



## ENVIRONMENTAL INVESTIGATION SERVICES

21 November 2018

Report Ref: E30259KMrpt3\_RAP\_Addendum

Department of Education  
Savills Australia Pty Ltd  
Level 25, Governor Phillip Tower  
1 Farrer Place  
SYDNEY NSW 2000

Attention: Mr Chris Laity

**REMEDIATION ACTION PLAN - ADDENDUM**  
**PROPOSED LINDFIELD LEARNING VILLAGE DEVELOPMENT**  
**100 ETON ROAD, LINDFIELD, NSW**

**1        INTRODUCTION**

Department of Education ('the client') via Savills Australia Pty Ltd commissioned Environmental Investigation Services (EIS)<sup>1</sup> to undertake an additional Detailed Site Investigation (DSI) for the entire site and update the Remediation Action Plan (RAP) for the proposed Lindfield Learning Village development at 100 Eton Road, Lindfield, NSW. The site location is shown on Figure 1 and the DSI soil assessment was confined to the site boundaries as shown on Figure 2.

EIS have previously prepared a number of reports for various stages of the proposed development, including the preparation of a RAP<sup>2</sup> for the south section of the site.

The additional site contamination investigation (DSI) and update of the RAP are required to address the NSW Department of Planning and Environment conditions for the development (State Significant Development 8114). The client has engaged a NSW EPA Accredited Site Auditor (Dr Ian Swane) to undertake a Statutory Site Audit, also a condition of the consent.

The letter is intended as an addendum to the existing EIS 2018 RAP and presents the results of the completed soil investigation component of the additional DSI and details the additional soil remediation works required following review of the additional/current soil data.

EIS note that the Conceptual Site Model (CSM) for the site has been revised based on further information recently obtained. This additional information has triggered further assessment of the

<sup>1</sup> Environmental consulting division of Jeffery & Katauskas Pty Ltd (J&K)

<sup>2</sup> EIS (2018) *Remediation Action Plan for Proposed Lindfield Learning Village Development at Eton Rd, Lindfield* (Ref: E30259KMrpt3 dated 16 August 2018)



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potential for on-site migration of contaminated groundwater and soil vapour/Hazardous Ground Gases (HGG). The additional DSI report will be prepared over the coming weeks as further field works are completed, which target the areas of environmental concern identified in the updated CSM.

Section 9 of EIS 2018 RAP is no longer applicable as this area has been assessed by the additional DSI. Other minor amendments to the EIS 2018 RAP are to be discussed in this addendum letter.

G-tek Australia Pty Limited have completed an Unexploded Ordnance Field Validation Survey<sup>3</sup> at the site. G-tek concluded that “*It is recommended that external works and vegetation clearing be allowed to be conducted without further unexploded ordnance related works being required or conducted*”. Therefore consideration of unexploded ordnance (UXO), exploded ordinance (EO) and exploded ordinance waste (EOW) is not considered necessary for remediation works.

## **2        SUMMARY OF SOIL CONTAMINATION**

### **2.1      Summary of Previous Soil Contamination**

In 2017 EIS completed a *Preliminary Environmental Site Assessment*<sup>4</sup> (ESA) and a *Preliminary Stage 2 ESA*<sup>5</sup> at the site. The results of the assessments indicated a fibre cement fragment (FCF) containing chrysotile asbestos in the fill soil sampled from one of the boreholes (BH1) located in the south section of the site.

### **2.2      Additional Detailed Site Investigation (DSI) – Status**

The scope of the Additional DSI included soil sampling from over fifty sampling locations (primarily via test pitting). EIS has previously completed sampling from five locations (BH1 to BH5). The total sampling density (55) meets the minimum density recommended in the NSW EPA Sampling Design Guidelines (1995) for the assessment area of approximately 5 hectares. Additionally a number of groundwater and HGG/Soil vapour wells have been installed at the site. The soil sampling and monitoring well locations are shown on Figure 2.

The subsurface conditions encountered generally consisted of asphaltic concrete pavement in driveway and car parking areas to a maximum depth of 0.1m, underlain by silty sand or silty clay fill material, underlain by clayey sand, sandy clay or sandstone bedrock. Fill material was encountered at the surface in unpaved areas and at some locations was located directly over the bedrock. The average fill depth encountered for the investigation was 0.35m below ground level. Significant sandstone outcropping was observed at the site and in the area.

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<sup>3</sup> Report titled, *Unexploded Ordnance Field Survey Lindfield Learning Village NSW, prepared for Design Inc by G-tek Australia Pty Limited* (Ref: 18090ENIN, V1.01 dated 29 October 2018)

<sup>4</sup> EIS (2017a) *Preliminary Environmental Site Assessment for Proposed Lindfield Learning Village Development at Eton Road, Lindfield* (Ref: E30259KMrpt dated 15 March 2017)

<sup>5</sup> EIS (2017b) *Preliminary Stage 2 Environmental Site Assessment for Proposed Lindfield Learning Village Development at Eton Road, Lindfield* (Ref: E30259KMrpt2 dated 16 October 2017)

No potential asbestos containing material (ACM), odours or staining were observed during the additional DSI soil sampling activities.

The photo-ionisation detector (PID) volatile screening results ranged from 0ppm to 1.5ppm equivalent isobutylene. The results generally indicate a lack of PID detectable volatile organic contaminants.

Selected soil samples were analysed at NATA accredited laboratories for: heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc); polycyclic aromatic hydrocarbons (PAHs); total recoverable hydrocarbons (TRH); monocyclic aromatic hydrocarbons (BTEX); organochlorine (OC) and organophosphate (OP) pesticides; polychlorinated biphenyls (PCBs); and asbestos (detect/non-detect). Additionally three surface samples were analysed for per-and poly-fluoroalkyl substances (PFAS).

The soil laboratory results were assessed against the relevant Site Assessment Criteria (SAC) associated with the proposed use of the site as a school. The results are presented in the report tables attached in the appendices. A summary of the Human Health results are presented below and shown in Figure 3 attached:

- The fill soil sample TP115 (0-0.1m) lead result of 1,800mg/kg was above the human SAC of 300mg/kg;
- The fill soil sample TP123 (0-0.1m) total PCB result of 4.2mg/kg was above the human health SAC of 1mg/kg; and
- Additional sampling was undertaken in the vicinity of TP123 in an attempt to delineate the extent of PCB impacted soil, however the fill soil sample TP152 (0-0.2m), TP153 (0-0.1m) and TP154 (0-0.15m) total PCB results of 1.1mg/kg, 1.9mg/kg and 1.1mg/kg respectively, were above the human health SAC of 1mg/kg.

EIS note that some of the fill soil results for heavy metals (lead and nickel) and TRH (F3) were above the EIL and ESL SAC. However, EIS are of the opinion that soil remediation as a result of these detections above the ecological criteria is not necessary for the following reasons:

- The elevated lead result at sampling location TP115 will effectively be addressed as part of the soil remediation at this location to address the human health risk;
- The TRH in the soil has been demonstrated to most likely be the result of natural occurring organic plant material by silica gel clean-up analysis of some representative samples at the laboratory; and
- The flora and fauna at the site appear healthy.

### **3        UPDATED SOIL REMEDIATION APPROACH AND EXTENT**

Following review of the additional site information and data, EIS have divided the site into three separate soil remediation areas as summarised in the sections below.

As a result of discussion with the Department of Education, the proposed remediation option of excavation and off-site disposal of impacted fill material to a NSW EPA Licensed landfill remains the preferred remediation strategy.

### **3.1      Remediation Area A – ACM**

The source of the ACM could be associated with the importation of minor amounts of fill material in the area, or may be associated with the construction and/or demolition of site structures.

Although the EIS 2018 RAP had identified the former proposed soil disturbance area as the extent of ACM remediation, EIS are now of the opinion that the ACM impacted area requiring remediation is likely to be considerably less for the following reasons:

- ACM and significant amounts of building rubble were not observed during soil sampling for the additional DSI;
- Sixty-two soil samples were forwarded to the laboratory for asbestos analysis for the additional DSI. ACM was not detected in any of the samples analysed by the laboratory; and
- Sandstone is located at the surface over the majority of the proposed ACM remediation area.

EIS propose that the horizontal extent of the ACM soil remediation be reduced to an area of approximately 3m x 3m in the vicinity of the former EIS BH1 where the former ACM (a fibre cement fragment) was previously encountered. The vertical extent of remediation will be to the base of the fill material.

The proposed extent of soil remediation Area A is shown the attached Figure 4.

### **3.2      Remediation Area B - PCBs**

The source of the PCB soil contamination is unclear. Possible sources could include imported fill or leakage from light fittings containing PCB capacitors that may have removed from the building and stockpiled prior to being loaded and disposed of off-site.

EIS propose that the horizontal extent of the PCB soil remediation cover an area of approximately 3m x 3m in the vicinity of the test pit TP123. Sandstone is exposed at the surface at and adjacent to the PCB remediation area. The vertical extent of remediation will be to the base of the fill material, the excavation will likely encounter sandstone bedrock.

The proposed extent of soil remediation Area B is shown the attached Figure 4.

### **3.3      Remediation Area C - Lead**

The source of the lead soil contamination is unclear. Possible sources could include imported fill, small paint flake/s (containing lead), slag (although not observed) or spent lead shot.

EIS propose that the horizontal extent of the lead soil remediation cover an area of approximately 3m x 3m in the vicinity of test pit TP115. The vertical extent of remediation will be to the base of the fill material, the excavation will likely encounter sandstone bedrock.

The proposed extent of soil remediation Area C is shown the attached Figure 4.

#### **4        UPDATED SOIL VALIDATION PLAN**

The updated soil validation plan and validation assessment for each remediation area is outlined in the sections below.

##### **4.1        Validation Sampling**

The table below outlines the updated soil validation requirements for the site.

Table 4-1: Validation Requirements

Aspect	Sampling	Analysis	Observations and Documentation
<b>Area A - ACM</b>			
Base and walls excavation after fill removal is complete	One sample per 100m <sup>2</sup> (10m grid) of underlying soil	Asbestos (presence absence)	Observations to be recorded. Photographs to be taken. Disposal dockets to be retained.
<b>Area B - PCBs</b>			
As per above	As per above	PCBs	As per above
<b>Area C - Lead</b>			
As per above	As per above	Lead	As per above

EIS note that the validation plan for imported material remains unchanged.

##### **4.2        Validation Assessment Criteria (VAC)**

The updated VAC to be adopted for the validation assessment are outlined in the table below:

Table 4-2: Updated VAC

Validation Area	Criteria
Area A	Asbestos absent.
Area B	Health Investigation Levels (HILs) for a 'residential with accessible soils' exposure scenario (HIL-A).

