

DHL Supply Chain (Australia) Pty Limited
Level 4, Building C
1 Homebush Bay Drive
Rhodes NSW 2138

Project 86548.20
19 September 2024
R.006.Rev1
LAR

Attention: Lloyd Henderson
Email: lloyd.henderson@dhl.com

Review of Supplementary Contamination Investigation - DHL Stage 1
Part of 1953 - 2109 Elizabeth Drive, Badgerys Creek NSW

1. Introduction

Douglas Partners Pty Ltd (DP) has prepared this review of the supplementary contamination investigation (SCI)¹ for the proposed Warehouse Development at DHL Stage 1 located at Part of 1953 - 2109 Elizabeth Drive, Badgerys Creek NSW ("the site", as shown in Drawing 1, Attachment A).

In June 2023, DP completed the SCI report for Robert Jones Developments Pty Ltd (RJD) of the wider Burra Park Development area. This review of the SCI was commissioned by Lloyd Henderson of DHL Supply Chain (Australia) Pty Limited and was undertaken in accordance with DP's proposal 86548.20.P.001.Rev0 dated 27 July 2023. It is understood, based on documents provided by DHL, that the site is approximately 11.9 hectares (ha) in size. The review of the SCI was required to support the State Significant Development Application (SSD 70818708) for the site.

DP has completed several contamination investigations relevant to the subject site including a detailed site investigation (DSI)² of the subject site. The DSI established that there was no evidence of widespread or significant contamination across the site. However, localised contamination in some areas of environmental concern (AECs) was observed as requiring a SCI to further investigate the AEC identified by the DSI and associated contaminants of potential concern (CoPC) relevant to subject site to determine the vertical and lateral extent of the contamination issues and/or whether remediation is required.

The SCI fieldwork was completed at the site on 14 to 20 December 2022 and 7 to 9 February 2023 to assess the AEC identified as requiring further investigation. The AECs identified which required further works, relevant to the site, are summarised in Table 1 and shown in Drawing 2, Attachment A.

¹ DP Report on Site Review Supplementary Contamination Investigation for Burra Park Development, 1953 – 2109 Elizabeth Drive, Badgerys Creek, NSW, report reference 86548.14.R.001.Rev0 dated 30 June 2023 (DP, 2023 – 'the SCI')

² DP Report on Site Review Detailed Site Investigation for Contamination, DHL Stage 1, Part of 1953 – 2109 Elizabeth Drive, Badgerys Creek, NSW, report reference 86548.20.R.001.Rev0 dated 8 August 2023 (DP, 2023a – 'the DSI Stage 1')

Table 1: Summary of Further Investigations, Delineation and/or Remediation Requirements

Location of Impact	Source and Contaminants of Potential Concern (CoPC)	Further Assessment/ Delineation Action Required
Background Areas	Pit 408 – nickel in surface soils	The DSI identified concentrations of nickel in shallow soil at levels exceeding the ecological SAC investigation levels (45 mg/kg) at Pit 408 (94 mg/kg). Further investigation was required to assess whether the nickel exceedance was either an anomalous isolated occurrence or indicative of more extensive nickel impact to site soil that may require remediation.
AEC 19	Building demolition waste/asbestos containing material (ACM) impact on the ground surface – asbestos	The DSI identified ACM impact on the ground surface, therefore a targeted investigation (double density, with reference to NSW EPA 1995 guidelines) was recommended to ascertain the extent of asbestos impact here. It is noted that most of AEC19 is located outside of the site boundaries.
AEC 36	Timber Power Poles	The DSI identified exceedances of Arsenic for Human and Ecological SAC for surface soils around one of the two power poles assessed at the site PP10. DP considered that soil around each timber power pole within the subject site should be assessed to better inform the extent of soil remediation required. A targeted investigation of power poles was required at the site to establish and further define which poles are suitable to be retained on site and which will require remediation and the extents of required remediation.
General (whole site)	Septic tanks	Septic tanks are present at the site that will require removal at some stage to facilitate the proposed development. Inspection of the excavation after removal and, if required, targeted sampling for pathogens and metals should be undertaken by a suitably qualified Environmental Consultant.
	Building footprints -	Structures are known to be present at the site that contain hazardous materials. As well as following the recommendations of the HAZMAT ³ , the footprints should be inspected by an Environmental Consultant after demolition for residual building materials and filling below the footprint. If filling is present, a targeted building footprint investigation should be undertaken.
	Heavy metals, TRH, BTEX, OCP, OPP, PCB, PAH, phenols and asbestos	

The SCI was required to further investigate the above identified AEC and associated CoPC relevant to subject site to determine the vertical and lateral extent of the contamination issues and/or whether remediation will be required.

³ DP Report on Hazardous Building Materials (HBM) Survey, Burra park, 1953 – 2109 Elizabeth Drive, Badgerys Creek, NSW, report reference 86548.07.R.001.Rev2 dated 26 September 2022, (DP, 2022 – ‘the HAZMAT’)

2. Summary of Sampling Completed within the Identified AEC at the Site

2.1 Soil Sampling Rationale and Methodology

The following SCI fieldwork was completed at the site on 14 to 20 December 2022 and 7 to 9 February 2023 to assess the AEC identified, within the site, as requiring further investigation.

2.1.1 Background Areas (pit 408)

To further investigate the extent of nickel impact to soils in the vicinity of pit 408, the following was completed:

- Collection of shallow fill samples (at depths of 0.0-0.2 m bgl) surrounding sample location pit 408. Samples were collected at the four cardinal points (north, east, south and west) approximately 2.0 m and 4.0 m from Pit 408;
- One sample was also collected at a depth of 0.4 m bgl at locations Pit 408 to assess the vertical extent of the relevant CoPC impact; and
- The 2 m samples and the 0.4 mbgl sample (from Pit 408) were sent to the laboratory for analysis of nickel. The 4.0 m samples were placed on hold and only be analysed in the event CoPC were identified within the 2.0 m samples at levels exceeding the SAC.

The pit 408 sample locations are presented on Drawing 3, Attachment A.

AEC19 (pit 591) - Located immediately adjacent to the site

The DSI identified fragments of ACM on the ground surface in the vicinity of Pit 591 (AEC19). Further investigation of the areas was required to determine the ACM content (w/w%) and whether further remediation was required.

The following was completed to investigate the potential for ACM impact in the vicinity of AEC19:

- Excavation of two strip trenches in the vicinity of Pit 591 (AEC19) with an excavator to visually identify/confirm the extent of fill in the area and the depth to natural soils;
- Each trench excavation was completed through fill soils to a depth of approximately 0.5 m into underlying native soils or a maximum depth of 3.0 m; and
- Collection of five 10 L bulk and five 500 mL soil samples from each metre of fill encountered within each area and inspected in accordance with WA DoH 2021. An additional four 10 L bulk and four 500 mL soil samples were collected from AEC19 at distances further away from each of the identified areas, however were only analysed if results indicate presence of ACM at concentrations requiring remediation.

The AEC 19 (pit 591) trenches and sample locations are also presented on Drawing 3, Attachment A.

2.1.2 AEC36

Delineation Investigation of PP10

The DSI (2023) identified shallow soils impacted with concentrations of arsenic exceeding the human health and ecological levels at one timber power pole location PP10 (where DSI surface samples SS5 was collected) within the site and elevated concentrations of power pole related CoPC (TRH and PAHs) at several other power poles across the wider Burra Park area. A targeted investigation of PP10, was required to further define whether PP10 is suitable to be retained on site or will require remediation.

The targeted delineation investigation around PP10 comprised the following:

- Delineation of TRH and PAH impacted topsoil surrounding PP10 to determine the extent of the remediation areas prior to the removal of poles;
- Collect soil samples at the base of PP10 at a depth of 0.3 m bgl to assess the vertical extent of impact to underlying soils/clay;
- To assess the lateral extent of impact, initial sampling was completed at 1 m and 1.5 m lateral step outs to the North, East, South and West of PP10, and at depths of 0.1 m and 0.3 m. The 1 m lateral at 0.1 m depth samples were be analysed, with other samples held pending any sample exceeded adopted site assessment criteria; and
- All delineation samples collected for the wider TNG site during (DP, 2023a – ‘the SCI’) were analysed for PAH (primary contaminant), with 10% of samples analysed for TRH and 5% analysed for PCBs particularly targeting power poles with observable transformer boxes.

Delineation sampling of the soil surrounding the PP10 was completed using a handheld shovel as summarised in Table 2.

Table 2: Summary of Power Pole, Delineation Sample and Approximate Depth

Power Pole	Delineation Samples	Approximate distance of Sample from Power Pole (m)	Approximate Depth of Sample
PP10 (DSI sample location SS5)	North: PP10-N1/0.1 South: PP10-S1/0.1 East: PP10-E1/0.1 West: PP10-W1/0.1	1.0	0.2
	Vertical Delineation sample PP10/0.3	0.1- 0.2	0.3

Remaining Power Pole PP11

The scope of the DSI only included sampling from one of the two power poles on-site (PP10) and therefore recommended that soil around the remaining on-site timber power pole PP11 should be further assessed to better inform the extent of soil remediation required.

The following was completed for the PP11, which had not been previously sampled, relevant to the subject site:

- Collection of a surface soil samples from the base PP11; and
- The surface soil sample was sent a NATA accredited laboratory for various analysis for power pole related CoPC including PAH and TRH.

2.1.3 On-site Buildings

There are two structures where ACM and / or lead has been identified within building materials as shown in Table 3. Given the age of the structures, site observations and HAZMAT survey results there is potential for shallow soil impact from hazardous building materials CoPC.

Table 3: Summary of Hazardous Building Materials Identified within Site Structures

Building/Area	Non-Friable Asbestos	Friable Asbestos	SMF	Lead Paint	Lead Dust	PCB
HS	✓	✗	✗	✓	✓	✗
GS	✗	✗	✓	✓	✓	✗

HS= House structure, GS= Garage structure, SMF = synthetic mineral fibre, PCB = polychlorinated biphenyls, ✓= identified and/or suspected present, ✗ = not identified and/or not suspected present. Refer to the HBM Register in Appendix B for details/clarification.

The following was completed in areas surrounding the site buildings:

- Collection of soil surface samples (0 - 0.1 mbg) in the vicinity of the exterior walls of the buildings - one sample was collected for every approximate 10 m surrounding each structure wall; and
- Laboratory analysis of the samples collected in the vicinity of the dwellings and sheds for CoPC including asbestos, lead, TRH, BTEX, PAHs, OCPs, OPPs, PCBs and Phenols.

A summary of buildings, surface samples collected and the associated Drawing 4, in Attachment A is presented in Table 4

Table 4: Summary of Hazardous Building Materials within Site Structures

Building/Area HAZMAT	Approx. Perimeter Distance of Building Footprint (m)	Samples Collected	Drawing No. (Attachment A)
HS	80	HS – 1 to 8	Drawing 4
GS	35	GS – 1 to 4	Drawing 4

3. Results and Discussion

3.1 Field Work Results

The test pit and trench logs for this assessment are included in Attachment B.

3.1.1 Background Areas (pit 408)

The logs for the background area test pits recorded the following general sub-surface profile:

- Topsoil: Silty clay with trace gravel and rootlets in TP408 to a depth of 0.35 m; overlying; and
- Clay: Silty Clay with trace rootlets. The tests pits associated with these background areas terminated in clay (maximum depth 0.7 m bgl).

3.1.2 AEC19 (pit 591) – Located immediately adjacent to the site

The logs for the AEC19 trenches recorded the following general sub-surface profile:

- Fill: Silty clay with trace gravel and rootlets AEC19 to a depth of approximately 0.6 m bgl. Anthropogenic material including fragments of bricks, concrete, glass and ceramics was observed within fill in the AEC19 trenches. Several fragments of bonded ACM were also identified within fill in AEC19 trenches(completed offsite) which were confirmed by the laboratory to contain asbestos (as further discussed in Sections 3.2.4); overlying; and
- Clay: Silty Clay with trace rootlets. The test pit associated with this area terminated in clay (maximum depth 0.7 m bgl).

3.2 Laboratory Analytical Results and Discussion

The results of laboratory analysis are summarised in the Tables C1 to C5 in Attachment C. The laboratory certificate(s) of analysis together with the chain of custody and sample receipt information are provided in Attachment D.

3.2.1 Background Areas (pit 408)

The DSI identified elevated concentrations of nickel (94 mg/kg) exceeding the EIL (45 mg/kg) in test pit TP408 at a depth of 0.0 – 0.2 m bgl. Based on the results of the SCI (Summarised in Table C1, Attachment C) the previously identified nickel exceedance is not considered to present an unacceptable ecological risk or prevent the proposed overall commercial/industrial use of the site given:

- The results of SCI delineation sampling did not identify concentrations of nickel at levels exceeding the EILs in any samples collected, therefore the nickel impact to soil in the vicinity of Pit 408 are considered highly limited in extent. The previously identified exceedance is considered an isolated anomalous occurrence and not representative of widespread nickel impact to site surfaces; and
- Vegetation in the vicinity of Pit 408 appeared to be healthy and in good condition in relation to surrounding areas indicating no significant ecological impact related to the metals.

Based on the above, it is concluded that no further investigations or remediation works are warranted in the vicinity of pit 408.

3.2.2 AEC36 – Power Poles

Delineation Sampling

Concentration of TRH and PAH were reported below the SAC in all samples submitted for analysis.

The results of power pole delineation sampling at power pole (PP10), identified the lateral extents of surface topsoil, as requiring remediation across an approximate area of 4 m² to a vertical depth of approximately 0.3 m bgl.

A summary of laboratory results for topsoil delineation samples assessed against the adopted SAC is provided in Table C3.

Sampling of Remaining Power Poles

Exceedances for ESLs and or public open space criteria only (without exceeding commercial/industrial criteria) were not considered to warrant remediation of soil in the vicinity of the power pole (PP11) given the primary commercial/industrial land use of the site and the limited potential for public or ecological access to soil.

3.2.3 On-site Buildings

A summary of laboratory results for surface samples collected in the vicinity of on-site buildings, assessed against the adopted SAC is provided in Tables C4 and C5, Attachment C.

A summary of the samples collected from the vicinity of on-site buildings where concentrations of CoPC exceeded the SAC is provided in Table 5.

Table 5: Summary of Exceedances of SAC for Surface Sampling Near On-site Buildings.

Sample	CoPC	Concentration (mg/kg)	SAC Exceeded
GS - 1	Copper	180	EIL – 130 mg/kg
	Zinc	430	EIL – 340 mg/kg

EIL – Ecological Investigation Level

Elevated concentrations of metals (copper and zinc) were identified in sample GS-1/0.1, collected in the vicinity of one of the on-site buildings (GS) at levels exceeding the EILs (as presented in Table 5).

The identified metal exceedances of EILs are not considered to present an unacceptable ecological or human health risk or prevent the proposed overall commercial/industrial use of the site given:

- The results are well below the HILs (copper HIL – 17,000 mg/kg, and Zinc HIL – 7,400 mg/kg) and therefore do not present a human health risk;
- Vegetation in the vicinity of the GS building appeared to be healthy and in good condition in relation to surrounding areas indicating no significant ecological impact related to the metals; and

- The proposed commercial/industrial setting of the site, particularly in the vicinity of where on-site GS building is located – Given that most of the site is likely to be covered by either asphalt or concrete, as part of the commercial/industrial development, ecological access to site's soils is considered to be highly limited.

Based on the above, it is concluded that no remediation works are warranted for soils in the vicinity of the on-site buildings in their current state. Notwithstanding this, following demolition of the on-site structures and removal of any building waste, further inspections and targeted sampling (if fill or demolition waste is present) should be completed within the footprints of the demolished structures and clearance letters issued in general accordance with clauses 473 and 474 of the *Work Health and Safety Regulation 2017* (NSW).

3.2.4 AEC19 (pit 591) Located immediately adjacent to the site

Asbestos (in the form of ACM) was detected, however did not exceed the Public Open Space SAC (HSLC - 0.02% w/w) and commercial/industrial SAC (HSLD - 0.05% w/w), in the 10 L bulk samples collected from fill in the AEC19 (pit 591) trenches (Table C2):

- TP591-T at a depth of 0.0-0.6 m bgl with a concentration of <0.01% w/w; and
- TP591-TW2 at a depth of 0.0-0.6 m bgl at a concentration of 0.02% w/w (at the level of the public open space SAC).

Chrysotile and amosite asbestos were identified by the laboratory within a fragment sample (TP591-TW2/0-0.6) collected from the trenches.

Whilst the fill in the vicinity of Pit 591 is considered suitable from a contamination perspective to remain on-site, minor remediation will be required to ensure that no visible asbestos remains in surface soils in the vicinity of pit 591. It is noted that the main area requiring remediation within AEC19 is outside of the site boundaries.

4. Revised Conceptual Site Model

A CSM was documented in the SAQP (DP, 2020)⁴ and updated during the DSI (DP, 2023). The data collected for the SCI has generally confirmed that certain potential contaminant sources outlined in the CSM pose a potentially complete pathway to the identified receptor(s) whilst others do not. This is summarised in Table 6.

