oitmaa@douglaspartners.com.au S+d Lab Quote	Bellevue 1	Bellevae 84944.00 Peter Oitmaa peter oitmaa@do S+d	Pe : :	Project Name: Project No: Project Mgr: Email: Date Required:	Project Nam Project No: Project Mgr: Email: Date Requir