Validation Area	Criteria
Area C	HIL-A.

EIS note that the validation criteria for imported material remains unchanged.

## **5        CONCLUSIONS AND RECOMDATIONS**

EIS are of the opinion that the site can be made suitable for the proposed development provided that EIS 2018 RAP and this addendum to the RAP are implemented for the required soil remediation works at the site. The RAP may need to further updated once the additional DSI has been completed and all groundwater, soil vapour and HGG results are available.

The additional DSI will include a detailed Waste Classification in accordance with the NSW EPA Waste Classification Guidelines 2014 or a separate Waste Classification report may be issued.

A site validation report should be prepared on completion of the remedial and validation activities and submitted to the consent authority.

## **6        LIMITATIONS**

The report limitations are outlined below:

- EIS accepts no responsibility for any unidentified contamination issues at the site. Any unexpected problems/subsurface features that may be encountered during development works should be inspected by an environmental consultant as soon as possible;
- Previous use of this site may have involved excavation for the foundations of buildings, services, and similar facilities. In addition, unrecorded excavation and burial of material may have occurred on the site. Backfilling of excavations could have been undertaken with potentially contaminated material that may be discovered in discrete, isolated locations across the site during construction work;
- This report has been prepared based on site conditions which existed at the time of the investigation; scope of work and limitation outlined in the EIS proposal; and terms of contract between EIS and the client (as applicable);
- The conclusions presented in this report are based on investigation of conditions at specific locations, chosen to be as representative as possible under the given circumstances, visual observations of the site and immediate surrounds and documents reviewed as described in the report;

- Subsurface soil and rock conditions encountered between investigation locations may be found to be different from those expected. Groundwater conditions may also vary, especially after climatic changes;
- The investigation and preparation of this report have been undertaken in accordance with accepted practice for environmental consultants, with reference to applicable environmental regulatory authority and industry standards, guidelines and the assessment criteria outlined in the report;
- Where information has been provided by third parties, EIS has not undertaken any verification process, except where specifically stated in the report;
- EIS has not undertaken any assessment of off-site areas that may be potential contamination sources or may have been impacted by site contamination, except where specifically stated in the report;
- EIS accept no responsibility for potentially asbestos containing materials that may exist at the site. These materials may be associated with demolition of pre-1990 constructed buildings or fill material at the site;
- EIS have not and will not make any determination regarding finances associated with the site;
- Additional investigation work may be required in the event of changes to the proposed development or landuse. EIS should be contacted immediately in such circumstances;
- Material considered to be suitable from a geotechnical point of view may be unsatisfactory from a soil contamination viewpoint, and vice versa; and
- This report has been prepared for the particular project described and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose.

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

Kind Regards



Mitchell Delaney  
Senior Associate



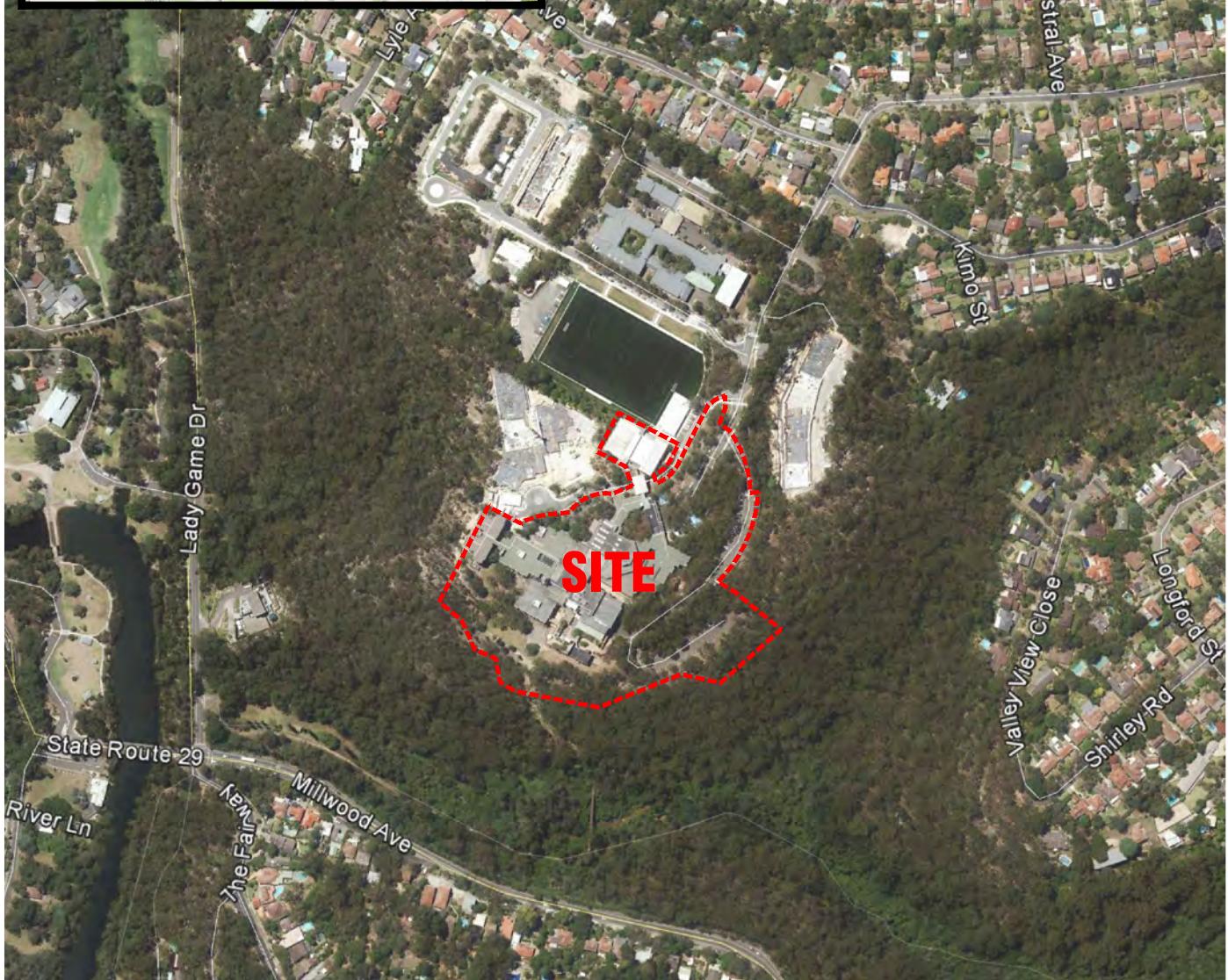
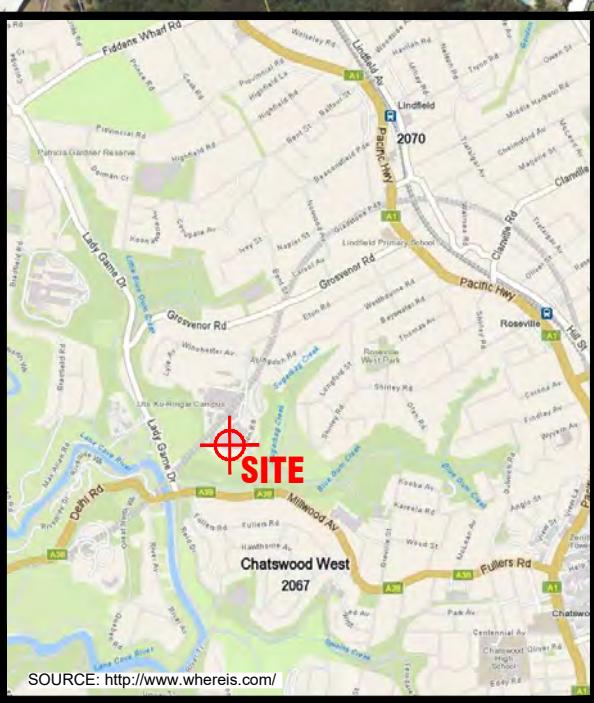
Adrian Kingswell  
Principal