⁴ DP, *Report on Sampling and Analysis Quality Plan, The Northern Gateway, 1953 – 2109 Elizabeth Drive, Badgerys Creek, NSW*, Project 86548.03, Rev. 1 (DP, 2020)

Table 6: Updated Summary of Potentially Complete Exposure Pathways (Proposed Land Use)

Source	Transport Pathway	Receptor	Risk Management Action/ Remediation Action Required
Background Areas (Pit 408)			
Pit 408 – nickel in surface soils	Plant uptake.	Ecological receptors	No action required - Testing of soil during the SCI indicates that nickel does not appear to be significantly impacting the site and does not present an unacceptable human health or ecological risk to the proposed development.
AEC 36			
Timber treatment and PCBs in transmission box(es): Metals, TRH, benzo(a)pyrene, total PAHs, total PCBs.	Direct contact of contaminated ground, ingestion and dermal contact with soil or water, inhalation of dust, leaching of contaminants and vertical migration into groundwater, lateral migration of groundwater.	Future site users Adjacent land users Ecological receptors	The results of power pole delineation sampling for PP10 identified the lateral extents of surface topsoil as requiring remediation, to be limited to within 1 m (north, south, east and west) of the power pole across an approximate area of 4 m² to a vertical depth of approximately 0.3 m bgl. Exceedances for ESLs and or public open space criteria only (without exceeding commercial/industrial criteria) were not considered to warrant remediation of soil in the vicinity of the remaining power pole (PP11) given the primary commercial/industrial land use of the site and the limited potential for public or ecological access to soil. Therefore, remediation and/or further investigation is not considered to be required for soils in the vicinity of PP11. The process of remediation and validation of soil in the vicinity of power pole PP10 should be documented in the RAP.
General (whole site)			
Building footprints - heavy metals, TRH, BTEX, OCP, OPP, PCB, PAH, phenols and asbestos	Inhalation of dust	Future site users Adjacent land users	No remediation works are warranted for soils in the vicinity of the on-site buildings in their current state. As well as following the recommendations of the HAZMAT¹, the footprints should be inspected by an Environmental Consultant after demolition for residual building materials and filling below the footprint. If filling or residual building materials are present, a targeted building footprint investigation should be undertaken.

Source	Transport Pathway	Receptor	Risk Management Action/ Remediation Action Required
AEC 19 (Pit 591)– Located immediately adjacent to the site			
Filling/ACM impact on the ground surface – asbestos	Inhalation of dust	Future site users Adjacent land users	Whilst the fill in the vicinity of pit 591 is considered suitable from a contamination perspective to remain on-site, minor remediation will be required to ensure that no visible asbestos remains in surface soils in the vicinity of pit 591. Whilst the main area identified within AEC19 as requiring remediation is not within the site boundary, it is recommended that additional inspections should be completed nearby or within the Stage 1 boundary prior to any significant soil disturbance. If ACM is encountered on site surfaces nearby or within site boundary, remediation will be required likely in the form of emu picking.

¹: Hazardous materials building assessment reported under separate cover (reference 86548.20.R.003.Rev0).

5. Conclusions and Recommendations

The results of targeted test pitting and trenching completed across the site during the SCI and collection of soil samples for laboratory analysis of the associated CoPC identified several AEC (as described in Table 6) at the site as requiring risk management and/or remediation. The identified AEC are considered typical of other rural properties in the area and are generally considered relatively localised, limited in extent and not representative of widespread gross contamination of the site. All of the identified AEC requiring remediation are readily amenable to clean-up through conventional remediation approaches.

Based on the results of the SCI, it is considered that the site can be made suitable for the proposed commercial/industrial development subject to implementation of the recommendations above.

The preparation of a RAP will be required to detail the remediation and validation requirements for each of the AEC requiring remediation to render the site suitable for the proposed land use.

6. References

CRC CARE. (2017). *Risk-based Management and Remediation Guidance for Benzo(a)pyrene*. Technical Report no. 39: Cooperative Research Centre for Contamination Assessment and Remediation of the Environment.

HEPA. (2020). *PFAS National Environmental Management Plan (NEMP)*. Version 2.0: Heads of EPAs Australia and New Zealand and Australian Government Department of the Environment.

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]*. Australian Government Publishing Services Canberra: National Environment Protection Council.

NSW EPA. (1995). *Contaminated Sites, Sampling Design Guidelines*. NSW Environment Protection Authority.

NSW EPA. (2020). *Guidelines for Consultants Reporting on Contaminated Land*. Contaminated Land Guidelines: NSW Environment Protection Authority.

7. Limitations

Douglas Partners Pty Ltd (DP) has prepared this report for this project at DHL Stage 1, Part of 1953 – 2109 Elizabeth Drive, Badgerys Creek NSW in accordance with DP's proposal 86548.20.P.001.Rev0 dated 27 July 2023 and acceptance email received from DHL Supply Chain (Australia) Pty Limited. The work was carried out under DP's Conditions of Engagement. This report is provided for the exclusive use DHL Supply Chain (Australia) Pty Limited for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

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

DP's advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by DP in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

The assessment of atypical safety hazards arising from this advice is restricted to the environmental components set out in this report and based on known project conditions and stated design advice and assumptions. While some recommendations for safe controls may be provided, detailed 'safety in design' assessment is outside the current scope of this report and requires additional project data and assessment.

This report must be read in conjunction with all of the attached 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 stated 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.

Please contact the undersigned if you have any questions on this matter.

Yours faithfully

Douglas Partners Pty Ltd



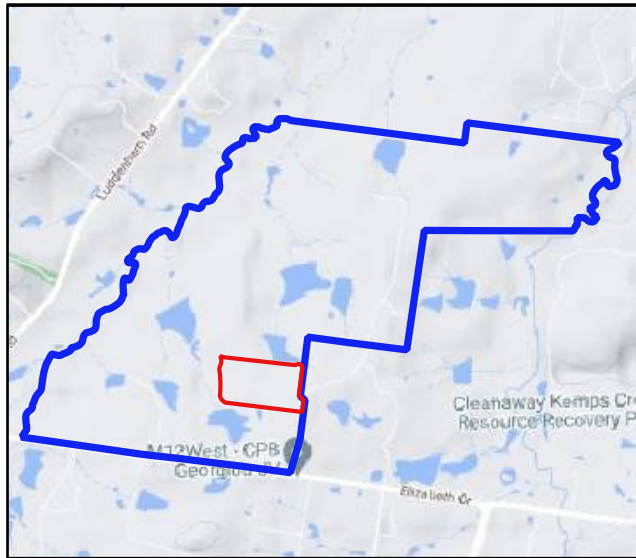
Lizbeth Rodriguez
Environmental Scientist

Reviewed by



p.p. **Dean Woods**
Principal

- Attachment A: Drawings
- Attachment B: Test Pit Logs
- Attachment C: Results Summary Tables C1 to C5
- Attachment D: Laboratory Certificates of Analysis and Chain-of-Custody documentation
- Attachment E: About this Report



Legend

- DHL Stage 1
- DHL Site Boundary
- The Northern Gateway Boundary (TNG)

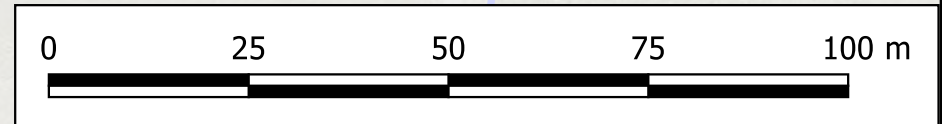


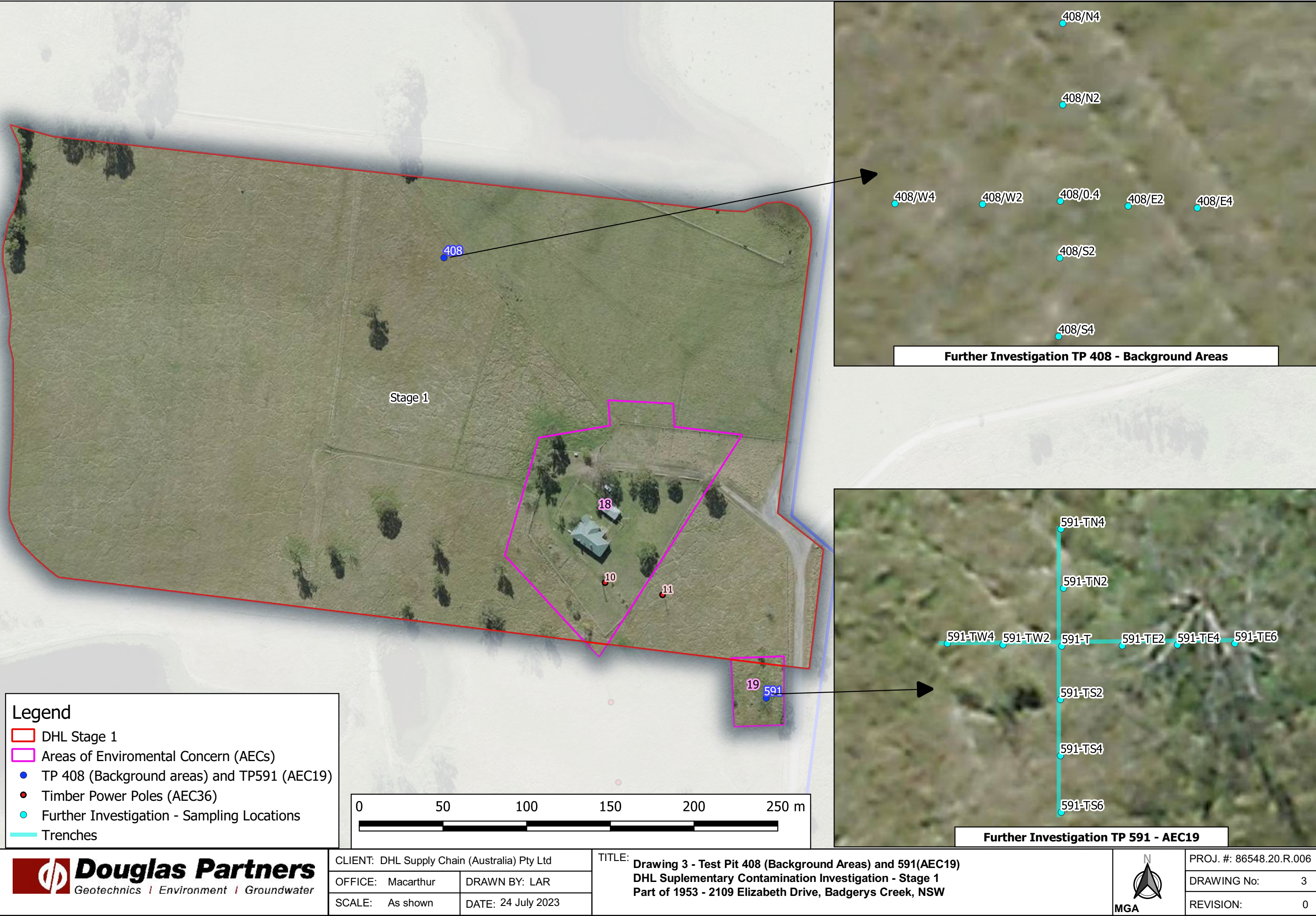
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	OFFICE: Macarthur	DRAWN BY: LAR			DRAWING No: 1
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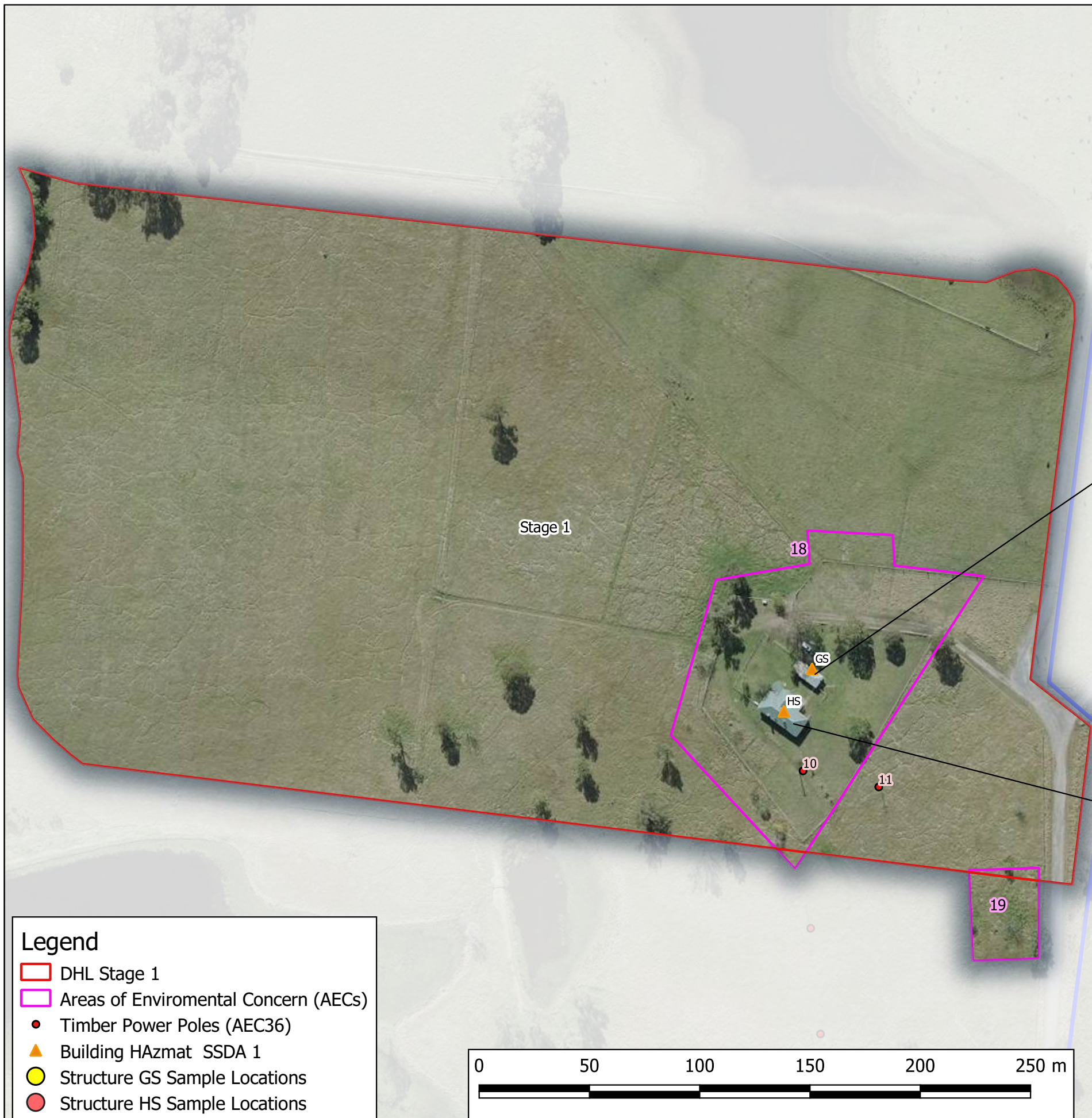


Legend

- DHL Stage 1
- DHL Site Boundary
- The Northern Gateway Boundary
- Areas of Environmental Concern (AECs)
- Timber Power Poles (AEC36)
- TP408 (Background areas) and TP591(AEC19)
- ▲ Hazardous Building Material

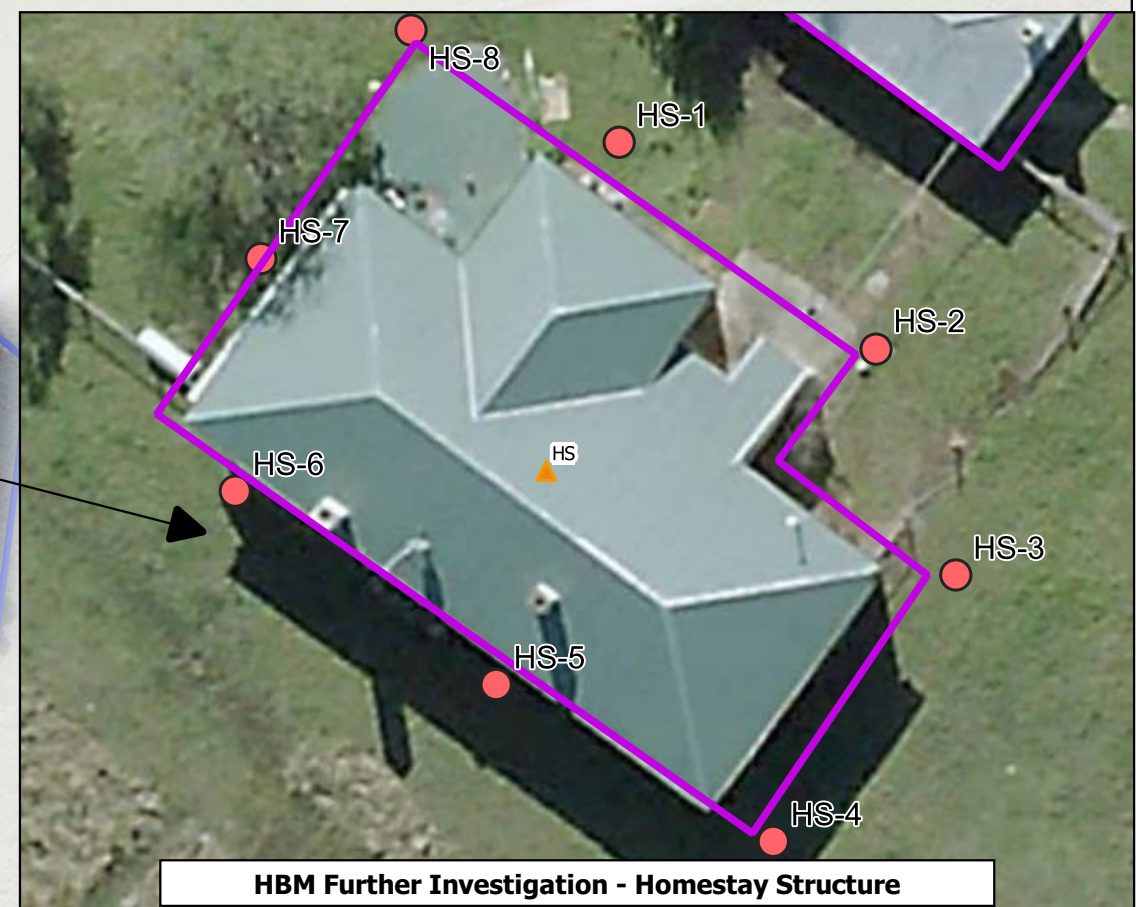






Legend

- DHL Stage 1
- Areas of Enviromental Concern (AECs)
- Timber Power Poles (AEC36)
- Building HAZmat SSDA 1
- Structure GS Sample Locations
- Structure HS Sample Locations



TEST PIT LOG

CLIENT: Roberts Jones Development Pty Ltd
PROJECT: The Northern Gateway
LOCATION: Elizabeth Drive, Badgerys Creek, NSW

SURFACE LEVEL: --
EASTING: 290795
NORTHING: 6250117

PIT No: TP591-T
PROJECT No: 86548.14
DATE: 7/2/2023
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/Silty CLAY CL: low plasticity, red brown, with brick and concrete fragments, trace sandstone gravel and cobbles, glass, ceramic tile and rootlets, w<PL		E	0.0							
	0.6	Silty CLAY CL: medium plasticity, red orange brown, trace rootlets, w~PL, residual			0.6							
	1.1	Pit discontinued at 1.1m - limit of investigation										
	2											
	3											

RIG: JCB 4CX backhoe - 450mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Strip trench, redundant terracotta sewer main on west; terracotta fragment on east at 5m

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	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 Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	>	Water seep	sp	Standard penetration test
E	Environmental sample	≡	Water level	S	Shear vane (kPa)
		V		V	Shear vane (kPa)



Description and Classification Methods

The methods of description and classification of soils and rocks used in this report are generally based on Australian Standard AS1726:2017, Geotechnical Site Investigations. In general, the descriptions include strength or density, colour, structure, soil or rock type and inclusions.