**Appendices:**

**Appendix A: Report Figures**

**Appendix B: Laboratory Summary Tables**

## **Appendix A: Report Figures**

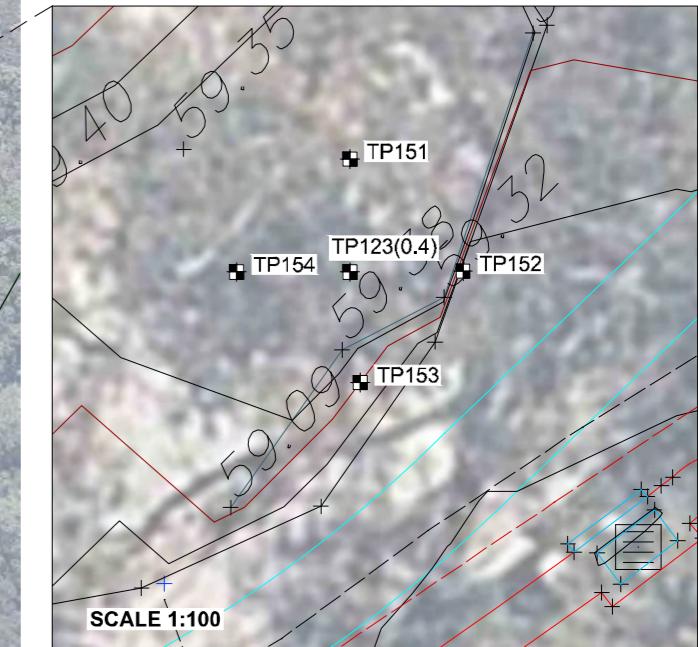
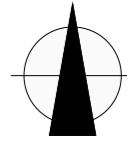
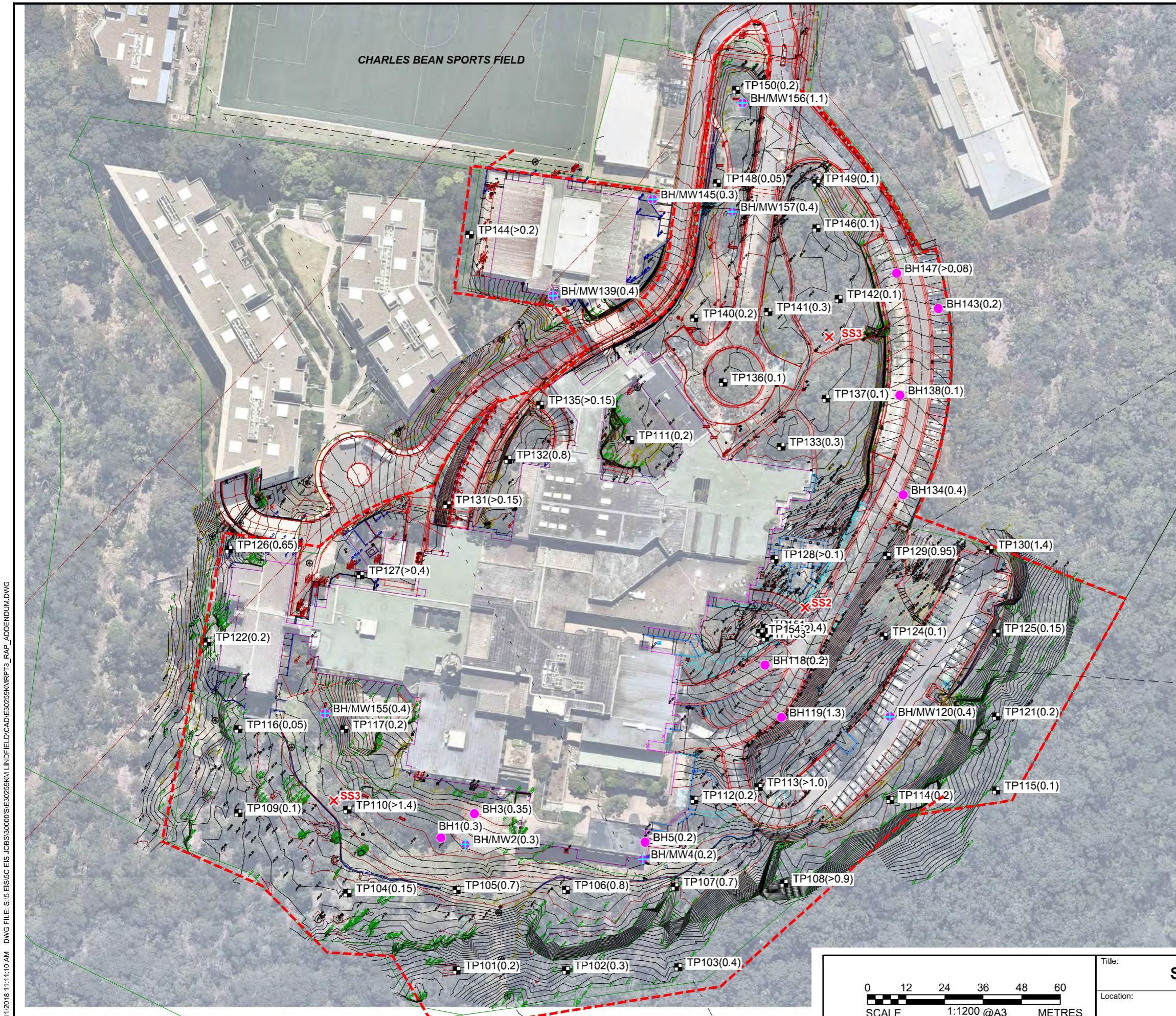


Title: **SITE LOCATION PLAN**

Location: 100 ETON ROAD  
LINDFIELD, NSW

Report No: E30259KM Rpt3\_RAP\_ADDENDUM | Figure No: 1

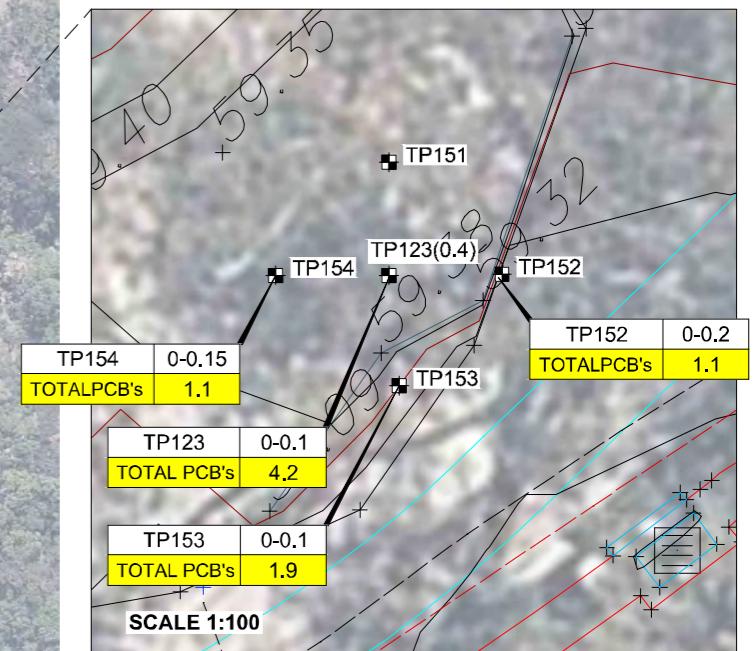
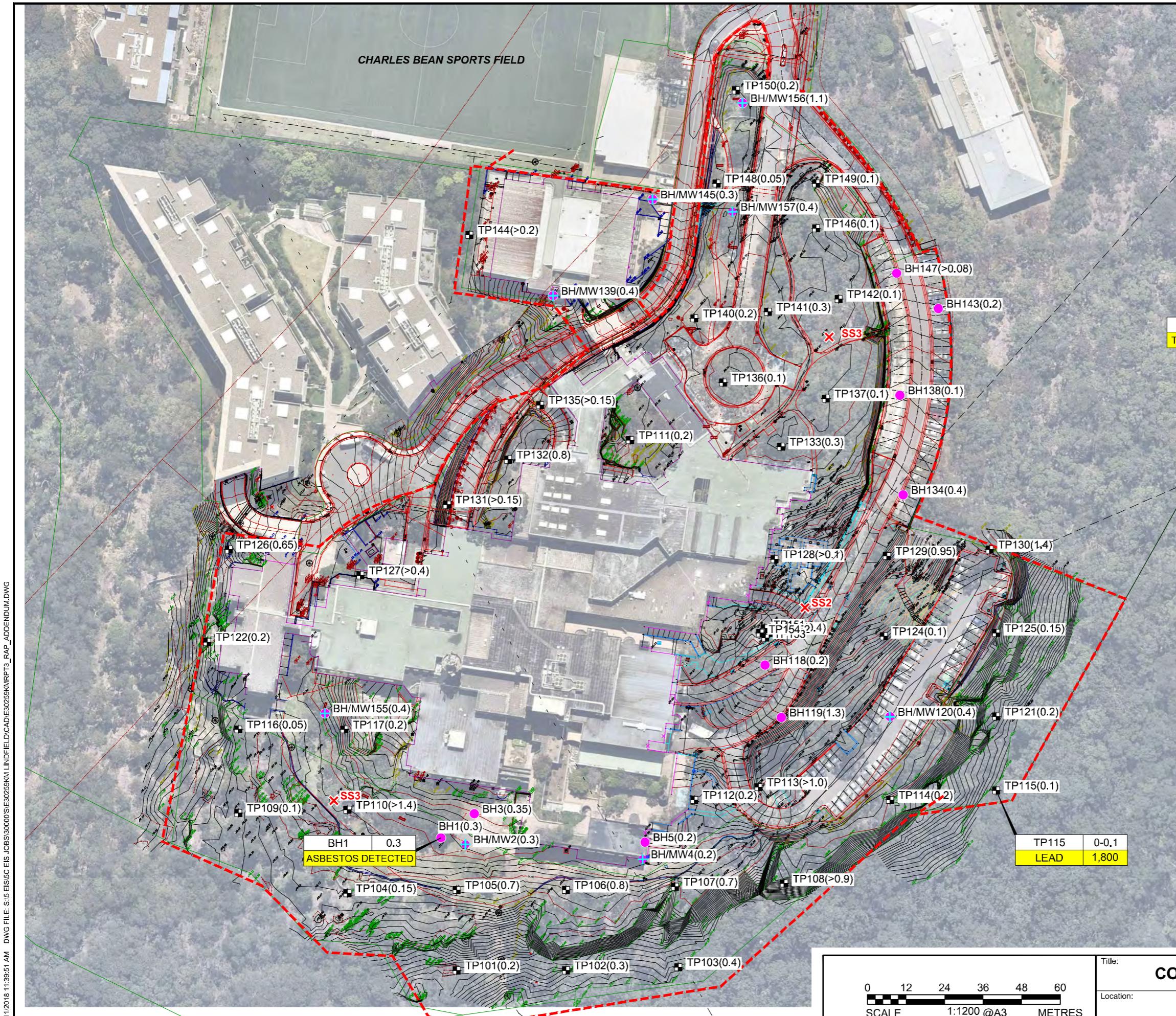
**EIS**



#### LEGEND

- APPROXIMATE SITE BOUNDARY
- ◆ BH/MW(Fill Depth) BOREHOLE AND GROUND WATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
- BH (Fill Depth) GROUND WATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
- TP(Fill Depth) TEST PIT LOCATION, NUMBER AND DEPTH OF FILL (m)
- × SS SURFACE SOIL SAMPLE

SAMPLE LOCATION PLAN		Figure No: 2
Location:	100 ETON ROAD LINDFIELD, NSW	
Report No:	E30259KM.RPT3_RAP_ADDENDUM	
<b>ENVIRONMENTAL INVESTIGATION SERVICES</b>		



**CONTAMINATION DATA PLAN**

Title: **100 ETON ROAD LINDFIELD, NSW**

Location: **100 ETON ROAD LINDFIELD, NSW**

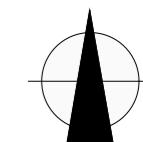
Report No: **E30259KM.RPT3\_RAP\_ADDENDUM**