The soil group symbol classifications are given as follows based on two major soil divisions:

- Coarse-grained soils
- Fine-grained soils

Major Divisions				Description	
				Group Symbol*	Typical Name
COARSE-GRAINED SOILS	More than 65% by dry mass, (excluding that larger than 63 mm) is greater than 0.075 mm	GRAVEL	More than 50% of coarse grains are greater than 2.36 mm	GW	Well graded gravels and gravel-sand mixtures, little or no fines.
				GP	Poorly graded gravels and gravel-sand mixtures, little or no fines.
				GM	Silty gravels, gravel-sand-silt mixtures.
				GC	Clay gravels, gravel-sand-clay mixtures.
		GRAVELLY SOILS	More than 50% of coarse grains are greater than 2.36 mm	SW	Well graded sands and gravelly sands, little or no fines.
				SP	Poorly graded sands and gravelly sands, little or no fines.
		SAND	More than 50% of coarse grains are less than 2.36 mm	SM	Silty sand, sand-silt mixtures.
				SC	Clayey sands, sand-clay mixtures.

* For coarse grained soils where the fines content is between 5% and 12%, the soil shall be given a dual classification eg GP-GM.

FINE-GRAINED SOILS	More than 35% by dry mass, (excluding that larger than 63 mm) is less than 0.075 mm	Liquid Limit less than 35%	ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity
		35% <LL< 50%	CI	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
		Liquid Limit greater than 50%	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity.
			Pt	Peat muck and other highly organic soils.

Soil Descriptions

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Soil Types

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

Type	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:

Type	Particle size (mm)
Coarse gravel	19 - 63
Medium gravel	6.7 - 19
Fine gravel	2.36 - 6.7
Coarse sand	0.6 - 2.36
Medium sand	0.21 - 0.6
Fine sand	0.075 - 0.21

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

The proportions of secondary constituents of soils are described as follows:

In fine grained soils (>35% fines)

Term	Proportion of sand or gravel	Example
And	Specify	Clay (60%) and Sand (40%)
Adjective	>30%	Sandy Clay
With	15 - 30%	Clay with sand
Trace	0 - 15%	Clay with trace sand

In coarse grained soils (>65% coarse)

- with clays or silts

Term	Proportion of fines	Example
And	Specify	Sand (70%) and Clay (30%)
Adjective	>12%	Clayey Sand
With	5 - 12%	Sand with clay
Trace	0 - 5%	Sand with trace clay

In coarse grained soils (>65% coarse)

- with coarser fraction

Term	Proportion of coarser fraction	Example
And	Specify	Sand (60%) and Gravel (40%)
Adjective	>30%	Gravelly Sand
With	15 - 30%	Sand with gravel
Trace	0 - 15%	Sand with trace gravel

The presence of cobbles and boulders shall be specifically noted by beginning the description with 'Mix of Soil and Cobbles/Boulders' with the word order indicating the dominant first and the proportion of cobbles and boulders described together.



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
Friable	Fr	-

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	Density Index (%)
Very loose	VL	<15
Loose	L	15-35
Medium dense	MD	35-65
Dense	D	65-85
Very dense	VD	>85

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;
- Extremely weathered material – formed from in-situ weathering of geological formations. Has soil strength but retains the structure or fabric of the parent rock;
- Alluvial soil – deposited by streams and rivers;
- Estuarine soil – deposited in coastal estuaries;

- Marine soil – deposited in a marine environment;
- Lacustrine soil – deposited in freshwater lakes;
- Aeolian soil – carried and deposited by wind;
- Colluvial soil – soil and rock debris transported down slopes by gravity;
- Topsoil – mantle of surface soil, often with high levels of organic material.
- Fill – any material which has been moved by man.

Moisture Condition – Coarse Grained Soils

For coarse grained soils the moisture condition should be described by appearance and feel using the following terms:

- Dry (D) Non-cohesive and free-running.
- Moist (M) Soil feels cool, darkened in colour.
Soil tends to stick together.
Sand forms weak ball but breaks easily.
- Wet (W) Soil feels cool, darkened in colour.
Soil tends to stick together, free water forms when handling.

Moisture Condition – Fine Grained Soils

For fine grained soils the assessment of moisture content is relative to their plastic limit or liquid limit, as follows:

- 'Moist, dry of plastic limit' or 'w < PL' (i.e. hard and friable or powdery).
- 'Moist, near plastic limit' or 'w ≈ PL' (i.e. soil can be moulded at moisture content approximately equal to the plastic limit).
- 'Moist, wet of plastic limit' or 'w > PL' (i.e. soils usually weakened and free water forms on the hands when handling).
- 'Wet' or 'w ≈ LL' (i.e. near the liquid limit).
- 'Wet' or 'w > LL' (i.e. wet of the liquid limit).



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 thin-walled 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 in-situ 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.

Symbols & Abbreviations

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Introduction

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

Drilling or Excavation Methods

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
PQ	Diamond core - 81 mm dia

Water

▷	Water seep
▽	Water level

Sampling and Testing

A	Auger sample
B	Bulk sample
D	Disturbed sample
E	Environmental sample
U ₅₀	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

General



Asphalt



Road base



Concrete



Filling

Soils



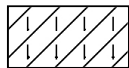
Topsoil



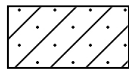
Peat



Clay



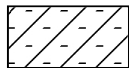
Silty clay



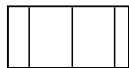
Sandy clay



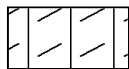
Gravelly clay



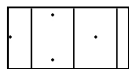
Shaly clay



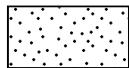
Silt



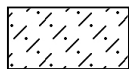
Clayey silt



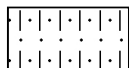
Sandy silt



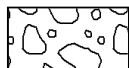
Sand



Clayey sand



Silty sand



Gravel



Sandy gravel



Cobbles, boulders



Talus

Sedimentary Rocks



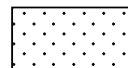
Boulder conglomerate



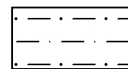
Conglomerate



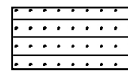
Conglomeratic sandstone



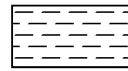
Sandstone



Siltstone



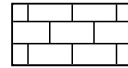
Laminite



Mudstone, claystone, shale

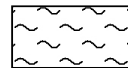


Coal

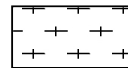


Limestone

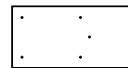
Metamorphic Rocks



Slate, phyllite, schist

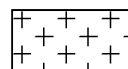


Gneiss

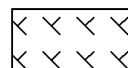


Quartzite

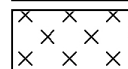
Igneous Rocks



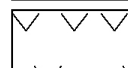
Granite



Dolerite, basalt, andesite



Dacite, epidote



Tuff, breccia



Porphyry

Table C1: Summary of Laboratory Results – Metals (Ni)

			Nickel
		PQL	1
Sample ID	Depth	Sample Date	mg/kg
TP408/0.4	0.4 m	7.2.23	2
			120055
TP408-N2/0.1	0.1 m	7.2.23	2
			120055
TP408-E2/0.1	0.1 m	7.2.23	4
			120055
TP408-S2/0.1	0.1 m	7.2.23	3
			120055
TP408-W2/0.1	0.1 m	7.2.23	10
			120055
BD1/20230207	0 m	7.2.23	24
			120055

Lab result
HIL/HSL valueEIL/ESL value

Notes:

- a

QA/QC replicate of sample listed directly below the primary sample
- b

Reported naphthalene laboratory result obtained from BTEXN suite
- c

Criteria applies to DDT only

Site Assessment Criteria (SAC):

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

SAC based on generic land use thresholds for Recreational C including public open space	
HIL C	Recreational / Open Space (NEPC, 2013)
HSL C	Recreational / Open Space (vapour intrusion) (NEPC, 2013)
DC HSL C	Direct contact HSL C Recreational /Open space (direct contact) (CRC CARE, 2011)
EIL/ESL UR/POS	Urban Residential and Public Open Space (NEPC, 2013)
ML R/P/POS	Residential, Parkland and Public Open Space (NEPC, 2013)

Table C2- Summary of Bulk Soil Sampling and Analytical Results for Asbestos											
Sample Number	Sample Depth Range (m bgl)	Weight of 10 Litre Bulk Sample (g)	Number of fragments > 7mm	Condition of Fragments (good/poor)	Size range of Fragment (mm)	Weight of Screened ACM (g)	Concentration of asbestos in ACM in soil (% w/w)*	Weight of 500mL Sample (g)	ACM >7mm (g) Estimation in Laboratory	Weight of AF or FA (g)**	Concentration of FA and AF in soil (% w/w)
HSL C for Asbestos in soil		-	-	-	-	-	0.020	-	-	-	0.001
HSL D for Asbestos in soil		-	-	-	-	-	0.050	-	-	-	0.001
TP591-T/0-0.6	0 - 0.6	16000	4	Good	5 - 14	1	<0.01	411.9	0	–	<0.001
TP591-TN2/0-0.6	0 - 0.6	12000	0	-	-	-	-	402.7	0	–	<0.001
TP591-TS2/0-0.6	0 - 0.6	14000	0	-	-	-	-	446.1	0	–	<0.001
TP591-TW2/0-0.6	0 - 0.6	17000	1	Good	77	22.5	0.02	580.7	0	–	<0.001
TP591-TE2/0-0.6	0 - 0.6	15000	0	-	-	-	-	498.8	0	–	<0.001

HSL C and D for Asbestos in soil

Bold

*

**

-

Table 7 of Schedule B(1), NEPC (2013) for Parkland Open Space (HSL C) and Commercial / Industrial land use (HSL D)

Concentration exceeds SAC

Based on % w/w asbestos in soil assuming 15% asbestos in ACM

Based on the weight of asbestos in FA and AF as calculated by Envirolab. Values exclude calculated weight of bonded ACM greater than > 7mm in samples

Not applicable as no asbestos was detected

Table C3: Summary of Laboratory Results – TRH, PAH

			TRH				PAH			
			TRH C6 - C10	TRH >C10-C16	F3 (>C16-C34)	F4 (>C34-C40)	Naphthalene ^b	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs
		PQL	25	50	100	100	0.1	0.05	0.5	0.05
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PP10/0.3	0.3 m	15.12.22	-	-	-	-	<0.1	<0.05	<0.5	<0.05
			- -	- 120	- 1300	- 5600	5 170	- 0.7	3 -	300 -
PP10-N1/0.1	0.1 m	15.12.22	-	-	-	-	<0.1	<0.05	<0.5	<0.05
			- -	- 120	- 1300	- 5600	5 170	- 0.7	3 -	300 -
PP10-E1/0.1	0.1 m	15.12.22	-	-	-	-	<0.1	<0.05	<0.5	<0.05
			- -	- 120	- 1300	- 5600	5 170	- 0.7	3 -	300 -
PP10-S1/0.1	0.1 m	15.12.22	-	-	-	-	0.1	0.1	<0.5	3.1
			- -	- 120	- 1300	- 5600	5 170	- 0.7	3 -	300 -
PP10-W1/0.1	0.1 m	15.12.22	<25	<50	140	<100	<0.1	<0.05	<0.5	0.1
			- -	- 120	- 1300	- 5600	5 170	- 0.7	3 -	300 -
BD5	0.1 m	15.12.22	<25	<50	110	<100	<0.1	<0.05	<0.5	0.1
			- -	- 120	- 1300	- 5600	5 170	- 0.7	3 -	300 -
PP11/0.1	0.1 m	14.12.22	<25	<50	180	<100	<0.1	0.2	<0.5	1.6
			- -	- 120	- 1300	- 5600	5 170	- 0.7	3 -	300 -

Lab result

HIL/HSL value

EIL/ESL value

HIL/HSL exceedance

EIL/ESL exceedance

HIL/HSL and EIL/ESL exceedance

ML exceedance

ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report

Blue = DC exceedance

HSL 0-<1 Exceedance

Bold = Lab detections - = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable NL = Non limiting AD = Asbestos detected NAD = No Asbestos detected

HIL = Health investigation level HSL = Health screening level (excluding DC) EIL = Ecological investigation level ESL = Ecological screening level ML = Management Limit DC = Direct Contact HSL

Notes:

- a
- QA/QC replicate of sample listed directly below the primary sample
- b
- Reported naphthalene laboratory result obtained from BTEXN suite
- c
- Criteria applies to DDT only

Site Assessment Criteria (SAC):

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

SAC based on generic land use thresholds for Residential A with garden/accessible soil	
HIL A	Residential / Low - High Density (NEPC, 2013)
HSL A/B	Residential / Low - High Density (vapour intrusion) (NEPC, 2013)
DC HSL A	Direct contact HSL A Residential (Low density) (direct contact) (CRC CARE, 2011)
EIL/ESL UR/POS	Urban Residential and Public Open Space (NEPC, 2013)
ML R/P/POS	Residential, Parkland and Public Open Space (NEPC, 2013)

Table C4: Summary of Laboratory Results – Metals, TRH, BTEX, PAH

			Metals								TRH						BTEX				PAH			
			Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 (less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene	Total Xylenes	^b Naphthalene	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs
		PQL	4	0.4	1	1	1	0.1	1	1	25	50	25	50	100	100	0.2	0.5	1	1	0.1	0.05	0.5	0.05
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
GS-1/0.1	0 m	7.2.23	45	3	17	180	590	<0.1	9	430	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	0.08	<0.5	1.1
			300 100	90 -	300 410	17000 130	600 1100	80 -	1200 55	30000 340	- -	- 120	NL 180	NL -	- 1300	- 5600	NL 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
BD3/20230207	0 m	7.2.23	13	1	4	14	180	<0.1	2	210	<25	<50	<25	<50	110	<100	<0.2	<0.5	<1	<1	<0.1	0.1	<0.5	1
			300 100	90 -	300 410	17000 130	600 1100	80 -	1200 55	30000 340	- -	- 120	NL 180	NL -	- 1300	- 5600	NL 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
GS-2/0.1	0 m	7.2.23	7	<0.4	20	18	110	<0.1	6	91	<25	<50	<25	<50	190	110	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
			300 100	90 -	300 410	17000 130	600 1100	80 -	1200 55	30000 340	- -	- 120	NL 180	NL -	- 1300	- 5600	NL 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
GS-3/0.1	0 m	7.2.23	23	<0.4	4	9	32	<0.1	2	48	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
			300 100	90 -	300 410	17000 130	600 1100	80 -	1200 55	30000 340	- -	- 120	NL 180	NL -	- 1300	- 5600	NL 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
GS-4/0.1	0 m	7.2.23	7	<0.4	9	20	77	<0.1	3	110	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
			300 100	90 -	300 410	17000 130	600 1100	80 -	1200 55	30000 340	- -	- 120	NL 180	NL -	- 1300	- 5600	NL 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
HS-1/0.1	0 m	7.2.23	17	<0.4	19	45	160	<0.1	11	240	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	0.2	<0.5	0.69
			300 100	90 -	300 410	17000 130	600 1100	80 -	1200 55	30000 340	- -	- 120	NL 180	NL -	- 1300	- 5600	NL 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
HS-2/0.1	0 m	7.2.23	7	0.5	13	31	220	<0.1	5	260	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	0.06	<0.5	0.3
			300 100	90 -	300 410	17000 130	600 1100	80 -	1200 55	30000 340	- -	- 120	NL 180	NL -	- 1300	- 5600	NL 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
HS-3/0.1	0 m	7.2.23	10	<0.4	17	26	280	<0.1	5	330	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
			300 100	90 -	300 410	17000 130	600 1100	80 -	1200 55	30000 340	- -	- 120	NL 180	NL -	- 1300	- 5600	NL 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
HS-4/0.1	0 m	7.2.23	12	<0.4	15	20	130	<0.1	5	150	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
			300 100	90 -	300 410	17000 130	600 1100	80 -	1200 55	30000 340	- -	- 120	NL 180	NL -	- 1300	- 5600	NL 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
HS-5/0.1	0 m	7.2.23	19	<0.4	24	29	330	<0.1	4	120	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
			300 100	90 -	300 410	17000 130	600 1100	80 -	1200 55	30000 340	- -	- 120	NL 180	NL -	- 1300	- 5600	NL 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
HS-6/0.1	0 m	7.2.23	8	<0.4	26	14	480	<0.1	6	230	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	0.09	<0.5	0.2
			300 100	90 -	300 410	17000 130	600 1100	80 -	1200 55	30000 340	- -	- 120	NL 180	NL -	- 1300	- 5600	NL 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
HS-7/0.1	0 m	7.2.23	8	<0.4	10	15	340	<0.1	7	250	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
			300 100	90 -	300 410	17000 130	600 1100	80 -	1200 55	30000 340	- -	- 120	NL 180	NL -	- 1300	- 5600	NL 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
HS-8/0.1	0 m	7.2.23	<4	<0.4	4	15	54	<0.1	3	96	<25	<50	<25	<50	260	170	<0.2	<0.5	<1	<1	<0.1	0.09	<0.5	0.09
			300 100	90 -	300 410	17000 130	600 1100	80 -	1200 55	30000 340	- -	- 120	NL 180	NL -	- 1300	- 5600	NL 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -

Lab result

HIL/HSL valueEIL/ESL value

HIL/HSL exceedance

EIL/ESL exceedance

HIL/HSL and EIL/ESL exceedance

ML exceedance

ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report

Blue

= DC exceedance

HSL 0-<1 Exceedance

Bold

= Lab detections

-

NL

AD

NAD

HIL = Health investigation level

HSL = Health screening level (excluding DC)

EIL = Ecological investigation level

ESL = Ecological screening level

ML = Management Limit

DC = Direct Contact HSL

- Notes:
- a

QA/QC replicate of sample listed directly below the primary sample
- b

Reported naphthalene laboratory result obtained from BTEXN suite
- c

Criteria applies to DDT only

Site Assessment Criteria (SAC):

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

SAC based on generic land use thresholds for Recreational C including public open space

HIL C

Recreational / Open Space (NEPC, 2013)

HSL C

Recreational / Open Space (vapour intrusion) (NEPC, 2013)

DC HSL C

Direct contact HSL C Recreational /Open space (direct contact) (CRC CARE, 2011)

EIL/ESL UR/PC

Urban Residential and Public Open Space (NEPC, 2013)

ML R/P/POS

Residential, Parkland and Public Open Space (NEPC, 2013)

Table C5: Summary of Laboratory Results – Phenol, OCP, OPP, PCB, Asbestos

			Phenol	OCP											OPP	PCB										Asbestos		
			Phenol	DDD	DDT+DDE+DDD ^c	DDE	DDT	Aldrin & Dieldrin	Total Chlordane	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene	Methoxychlor	Chlorpyrifos	Arochlor 1016	Total PCB	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Asbestos ID in soil >0.1g/kg	Trace Analysis	Asbestos (50 g)		
		PQL	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1					
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	
GS-1/0.1	0 m	7.2.23	<5	<0.1	<0.1	<0.1	<0.1	1.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD		
			120 -	- -	400 180	- -	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -					
BD3/20230207	0 m	7.2.23	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	-	-	-		
			120 -	- -	400 180	- -	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -					
GS-2/0.1	0 m	7.2.23	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD		
			120 -	- -	400 180	- -	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -					
GS-3/0.1	0 m	7.2.23	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD		
			120 -	- -	400 180	- -	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -					
GS-4/0.1	0 m	7.2.23	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD		
			120 -	- -	400 180	- -	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -					
HS-1/0.1	0 m	7.2.23	<5	0.6	1.3	0.4	0.3	1.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD		
			120 -	- -	400 180	- -	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -					
HS-2/0.1	0 m	7.2.23	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD		
			120 -	- -	400 180	- -	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -					
HS-3/0.1	0 m	7.2.23	<5	<0.1	0.6	0.6	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD		
			120 -	- -	400 180	- -	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -					
HS-4/0.1	0 m	7.2.23	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD		
			120 -	- -	400 180	- -	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -					
HS-5/0.1	0 m	7.2.23	<5	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD		
			120 -	- -	400 180	- -	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -					
HS-6/0.1	0 m	7.2.23	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD		
			120 -	- -	400 180	- -	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -					
HS-7/0.1	0 m	7.2.23	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD		
			120 -	- -	400 180	- -	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -					
HS-8/0.1	0 m	7.2.23	<5	0.4	0.7	0.2	0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD		
			120 -	- -	400 180	- -	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -					

Lab result

HIL/HSL valueEIL/ESL value

HIL/HSL exceedance

EIL/ESL exceedance

HIL/HSL and EIL/ESL exceedance

ML exceedance

ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report

Blue = DC exceedance

HSL 0-<1 Exceedance

Bold = Lab detections

- = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable

NL = Non limiting

AD = Asbestos detected

NAD = No Asbestos detected

HIL = Health investigation level

HSL = Health screening level (excluding DC)

EIL = Ecological investigation level

ESL = Ecological screening level

ML = Management Limit

DC = Dire

Notes:

- a

QA/QC replicate of sample listed directly below the primary sample
- b

Reported naphthalene laboratory result obtained from BTEXN suite
- c

Criteria applies to DDT only

Site Assessment Criteria (SAC):

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

SAC based on generic land use thresholds for Recreational C including public open space	
HIL C	Recreational / Open Space (NEPC, 2013)
HSL C	Recreational / Open Space (vapour intrusion) (NEPC, 2013)
DC HSL C	Direct contact HSL C Recreational /Open space (direct contact) (CRC CARE, 2011)
EIL/ESL UR/POS	Urban Residential and Public Open Space (NEPC, 2013)
ML R/P/POS	Residential, Parkland and Public Open Space (NEPC, 2013)

CERTIFICATE OF ANALYSIS 313387

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Ashika Jagdish, Grant Russell
Address	18 Waler Crescent, Smeaton Grange, NSW, 2567

Sample Details

Your Reference	<u>86548.14, Badgerys Creek</u>
Number of Samples	103 Soil
Date samples received	16/12/2000
Date completed instructions received	16/12/2022

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	03/01/2023
Date of Issue	04/01/2023
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Josh Williams, Organics and LC Supervisor
Kyle Gavrily, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

TRH in Soil (C6-C9) NEPM

Our Reference		313387-1	313387-9	313387-25	313387-26	313387-44
Your Reference	UNITS	PP1/0.1	PP11/0.1	PP49/0.1	PP51/0.1	PP71/0.1
Date Sampled		14.12.22	14.12.22	15.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	21/12/2022	21/12/2022	21/12/2022	21/12/2022	21/12/2022
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
Surrogate aaa-Trifluorotoluene	%	83	94	86	83	84

TRH in Soil (C6-C9) NEPM

Our Reference		313387-59	313387-95	313387-101	313387-103
Your Reference	UNITS	PP52-W1/0.1	PP10-W1/0.1	BD3	BD5
Date Sampled		14.12.22	15.12.22	14.12.22	15.12.22
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	21/12/2022	21/12/2022	21/12/2022	21/12/2022
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25
Surrogate aaa-Trifluorotoluene	%	83	86	93	82

svTRH (C10-C40) in Soil						
Our Reference		313387-1	313387-9	313387-25	313387-26	313387-44
Your Reference	UNITS	PP1/0.1	PP11/0.1	PP49/0.1	PP51/0.1	PP71/0.1
Date Sampled		14.12.22	14.12.22	15.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	23/12/2022	22/12/2022	23/12/2022	23/12/2022	23/12/2022
TRH C ₁₀ - C ₁₄	mg/kg	63	<50	95	<50	97
TRH C ₁₅ - C ₂₈	mg/kg	3,100	<100	2,300	410	2,200
TRH C ₂₉ - C ₃₆	mg/kg	910	130	1,700	430	1,600
Total +ve TRH (C10-C36)	mg/kg	4,000	130	4,100	840	4,000
TRH >C ₁₀ -C ₁₆	mg/kg	110	<50	150	<50	160
TRH >C ₁₆ -C ₃₄	mg/kg	3,800	180	3,800	780	3,700
TRH >C ₃₄ -C ₄₀	mg/kg	450	<100	630	190	570
Total +ve TRH (>C10-C40)	mg/kg	4,400	180	4,500	970	4,400
Surrogate o-Terphenyl	%	#	80	111	82	113

svTRH (C10-C40) in Soil					
Our Reference		313387-59	313387-95	313387-101	313387-103
Your Reference	UNITS	PP52-W1/0.1	PP10-W1/0.1	BD3	BD5
Date Sampled		14.12.22	15.12.22	14.12.22	15.12.22
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	190	<100	140	<100
Total +ve TRH (C10-C36)	mg/kg	190	<50	140	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	230	140	190	110
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	230	140	190	110
Surrogate o-Terphenyl	%	78	75	76	75

PAHs in Soil						
Our Reference		313387-1	313387-2	313387-3	313387-4	313387-5
Your Reference	UNITS	PP1/0.1	PP2/0.1	PP3/0.1	PP4/0.1	PP5/0.1
Date Sampled		14.12.22	14.12.22	14.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	2.6	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.9	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.8	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	9.7	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	5.4	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	48	0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	49	0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	41	0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	28	0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	72	0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	28	0.08	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	14	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	3.4	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	13	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	320	0.74	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	45	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	45	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	45	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	77	105	110	108	106

PAHs in Soil						
Our Reference		313387-6	313387-7	313387-8	313387-9	313387-10
Your Reference	UNITS	PP7/0.1	PP8/0.1	PP9/0.1	PP11/0.1	PP12/0.1
Date Sampled		14.12.22	14.12.22	14.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	6.6
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.9
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.4
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	7.3
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	0.2	9.4
Pyrene	mg/kg	<0.1	<0.1	<0.1	0.2	9.0
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	0.2	34
Chrysene	mg/kg	<0.1	<0.1	<0.1	0.2	52
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	0.3	150
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	0.2	40
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.1	16
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	12
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	0.1	17
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	1.6	350
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	73
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	73
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	73
Surrogate <i>p</i> -Terphenyl-d14	%	107	104	106	106	125

PAHs in Soil						
Our Reference		313387-11	313387-12	313387-13	313387-14	313387-15
Your Reference	UNITS	PP13/0.1	PP14/0.1	PP31/0.1	PP33/0.1	PP34/0.1
Date Sampled		14.12.22	15.12.22	15.12.22	15.12.22	15.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.3	5.9	1.1	3.7	<0.1
Acenaphthene	mg/kg	<0.1	0.6	<0.1	0.3	<0.1
Fluorene	mg/kg	<0.1	1.0	<0.1	0.6	<0.1
Phenanthrene	mg/kg	<0.1	1.9	0.2	0.6	<0.1
Anthracene	mg/kg	0.2	6.3	1.1	4.3	<0.1
Fluoranthene	mg/kg	<0.1	25	3.4	20	<0.1
Pyrene	mg/kg	<0.1	26	5.6	36	<0.1
Benzo(a)anthracene	mg/kg	0.2	13	8.9	40	<0.1
Chrysene	mg/kg	0.1	15	7.5	73	<0.1
Benzo(b,j,k)fluoranthene	mg/kg	0.6	17	43	240	<0.2
Benzo(a)pyrene	mg/kg	0.5	14	11	74	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.4	6.6	5.8	43	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.1	3.2	2.5	9.4	<0.1
Benzo(g,h,i)perylene	mg/kg	0.4	7.9	4.8	35	<0.1
Total +ve PAH's	mg/kg	2.8	140	96	580	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.7	21	20	120	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	0.7	21	20	120	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.7	21	20	120	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	114	#	118	118	111

PAHs in Soil						
Our Reference		313387-16	313387-17	313387-18	313387-19	313387-20
Your Reference	UNITS	PP36/0.1	PP37/0.1	PP39/0.1	PP40/0.1	PP41/0.1
Date Sampled		15.12.22	15.12.22	15.12.22	15.12.22	15.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	8.9	0.3	1.3	3.8	<0.1
Acenaphthene	mg/kg	0.8	<0.1	<0.1	0.6	<0.1
Fluorene	mg/kg	1.4	<0.1	0.2	0.7	<0.1
Phenanthrene	mg/kg	6.0	<0.1	0.8	1.1	<0.1
Anthracene	mg/kg	22	0.1	1.6	5.1	<0.1
Fluoranthene	mg/kg	99	0.5	11	38	<0.1
Pyrene	mg/kg	140	0.8	13	52	<0.1
Benzo(a)anthracene	mg/kg	190	1.4	13	56	0.1
Chrysene	mg/kg	230	1.1	20	66	0.1
Benzo(b,j+k)fluoranthene	mg/kg	480	3.8	54	210	0.4
Benzo(a)pyrene	mg/kg	150	1.3	13	59	0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	68	0.8	7.6	31	<0.1
Dibenzo(a,h)anthracene	mg/kg	6.8	0.3	3.2	11	<0.1
Benzo(g,h,i)perylene	mg/kg	60	0.6	5.9	14	<0.1
Total +ve PAH's	mg/kg	1,500	11	140	550	0.78
Benzo(a)pyrene TEQ calc (zero)	mg/kg	230	2.2	24	100	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	230	2.2	24	100	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	230	2.2	24	100	<0.5
Surrogate p-Terphenyl-d14	%	#	114	114	#	111

PAHs in Soil						
Our Reference		313387-21	313387-22	313387-23	313387-24	313387-25
Your Reference	UNITS	PP43/0.1	PP45/0.1	PP46/0.1	PP47/0.1	PP49/0.1
Date Sampled		15.12.22	15.12.22	15.12.22	15.12.22	15.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Naphthalene	mg/kg	<0.1	<0.1	1.9	0.2	<0.1
Acenaphthylene	mg/kg	<0.1	0.3	8.4	4.1	6.5
Acenaphthene	mg/kg	<0.1	<0.1	3.2	1	0.9
Fluorene	mg/kg	<0.1	<0.1	0.8	0.9	1.1
Phenanthrene	mg/kg	<0.1	<0.1	8.6	2.0	1.2
Anthracene	mg/kg	<0.1	0.3	22	5.3	7.7
Fluoranthene	mg/kg	<0.1	0.4	150	43	39
Pyrene	mg/kg	<0.1	0.7	180	62	63
Benzo(a)anthracene	mg/kg	<0.1	1.6	140	73	92
Chrysene	mg/kg	<0.1	1.5	140	68	88
Benzo(b,j+k)fluoranthene	mg/kg	0.3	7.6	390	200	230
Benzo(a)pyrene	mg/kg	0.06	2.4	120	65	93
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	2.0	74	28	41
Dibenzo(a,h)anthracene	mg/kg	<0.1	0.8	31	7.4	16
Benzo(g,h,i)perylene	mg/kg	<0.1	1.6	69	23	36
Total +ve PAH's	mg/kg	0.4	19	1,400	580	720
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	4.3	220	100	150
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	4.3	220	100	150
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	4.3	220	100	150
Surrogate p-Terphenyl-d14	%	108	109	126	118	122

PAHs in Soil						
Our Reference		313387-26	313387-27	313387-28	313387-29	313387-30
Your Reference	UNITS	PP51/0.1	PP53/0.1	PP54/0.1	PP56/0.1	PP57/0.1
Date Sampled		14.12.22	14.12.22	15.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	1.1	<0.1	0.2	<0.1	0.1
Acenaphthene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.2	<0.1	0.1	<0.1	<0.1
Anthracene	mg/kg	1.5	<0.1	<0.1	<0.1	0.1
Fluoranthene	mg/kg	5.0	<0.1	0.2	<0.1	0.4
Pyrene	mg/kg	7.1	<0.1	0.2	<0.1	0.9
Benzo(a)anthracene	mg/kg	7.7	<0.1	0.2	<0.1	0.8
Chrysene	mg/kg	14	<0.1	0.2	<0.1	1
Benzo(b,j,k)fluoranthene	mg/kg	50	<0.2	0.3	<0.2	2.4
Benzo(a)pyrene	mg/kg	19	<0.05	0.2	<0.05	1.0
Indeno(1,2,3-c,d)pyrene	mg/kg	6.8	<0.1	0.1	<0.1	0.4
Dibenzo(a,h)anthracene	mg/kg	2.3	<0.1	<0.1	<0.1	0.1
Benzo(g,h,i)perylene	mg/kg	6.8	<0.1	0.1	<0.1	0.4
Total +ve PAH's	mg/kg	120	<0.05	1.8	<0.05	7.6
Benzo(a)pyrene TEQ calc (zero)	mg/kg	28	<0.5	<0.5	<0.5	1.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	28	<0.5	<0.5	<0.5	1.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	28	<0.5	<0.5	<0.5	1.5
Surrogate p-Terphenyl-d14	%	80	105	105	104	106

PAHs in Soil						
Our Reference		313387-31	313387-32	313387-33	313387-34	313387-35
Your Reference	UNITS	PP58/0.1	PP59/0.1	PP60/0.1	PP61/0.1	PP62/0.1
Date Sampled		14.12.22	14.12.22	14.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	31/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Acenaphthylene	mg/kg	<0.1	0.1	<0.1	0.2	7.5
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.6
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.8
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	2.6
Anthracene	mg/kg	<0.1	0.1	<0.1	0.3	9.3
Fluoranthene	mg/kg	<0.1	0.3	0.2	0.6	64
Pyrene	mg/kg	<0.1	0.3	0.3	1	84
Benzo(a)anthracene	mg/kg	<0.1	0.4	0.4	1.3	97
Chrysene	mg/kg	<0.1	0.3	0.3	1.0	91
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	1	0.8	2.8	230
Benzo(a)pyrene	mg/kg	<0.05	0.4	0.5	1.2	94
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.2	0.2	0.6	38
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	0.2	16
Benzo(g,h,i)perylene	mg/kg	<0.1	0.2	0.3	0.5	32
Total +ve PAH's	mg/kg	<0.05	3.8	2.9	9.7	770
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	0.6	0.6	1.9	150
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	0.6	0.7	1.9	150
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	0.7	0.7	1.9	150
Surrogate p-Terphenyl-d14	%	123	108	105	105	122

PAHs in Soil						
Our Reference		313387-36	313387-37	313387-38	313387-39	313387-40
Your Reference	UNITS	PP63/0.1	PP64/0.1	PP65/0.1	PP66/0.1	PP67/0.1
Date Sampled		14.12.22	14.12.22	14.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Naphthalene	mg/kg	<0.1	<0.1	0.1	<0.1	0.4
Acenaphthylene	mg/kg	4.8	3.1	8.4	4.1	20
Acenaphthene	mg/kg	0.5	0.3	1.6	0.6	3.5
Fluorene	mg/kg	0.8	0.5	1.5	0.8	3.2
Phenanthrene	mg/kg	0.8	0.5	2.6	0.5	31
Anthracene	mg/kg	5.0	3.2	10	3.9	61
Fluoranthene	mg/kg	97	9.5	86	16	560
Pyrene	mg/kg	96	24	130	35	660
Benzo(a)anthracene	mg/kg	98	28	130	28	540
Chrysene	mg/kg	95	46	130	49	640
Benzo(b,j+k)fluoranthene	mg/kg	220	97	290	140	1,200
Benzo(a)pyrene	mg/kg	73	34	110	52	410
Indeno(1,2,3-c,d)pyrene	mg/kg	31	9.2	42	19	150
Dibenzo(a,h)anthracene	mg/kg	11	3.6	6.7	5.3	41
Benzo(g,h,i)perylene	mg/kg	25	8.4	33	10	130
Total +ve PAH's	mg/kg	760	270	970	360	4,400
Benzo(a)pyrene TEQ calc (zero)	mg/kg	120	52	170	77	650
Benzo(a)pyrene TEQ calc(half)	mg/kg	120	52	170	77	650
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	120	52	170	77	650
Surrogate <i>p</i> -Terphenyl-d14	%	106	121	118	115	129

PAHs in Soil						
Our Reference		313387-41	313387-42	313387-43	313387-44	313387-46
Your Reference	UNITS	PP68/0.1	PP69/0.1	PP70/0.1	PP71/0.1	PP52/0.3
Date Sampled		14.12.22	14.12.22	14.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	31/12/2022	31/12/2022	31/12/2022	31/12/2022	22/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.8	<0.1	0.9	2.8	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	0.4	<0.1
Fluorene	mg/kg	0.2	<0.1	0.2	0.4	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.4	0.7	<0.1
Anthracene	mg/kg	0.6	<0.1	0.6	2.4	<0.1
Fluoranthene	mg/kg	0.7	<0.1	3.4	16	<0.1
Pyrene	mg/kg	2.6	<0.1	3.3	46	<0.1
Benzo(a)anthracene	mg/kg	2.6	<0.1	3.3	40	<0.1
Chrysene	mg/kg	3.1	<0.1	3.5	64	<0.1
Benzo(b,j,k)fluoranthene	mg/kg	14	<0.2	8.4	120	<0.2
Benzo(a)pyrene	mg/kg	3.9	<0.05	4.2	52	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	2.0	<0.1	1.8	16	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.6	<0.1	0.6	7.5	<0.1
Benzo(g,h,i)perylene	mg/kg	1.7	<0.1	1.7	19	<0.1
Total +ve PAH's	mg/kg	32	<0.05	32	390	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	6.4	<0.5	6.2	78	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	6.4	<0.5	6.2	78	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	6.4	<0.5	6.2	78	<0.5
Surrogate p-Terphenyl-d14	%	129	127	131	86	85

PAHs in Soil						
Our Reference		313387-47	313387-51	313387-55	313387-59	313387-64
Your Reference	UNITS	PP52-N1/0.1	PP52-E1/0.1	PP52-S1/0.1	PP52-W1/0.1	PP6/0.3
Date Sampled		14.12.22	14.12.22	14.12.22	14.12.22	15.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	31/12/2022	31/12/2022	31/12/2022	31/12/2022	31/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j,k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	128	62	124	121	127

PAHs in Soil						
Our Reference		313387-65	313387-69	313387-73	313387-77	313387-82
Your Reference	UNITS	PP6-N1/0.1	PP6-E1/0.1	PP6-S1/0.1	PP6-W1/0.1	PP10/0.3
Date Sampled		15.12.22	15.12.22	15.12.22	15.12.22	15.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	31/12/2022	31/12/2022	31/12/2022	31/12/2022	31/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j,k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	130	126	130	135	126

PAHs in Soil						
Our Reference		313387-83	313387-87	313387-91	313387-95	313387-99
Your Reference	UNITS	PP10-N1/0.1	PP10-E1/0.1	PP10-S1/0.1	PP10-W1/0.1	BD1
Date Sampled		15.12.22	15.12.22	15.12.22	15.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	31/12/2022	31/12/2022	31/12/2022	31/12/2022	31/12/2022
Naphthalene	mg/kg	<0.1	<0.1	0.1	<0.1	0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	2.6
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Fluorene	mg/kg	<0.1	<0.1	0.1	<0.1	0.6
Phenanthrene	mg/kg	<0.1	<0.1	1.2	0.1	0.5
Anthracene	mg/kg	<0.1	<0.1	0.1	<0.1	1.3
Fluoranthene	mg/kg	<0.1	<0.1	0.2	<0.1	2.9
Pyrene	mg/kg	<0.1	<0.1	0.2	<0.1	5.4
Benzo(a)anthracene	mg/kg	<0.1	<0.1	0.6	<0.1	5.3
Chrysene	mg/kg	<0.1	<0.1	0.4	<0.1	6.2
Benzo(b,j,k)fluoranthene	mg/kg	<0.2	<0.2	0.2	<0.2	20
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.1	<0.05	8.4
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	4.0
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.4
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	3.6
Total +ve PAH's	mg/kg	<0.05	<0.05	3.1	0.1	62
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	13
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	13
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	13
Surrogate p-Terphenyl-d14	%	125	123	131	133	133

PAHs in Soil					
Our Reference		313387-100	313387-101	313387-102	313387-103
Your Reference	UNITS	BD2	BD3	BD4	BD5
Date Sampled		14.12.22	14.12.22	14.12.22	15.12.22
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	31/12/2022	31/12/2022	31/12/2022	31/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.2	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.2	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.4	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.3	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.4	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	1	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.60	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.3	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.4	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	4.1	<0.05	<0.05	0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.9	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	0.9	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.9	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	129	140	133	130

PCBs in Soil				
Our Reference		313387-1	313387-26	313387-46
Your Reference	UNITS	PP1/0.1	PP51/0.1	PP52/0.3
Date Sampled		14.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil
Date extracted	-	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	108	105	92

Moisture						
Our Reference	UNITS	313387-1	313387-2	313387-3	313387-4	313387-5
Your Reference		PP1/0.1	PP2/0.1	PP3/0.1	PP4/0.1	PP5/0.1
Date Sampled		14.12.22	14.12.22	14.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Moisture	%	9.3	12	8.5	5.9	15

Moisture						
Our Reference	UNITS	313387-6	313387-7	313387-8	313387-9	313387-10
Your Reference		PP7/0.1	PP8/0.1	PP9/0.1	PP11/0.1	PP12/0.1
Date Sampled		14.12.22	14.12.22	14.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Moisture	%	10	14	11	10	13

Moisture						
Our Reference	UNITS	313387-11	313387-12	313387-13	313387-14	313387-15
Your Reference		PP13/0.1	PP14/0.1	PP31/0.1	PP33/0.1	PP34/0.1
Date Sampled		14.12.22	15.12.22	15.12.22	15.12.22	15.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Moisture	%	11	9.4	12	23	14

Moisture						
Our Reference	UNITS	313387-16	313387-17	313387-18	313387-19	313387-20
Your Reference		PP36/0.1	PP37/0.1	PP39/0.1	PP40/0.1	PP41/0.1
Date Sampled		15.12.22	15.12.22	15.12.22	15.12.22	15.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Moisture	%	7.7	5.5	16	7.1	19

Moisture						
Our Reference	UNITS	313387-21	313387-22	313387-23	313387-24	313387-25
Your Reference		PP43/0.1	PP45/0.1	PP46/0.1	PP47/0.1	PP49/0.1
Date Sampled		15.12.22	15.12.22	15.12.22	15.12.22	15.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Moisture	%	7.2	10	7.1	7.0	9.1

Client Reference: 86548.14, Badgerys Creek

Moisture						
Our Reference	UNITS	313387-26	313387-27	313387-28	313387-29	313387-30
Your Reference		PP51/0.1	PP53/0.1	PP54/0.1	PP56/0.1	PP57/0.1
Date Sampled		14.12.22	14.12.22	15.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Moisture	%	8.9	1	4.5	13	21

Moisture						
Our Reference	UNITS	313387-31	313387-32	313387-33	313387-34	313387-35
Your Reference		PP58/0.1	PP59/0.1	PP60/0.1	PP61/0.1	PP62/0.1
Date Sampled		14.12.22	14.12.22	14.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Moisture	%	12	5.7	29	21	8.9

Moisture						
Our Reference	UNITS	313387-36	313387-37	313387-38	313387-39	313387-40
Your Reference		PP63/0.1	PP64/0.1	PP65/0.1	PP66/0.1	PP67/0.1
Date Sampled		14.12.22	14.12.22	14.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Moisture	%	5.1	5.3	19	24	16

Moisture						
Our Reference	UNITS	313387-41	313387-42	313387-43	313387-44	313387-46
Your Reference		PP68/0.1	PP69/0.1	PP70/0.1	PP71/0.1	PP52/0.3
Date Sampled		14.12.22	14.12.22	14.12.22	14.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Moisture	%	19	11	4.2	13	12

Moisture						
Our Reference	UNITS	313387-47	313387-51	313387-55	313387-59	313387-64
Your Reference		PP52-N1/0.1	PP52-E1/0.1	PP52-S1/0.1	PP52-W1/0.1	PP6/0.3
Date Sampled		14.12.22	14.12.22	14.12.22	14.12.22	15.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Moisture	%	12	13	11	12	14

Moisture						
Our Reference	UNITS	313387-65	313387-69	313387-73	313387-77	313387-82
Your Reference		PP6-N1/0.1	PP6-E1/0.1	PP6-S1/0.1	PP6-W1/0.1	PP10/0.3
Date Sampled		15.12.22	15.12.22	15.12.22	15.12.22	15.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Moisture	%	10	11	11	9.6	14

Moisture						
Our Reference	UNITS	313387-83	313387-87	313387-91	313387-95	313387-99
Your Reference		PP10-N1/0.1	PP10-E1/0.1	PP10-S1/0.1	PP10-W1/0.1	BD1
Date Sampled		15.12.22	15.12.22	15.12.22	15.12.22	14.12.22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Moisture	%	14	13	4.7	8.3	4.2

Moisture					
Our Reference	UNITS	313387-100	313387-101	313387-102	313387-103
Your Reference		BD2	BD3	BD4	BD5
Date Sampled		14.12.22	14.12.22	14.12.22	15.12.22
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Moisture	%	30	18	8.4	9.7

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. 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.

QUALITY CONTROL: TRH in Soil (C6-C9) NEPM					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-23	313387-9
Date extracted	-			19/12/2022	1	19/12/2022	19/12/2022		19/12/2022	19/12/2022
Date analysed	-			21/12/2022	1	21/12/2022	21/12/2022		21/12/2022	21/12/2022
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	1	<25	<25	0	111	120
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	1	<25	<25	0	111	120
Surrogate aaa-Trifluorotoluene	%		Org-023	82	1	83	74	11	96	92

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-23	313387-9
Date extracted	-			19/12/2022	1	19/12/2022	19/12/2022		19/12/2022	19/12/2022
Date analysed	-			22/12/2022	1	23/12/2022	23/12/2022		22/12/2022	22/12/2022
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	1	63	65	3	80	84
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	1	3100	3000	3	90	82
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	1	910	910	0	95	95
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	1	110	100	10	80	84
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	1	3800	3800	0	90	82
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	1	450	420	7	95	95
Surrogate o-Terphenyl	%		Org-020	76	1	#	#		71	80

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-23	313387-9
Date extracted	-			19/12/2022	1	19/12/2022	19/12/2022		19/12/2022	19/12/2022
Date analysed	-			22/12/2022	1	22/12/2022	22/12/2022		22/12/2022	22/12/2022
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	93	99
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	2.6	2.6	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	0.9	0.6	40	89	95
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	0.8	0.6	29	92	99
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	9.7	8.7	11	104	116
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	5.4	4.2	25	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	48	32	40	96	102
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	49	37	28	101	109
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	41	38	8	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	28	36	25	83	75
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	72	82	13	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	28	32	13	128	124
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	14	15	7	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	3.4	3.2	6	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	13	14	7	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	120	1	77	73	5	101	111

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-24	313387-24
Date extracted	-			[NT]	13	19/12/2022	19/12/2022		19/12/2022	19/12/2022
Date analysed	-			[NT]	13	22/12/2022	22/12/2022		22/12/2022	22/12/2022
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	92	103
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	13	1.1	1.5	31	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	0.1	0	89	111
Fluorene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	0.2	67	95	111
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	13	0.2	0.2	0	104	#
Anthracene	mg/kg	0.1	Org-022/025	[NT]	13	1.1	1.7	43	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	13	3.4	7.5	75	98	#
Pyrene	mg/kg	0.1	Org-022/025	[NT]	13	5.6	10	56	103	#
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	13	8.9	13	37	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	13	7.5	28	115	79	#
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	13	43	84	65	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	13	11	23	71	126	#
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	13	5.8	7.6	27	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	13	2.5	2.4	4	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	13	4.8	6.4	29	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	13	118	117	1	106	126

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-25	313387-46
Date extracted	-			[NT]	23	19/12/2022	19/12/2022		19/12/2022	19/12/2022
Date analysed	-			[NT]	23	22/12/2022	22/12/2022		22/12/2022	22/12/2022
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	23	1.9	1.7	11	96	111
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	23	8.4	8.0	5	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	23	3.2	3.0	6	90	104
Fluorene	mg/kg	0.1	Org-022/025	[NT]	23	0.8	1.2	40	99	106
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	23	8.6	6.6	26	109	112
Anthracene	mg/kg	0.1	Org-022/025	[NT]	23	22	21	5	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	23	150	110	31	102	118
Pyrene	mg/kg	0.1	Org-022/025	[NT]	23	180	140	25	98	119
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	23	140	110	24	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	23	140	100	33	81	88
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	23	390	330	17	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	23	120	110	9	88	99
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	23	74	64	14	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	23	31	30	3	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	23	69	55	23	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	23	126	119	6	96	98

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-26	313387-102
Date extracted	-			[NT]	43	19/12/2022	19/12/2022		20/12/2022	19/12/2022
Date analysed	-			[NT]	43	31/12/2022	31/12/2022		22/12/2022	31/12/2022
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	43	<0.1	0.1	0	99	107
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	43	0.9	1.1	20	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	43	<0.1	<0.1	0	103	103
Fluorene	mg/kg	0.1	Org-022/025	[NT]	43	0.2	0.2	0	95	118
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	43	0.4	0.5	22	98	122
Anthracene	mg/kg	0.1	Org-022/025	[NT]	43	0.6	0.7	15	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	43	3.4	2.4	34	94	116
Pyrene	mg/kg	0.1	Org-022/025	[NT]	43	3.3	3.1	6	93	123
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	43	3.3	3.4	3	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	43	3.5	3.5	0	75	71
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	43	8.4	11	27	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	43	4.2	5.2	21	94	88
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	43	1.8	2.2	20	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	43	0.6	0.4	40	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	43	1.7	2.0	16	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	43	131	136	4	83	125

QUALITY CONTROL: PAHs in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	73	19/12/2022	19/12/2022		[NT]	[NT]
Date analysed	-			[NT]	73	31/12/2022	31/12/2022		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	73	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	73	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	73	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	73	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	73	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	73	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	73	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	73	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	73	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	73	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	73	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	73	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	73	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	73	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	73	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	73	130	131	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	100	19/12/2022	19/12/2022		[NT]	[NT]
Date analysed	-			[NT]	100	31/12/2022	31/12/2022		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	100	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	100	0.2	0.2	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	100	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	100	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	100	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	100	<0.1	0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	100	0.2	0.2	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	100	0.4	0.4	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	100	0.3	0.4	29	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	100	0.4	0.4	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	100	1	1	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	100	0.60	0.62	3	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	100	0.3	0.3	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	100	0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	100	0.4	0.4	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	100	129	131	2	[NT]	[NT]

Client Reference: 86548.14, Badgerys Creek

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-26	313387-46
Date extracted	-			20/12/2022	[NT]	[NT]	[NT]	[NT]	20/12/2022	20/12/2022
Date analysed	-			31/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	22/12/2022
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	120	88
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-021	89	[NT]	[NT]	[NT]	[NT]	96	101

Result Definitions

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

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

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

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

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

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

TRH Soil C10-C40 NEPM - # Percent recovery for the surrogate is not possible to report as the high concentration of analytes in sample 313387-1,1d have caused interference.

PAHs in Soil - The RPD for duplicate results is accepted due to the non homogenous nature of samples 313387-13/13d.

PAHs in Soil - # Percent recovery for the matrix spike is not possible to report as the high concentration of analytes in sample 313387-24ms have caused interference.