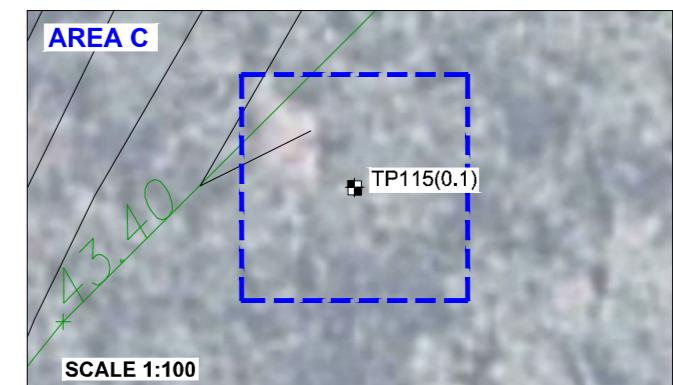
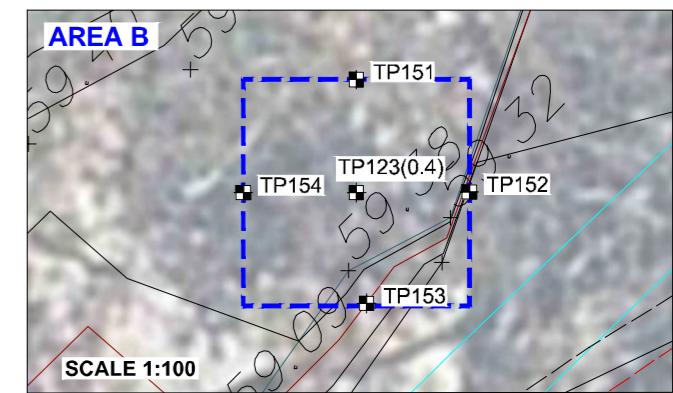
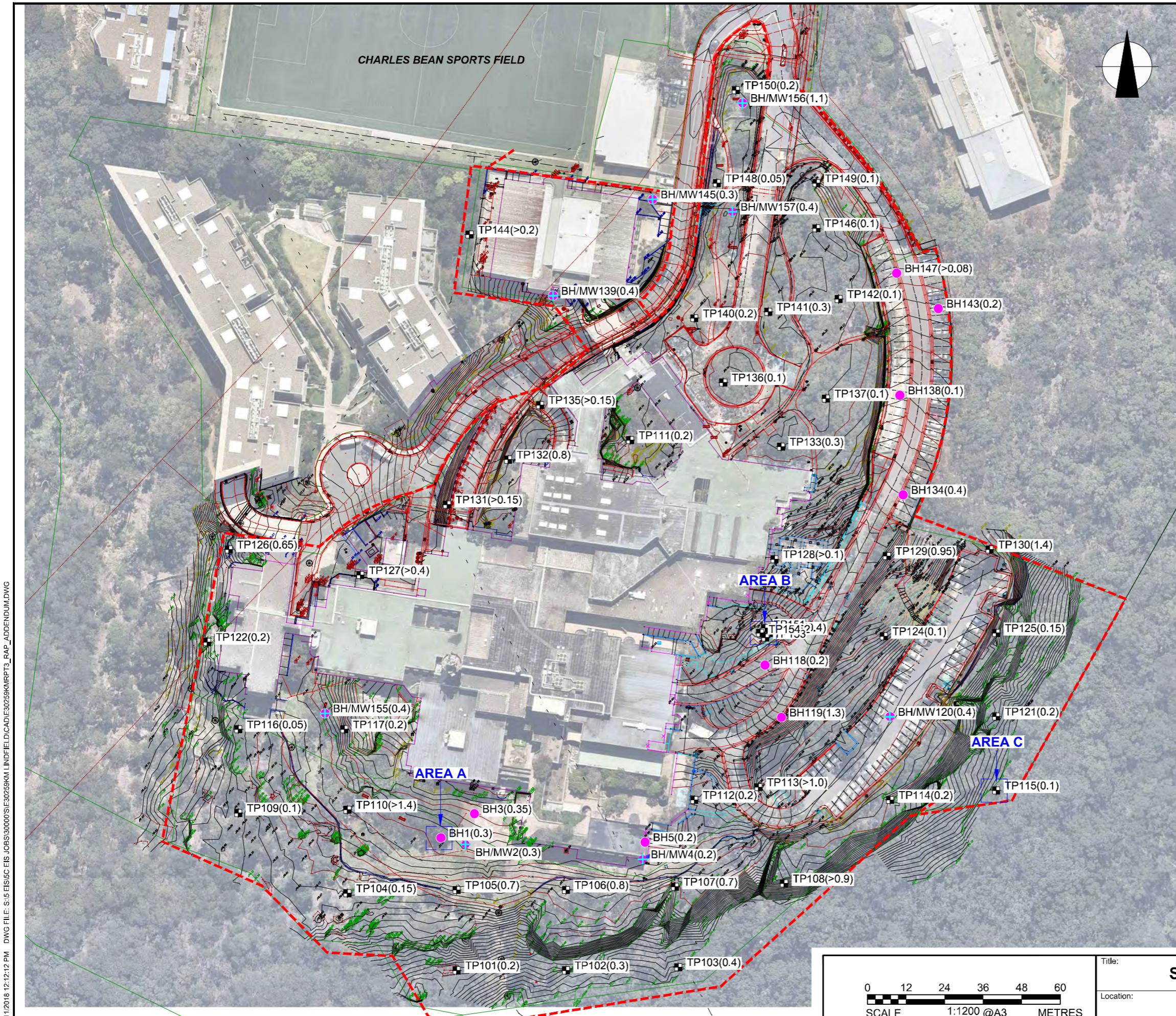
Figure No: **3**

Scale: **1:1200 @A3 METRES**

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Title: **SOIL REMEDIATION AREA**

Location: 100 ETON ROAD  
LINDFIELD, NSW

Report No: E30259KM.RPT3\_RAP\_ADDENDUM | Figure No: 4

Scale: 1:1200 @A3 METRES

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

**ENVIRONMENTAL INVESTIGATION SERVICES**

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## **Appendix B: Laboratory Summary Tables**

TABLE A-1

SOIL LABORATORY RESULTS COMPARED TO NEPM 2013.

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

All data in mg/kg unless stated otherwise			HEAVY METALS									PAHs		ORGANOCHLORINE PESTICIDES (OCPs)							OP PESTICIDES (OPPs)		TOTAL PCBs	ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium VI	Copper	Lead	Mercury	Nickel	Zinc		Total PAHs	Carcinogenic PAHs	HCB	Endosulfan	Methoxychlor	Aldrin & Dieldrin	Chlordane	DDT, DDD & DDE	Heptachlor	Chlorpyrifos			
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100		
Site Assessment Criteria (SAC)			100	20	100	6000	300	40	400	7400	300	3	10	270	300	6	50	240	6	160	1	Detected/Not Detected		
Sample Reference	Sample Depth	Sample Description																						
BH1	0.0-0.2	Fill: silty sand	<4	<0.4	8	16	48	<0.1	9	44	0.06	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Detected	
BH1	0.3-0.5	Silty sand	<4	<0.4	6	3	10	<0.1	<1	6	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
BH2	0.0-0.2	Fill: silty sand	5	<0.4	17	5	14	<0.1	3	17	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not detected.		
BH2	0.3-0.5	Silty sand	<4	<0.4	9	2	11	<0.1	2	12	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
BH3	0.0-0.2	Fill: silty sand	<4	<0.4	11	4	12	<0.1	3	18	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not detected.		
BH3	0.6-0.8	Silty sand	<4	<0.4	12	<1	6	<0.1	<1	3	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
BH4	0.0-0.2	Fill: silty sand	<4	<0.4	10	14	20	<0.1	7	36	1.3	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not detected.		
BH4	0.5-0.95	Silty sand	<4	<0.4	10	1	11	<0.1	1	30	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
BH5	0.0-0.2	Fill: silty sand	<4	<0.4	12	78	25	<0.1	9	48	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not detected.		
BH5	0.3-0.5	Silty sand	<4	<0.4	10	3	11	<0.1	3	19	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
TP101	0.0-0.1	Fill: silty clay	<4	<0.4	5	5	33	<0.1	2	18	0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected		
TP102	0.0-0.1	Fill: silty sand	<4	<0.4	4	3	20	<0.1	1	12	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.6	Not Detected		
TP102	0.1-0.2	Fill: clayey sand	<4	<0.4	4	2	18	<0.1	<1	10	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected		
TP103	0.0-0.1	Fill: silty clay	<4	<0.4	9	20	37	0.1	5	44	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected		
TP104	0.0-0.1	Fill: silty clay	<4	<0.4	6	5	19	<0.1	2	22	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected		
TP105	0.0-0.1	Fill: sandy gravel	<4	<0.4	5	29	4	<0.1	20	17	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected		
TP105	0.4-0.5	Sandy clay	<4	<0.4	10	12	9	<0.1	8	12	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected		
TP106	0.0-0.1	Fill: silty clay	4	<0.4	7	9	22	<0.1	5	31	<0.05	<0.5	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected		
TP106	0.6-0.7	Fill: silty clay	<4	<0.4	2	1	11	<0.1	<1	7	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected		
TP106	1.2-1.3	Sandy clay	<4	<0.4	18	<1	7	<0.1	<1	5	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
TP107	0.0-0.1	Fill: silty clay	<4	<0.4	13	23	93	<0.1	10	60	0.52	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected		
TP107	0.4-0.5	Fill: silty clay	<4	<0.4	10	1	10	<0.1	1	9	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected		
TP108	0.0-0.1	Fill: silty clay	<4	<0.4	8	7	18	<0.1	3	18	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected		
TP108	0.3-0.4	Fill: silty clay	<4	<0.4	53	27	20	<0.1	<1	40	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected		
TP109	0.0-0.1	Fill: silty clay	<4	<0.4	3	3	28	<0.1	1	8	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected		
TP110	0.0-0.1	Fill: silty clay	<4	<0.4	7	6	17	<0.1	5	24	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected		
TP110	0.3-0.4	Fill: clayey sand	<4	<0.4	8	3	7	<0.1	3	10	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected		
TP110	1.3-1.4	Fill: silty clay	<4	<0.4	7	2	8	<0.1	2	8	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected		
TP111	0-0.2	Silty sand	<4	<0.4	9	7	30	0.2	2	16	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected		
TP112	0.0-0.1	Fill: silty clay	<4	<0.4	4	5	14	<0.1	2	27	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected		
TP112	0.4-0.5	Sandy clay</td																						