Project No: 86548.14				Suburb: Badgerys Creek				To: Envirolab Services			
Project Manager: GAR				Order Number:				Sampler: AJ/SCG			
Email: Grant.Russell@douglaspartners.com.au; Ashika.Jagdish@douglaspartners.com.au								Attn: Nancy Zhang			
Turnaround time: ☒ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day								(02) 9910 6200			
Prior Storage: ☒ Fridge ☐ Freezer ☐ Esky ☐ Shelf								Do samples contain 'potential' HBM? ☒ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)			

Lab ID	Sample ID			Date Sampled	Sample Type S - soil W - water M - Material	Container Type G - glass P - plastic	Analytes										Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To				PAH	PCBs	TRH							ON HOLD	
1	PP1/0.1			14.12.22	S	G	x	x	x								
2	PP2/0.1			14.12.22	S	G	x										
3	PP3/0.1			14.12.22	S	G	x										
4	PP4/0.1			14.12.22	S	G	x										
5	PP5/0.1			14.12.22	S	G	x										
6	PP7/0.1			14.12.22	S	G	x										
7	PP8/0.1			14.12.22	S	G	x										
8	PP9/0.1			14.12.22	S	G	x										
9	PP11/0.1			14.12.22	S	G	x			x							
10	PP12/0.1			14.12.22	S	G	x										
11	PP13/0.1			14.12.22	S	G	x										
12	PP14/0.1			15.12.22	S	G	x										
13	PP31/0.1			15.12.22	S	G	x										
14	PP33/0.1			15.12.22	S	G	x										

Metals to analyse:

Number of samples in container: 7

Send results to: Douglas Partners Pty Ltd

Address: 18 Waler Crescent, Smeaton Grange

Relinquished by: AJ

Transported to laboratory by:

Phone: (02) 4647 0075

Date: 16.12.22

Signed: *[Signature]*

LAB RECEIPT *Es Sud*

Lab Ref. No:

Received by: *Umuemp*

Date & Time: 16/12

Signed: *Umu*

Project No: 86548.14		Suburb:		To: Envirolab Services														
Project Manager: GAR				Dispatch date: 16.12.22														
Lab ID	Sample ID			Date Sampled	Sample Type S - soil W - water M -	Container Type G - glass P - plastic	Analytes											Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To				PAH	PCBs	TRH							ON HOLD		
15	PP34/0.1			15.12.22	S	G	x											
16	PP36/0.1			15.12.22	S	G	x											
17	PP37/0.1			15.12.22	S	G	x											
18	PP39/0.1			15.12.22	S	G	x											
19	PP40/0.1			15.12.22	S	G	x											
20	PP41/0.1			15.12.22	S	G	x											
21	PP43/0.1			15.12.22	S	G	x										313387	
22	PP45/0.1			15.12.22	S	G	x										16.12.22	
23	PP46/0.1			15.12.22	S	G	x										CM	
24	PP47/0.1			15.12.22	S	G	x											
25	PP49/0.1			15.12.22	S	G	x			x								
26	PP51/0.1			14.12.22	S	G	x	x	x									
27	PP53/0.1			14.12.22	S	G	x											
28	PP54/0.1			15.12.22	S	G	x											
29	PP56/0.1			14.12.22	S	G	x											
30	PP57/0.1			14.12.22	S	G	x											
31	PP58/0.1			14.12.22	S	G	x											
32	PP59/0.1			14.12.22	S	G	x											

Project No: 86548.14					Suburb: Badgerys Creek					To: Envirolab Services							
Project Manager: GAR										Dispatch date: 16.12.22							
Lab ID	Sample ID			Date Sampled	Sample Type S - soil W - water M -	Container Type G - glass P - plastic	Analytes										Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To				PAH	PCBs	TRH							ON HOLD	
33	PP60/0.1			14.12.22	S	G	x										
34	PP61/0.1			14.12.22	S	G	x										
35	PP62/0.1			14.12.22	S	G	x										
36	PP63/0.1			14.12.22	S	G	x										
37	PP64/0.1			14.12.22	S	G	x										
38	PP65/0.1			14.12.22	S	G	x										
39	PP66/0.1			14.12.22	S	G	x										
40	PP67/0.1			14.12.22	S	G	x										
41	PP68/0.1			14.12.22	S	G	x										# 713387
42	PP69/0.1			14.12.22	S	G	x										CM 16.12.22
43	PP70/0.1			14.12.22	S	G	x										
44	PP71/0.1			14.12.22	S	G	x			x							
45	PP52/0.1			14.12.22	S	G										x	
46	PP52/0.3			14.12.22	S	G	x	x									
47	PP52-N1/0.1			14.12.22	S	G	x										
48	PP52-N1/0.3			14.12.22	S	G										x	
49	PP52-N1.5/0.1			14.12.22	S	G										x	
50	PP52-N1.5/0.3			14.12.22	S	G										x	
51	PP52-E1/0.1			14.12.22	S	G	x										

Project No: 86548.14					Suburb: Badgerys Creek					To: Envirolab Services								
Project Manager: GAR										Dispatch date: 16.12.22								
Lab ID	Sample ID			Date Sampled	Sample Type S - soil W - water M -	Container Type G - glass P - plastic	Analytes										Notes/ Preservation/ Additional Requirements	
	Location / Other ID	Depth From	Depth To				PAH	PCBs	TRH							ON HOLD		
52	PP52E1/0.3			14.12.22	S	G											x	
53	PP52-E1.5/0.1			14.12.22	S	G											x	
54	PP52-E1.5/0.3			14.12.22	S	G											x	
55	PP52-S1/0.1			14.12.22	S	G	x											
56	PP52-S1/0.3			14.12.22	S	G											x	
57	PP52-S1.5/0.1			14.12.22	S	G											x	
58	PP52-S1.5/0.3			14.12.22	S	G											x	
59	PP52-W1/0.1			14.12.22	S	G	x			x								
60	PP52-W1/0.3			14.12.22	S	G											x	
61	PP52-W1.5/0.1			14.12.22	S	G											x	
62	PP52-W1.5/0.3			14.12.22	S	G											x	
63	PP6/0.1			15.12.22	S	G											x	
64	PP6/0.3			15.12.22	S	G	x											
65	PP6-N1/0.1			15.12.22	S	G	x											
66	PP6-N1/0.3			15.12.22	S	G											x	#313387
67	PP6-N1.5/0.1			15.12.22	S	G											x	CM
68	PP6-N1.5/0.3			15.12.22	S	G											x	16.12.22
69	PP6-E1/0.1			15.12.22	S	G	x											
70	PP6-E1/0.3			15.12.22	S	G											x	

Project No: 86548.14 **Suburb:** Badgerys Creek **To:** Envirolab Services
Project Manager: GAR **Dispatch date:** 16.12.22

Lab ID	Sample ID			Date Sampled	Sample Type S - soil W - water M -	Container Type G - glass P - plastic	Analytes										Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To				PAH	PCBs	TRH							ON HOLD	
71	PP6-E1.5/0.1			15.12.22	S	G										x	
72	PP6-E1.5/0.3			15.12.22	S	G										x	
73	PP6-S1/0.1			15.12.22	S	G	x										
74	PP6-S1/0.3			15.12.22	S	G										x	
75	PP6-S1.5/0.1			15.12.22	S	G										x	
76	PP6-S1.5/0.3			15.12.22	S	G										x	
77	PP6-W1/0.1			15.12.22	S	G	x										
78	PP6-W1/0.3			15.12.22	S	G										x	
79	PP6-W1.5/0.1			15.12.22	S	G										x	
80	PP6-W1.5/0.3			15.12.22	S	G										x	
81	PP10/0.1			15.12.22	S	G										x	
82	PP10/0.3			15.12.22	S	G	x										# 313387 CM
83	PP10-N1/0.1			15.12.22	S	G	x										16.12.21
84	PP10-N1/0.3			15.12.22	S	G										x	
85	PP10-N1.5/0.1			15.12.22	S	G										x	
86	PP10-N1.5/0.3			15.12.22	S	G										x	
87	PP10-E1/0.1			15.12.22	S	G	x										
88	PP10-E1/0.3			15.12.22	S	G										x	
89	PP10-E1.5/0.1			15.12.22	S	G										x	

Project No: 86548.14					Suburb: Badgerys Creek					To: Envirolab Services								
Project Manager: GAR										Dispatch date: 16.12.22								
Lab ID	Sample ID			Date Sampled	Sample Type S - soil W - water M -	Container Type G - glass P - plastic	Analytes										Notes/ Preservation/ Additional Requirements	
	Location / Other ID	Depth From	Depth To				PAH	PCBs	TRH							ON HOLD		
90	PP10-E1.5/0.3			15.12.22	S	G											x	
91	PP10-S1/0.1			15.12.22	S	G	x											
92	PP10-S1/0.3			15.12.22	S	G											x	
93	PP10-S1.5/0.1			15.12.22	S	G											x	
94	PP10-S1.5/0.3			15.12.22	S	G											x	
95	PP10-W1/0.1			15.12.22	S	G	x			x								
96	PP10-W1/0.3			15.12.22	S	G											x	
97	PP10-W1.5/0.1			15.12.22	S	G											x	
98	PP10-W1.5/0.3			15.12.22	S	G											x	
99	BD1			14.12.22	S	G	x											
100	BD2			14.12.22	S	G	x											
101	BD3			14.12.22	S	G	x			x								
102	BD4			14.12.22	S	G	x											
103	BD5			15.12.22	S	G	x			x								
																		#313307
																		CM
																		16.12.22

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Ashika Jagdish, Grant Russell

Sample Login Details

Your reference	86548.14, Badgerys Creek
Envirolab Reference	313387
Date Sample Received	16/12/2000
Date Instructions Received	16/12/2022
Date Results Expected to be Reported	03/01/2023

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	103 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	14
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	TRH in Soil (C6-C9) NEPM	svTRH (C10-C40) in Soil	PAHs in Soil	PCBs in Soil	On Hold
PP1/0.1	✓	✓	✓	✓	
PP2/0.1			✓		
PP3/0.1			✓		
PP4/0.1			✓		
PP5/0.1			✓		
PP7/0.1			✓		
PP8/0.1			✓		
PP9/0.1			✓		
PP11/0.1	✓	✓	✓		
PP12/0.1			✓		
PP13/0.1			✓		
PP14/0.1			✓		
PP31/0.1			✓		
PP33/0.1			✓		
PP34/0.1			✓		
PP36/0.1			✓		
PP37/0.1			✓		
PP39/0.1			✓		
PP40/0.1			✓		
PP41/0.1			✓		
PP43/0.1			✓		
PP45/0.1			✓		
PP46/0.1			✓		
PP47/0.1			✓		
PP49/0.1	✓	✓	✓		
PP51/0.1	✓	✓	✓	✓	
PP53/0.1			✓		
PP54/0.1			✓		
PP56/0.1			✓		
PP57/0.1			✓		
PP58/0.1			✓		
PP59/0.1			✓		



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Sample ID	TRH in Soil (C6-C9) NEPM	svTRH (C10-C40) in Soil	PAHs in Soil	PCBs in Soil	On Hold
PP60/0.1			✓		
PP61/0.1			✓		
PP62/0.1			✓		
PP63/0.1			✓		
PP64/0.1			✓		
PP65/0.1			✓		
PP66/0.1			✓		
PP67/0.1			✓		
PP68/0.1			✓		
PP69/0.1			✓		
PP70/0.1			✓		
PP71/0.1	✓	✓	✓		
PP52/0.1					✓
PP52/0.3			✓	✓	
PP52-N1/0.1			✓		
PP52-N1/0.3					✓
PP52-N1.5/0.1					✓
PP52-N1.5/0.3					✓
PP52-E1/0.1			✓		
PP52E1/0.3					✓
PP52-E1.5/0.1					✓
PP52-E1.5/0.3					✓
PP52-S1/0.1			✓		
PP52-S1/0.3					✓
PP52-S1.5/0.1					✓
PP52-S1.5/0.3					✓
PP52-W1/0.1	✓	✓	✓		
PP52-W1/0.3					✓
PP52-W1.5/0.1					✓
PP52-W1.5/0.3					✓
PP6/0.1					✓
PP6/0.3			✓		



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Sample ID	TRH in Soil (C6-C9) NEPM	svTRH (C10-C40) in Soil	PAHs in Soil	PCBs in Soil	On Hold
PP6-N1/0.1			✓		
PP6-N1/0.3					✓
PP6-N1.5/0.1					✓
PP6-N1.5/0.3					✓
PP6-E1/0.1			✓		
PP6-E1/0.3					✓
PP6-E1.5/0.1					✓
PP6-E1.5/0.3					✓
PP6-S1/0.1			✓		
PP6-S1/0.3					✓
PP6-S1.5/0.1					✓
PP6-S1.5/0.3					✓
PP6-W1/0.1			✓		
PP6-W1/0.3					✓
PP6-W1.5/0.1					✓
PP6-W1.5/0.3					✓
PP10/0.1					✓
PP10/0.3			✓		
PP10-N1/0.1			✓		
PP10-N1/0.3					✓
PP10-N1.5/0.1					✓
PP10-N1.5/0.3					✓
PP10-E1/0.1			✓		
PP10-E1/0.3					✓
PP10-E1.5/0.1					✓
PP10-E1.5/0.3					✓
PP10-S1/0.1			✓		
PP10-S1/0.3					✓
PP10-S1.5/0.1					✓
PP10-S1.5/0.3					✓
PP10-W1/0.1	✓	✓	✓		
PP10-W1/0.3					✓



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Sample ID	TRH in Soil (C6-C9) NEPM	svTRH (C10-C40) in Soil	PAHs in Soil	PCBs in Soil	On Hold
PP10-W1.5/0.1					✓
PP10-W1.5/0.3					✓
BD1			✓		
BD2			✓		
BD3	✓	✓	✓		
BD4			✓		
BD5	✓	✓	✓		

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

CERTIFICATE OF ANALYSIS 316402

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Ashika Jagdish, Grant Russell
Address	18 Waler Crescent, Smeaton Grange, NSW, 2567

Sample Details

Your Reference	86548.14, Burra Park
Number of Samples	119 Soil, 8 Material
Date samples received	13/02/2023
Date completed instructions received	13/02/2023

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	21/02/2023
Date of Issue	21/02/2023
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Asbestos Approved By

Analysed by Asbestos Approved Analyst: Nyovan Moonean, Stuart Chen
 Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By

Diego Bigolin, Inorganics Supervisor
 Hannah Nguyen, Metals Supervisor
 Kyle Gavril, Senior Chemist
 Liam Timmins, Organic Instruments Team Leader
 Lucy Zhu, Asbestos Supervisor
 Steven Luong, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil

Our Reference		316402-86	316402-87	316402-88	316402-89	316402-90
Your Reference	UNITS	GS-1/0.1	GS-2/0.1	GS-3/0.1	GS-4/0.1	HS-1/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	95	69	84	97	101

vTRH(C6-C10)/BTEXN in Soil

Our Reference		316402-91	316402-92	316402-93	316402-94	316402-95
Your Reference	UNITS	HS-2/0.1	HS-3/0.1	HS-4/0.1	HS-5/0.1	HS-6/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	95	91	98	94	97

vTRH(C6-C10)/BTEXN in Soil

Our Reference		316402-96	316402-97	316402-98	316402-99	316402-100
Your Reference	UNITS	HS-7/0.1	HS-8/0.1	BD3/20230207	HBM2-1/0.1	HBM2-2/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	92	97	104	96	98

vTRH(C6-C10)/BTEXN in Soil

Our Reference		316402-101	316402-102	316402-103	316402-104	316402-105
Your Reference	UNITS	HBM2-3/0.1	HBM2-4/0.1	HBM2-5/0.1	HBM2-6/0.1	BD1/20230209
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	100	87	86	99	96

vTRH(C6-C10)/BTEXN in Soil

Our Reference		316402-106	316402-107	316402-108	316402-109	316402-110
Your Reference	UNITS	HBM11-1/0.1	HBM11-2/0.1	HBM11-3/0.1	HBM11-4/0.1	HBM11-5/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	109	99	100	93	106

vTRH(C6-C10)/BTEXN in Soil

Our Reference		316402-111	316402-112	316402-113	316402-114	316402-115
Your Reference	UNITS	HBM11-6/0.1	HBM11-7/0.1	HBM23a-1/0.1	HBM23a-2/0.1	HBM23a-3/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	98	94	103	117	95

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		316402-124
Your Reference	UNITS	BD2/20230209
Depth		-
Date Sampled		9.2.23
Type of sample		Soil
Date extracted	-	14/02/2023
Date analysed	-	15/02/2023
TRH C ₆ - C ₉	mg/kg	<25
TRH C ₆ - C ₁₀	mg/kg	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	97

svTRH (C10-C40) in Soil

Our Reference		316402-86	316402-87	316402-88	316402-89	316402-90
Your Reference	UNITS	GS-1/0.1	GS-2/0.1	GS-3/0.1	GS-4/0.1	HS-1/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	150	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	150	<50	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	190	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	110	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	300	<50	<50	<50
Surrogate o-Terphenyl	%	85	83	81	82	81

svTRH (C10-C40) in Soil

Our Reference		316402-91	316402-92	316402-93	316402-94	316402-95
Your Reference	UNITS	HS-2/0.1	HS-3/0.1	HS-4/0.1	HS-5/0.1	HS-6/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	81	88	81	81	80

svTRH (C10-C40) in Soil

Our Reference		316402-96	316402-97	316402-98	316402-99	316402-100
Your Reference	UNITS	HS-7/0.1	HS-8/0.1	BD3/20230207	HBM2-1/0.1	HBM2-2/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	110	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	230	<100	160	<100
Total +ve TRH (C10-C36)	mg/kg	<50	340	<50	160	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	260	110	200	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	170	<100	140	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	430	110	340	<50
Surrogate o-Terphenyl	%	82	86	82	97	80

svTRH (C10-C40) in Soil

Our Reference		316402-101	316402-102	316402-103	316402-104	316402-105
Your Reference	UNITS	HBM2-3/0.1	HBM2-4/0.1	HBM2-5/0.1	HBM2-6/0.1	BD1/20230209
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	130	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	120	210	130
Total +ve TRH (C10-C36)	mg/kg	<50	<50	120	340	130
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	53	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	53	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	120	150	240	140
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	150	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	120	150	450	140
Surrogate o-Terphenyl	%	81	91	93	86	83

svTRH (C10-C40) in Soil

Our Reference		316402-106	316402-107	316402-108	316402-109	316402-110
Your Reference	UNITS	HBM11-1/0.1	HBM11-2/0.1	HBM11-3/0.1	HBM11-4/0.1	HBM11-5/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	120
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	130	150
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	130	270
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	160	220
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	120
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	160	350
Surrogate o-Terphenyl	%	80	79	79	82	84

svTRH (C10-C40) in Soil

Our Reference		316402-111	316402-112	316402-113	316402-114	316402-115
Your Reference	UNITS	HBM11-6/0.1	HBM11-7/0.1	HBM23a-1/0.1	HBM23a-2/0.1	HBM23a-3/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	100	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	89	79	79	79	83

svTRH (C10-C40) in Soil		
Our Reference		316402-124
Your Reference	UNITS	BD2/20230209
Depth		-
Date Sampled		9.2.23
Type of sample		Soil
Date extracted	-	14/02/2023
Date analysed	-	21/02/2023
TRH C ₁₀ - C ₁₄	mg/kg	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	81

PAHs in Soil						
Our Reference		316402-86	316402-87	316402-88	316402-89	316402-90
Your Reference	UNITS	GS-1/0.1	GS-2/0.1	GS-3/0.1	GS-4/0.1	HS-1/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	15/02/2023
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.2	<0.2	<0.2	<0.2	0.3
Benzo(a)pyrene	mg/kg	0.08	<0.05	<0.05	<0.05	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	1.1	<0.05	<0.05	<0.05	0.69
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	80	80	79	81	89

PAHs in Soil						
Our Reference		316402-91	316402-92	316402-93	316402-94	316402-95
Your Reference	UNITS	HS-2/0.1	HS-3/0.1	HS-4/0.1	HS-5/0.1	HS-6/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
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	0.06	<0.05	<0.05	<0.05	0.09
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.3	<0.05	<0.05	<0.05	0.2
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	88	87	87	86	87

PAHs in Soil						
Our Reference		316402-96	316402-97	316402-98	316402-99	316402-100
Your Reference	UNITS	HS-7/0.1	HS-8/0.1	BD3/20230207	HBM2-1/0.1	HBM2-2/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
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	0.2	<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	0.09	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
Total +ve PAH's	mg/kg	<0.05	0.09	1.0	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	86	88	101	90	85

PAHs in Soil						
Our Reference		316402-101	316402-102	316402-103	316402-104	316402-105
Your Reference	UNITS	HBM2-3/0.1	HBM2-4/0.1	HBM2-5/0.1	HBM2-6/0.1	BD1/20230209
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
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	0.5	0.4	<0.1	<0.1
Anthracene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.9	1.9	<0.1	<0.1
Pyrene	mg/kg	<0.1	1	1.8	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.6	0.9	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.5	1.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.8	2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.64	1.6	<0.05	0.07
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.2	0.9	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.3	0.7	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	5.6	11	<0.05	0.07
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	0.8	2.0	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	0.9	2.0	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	0.9	2.1	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	86	89	102	110	101

PAHs in Soil						
Our Reference		316402-106	316402-107	316402-108	316402-109	316402-110
Your Reference	UNITS	HBM11-1/0.1	HBM11-2/0.1	HBM11-3/0.1	HBM11-4/0.1	HBM11-5/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
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	0.2
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	0.3
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	0.07	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	0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	0.07	1.6
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	91	93	90	93	94

PAHs in Soil						
Our Reference		316402-111	316402-112	316402-113	316402-114	316402-115
Your Reference	UNITS	HBM11-6/0.1	HBM11-7/0.1	HBM23a-1/0.1	HBM23a-2/0.1	HBM23a-3/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	104	94	101	102	90

PAHs in Soil		
Our Reference		316402-124
Your Reference	UNITS	BD2/20230209
Depth		-
Date Sampled		9.2.23
Type of sample		Soil
Date extracted	-	14/02/2023
Date analysed	-	21/02/2023
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	108

Organochlorine Pesticides in soil						
Our Reference		316402-86	316402-87	316402-88	316402-89	316402-90
Your Reference	UNITS	GS-1/0.1	GS-2/0.1	GS-3/0.1	GS-4/0.1	HS-1/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	15/02/2023
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	3.6
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	3.3
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	0.4
Dieldrin	mg/kg	1.1	<0.1	<0.1	<0.1	1.2
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	0.6
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	1.3
Surrogate TCMX	%	86	84	86	87	84

Organochlorine Pesticides in soil						
Our Reference		316402-91	316402-92	316402-93	316402-94	316402-95
Your Reference	UNITS	HS-2/0.1	HS-3/0.1	HS-4/0.1	HS-5/0.1	HS-6/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	0.6	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	0.2	<0.1	0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	0.6	<0.1	<0.1	<0.1
Surrogate TCMX	%	84	81	83	82	84

Organochlorine Pesticides in soil						
Our Reference		316402-96	316402-97	316402-99	316402-100	316402-101
Your Reference	UNITS	HS-7/0.1	HS-8/0.1	HBM2-1/0.1	HBM2-2/0.1	HBM2-3/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	0.3	<0.1	0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	0.4	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	0.7	<0.1	<0.1	<0.1
Surrogate TCMX	%	82	83	87	82	83

Organochlorine Pesticides in soil						
Our Reference		316402-102	316402-103	316402-104	316402-106	316402-107
Your Reference	UNITS	HBM2-4/0.1	HBM2-5/0.1	HBM2-6/0.1	HBM11-1/0.1	HBM11-2/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	83	97	103	88	92

Organochlorine Pesticides in soil						
Our Reference		316402-108	316402-109	316402-110	316402-111	316402-112
Your Reference	UNITS	HBM11-3/0.1	HBM11-4/0.1	HBM11-5/0.1	HBM11-6/0.1	HBM11-7/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	88	89	89	97	90

Organochlorine Pesticides in soil				
Our Reference		316402-113	316402-114	316402-115
Your Reference	UNITS	HBM23a-1/0.1	HBM23a-2/0.1	HBM23a-3/0.1
Depth		-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	98	89

Organophosphorus Pesticides in Soil						
Our Reference		316402-86	316402-87	316402-88	316402-89	316402-90
Your Reference	UNITS	GS-1/0.1	GS-2/0.1	GS-3/0.1	GS-4/0.1	HS-1/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	15/02/2023
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
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	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
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
Chlorpyrifos	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
Bromophos-ethyl	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
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	84	86	87	84

Organophosphorus Pesticides in Soil

Our Reference		316402-91	316402-92	316402-93	316402-94	316402-95
Your Reference	UNITS	HS-2/0.1	HS-3/0.1	HS-4/0.1	HS-5/0.1	HS-6/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
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
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	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
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
Chlorpyrifos	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
Bromophos-ethyl	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
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	84	81	83	82	84

Organophosphorus Pesticides in Soil

Our Reference		316402-96	316402-97	316402-99	316402-100	316402-101
Your Reference	UNITS	HS-7/0.1	HS-8/0.1	HBM2-1/0.1	HBM2-2/0.1	HBM2-3/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
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
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	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
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
Chlorpyrifos	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
Bromophos-ethyl	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
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	82	83	87	82	83

Organophosphorus Pesticides in Soil

Our Reference		316402-102	316402-103	316402-104	316402-106	316402-107
Your Reference	UNITS	HBM2-4/0.1	HBM2-5/0.1	HBM2-6/0.1	HBM11-1/0.1	HBM11-2/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
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
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	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
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
Chlorpyrifos	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
Bromophos-ethyl	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
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	83	97	103	88	92

Organophosphorus Pesticides in Soil

Our Reference		316402-108	316402-109	316402-110	316402-111	316402-112
Your Reference	UNITS	HBM11-3/0.1	HBM11-4/0.1	HBM11-5/0.1	HBM11-6/0.1	HBM11-7/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
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
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	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
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
Chlorpyrifos	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
Bromophos-ethyl	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
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	88	89	89	97	90

Organophosphorus Pesticides in Soil				
Our Reference		316402-113	316402-114	316402-115
Your Reference	UNITS	HBM23a-1/0.1	HBM23a-2/0.1	HBM23a-3/0.1
Depth		-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023
Dichlorvos	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	98	89

PCBs in Soil						
Our Reference		316402-86	316402-87	316402-88	316402-89	316402-90
Your Reference	UNITS	GS-1/0.1	GS-2/0.1	GS-3/0.1	GS-4/0.1	HS-1/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	15/02/2023
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	84	86	87	84

PCBs in Soil						
Our Reference		316402-91	316402-92	316402-93	316402-94	316402-95
Your Reference	UNITS	HS-2/0.1	HS-3/0.1	HS-4/0.1	HS-5/0.1	HS-6/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	84	81	83	82	84

PCBs in Soil						
Our Reference		316402-96	316402-97	316402-99	316402-100	316402-101
Your Reference	UNITS	HS-7/0.1	HS-8/0.1	HBM2-1/0.1	HBM2-2/0.1	HBM2-3/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	82	83	87	82	83

PCBs in Soil						
Our Reference		316402-102	316402-103	316402-104	316402-106	316402-107
Your Reference	UNITS	HBM2-4/0.1	HBM2-5/0.1	HBM2-6/0.1	HBM11-1/0.1	HBM11-2/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	83	97	103	88	92

PCBs in Soil						
Our Reference		316402-108	316402-109	316402-110	316402-111	316402-112
Your Reference	UNITS	HBM11-3/0.1	HBM11-4/0.1	HBM11-5/0.1	HBM11-6/0.1	HBM11-7/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	88	89	89	97	90

PCBs in Soil				
Our Reference		316402-113	316402-114	316402-115
Your Reference	UNITS	HBM23a-1/0.1	HBM23a-2/0.1	HBM23a-3/0.1
Depth		-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil
Date extracted	-	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	98	89

Acid Extractable metals in soil

Our Reference		316402-1	316402-2	316402-4	316402-6	316402-8
Your Reference	UNITS	TP408/0.4	TP408-N2/0.1	TP408-E2/0.1	TP408-S2/0.1	TP408-W2/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Nickel	mg/kg	2	2	4	3	10

Acid Extractable metals in soil

Our Reference		316402-10	316402-11	316402-12	316402-14	316402-16
Your Reference	UNITS	BD1/20230207	TP463/0.4	TP463-N2/0.1	TP463/E2/0.1	TP463-S2/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Arsenic	mg/kg	[NA]	<4	8	10	9
Nickel	mg/kg	24	[NA]	[NA]	[NA]	[NA]
Zinc	mg/kg	[NA]	29	35	47	47

Acid Extractable metals in soil

Our Reference		316402-18	316402-20	316402-86	316402-87	316402-88
Your Reference	UNITS	TP463-W2/0.1	BD2/20230207	GS-1/0.1	GS-2/0.1	GS-3/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Arsenic	mg/kg	14	5	45	7	23
Cadmium	mg/kg	[NA]	[NA]	3	<0.4	<0.4
Chromium	mg/kg	[NA]	[NA]	17	20	4
Copper	mg/kg	[NA]	[NA]	180	18	9
Lead	mg/kg	[NA]	[NA]	590	110	32
Mercury	mg/kg	[NA]	[NA]	<0.1	<0.1	<0.1
Nickel	mg/kg	[NA]	[NA]	9	6	2
Zinc	mg/kg	49	36	430	91	48

Acid Extractable metals in soil

Our Reference		316402-89	316402-90	316402-91	316402-92	316402-93
Your Reference	UNITS	GS-4/0.1	HS-1/0.1	HS-2/0.1	HS-3/0.1	HS-4/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Arsenic	mg/kg	7	17	7	10	12
Cadmium	mg/kg	<0.4	<0.4	0.5	<0.4	<0.4
Chromium	mg/kg	9	19	13	17	15
Copper	mg/kg	20	45	31	26	20
Lead	mg/kg	77	160	220	280	130
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	11	5	5	5
Zinc	mg/kg	110	240	260	330	150

Acid Extractable metals in soil

Our Reference		316402-94	316402-95	316402-96	316402-97	316402-98
Your Reference	UNITS	HS-5/0.1	HS-6/0.1	HS-7/0.1	HS-8/0.1	BD3/20230207
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Arsenic	mg/kg	19	8	8	<4	13
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	1
Chromium	mg/kg	24	26	10	4	4
Copper	mg/kg	29	14	15	15	14
Lead	mg/kg	330	480	340	54	180
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	6	7	3	2
Zinc	mg/kg	120	230	250	96	210

Acid Extractable metals in soil

Our Reference		316402-99	316402-100	316402-101	316402-102	316402-103
Your Reference	UNITS	HBM2-1/0.1	HBM2-2/0.1	HBM2-3/0.1	HBM2-4/0.1	HBM2-5/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Arsenic	mg/kg	6	8	<4	<4	4
Cadmium	mg/kg	<0.4	<0.4	0.5	0.6	<0.4
Chromium	mg/kg	22	17	69	50	8
Copper	mg/kg	27	19	71	59	14
Lead	mg/kg	28	35	71	35	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	21	11	78	45	5
Zinc	mg/kg	1,100	220	260	300	93

Acid Extractable metals in soil

Our Reference		316402-104	316402-105	316402-106	316402-107	316402-108
Your Reference	UNITS	HBM2-6/0.1	BD1/20230209	HBM11-1/0.1	HBM11-2/0.1	HBM11-3/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Arsenic	mg/kg	6	5	8	8	5
Cadmium	mg/kg	<0.4	0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	21	18	21	14
Copper	mg/kg	31	30	29	22	19
Lead	mg/kg	79	26	28	24	27
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	14	19	9	9	8
Zinc	mg/kg	400	1,200	84	170	130

Acid Extractable metals in soil

Our Reference		316402-109	316402-110	316402-111	316402-112	316402-113
Your Reference	UNITS	HBM11-4/0.1	HBM11-5/0.1	HBM11-6/0.1	HBM11-7/0.1	HBM23a-1/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Arsenic	mg/kg	5	13	7	10	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	18	28	11	19	14
Copper	mg/kg	46	76	21	18	43
Lead	mg/kg	32	53	18	27	18
Mercury	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	26	7	6	8
Zinc	mg/kg	190	130	54	53	47

Acid Extractable metals in soil

Our Reference		316402-114	316402-115	316402-124	316402-128	316402-129
Your Reference	UNITS	HBM23a-2/0.1	HBM23a-3/0.1	BD2/20230209	GS-1/0.1 - [TRIPLICATE]	HS-7/0.1 - [TRIPLICATE]
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Arsenic	mg/kg	7	7	8	55	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	2	<0.4
Chromium	mg/kg	22	24	18	27	5
Copper	mg/kg	28	22	20	53	10
Lead	mg/kg	22	24	34	630	240
Mercury	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	9	6	11	4
Zinc	mg/kg	57	48	68	710	170

Acid Extractable metals in soil		
Our Reference		316402-130
Your Reference	UNITS	BD2/20230209 - [TRIPLICATE]
Depth		-
Date Sampled		9.2.23
Type of sample		Soil
Date prepared	-	15/02/2023
Date analysed	-	17/02/2023
Arsenic	mg/kg	10
Cadmium	mg/kg	<0.4
Chromium	mg/kg	21
Copper	mg/kg	16
Lead	mg/kg	31
Mercury	mg/kg	<0.1
Nickel	mg/kg	7
Zinc	mg/kg	53

Misc Soil - Inorg

Our Reference		316402-86	316402-87	316402-88	316402-89	316402-90
Your Reference	UNITS	GS-1/0.1	GS-2/0.1	GS-3/0.1	GS-4/0.1	HS-1/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg

Our Reference		316402-91	316402-92	316402-93	316402-94	316402-95
Your Reference	UNITS	HS-2/0.1	HS-3/0.1	HS-4/0.1	HS-5/0.1	HS-6/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg

Our Reference		316402-96	316402-97	316402-99	316402-100	316402-101
Your Reference	UNITS	HS-7/0.1	HS-8/0.1	HBM2-1/0.1	HBM2-2/0.1	HBM2-3/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg

Our Reference		316402-102	316402-103	316402-104	316402-106	316402-107
Your Reference	UNITS	HBM2-4/0.1	HBM2-5/0.1	HBM2-6/0.1	HBM11-1/0.1	HBM11-2/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		316402-108	316402-109	316402-110	316402-111	316402-112
Your Reference	UNITS	HBM11-3/0.1	HBM11-4/0.1	HBM11-5/0.1	HBM11-6/0.1	HBM11-7/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg				
Our Reference		316402-113	316402-114	316402-115
Your Reference	UNITS	HBM23a-1/0.1	HBM23a-2/0.1	HBM23a-3/0.1
Depth		-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil
Date prepared	-	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	14/02/2023	14/02/2023	14/02/2023
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5

Moisture						
Our Reference	UNITS	316402-86	316402-87	316402-88	316402-89	316402-90
Your Reference		GS-1/0.1	GS-2/0.1	GS-3/0.1	GS-4/0.1	HS-1/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Moisture	%	6.9	7.0	8.4	15	16

Moisture						
Our Reference	UNITS	316402-91	316402-92	316402-93	316402-94	316402-95
Your Reference		HS-2/0.1	HS-3/0.1	HS-4/0.1	HS-5/0.1	HS-6/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Moisture	%	7.8	6.5	11	15	11

Moisture						
Our Reference	UNITS	316402-96	316402-97	316402-98	316402-99	316402-100
Your Reference		HS-7/0.1	HS-8/0.1	BD3/20230207	HBM2-1/0.1	HBM2-2/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Moisture	%	18	15	8.4	30	23

Moisture						
Our Reference	UNITS	316402-101	316402-102	316402-103	316402-104	316402-105
Your Reference		HBM2-3/0.1	HBM2-4/0.1	HBM2-5/0.1	HBM2-6/0.1	BD1/20230209
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Moisture	%	5.1	6.7	17	19	22

Moisture						
Our Reference	UNITS	316402-106	316402-107	316402-108	316402-109	316402-110
Your Reference		HBM11-1/0.1	HBM11-2/0.1	HBM11-3/0.1	HBM11-4/0.1	HBM11-5/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Moisture	%	15	12	9.1	14	9.9

Moisture						
Our Reference	UNITS	316402-111	316402-112	316402-113	316402-114	316402-115
Your Reference		HBM11-6/0.1	HBM11-7/0.1	HBM23a-1/0.1	HBM23a-2/0.1	HBM23a-3/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2023	14/02/2023	14/02/2023	14/02/2023	14/02/2023
Date analysed	-	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Moisture	%	12	9.4	13	11	8.6

Moisture		
Our Reference	UNITS	316402-124
Your Reference		BD2/20230209
Depth		-
Date Sampled		9.2.23
Type of sample		Soil
Date prepared	-	14/02/2023
Date analysed	-	15/02/2023
Moisture	%	8.7