TABLE A-2 SOIL LABORATORY RESULTS COMPARED TO NEPM 2013. HIL-A: 'Residential with garden/accessible soils; children's day care centers; preschools; and primary schools'																						
All data in mg/kg unless stated otherwise			HEAVY METALS							PAHs		ORGANOCHLORINE PESTICIDES (OCPs)						OP PESTICIDES (OPPs)	TOTAL PCBs	ASBESTOS FIBRES		
			Arsenic	Cadmium	Chromium VI	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	Carcinogenic PAHs	HCB	Endosulfan	Methoxychlor	Aldrin & Dieldrin	Chlordane	DDT, DDD & DDE	Heptachlor	Chloryrifos	TOTAL PCBs	ASBESTOS FIBRES
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100
Site Assessment Criteria (SAC)			100	20	100	6000	300	40	400	7400	300	3	10	270	300	6	50	240	6	160	1	Detected/Not Detected
Sample Reference	Sample Depth	Sample Description																				
TP126	0.0-0.1	Fill: silty sand	<4	<0.4	7	9	7	<0.1	4	21	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
TP126	0.2-0.3	Fill: sandy clay	<4	<0.4	9	5	11	<0.1	9	19	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TP127	0-0.2	Fill: silty sand	8	<0.4	15	16	35	<0.1	15	64	0.3	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	Not Detected
TP127	0.3-0.4	Fill: sandy clay	<4	<0.4	10	5	17	<0.1	3	17	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
TP128	0.0-0.1	Fill: silty sand	<4	<0.4	11	7	64	<0.1	2	25	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TP129	0.0-0.1	Fill: silty clay	6	<0.4	9	10	35	<0.1	6	36	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	Not Detected
TP129	0.3-0.4	Fill: clayey sand	<4	<0.4	6	3	31	<0.1	1	6	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TP129	0.95-1.0	Fill: clayey sand	<4	<0.4	4	<1	3	<0.1	<1	1	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP130	0.05-0.15	Fill: clayey sand	<4	<0.4	8	7	31	<0.1	2	20	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TP130	0.7-0.8	Fill: clayey sand	<4	<0.4	14	5	29	<0.1	4	14	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
TP131	0-0.15	Fill: silty sand	6	<0.4	8	10	29	<0.1	4	38	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TP132	0.0-0.1	Fill: silty sand	<4	<0.4	6	9	28	<0.1	2	35	0.66	<0.5	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TP132	0.3-0.4	Fill: clayey sand	<4	<0.4	7	2	4	<0.1	<1	3	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
TP132	0.9-1.0	Clayey sand	<4	<0.4	6	<1	1	<0.1	<1	<1	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP133	0.0-0.1	Fill: silty sand	<4	<0.4	6	8	28	<0.1	3	20	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TP133	0.3-0.4	Sand	<4	<0.4	<1	<1	<0.1	<1	<1	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
BH134	0.1-0.3	Fill: Silty sand	<4	<0.4	13	4	6	<0.1	9	9	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TP135	0-0.15	Fill: silty sand	4	<0.4	7	5	23	<0.1	2	25	8.7	0.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TP136	0.0-0.1	Fill: silty sand	<4	<0.4	3	3	19	<0.1	<1	12	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TP137	0.0-0.1	Fill: silty sand	<4	<0.4	2	7	46	<0.1	2	17	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH138	0.05-0.1	Fill: silty sandy gravel	<4	<0.4	66	40	6	<0.1	71	42	0.3	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH138	0.2-0.3	Sandstone	<4	<0.4	3	<1	1	<0.1	<1	<1	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	
BH139	0.2-0.35	Fill: silty gravelly sand	<4	<0.4	22	110	4	0.1	25	31	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TP140	0.0-0.1	Fill: silty sand	<4	<0.4	7	13	24	<0.1	2	51	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TP140	0.2-0.3	Clayey sand	<4	<0.4	10	2	3	<0.1	<1	9	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP141	0.0-0.1	Fill: silty sand	<4	<0.4	3	6	42	<0.1	1	12	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
TP141	0.3	Fill: silty sand	<4	<0.4	2	<1	2	<0.1	<1	<1	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
TP142	0.0-0.1	Fill: silty sand clay	<4	<0.4	3	8	22	<0.1	2	28	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	Not Detected
TP142	0.2-0.3	Clayey sand	<4	<0.4	5	1	6	<0.1	<1	9	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
BH143	0.2-0.4	Silty sand	<4	<0.4	6	2																

TABLE A-3  
SOIL LABORATORY RESULTS COMPARED TO PFAS NEMP 2018

			PFAS COMPOUNDS	
			PFOS + PFHxS	PFOA
<i>All data in mg/kg unless stated otherwise</i>			0.0002	0.0001
PQL - Envirolab Services			0.009	0.1
Sample Reference	Sample Depth	Sample Description		
SS1	NA	Fill: silty sand	0.0006	<0.0001
SS2	NA	Fill: silty sand	0.0005	<0.0001
SS3	NA	Fill: silty sand	0.0003	<0.0001
<b>Total Number of Samples</b>			3	3
<b>Maximum Value</b>			0.0006	<0.0001
Concentration above the SAC			<b>VALUE</b>	

NPMP 2018, Soil - Human health screening values for Residential landuse with gadrn/accessible soil adopted.

TABLE B-1 SOIL LABORATORY RESULTS COMPARED TO HSLs All data in mg/kg unless stated otherwise												
					C <sub>6</sub> -C <sub>10</sub> (F1)	>C <sub>10</sub> -C <sub>16</sub> (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	Field PID Measurement
<b>PQL - Envirolab Services</b>					25	50	0.2	0.5	1	1	1	ppm
<b>NEPM 2013 HSL Land Use Category</b>												
Sample Reference	Sample Depth	Sample Description	Depth Category	Soil Category								
BH1	0.0-0.2	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH1	0.3-0.5	Silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH2	0.0-0.2	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH2	0.3-0.5	Silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH3	0.0-0.2	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH3	0.6-0.8	Silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH4	0.0-0.2	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH4	0.5-0.95	Silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH5	0.0-0.2	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH5	0.3-0.5	Silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP101	0.0-0.1	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP102	0.0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	51	<0.2	<0.5	<1	<1	<1	0
TP102	0.1-0.2	Fill: clayey sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP103	0.0-0.1	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP104	0.0-0.1	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP105	0.0-0.1	Fill: sandy gravel	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP105	0.4-0.5	Sandy clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP106	0.0-0.1	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP106	0.6-0.7	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP106	1.2-1.3	Sandy clay	1m to < 2m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP107	0.0-0.1	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP107	0.4-0.5	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP108	0.0-0.1	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP108	0.3-0.4	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP109	0.0-0.1	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP110	0.3-0.4	Fill: clayey sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP110	1.3-1.4	Fill: silty clay	1m to < 2m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP111	0-0.2	Silty sand	0m to < 1m	Sand	<25	67	<0.2	<0.5	<1	<1	<0.1	0
TP112	0.0-0.1	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP112	0.4-0.5	Sandy clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP113	0.0-0.05	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP113	0.9-1.0	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP114	0.0-0.1	Fill: clayey sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP115	0.0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP115	0.1-0.2	Sandy clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP116	0.0-0.05	Fill: silty sandy clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP117	0.0-0.1	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP118	0-0.2	Fill: silty sandy gravel	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	1.5
TP119	0.15-0.35	Fill: silty sandy gravel	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0.4
TP119	0.6-0.8	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
TP119	1.3-1.5	Sandstone	1m to < 2m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
TP120	0.1-0.3	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
TP121	0.0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP122	0.0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP123	0.0-0.1	Fill: silty clay	0m to < 1m	Sand	<25	60	<0.2	<0.5	<1	<1	<1	0
TP123	0.2-0.3	Fill: clayey sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP123	0.5-0.6	Sandy clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP124	0.0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP125	0.5-0.15	Fill: clayey sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
<b>Total Number of Samples</b>					50	50	50	50	50	50	50	
<b>Maximum Value</b>					<PQL	67	<PQL	<PQL	<PQL	<PQL	<PQL	
Concentration above the SAC											VALUE	
The guideline corresponding to the elevated value is highlighted in grey in the Site Assessment Criteria Table below												

SITE ASSESSMENT CRITERIA											
					C<sub>6</sub>-C<sub>10</sub> (F1)	>C<sub>10</sub>-C<sub>16</sub> (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene



<tbl\_r cells="8" ix="3" maxcspan="5" maxrspan="1"

TABLE B-2 SOIL LABORATORY RESULTS COMPARED TO HSLs All data in mg/kg unless stated otherwise												
					C <sub>6</sub> -C <sub>10</sub> (F1)	>C <sub>10</sub> -C <sub>16</sub> (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	Field PID Measurement
PQL - Envirolab Services					25	50	0.2	0.5	1	1	1	ppm
NEPM 2013 HSL Land Use Category											HSL-A/B:LOW/HIGH DENSITY RESIDENTIAL	
Sample Reference	Sample Depth	Sample Description	Depth Category	Soil Category								
TP126	0.0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP126	0.2-0.3	Fill: sandy clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP127	0-0.2	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
TP127	0.3-0.4	Fill: sandy clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
TP128	0.0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP129	0.0-0.1	Fill: silty clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP129	0.3-0.4	Fill: clayey sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP129	0.95-1.0	Fill: clayey sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP130	0.05-0.15	Fill: clayey sand	1m to < 2m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP130	0.7-0.8	Fill: clayey sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP131	0-0.15	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
TP132	0.0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP132	0.3-0.4	Fill: clayey sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP132	0.9-1.0	Clayey sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP133	0.0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP133	0.3-0.4	Sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH134	0.1-0.3	Fill: Silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
TP135	0-0.15	Fill: silty sand	0m to < 1m	Sand	<25	51	<0.2	<0.5	<1	<1	<0.1	1
TP136	0.0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP137	0.0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH138	0.05-0.1	Fill: silty sandy gravel	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	0.1	0
BH138	0.2-0.3	Sandstone	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
BH139	0.2-0.35	Fill: silty gravelly sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
TP140	0.0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP140	0.2-0.3	Clayey sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP141	0.0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP141	0.3	Fill: silty sand	0m to < 1m	Sand	<25	60	<0.2	<0.5	<1	<1	<1	0
TP142	0.0-0.1	Fill: silty sand clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP142	0.2-0.3	Clayey sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH143	0.2-0.4	Silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
BH143	0.5-0.8	Sandstone	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
TP144	0-0.2	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
BH145	0.1-0.2	Fill: sandy clayey gravel	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	1.2
BH145	0.3-0.6	Clayey sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
TP146	0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH147	0.1-0.4	Silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
BH147	0.5-0.65	Sandstone	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<0.1	0
TP148	0.0-0.05	Fill: silty clayey sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP148	0.1-0.2	Silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP149	0-0.1	Fill: silty sand	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP149	0.3-0.4	Sandy clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP150	0-0.1	Fill: sandy clay	0m to < 1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
Total Number of Samples					42	42	42	42	42	42	42	
Maximum Value					<PQL	60	<PQL	<PQL	<PQL	<PQL	0.1	
Concentration above the SAC											VALUE	
The guideline corresponding to the elevated value is highlighted in grey in the Site Assessment Criteria Table below												

SITE ASSESSMENT CRITERIA											
					C <sub>6</sub> -C <sub>10</sub> (F1)	>C <sub>10</sub> -C <sub>16</sub> (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene
PQL - Envirolab Services					25	50	0.2	0.5	1	1	1
NEPM 2013 HSL Land Use Category											HSL-A/B:LOW/HIGH DENSITY RESIDENTIAL
Sample Reference	Sample Depth	Sample Description	Depth Category	Soil Category							
TP126	0.0-0.1	Fill: silty sand	0m to < 1m	Sand	45	110	0.5	160	55	40	3
TP126	0.2-0.3	Fill: sandy clay	0m to < 1m	Sand	45	110	0.5				

TABLE C-1  
SOIL LABORATORY RESULTS COMPARED TO NEPM 2013 EILs AND ESLs  
All data in mg/kg unless stated otherwise

Land Use Category				URBAN RESIDENTIAL AND PUBLIC OPEN SPACE																				
				pH	CEC (cmol/kg)	Clay Content (% clay)	AGED HEAVY METALS-EILs						EILs				ESLs							
				-	1	-	4	1	1	1	1	1	Naphthalene	DDT	C <sub>6</sub> -C <sub>10</sub> (F1)	>C <sub>10</sub> -C <sub>16</sub> (F2)	>C <sub>16</sub> -C <sub>34</sub> (F3)	>C <sub>34</sub> -C <sub>40</sub> (F4)	Benzene	Toluene	Ethylbenzene	Total Xylenes	B(a)P	
PQL - Envirolab Services				-	1	-	4	1	1	1	1	1	0.1	0.1	25	50	100	100	0.2	0.5	1	3	0.05	
Ambient Background Concentration (ABC)				-	-	-	NSL	13	28	163	5	122	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	
Sample Reference	Sample Depth	Sample Description	Soil Texture																					
BH1	0.0-0.2	Fill: silty sand	Coarse	6.6	5	10.5	<4	8	16	48	9	44	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.06	
BH1	0.3-0.5	Silty sand	Coarse	6.6	5	10.5	<4	6	3	10	<1	6	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
BH2	0.0-0.2	Fill: silty sand	Coarse	6.6	5	10.5	5	17	5	14	3	17	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
BH2	0.3-0.5	Silty sand	Coarse	6.6	5	10.5	<4	9	2	11	2	12	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
BH3	0.0-0.2	Fill: silty sand	Coarse	6.6	5	10.5	<4	11	4	12	3	18	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
BH3	0.6-0.8	Silty sand	Coarse	6.6	5	10.5	<4	12	<1	6	<1	3	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
BH4	0.0-0.2	Fill: silty sand	Coarse	6.6	5	10.5	<4	10	14	20	7	36	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.1	
BH4	0.5-0.95	Silty sand	Coarse	6.6	5	10.5	<4	10	1	11	1	30	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
BH5	0.0-0.2	Fill: silty sand	Coarse	6.6	5	10.5	<4	12	78	25	9	48	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
BH5	0.3-0.5	Silty sand	Coarse	6.6	5	10.5	<4	10	3	11	3	19	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP101	0.0-0.1	Fill: silty clay	Fine	6.6	5	10.5	<4	5	5	33	2	18	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.05	
TP102	0.0-0.1	Fill: silty sand	Coarse	6.6	5	10.5	<4	4	3	20	1	12	<0.1	<0.1	<25	51	400	120	<0.2	<0.5	<1	<3	<0.05	
TP102	0.1-0.2	Fill: clayey sand	Coarse	6.6	5	10.5	<4	4	2	18	<1	10	<0.1	NA	<25	<50	110	<100	<0.2	<0.5	<1	<3	<0.05	
TP103	0.0-0.1	Fill: silty clay	Fine	6.6	5	10.5	<4	9	20	37	5	44	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP104	0.0-0.1	Fill: silty clay	Fine	6.6	5	10.5	<4	6	5	19	2	22	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP105	0.0-0.1	Fill: sandy gravel	Coarse	6.6	5	10.5	<4	5	29	4	20	17	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP105	0.4-0.5	Sandy clay	Fine	6.6	5	10.5	<4	10	12	9	8	12	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP106	0.0-0.1	Fill: silty clay	Fine	6.6	5	10.5	<4	4	7	22	5	31	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP106	0.6-0.7	Fill: silty clay	Fine	6.6	5	10.5	<4	2	1	11	<1	7	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP106	1.2-1.3	Sandy clay	Fine	6.6	5	10.5	<4	18	<1	7	<1	5	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP107	0.0-0.1	Fill: silty clay	Fine	6.6	5	10.5	<4	13	23	93	10	60	<0.1	<0.1	<25	<50	1600	2400	<0.2	<0.5	<1	<3	0.2	
TP107	0.4-0.5	Fill: silty clay	Fine	6.6	5	10.5	<4	10	1	10	1	9	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP108	0.0-0.1	Fill: silty clay	Fine	6.6	5	10.5	<4	8	7	18	3	18	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP108	0.3-0.4	Fill: silty clay	Fine	6.6	5	10.5	<4	53	27	20	<1	40	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP109	0.0-0.1	Fill: silty clay	Fine	6.6	5	10.5	<4	3	3	28	1	8	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP110	0.0-0.1	Fill: silty clay	Fine	6.6	5	10.5	<4	7	6	17	5	24	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP110	0.3-0.4	Fill: clayey sand	Coarse	6.6	5	10.5	<4	8	3	7	3	10	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP110	1.3-1.4	Fill: silty clay	Fine	6.6	5	10.5	<4	7	2	8	2	8	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05</	

TABLE C-2  
SOIL LABORATORY RESULTS COMPARED TO NEPM 2013 EILS AND ESLs  
All data in mg/kg unless stated otherwise

Land Use Category				URBAN RESIDENTIAL AND PUBLIC OPEN SPACE																				
				pH	CEC (cmol <sub>g</sub> /kg)	Clay Content (% clay)	AGED HEAVY METALS-EILs						EILs		ESLs									
							Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C <sub>6</sub> -C <sub>10</sub> (F1)	>C <sub>10</sub> -C <sub>16</sub> (F2)	>C <sub>16</sub> -C <sub>34</sub> (F3)	>C <sub>34</sub> -C <sub>40</sub> (F4)	Benzene	Toluene	Ethylbenzene	Total Xylenes	B(a)P	
PQL - Envirolab Services				-	1	-	4	1	1	1	1	1	0.1	0.1	25	50	100	100	0.2	0.5	1	3	0.05	
Ambient Background Concentration (ABC)				-	-	-	NSL	13	28	163	5	122	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	
Sample Reference	Sample Depth	Sample Description	Soil Texture																					
TP126	0.0-0.1	Fill: silty sand	Coarse	6.6	5	10.5	<4	7	9	7	4	21	<0.1	NA	<25	<50	100	<100	<0.2	<0.5	<1	<3	<0.05	
TP126	0.2-0.3	Fill: sandy clay	Fine	6.6	5	10.5	<4	9	5	11	9	19	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP127	0.0-2	Fill: silty sand	Coarse	6.9	11	11	8	15	16	35	15	64	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.07	
TP127	0.3-0.4	Fill: sandy clay	Fine	6.6	5	10.5	<4	10	5	17	3	17	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP128	0.0-0.1	Fill: silty sand	Coarse	6.6	5	10.5	<4	11	7	64	2	25	<0.1	<0.1	<25	<50	340	160	<0.2	<0.5	<1	<3	<0.05	
TP129	0.0-0.1	Fill: silty clay	Fine	6.6	5	10.5	6	9	10	35	6	36	<0.1	<0.1	<25	<50	500	280	<0.2	<0.5	<1	<3	<0.05	
TP129	0.3-0.4	Fill: clayey sand	Coarse	6.6	5	10.5	<4	6	3	31	1	6	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP129	0.95-1.0	Fill: clayey sand	Coarse	6.6	5	10.5	<4	4	<1	3	<1	1	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP130	0.05-0.15	Fill: clayey sand	Coarse	6.6	5	10.5	<4	8	7	31	2	20	<0.1	<0.1	<25	<50	280	110	<0.2	<0.5	<1	<3	<0.05	
TP130	0.7-0.8	Fill: clayey sand	Coarse	6.6	5	10.5	<4	14	5	29	4	14	<0.1	NA	<25	<50	120	<100	<0.2	<0.5	<1	<3	<0.05	
TP131	0.0-15	Fill: silty sand	Coarse	6.6	5	10.5	6	8	10	29	4	38	<0.1	<0.1	<25	<50	180	110	<0.2	<0.5	<1	<3	<0.05	
TP132	0.0-0.1	Fill: silty sand	Coarse	6.6	5	10.5	<4	6	9	28	2	35	<0.1	<0.1	<25	<50	250	130	<0.2	<0.5	<1	<3	0.1	
TP132	0.3-0.4	Fill: clayey sand	Coarse	6.6	5	10.5	<4	7	2	4	<1	3	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP132	0.95-1.0	Clayey sand	Coarse	6.6	5	10.5	<4	4	<1	3	<1	1	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP133	0.0-0.1	Fill: silty sand	Coarse	6.6	5	10.5	<4	6	8	28	3	20	<0.1	<0.1	<25	<50	170	<100	<0.2	<0.5	<1	<3	<0.05	
TP133	0.3-0.4	Sand	Coarse	6.6	5	10.5	<4	<1	<1	<1	<1	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05		
BH134	0.1-0.3	Fill: Silty sand	Coarse	7.8	4	9	<4	13	4	6	9	9	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP135	0.0-15	Fill: silty sand	Coarse	6.6	5	10.5	4	7	5	23	2	25	<0.1	<0.1	<25	<50	51	250	<0.2	<0.5	<1	<3	0.7	
TP136	0.0-0.1	Fill: silty sand	Coarse	6.6	5	10.5	<4	3	<1	1	<1	<1	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP137	0.0-0.1	Fill: silty sand	Coarse	6.6	5	10.5	<4	2	7	46	2	17	<0.1	<0.1	<25	<50	120	<100	<0.2	<0.5	<1	<3	<0.05	
BH138	0.05-0.1	Fill: silty sandy gravel	Coarse	6.6	5	10.5	<4	66	40	6	71	42	0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
BH138	0.2-0.3	Sandstone	Fine	6.6	5	10.5	<4	3	<1	1	<1	<1	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
BH139	0.2-0.35	Fill: silty gravelly sand	Coarse	6.6	5	10.5	<4	22	110	4	25	31	<0.1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP140	0.0-0.1	Fill: silty sand	Coarse	6.6	5	10.5	<4	7	13	24	2	51	<0.1	<0.1	<25	<50	300	150	<0.2	<0.5	<1	<3	<0.05	
TP140	0.2-0.3	Clayey sand	Coarse	6.6	5	10.5	<4	10	2	3	<1	9	<0.1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05	
TP141	0.0-0.1	Fill: silty sand	Coarse	6.6	5	10.5	<4	3	6	42	1	12	<0.1	<0.1	<25	<50	100	<100	<0.2	<0.5	<1	<3	<0.05	
TP141	0.3	Fill: silty sand	Coarse	6.6	5	10.5	<4	2	<1	2	<1	<1	<0.1	<0.1	<25	<50	60	<100	<0.2	<0.5	<1	<3	<0.05	
TP142	0.0-0.1	Fill: silty sand clay	Fine	6.6	5	10.5	<4	3	8	22	2	28	<0.1	<0.1	<25	<50	1100	900	<0.2	<0.5	<1	<3	<0.05	
TP142	0.2-0.3	Clayey sand	Coarse	6.6	5	10.5	<4	5	1</td															

**TABLE C-3**  
**SOIL LABORATORY RESULTS COMPARED TO NEPM 2013 - PFAS NEMP Guideline**  
**All data in mg/kg unless stated otherwise**

Land Use Category			PFAS COMPOUNDS	
			PFOS	PFOA
PQL - Envirolab Services			0.0002	0.0001
Site Assessment Criteria (SAC) - Ecological Direct Exposure (Public Open Space)			1	10
Site Assessment Criteria (SAC) - Ecological Indirect Exposure (Residential)			0.01	NSL
Sample Reference	Sample Depth	Sample Description		
SS1	NA	Fill: silty sand	0.0006	<0.0001
SS2	NA	Fill: silty sand	0.0005	<0.0001
SS3	NA	Fill: silty sand	0.0003	<0.0001
<b>Total Number of Samples</b>			3	3
<b>Maximum Value</b>			0.0006	<0.0001
Concentration above the SAC			VALUE	

**TABLE D-1**  
**SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS**  
**All results in mg/kg unless stated otherwise**

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP117 (0-0.1m)	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUPAMS1	Cadmium	0.4	<0.4	<0.4	NC	NC
Envirolab Report: 203424	Chromium	1	9	11	10.0	20
	Copper	1	13	16	14.5	21
	Lead	1	26	31	28.5	18
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	6	7	6.5	15
	Zinc	1	52	59	55.5	13
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	Total OCPs	0.1	<0.1	<0.1	NC	NC
	Total OPPs	0.1	<0.1	<0.1	NC	NC
	Total PCBs	0.1	<0.1	<0.1	NC	NC
	TRH C <sub>6</sub> -C <sub>10</sub> (F1)	25	<25	<25	NC	NC
	TRH >C <sub>10</sub> -C <sub>16</sub> (F2)	50	<50	<50	NC	NC
	TRH >C <sub>16</sub> -C <sub>34</sub> (F3)	100	<100	<100	NC	NC
	TRH >C <sub>34</sub> -C <sub>40</sub> (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

**Explanation:**

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

Results > 10 times PQL = RPD value <= 50% are acceptable

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

Results < 5 times PQL = RPD value <= 100% are acceptable

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

RPD Results Above the Acceptance Criteria

VALUE

**TABLE D-2**  
**SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS**  
**All results in mg/kg unless stated otherwise**

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP116 (0-0.05)	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUPAMS2	Cadmium	0.4	<0.4	<0.4	NC	NC
Envirolab Report: 203424	Chromium	1	4	4	4.0	0
	Copper	1	9	7	8.0	25
	Lead	1	66	55	60.5	18
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	3	2	2.5	40
	Zinc	1	29	23	26.0	23
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibeno(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C <sub>6</sub> -C <sub>10</sub> (F1)	25	<25	<25	NC	NC
	TRH >C <sub>10</sub> -C <sub>16</sub> (F2)	50	<50	<50	NC	NC
	TRH >C <sub>16</sub> -C <sub>34</sub> (F3)	100	120	<100	85.0	82
	TRH >C <sub>34</sub> -C <sub>40</sub> (F4)	100	170	<100	110.0	109
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

**Explanation:**

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

Results > 10 times PQL = RPD value <= 50% are acceptable

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

Results < 5 times PQL = RPD value <= 100% are acceptable

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

RPD Results Above the Acceptance Criteria

VALUE

**TABLE D-3**  
**SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS**  
**All results in mg/kg unless stated otherwise**

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP103 (0-0.1m)	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUPAMS4	Cadmium	0.4	<0.4	<0.4	NC	NC
Envirolab Report: 203424	Chromium	1	9	10	9.5	11
	Copper	1	20	23	21.5	14
	Lead	1	37	44	40.5	17
	Mercury	0.1	0.1	0.1	0.1	0
	Nickel	1	5	6	5.5	18
	Zinc	1	44	52	48.0	17
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	Total OCPs	0.1	<0.1	<0.1	NC	NC
	Total OPPs	0.1	<0.1	<0.1	NC	NC
	Total PCBs	0.1	<0.1	<0.1	NC	NC
	TRH C <sub>6</sub> -C <sub>10</sub> (F1)	25	<25	<25	NC	NC
	TRH >C <sub>10</sub> -C <sub>16</sub> (F2)	50	<50	<50	NC	NC
	TRH >C <sub>16</sub> -C <sub>34</sub> (F3)	100	<100	<100	NC	NC
	TRH >C <sub>34</sub> -C <sub>40</sub> (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

**Explanation:**

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

Results > 10 times PQL = RPD value <= 50% are acceptable

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

Results < 5 times PQL = RPD value <= 100% are acceptable

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

RPD Results Above the Acceptance Criteria

VALUE

**TABLE D-4**  
**SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS**  
**All results in mg/kg unless stated otherwise**

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP123 (0.2-0.3m)	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUPAMS7	Cadmium	0.4	<0.4	<0.4	NC	NC
Envirolab Report: 203424	Chromium	1	2	2	2.0	0
	Copper	1	1	2	1.5	67
	Lead	1	15	18	16.5	18
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	<1	<1	NC	NC
	Zinc	1	3	3	3.0	0
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibeno(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	TRH C <sub>6</sub> -C <sub>10</sub> (F1)	25	<25	<25	NC	NC
	TRH >C <sub>10</sub> -C <sub>16</sub> (F2)	50	<50	<50	NC	NC
	TRH >C <sub>16</sub> -C <sub>34</sub> (F3)	100	100	<100	75.0	67
	TRH >C <sub>34</sub> -C <sub>40</sub> (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

**Explanation:**

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

Results > 10 times PQL = RPD value <= 50% are acceptable

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

Results < 5 times PQL = RPD value <= 100% are acceptable

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

RPD Results Above the Acceptance Criteria

VALUE

**TABLE D-5**  
**SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS**  
**All results in mg/kg unless stated otherwise**

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP124 (0-0.1m)	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUPAMS10	Cadmium	0.4	<0.4	<0.4	NC	NC
Envirolab Report: 203424	Chromium	1	6	4	5.0	40
	Copper	1	17	17	17.0	0
	Lead	1	140	88	114.0	46
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	3	3	3.0	0
	Zinc	1	14	13	13.5	7
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	Total OCPs	0.1	<0.1	<0.1	NC	NC
	Total OPPs	0.1	<0.1	<0.1	NC	NC
	Total PCBs	0.1	<0.1	<0.1	NC	NC
	TRH C <sub>6</sub> -C <sub>10</sub> (F1)	25	<25	<25	NC	NC
	TRH >C <sub>10</sub> -C <sub>16</sub> (F2)	50	<50	<50	NC	NC
	TRH >C <sub>16</sub> -C <sub>34</sub> (F3)	100	270	240	255.0	12
	TRH >C <sub>34</sub> -C <sub>40</sub> (F4)	100	150	130	140.0	14
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<2	<2	NC	NC

**Explanation:**

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

Results > 10 times PQL = RPD value <= 50% are acceptable

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

Results < 5 times PQL = RPD value <= 100% are acceptable

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

RPD Results Above the Acceptance Criteria

VALUE

**TABLE D-6**  
**SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS**  
**All results in mg/kg unless stated otherwise**

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH145 (0.2-0.2m)	Arsenic	4	<4	<4	NC	NC
Dup Ref = DUP4	Cadmium	0.4	<0.4	<0.4	NC	NC
Envirolab Report: 204970	Chromium	1	38	37	37.5	3
	Copper	1	38	35	36.5	8
	Lead	1	4	4	4.0	0
	Mercury	0.1	<0.1	<0.1	NC	NC
	Nickel	1	67	67	67.0	0
	Zinc	1	32	34	33.0	6
	Naphthalene	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	<0.1	<0.1	NC	NC
	Dibenzo(ah)anthracene	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	<0.1	<0.1	NC	NC
	Total OCPs	0.1	<0.1	<0.1	NC	NC
	Total OPPs	0.1	<0.1	<0.1	NC	NC
	Total PCBs	0.1	<0.1	<0.1	NC	NC
	TRH C <sub>6</sub> -C <sub>10</sub> (F1)	25	<25	<25	NC	NC
	TRH >C <sub>10</sub> -C <sub>16</sub> (F2)	50	<50	<50	NC	NC
	TRH >C <sub>16</sub> -C <sub>34</sub> (F3)	100	<100	<100	NC	NC
	TRH >C <sub>34</sub> -C <sub>40</sub> (F4)	100	<100	<100	NC	NC
	Benzene	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	<1	<1	NC	NC
	m+p-xylene	2	<2	<2	NC	NC
	o-xylene	1	<1	<1	NC	NC

**Explanation:**

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

Results > 10 times PQL = RPD value <= 50% are acceptable

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

Results < 5 times PQL = RPD value <= 100% are acceptable

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

RPD Results Above the Acceptance Criteria

VALUE

TABLE D-7  
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS  
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP151 (0-0.15m) Dup Ref = DUPMDE Envirolab Report: 204970	Total PCBs	0.1	<0.1	<0.1	NC	NC

Explanation:

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

Results > 10 times PQL = RPD value <= 50% are acceptable

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

Results < 5 times PQL = RPD value <= 100% are acceptable

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

RPD Results Above the Acceptance Criteria

VALUE

TABLE D-8  
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS  
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = SS3	PFHxS	0.0001	<0.0001	<0.0001	NC	NC
Dup Ref = DUPMDA	PFOS	0.0001	0.0003	0.0003	NC	NC
Envirolab Report: 204813	PFOA	0.0001	<0.0001	<0.0001	NC	NC

Explanation:

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

Results > 10 times PQL = RPD value <= 50% are acceptable

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

Results < 5 times PQL = RPD value <= 100% are acceptable

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

RPD Results Above the Acceptance Criteria

VALUE

**TABLE E-1**  
**SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS**  
**All results in mg/kg unless stated otherwise**

SAMPLE	ANALYSIS	Envirolab PQL	Envirolab VIC PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP109 (0-0.1m)	Arsenic	4	4	<4	<4	NC	NC
Dup Ref = DUPAMS3	Cadmium	0.4	0.4	<0.4	<0.4	NC	NC
Envirolab Report: 203424	Chromium	1	1	3	3	3.0	0
Envirolab VIC Report: 15166	Copper	1	1	3	3	3.0	0
	Lead	1	1	28	30	29.0	7
	Mercury	0.1	0.1	<0.1	<0.1	NC	NC
	Nickel	1	1	1	1	1.0	0
	Zinc	1	1	8	9	8.5	12
	Naphthalene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	0.05	0.05	0.05	0.1	0
	Indeno(123-cd)pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Dibenz(a,h)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	100	<100	<100	NC	NC
	TRH >C34-C40 (F4)	100	100	<100	<100	NC	NC
	Benzene	0.2	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	1	<1	<1	NC	NC
	m+p-xylene	2	2	<2	<2	NC	NC
	o-xylene	1	1	<1	<1	NC	NC

**Explanation:**

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

Results > 10 times PQL = RPD value <= 50% are acceptable

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

Results < 5 times PQL = RPD value <= 100% are acceptable

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

RPD Results Above the Acceptance Criteria

VALUE

**TABLE E-2**  
**SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS**  
**All results in mg/kg unless stated otherwise**

SAMPLE	ANALYSIS	Envirolab PQL	Envirolab VIC PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP112 (0-0.1m)	Arsenic	4	4	<4	4	3.0	67
Dup Ref = DUPAMS5	Cadmium	0.4	0.4	<0.4	<0.4	NC	NC
Envirolab Report: 203424	Chromium	1	1	4	7	5.5	55
Envirolab VIC Report: 15166	Copper	1	1	5	10	7.5	67
	Lead	1	1	14	20	17.0	35
	Mercury	0.1	0.1	<0.1	0.2	0.1	120
	Nickel	1	1	2	4	3.0	67
	Zinc	1	1	27	41	34.0	41
	Naphthalene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Dibenz(o,ah)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	0.1	<0.1	<0.1	NC	NC
	Total OCPs	0.1	0.1	<0.1	<0.1	NC	NC
	Total OPPs	0.1	0.1	<0.1	<0.1	NC	NC
	Total PCBs	0.1	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	100	<100	<100	NC	NC
	TRH >C34-C40 (F4)	100	100	<100	<100	NC	NC
	Benzene	0.2	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	1	<1	<1	NC	NC
	m+p-xylene	2	2	<2	<2	NC	NC
	o-xylene	1	1	<1	<1	NC	NC

**Explanation:**

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

Results > 10 times PQL = RPD value <= 50% are acceptable

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

Results < 5 times PQL = RPD value <= 100% are acceptable

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

RPD Results Above the Acceptance Criteria

VALUE

**TABLE E-3**  
**SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS**  
**All results in mg/kg unless stated otherwise**

SAMPLE	ANALYSIS	Envirolab PQL	Envirolab VIC PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP125 (0.05-0.15m)	Arsenic	4	4	<4	<4	NC	NC
Dup Ref = DUPAMS9	Cadmium	0.4	0.4	<0.4	<0.4	NC	NC
Envirolab Report: 203424	Chromium	1	1	4	5	4.5	22
Envirolab VIC Report: 15166	Copper	1	1	12	14	13.0	15
	Lead	1	1	82	110	96.0	29
	Mercury	0.1	0.1	<0.1	<0.1	NC	NC
	Nickel	1	1	2	2	2.0	0
	Zinc	1	1	21	27	24.0	25
	Naphthalene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	0.1	<0.1	<0.1	NC	NC
	Anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(a)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Dibenz(a,h)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	100	160	<100	105.0	105
	TRH >C34-C40 (F4)	100	100	<100	<100	NC	NC
	Benzene	0.2	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	1	<1	<1	NC	NC
	m+p-xylene	2	2	<2	<2	NC	NC
	o-xylene	1	1	<1	<1	NC	NC

**Explanation:**

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

Results > 10 times PQL = RPD value <= 50% are acceptable

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

Results < 5 times PQL = RPD value <= 100% are acceptable

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

RPD Results Above the Acceptance Criteria

VALUE

**TABLE E-4**  
**SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS**  
**All results in mg/kg unless stated otherwise**

SAMPLE	ANALYSIS	Envirolab PQL	Envirolab VIC PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP135 (0-0.15m)	Arsenic	4	4	4	5	4.5	22
Dup Ref = DUPMDD	Cadmium	0.4	0.4	<0.4	<0.4	NC	NC
Envirolab Report: 204970	Chromium	1	1	7	8	7.5	13
Envirolab VIC Report: 15316	Copper	1	1	5	5	5.0	0
	Lead	1	1	23	24	23.5	4
	Mercury	0.1	0.1	<0.1	<0.1	NC	NC
	Nickel	1	1	2	2	2.0	0
	Zinc	1	1	25	27	26.0	8
	Naphthalene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthylene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	0.1	0.1	<0.1	0.1	67
	Fluorene	0.1	0.1	0.1	<0.2	0.1	67
	Phenanthrene	0.1	0.1	1.4	0.8	1.1	55
	Anthracene	0.1	0.1	0.3	0.2	0.3	40
	Fluoranthene	0.1	0.1	1.7	1.2	1.5	34
	Pyrene	0.1	0.1	1.4	1	1.2	33
	Benzo(a)anthracene	0.1	0.1	0.6	0.4	0.5	40
	Chrysene	0.1	0.1	0.7	0.4	0.6	55
	Benzo(b,j+k)fluoranthene	0.2	0.2	1	0.7	0.9	35
	Benzo(a)pyrene	0.05	0.05	0.7	0.46	0.6	41
	Indeno(123-cd)pyrene	0.1	0.1	0.3	0.2	0.3	40
	Dibenz(o,ah)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	0.1	0.3	0.2	0.3	40
	Total OCPs	0.1	0.1	<0.1	<0.1	NC	NC
	Total OPPs	0.1	0.1	<0.1	<0.1	NC	NC
	Total PCBs	0.1	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	100	570	380	475.0	40
	TRH >C34-C40 (F4)	100	100	250	210	230.0	17
	Benzene	0.2	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	1	<1	<1	NC	NC
	m+p-xylene	2	2	<2	<2	NC	NC
	o-xylene	1	1	<1	<1	NC	NC

**Explanation:**

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

Results > 10 times PQL = RPD value <= 50% are acceptable

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

Results < 5 times PQL = RPD value <= 100% are acceptable

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

RPD Results Above the Acceptance Criteria

VALUE

**TABLE E-5**  
**SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS**  
**All results in mg/kg unless stated otherwise**

SAMPLE	ANALYSIS	Envirolab PQL	Envirolab VIC PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP118 (0-0.2m)	Arsenic	4	4	<4	<4	NC	NC
Dup Ref = DUPMDG	Cadmium	0.4	0.4	<0.4	<0.4	NC	NC
Envirolab Report: 204970	Chromium	1	1	30	35	32.5	15
Envirolab VIC Report: 15316	Copper	1	1	35	37	36.0	6
	Lead	1	1	9	9	9.0	0
	Mercury	0.1	0.1	0.1	<0.1	0.1	67
	Nickel	1	1	41	42	41.5	2
	Zinc	1	1	39	33	36.0	17
	Naphthalene	0.1	0.1	<0.1	0.2	0.1	120
	Acenaphthylene	0.1	0.1	<0.1	<0.1	NC	NC
	Acenaphthene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluorene	0.1	0.1	<0.1	<0.1	NC	NC
	Phenanthrene	0.1	0.1	<0.1	0.1	0.1	67
	Anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Fluoranthene	0.1	0.1	<0.1	<0.1	NC	NC
	Pyrene	0.1	0.1	<0.1	0.1	0.1	67
	Benzo(a)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Chrysene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	0.2	<0.2	<0.2	NC	NC
	Benzo(a)pyrene	0.05	0.05	<0.05	<0.05	NC	NC
	Indeno(123-cd)pyrene	0.1	0.1	<0.1	<0.1	NC	NC
	Dibenz(o,h)anthracene	0.1	0.1	<0.1	<0.1	NC	NC
	Benzo(ghi)perylene	0.1	0.1	<0.1	<0.1	NC	NC
	Total OCPs	0.1	0.1	<0.1	<0.1	NC	NC
	Total OPPs	0.1	0.1	<0.1	<0.1	NC	NC
	Total PCBs	0.1	0.1	<0.1	<0.1	NC	NC
	TRH C6-C10 (F1)	25	25	<25	<25	NC	NC
	TRH >C10-C16 (F2)	50	50	<50	<50	NC	NC
	TRH >C16-C34 (F3)	100	100	160	280	220.0	55
	TRH >C34-C40 (F4)	100	100	<100	320	185.0	146
	Benzene	0.2	0.2	<0.2	<0.2	NC	NC
	Toluene	0.5	0.5	<0.5	<0.5	NC	NC
	Ethylbenzene	1	1	<1	<1	NC	NC
	m+p-xylene	2	2	<2	<2	NC	NC
	o-xylene	1	1	<1	<1	NC	NC

**Explanation:**

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

Results > 10 times PQL = RPD value <= 50% are acceptable

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

Results < 5 times PQL = RPD value <= 100% are acceptable

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

RPD Results Above the Acceptance Criteria

VALUE

**TABLE E-6**  
**SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS**  
 All results in mg/kg unless stated otherwise

### Explanation:

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

Results > 10 times PQL = RPD value <= 50% are acceptable

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

Results < 5 times PQL = RPD value <= 100% are acceptable

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

## RPD Results Above the Acceptance Criteria

## VALUE

**TABLE F**  
**SUMMARY OF FIELD QA/QC RESULTS**

ANALYSIS	Envirolab PQL		TBS1 <sup>s</sup>	TS <sup>s</sup>	TBR2 <sup>s</sup>	TSR2 <sup>s</sup>	FR2 <sup>w</sup>	FR3 <sup>w</sup>
			12/10/2018	15/10/2018	6/11/2018	15/10/2018	5/11/2018	5/11/2018
	ug/L	mg/kg	mg/kg	% Recovery	mg/kg	% Recovery	μg/L	μg/L
Benzene	1	0.2	<0.2	86	<0.2	90	<1	<1
Toluene	1	0.5	<0.5	88	<0.5	91	<1	<1
Ethylbenzene	1	1	<1	83	<1	92	<1	<1
m+p-xylene	2	2	<2	83	<2	93	<2	<2
o-xylene	1	1	<1	84	<1	91	<1	<1

**Explanation:**

<sup>w</sup> Sample type (water)

<sup>s</sup> Sample type (sand)

BTEX concentrations in trip spikes are presented as % recovery

Values above PQLs/Acceptance criteria

VALUE