Asbestos ID - soils						
Our Reference	UNITS	316402-86	316402-87	316402-88	316402-89	316402-90
Your Reference		GS-1/0.1	GS-2/0.1	GS-3/0.1	GS-4/0.1	HS-1/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Sample mass tested	g	Approx. 40g	Approx. 45g	Approx. 40g	Approx. 35g	Approx. 55g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	316402-91	316402-92	316402-93	316402-94	316402-95
Your Reference		HS-2/0.1	HS-3/0.1	HS-4/0.1	HS-5/0.1	HS-6/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Sample mass tested	g	Approx. 75g	Approx. 60g	Approx. 70g	Approx. 85g	Approx. 60g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	316402-96	316402-97	316402-99	316402-100	316402-101
Your Reference		HS-7/0.1	HS-8/0.1	HBM2-1/0.1	HBM2-2/0.1	HBM2-3/0.1
Depth		-	-	-	-	-
Date Sampled		7.2.23	7.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Sample mass tested	g	Approx. 55g	Approx. 55g	Approx. 50g	Approx. 55g	Approx. 90g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	316402-102	316402-103	316402-104	316402-106	316402-107
Your Reference		HBM2-4/0.1	HBM2-5/0.1	HBM2-6/0.1	HBM11-1/0.1	HBM11-2/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Sample mass tested	g	Approx. 80g	Approx. 45g	Approx. 50g	Approx. 60g	Approx. 55g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	316402-108	316402-109	316402-110	316402-111	316402-112
Your Reference		HBM11-3/0.1	HBM11-4/0.1	HBM11-5/0.1	HBM11-6/0.1	HBM11-7/0.1
Depth		-	-	-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Sample mass tested	g	Approx. 60g	Approx. 65g	Approx. 60g	Approx. 50g	Approx. 65g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils				
Our Reference	UNITS	316402-113	316402-114	316402-115
Your Reference		HBM23a-1/0.1	HBM23a-2/0.1	HBM23a-3/0.1
Depth		-	-	-
Date Sampled		9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil
Date analysed	-	17/02/2023	17/02/2023	17/02/2023
Sample mass tested	g	Approx. 60g	Approx. 60g	Approx. 65g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils NEPM						
Our Reference		316402-21	316402-22	316402-24	316402-27	316402-28
Your Reference	UNITS	TP591-T/0-0.6	TP591-TN2/0-0.6	TP591-TS2/0-0.6	TP591-TW2/0-0.6	TP591-TW4/0-0.6
Depth		0-0.6	0-0.6	0-0.6	0-0.6	0-0.6
Date Sampled		7.2.23	7.2.23	7.2.23	7.2.23	7.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Sample mass tested	g	411.92	402.65	446.05	580.67	535.56
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	—	—	—	—	—
FA and AF Estimation*	g	—	—	—	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM						
Our Reference		316402-29	316402-32	316402-33	316402-34	316402-35
Your Reference	UNITS	TP591-TE2/0-0.6	TP604-T/0-0.7	TP604-TN2/0-0.7	TP604-TN4/0-0.7	TP604-TN6/0-0.7
Depth		0-0.6	0-0.7	0-0.7	0-0.7	0-0.7
Date Sampled		7.2.23	8.2.23	8.2.23	8.2.23	8.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Sample mass tested	g	498.82	674.77	581.47	629.48	585.27
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	Chrysotile asbestos detected Amosite asbestos detected Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	0.3277	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	See Above	No visible asbestos detected
ACM >7mm Estimation*	g	—	—	—	0.2063	—
FA and AF Estimation*	g	—	—	—	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM

Our Reference		316402-36	316402-38	316402-40	316402-42	316402-43
Your Reference	UNITS	TP604-TS2/0-0.7	TP604-TW2/0-0.7	TP604-TE2/0-0.7	TP602-SP1/0-0.7	TP602-SP2/0-0.8
Depth		0-0.7	0-0.7	0-0.7	0-0.7	0-0.8
Date Sampled		8.2.23	8.2.23	8.2.23	8.2.23	8.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Sample mass tested	g	335.92	502.62	670.01	588.67	842.81
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	—	—	—	—	—
FA and AF Estimation*	g	—	—	—	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM

Our Reference		316402-44	316402-45	316402-46	316402-47	316402-48
Your Reference	UNITS	TP602-SP3/0-0.7	TP602-SP4/0-0.4	TP602-SP5/0-0.6	TP602-SP6/0-0.6	TP599-T/0-1.0
Depth		0-0.7	0-0.4	0-0.6	0-0.6	0-1.0
Date Sampled		8.2.23	8.2.23	8.2.23	8.2.23	8.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Sample mass tested	g	804.03	574.6	931.75	925.77	811.7
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	Chrysotile asbestos detected Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	1.2106	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	See Above	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	0.9734	—	—	—	—
FA and AF Estimation*	g	—	—	—	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM

Our Reference		316402-49	316402-51	316402-53	316402-55	316402-59
Your Reference	UNITS	TP599-TN2/0-1.0	TP599-TS2/0-1.0	TP599-TW2/0-1.0	TP599-TE2/0-1.0	ACM-T/0-0.5
Depth		0-1.0	0-1.0	0-1.0	0-1.0	0-0.5
Date Sampled		8.2.23	8.2.23	8.2.23	8.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Sample mass tested	g	754.36	748.64	817.19	687.34	659.74
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	—	—	—	—	—
FA and AF Estimation*	g	—	—	—	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM

Our Reference		316402-60	316402-62	316402-64	316402-66	316402-71
Your Reference	UNITS	ACM-TW2/0-0.5	ACM-TE2/0-0.5	ACM-TS2/0-0.5	ACM-TN2/0-0.5	FM-1/0-1.0
Depth		0-0.5	0-0.5	0-0.5	0-0.5	0-1.0
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Sample mass tested	g	909.15	681.84	643.42	835.35	663.77
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	—	—	—	—	—
FA and AF Estimation*	g	—	—	—	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM

Our Reference		316402-72	316402-73	316402-74	316402-75	316402-76
Your Reference	UNITS	FM-2/0-1.0	FM-3/0-1.0	FM-4/0-1.0	FM-5/0-1.0	TP581-T/0-0.6
Depth		0-1.0	0-1.0	0-1.0	0-1.0	0-0.6
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Sample mass tested	g	868.84	808.11	952.49	940.42	753.9
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	—	—	—	—	—
FA and AF Estimation*	g	—	—	—	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM

Our Reference		316402-77	316402-79	316402-81	316402-83
Your Reference	UNITS	TP581-TN2/0-0.6	TP581-TE2/0-0.6	TP581-TS2/0-0.6	TP581-TW2/0-0.6
Depth		0-0.6	0-0.6	0-0.6	0-0.6
Date Sampled		9.2.23	9.2.23	9.2.23	9.2.23
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Sample mass tested	g	724.79	684.99	647.15	803.84
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	—	—	—	—
FA and AF Estimation*	g	—	—	—	—
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001

Asbestos ID - materials						
Our Reference	UNITS	316402-116	316402-117	316402-118	316402-121	316402-123
Your Reference		FM-2/0-1.0	TP591-TW2/0-0.6	TP602-SP3/0-0.7	ACM-T/0-0.5	HBM2-PACM
Depth		-	-	-	-	-
Date Sampled		9.2.23	7.2.23	8.2.23	9.2.23	9.2.23
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	17/02/2023	17/02/2023	17/02/2023	17/02/2023	17/02/2023
Mass / Dimension of Sample	-	70x50x4mm	72x45x5mm	110x80x5mm	80x65x5mm	85x60x5mm
Sample Description	-	Grey fibre cement material	Grey fibre cement material	Beige fibre cement material	Beige fibre cement material	Beige fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected	Chrysotile asbestos detected	Chrysotile asbestos detected	No asbestos detected	No asbestos detected
		Amosite asbestos detected	Amosite asbestos detected		Organic fibres detected	Organic fibres detected
Trace Analysis	-	[NT]	[NT]	[NT]	No asbestos detected	No asbestos detected

Metals from Neutral Leaching Fluid ICPMS		
Our Reference		316402-85
Your Reference	UNITS	594-G
Depth		-
Date Sampled		9.2.23
Type of sample		Soil
Date extracted	-	21/02/2023
Date analysed	-	21/02/2023
pH of final Leachate	pH units	7.8
Lead	µg/L	10

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE #1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF) NOTE #2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS following leaching using ultra high purity water, i.e. reagent water = CLASS 1, 2 & 4 from AS 4439.3.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.

Method ID	Methodology Summary
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	316402-87
Date extracted	-			14/02/2023	86	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Date analysed	-			15/02/2023	86	15/02/2023	15/02/2023		15/02/2023	15/02/2023
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	86	<25	<25	0	106	108
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	86	<25	<25	0	106	108
Benzene	mg/kg	0.2	Org-023	<0.2	86	<0.2	<0.2	0	101	109
Toluene	mg/kg	0.5	Org-023	<0.5	86	<0.5	<0.5	0	102	107
Ethylbenzene	mg/kg	1	Org-023	<1	86	<1	<1	0	104	106
m+p-xylene	mg/kg	2	Org-023	<2	86	<2	<2	0	111	110
o-Xylene	mg/kg	1	Org-023	<1	86	<1	<1	0	115	117
Naphthalene	mg/kg	1	Org-023	<1	86	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	97	86	95	100	5	98	95

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	316402-107
Date extracted	-			[NT]	96	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Date analysed	-			[NT]	96	15/02/2023	15/02/2023		15/02/2023	15/02/2023
TRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	96	<25	<25	0	106	103
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	96	<25	<25	0	106	103
Benzene	mg/kg	0.2	Org-023	[NT]	96	<0.2	<0.2	0	106	115
Toluene	mg/kg	0.5	Org-023	[NT]	96	<0.5	<0.5	0	105	106
Ethylbenzene	mg/kg	1	Org-023	[NT]	96	<1	<1	0	104	96
m+p-xylene	mg/kg	2	Org-023	[NT]	96	<2	<2	0	108	100
o-Xylene	mg/kg	1	Org-023	[NT]	96	<1	<1	0	115	109
Naphthalene	mg/kg	1	Org-023	[NT]	96	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	96	92	93	1	95	97

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	106	14/02/2023	14/02/2023		[NT]	[NT]
Date analysed	-			[NT]	106	15/02/2023	15/02/2023		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	106	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	106	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	106	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	106	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	106	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	106	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	106	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	106	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	106	109	101	8	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	316402-87
Date extracted	-			14/02/2023	86	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Date analysed	-			14/02/2023	86	14/02/2023	14/02/2023		14/02/2023	14/02/2023
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	86	<50	<50	0	102	97
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	86	<100	<100	0	111	111
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	86	<100	<100	0	114	104
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	86	<50	<50	0	102	97
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	86	<100	<100	0	111	111
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	86	<100	<100	0	114	104
Surrogate o-Terphenyl	%		Org-020	84	86	85	83	2	82	83

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	316402-107
Date extracted	-			[NT]	96	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Date analysed	-			[NT]	96	15/02/2023	15/02/2023		15/02/2023	15/02/2023
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	96	<50	<50	0	103	102
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	96	<100	<100	0	111	111
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	96	<100	<100	0	114	129
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	96	<50	<50	0	103	102
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	96	<100	<100	0	111	111
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	96	<100	<100	0	114	129
Surrogate o-Terphenyl	%		Org-020	[NT]	96	82	90	9	85	79

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	106	14/02/2023	14/02/2023		[NT]	[NT]
Date analysed	-			[NT]	106	15/02/2023	15/02/2023		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	106	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	106	<100	<100	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	106	<100	<100	0	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	106	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	106	<100	<100	0	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	106	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	106	80	79	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	316402-87
Date extracted	-			14/02/2023	86	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Date analysed	-			14/02/2023	86	14/02/2023	14/02/2023		15/02/2023	14/02/2023
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	90	97
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	87	115
Fluorene	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	93	97
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	86	0.1	<0.1	0	90	90
Anthracene	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	86	0.2	0.2	0	94	98
Pyrene	mg/kg	0.1	Org-022/025	<0.1	86	0.2	0.2	0	95	105
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	86	0.1	0.2	67	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	86	0.1	0.2	67	77	81
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	86	0.2	0.3	40	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	86	0.08	0.08	0	140	120
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	89	86	80	82	2	95	89

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	316402-107
Date extracted	-			[NT]	96	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Date analysed	-			[NT]	96	15/02/2023	15/02/2023		14/02/2023	15/02/2023
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	97	126
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	113	89
Fluorene	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	97	93
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	86	82
Anthracene	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	102	98
Pyrene	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	109	99
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	79	79
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	96	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	96	<0.05	<0.05	0	120	104
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	96	86	90	5	88	96

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	106	14/02/2023	14/02/2023		[NT]	[NT]
Date analysed	-			[NT]	106	15/02/2023	15/02/2023		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	106	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	106	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	106	91	90	1	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	316402-87
Date extracted	-			14/02/2023	86	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Date analysed	-			15/02/2023	86	14/02/2023	14/02/2023		15/02/2023	14/02/2023
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	88	90
HCB	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	86	90
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	77	87
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	89	91
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	86	90
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	96	109
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	86	1.1	1.3	17	108	96
Endrin	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	94	84
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	90	106
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	78	88
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	85	86	86	86	0	93	90

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	316402-107
Date extracted	-			[NT]	96	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Date analysed	-			[NT]	96	15/02/2023	15/02/2023		14/02/2023	15/02/2023
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	86	88
HCB	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	82	88
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	83	83
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	93	91
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	90	88
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	105	98
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	96	108
Endrin	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	74	92
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	98	90
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	78	72
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	96	82	86	5	88	95

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	106	14/02/2023	14/02/2023		[NT]	[NT]
Date analysed	-			[NT]	106	15/02/2023	15/02/2023		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	106	0.2	0.2	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	106	88	88	0	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	316402-87
Date extracted	-			14/02/2023	86	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Date analysed	-			15/02/2023	86	14/02/2023	14/02/2023		15/02/2023	14/02/2023
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	113	123
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	85	79
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	97	136
Malathion	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	110	110
Chlorpyrifos	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	102	98
Parathion	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	117	115
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	123	111
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	85	86	86	86	0	93	90

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	316402-107
Date extracted	-			[NT]	96	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Date analysed	-			[NT]	96	15/02/2023	15/02/2023		14/02/2023	15/02/2023
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	125	101
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	77	83
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	134	85
Malathion	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	106	99
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	94	100
Parathion	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	122	99
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	106	102
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	96	82	86	5	88	95

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	106	14/02/2023	14/02/2023		[NT]	[NT]
Date analysed	-			[NT]	106	15/02/2023	15/02/2023		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	106	88	88	0	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	316402-87
Date extracted	-			14/02/2023	86	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Date analysed	-			15/02/2023	86	14/02/2023	14/02/2023		15/02/2023	14/02/2023
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	86	<0.1	<0.1	0	111	100
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	86	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	85	86	86	86	0	93	90

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	316402-107
Date extracted	-			[NT]	96	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Date analysed	-			[NT]	96	15/02/2023	15/02/2023		14/02/2023	15/02/2023
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	96	<0.1	<0.1	0	123	100
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	96	82	86	5	88	95

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	106	14/02/2023	14/02/2023		[NT]	[NT]
Date analysed	-			[NT]	106	15/02/2023	15/02/2023		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	106	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	106	88	88	0	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	316402-4
Date prepared	-			15/02/2023	2	15/02/2023	15/02/2023		15/02/2023	15/02/2023
Date analysed	-			17/02/2023	2	17/02/2023	17/02/2023		17/02/2023	17/02/2023
Arsenic	mg/kg	4	Metals-020	<4	86	45	47	4	101	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	86	3	3	0	98	[NT]
Chromium	mg/kg	1	Metals-020	<1	86	17	20	16	98	[NT]
Copper	mg/kg	1	Metals-020	<1	86	180	52	110	101	[NT]
Lead	mg/kg	1	Metals-020	<1	86	590	810	31	100	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	86	<0.1	<0.1	0	95	[NT]
Nickel	mg/kg	1	Metals-020	<1	2	2	1	67	99	76
Zinc	mg/kg	1	Metals-020	<1	86	430	780	58	98	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	316402-87
Date prepared	-			[NT]	86	15/02/2023	15/02/2023		15/02/2023	15/02/2023
Date analysed	-			[NT]	86	17/02/2023	17/02/2023		17/02/2023	17/02/2023
Nickel	mg/kg	1	Metals-020	[NT]	86	9	11	20	103	81
Arsenic	mg/kg	4	Metals-020	[NT]	96	8	8	0	106	89
Cadmium	mg/kg	0.4	Metals-020	[NT]	96	<0.4	<0.4	0	102	90
Chromium	mg/kg	1	Metals-020	[NT]	96	10	17	52	104	92
Copper	mg/kg	1	Metals-020	[NT]	96	15	20	29	108	118
Lead	mg/kg	1	Metals-020	[NT]	96	340	470	32	105	124
Mercury	mg/kg	0.1	Metals-021	[NT]	96	<0.1	<0.1	0	86	91
Zinc	mg/kg	1	Metals-020	[NT]	96	250	290	15	100	88

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	316402-107
Date prepared	-			[NT]	96	15/02/2023	15/02/2023		15/02/2023	15/02/2023
Date analysed	-			[NT]	96	17/02/2023	17/02/2023		17/02/2023	17/02/2023
Nickel	mg/kg	1	Metals-020	[NT]	96	7	9	25	109	76
Arsenic	mg/kg	4	Metals-020	[NT]	106	8	8	0	111	81
Cadmium	mg/kg	0.4	Metals-020	[NT]	106	<0.4	<0.4	0	109	88
Chromium	mg/kg	1	Metals-020	[NT]	106	18	16	12	109	81
Copper	mg/kg	1	Metals-020	[NT]	106	29	28	4	114	107
Lead	mg/kg	1	Metals-020	[NT]	106	28	28	0	111	77
Mercury	mg/kg	0.1	Metals-021	[NT]	106	<0.1	<0.1	0	94	88
Zinc	mg/kg	1	Metals-020	[NT]	106	84	83	1	106	71

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	106	15/02/2023	15/02/2023		[NT]	[NT]
Date analysed	-			[NT]	106	17/02/2023	17/02/2023		[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	106	9	8	12	[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	124	8	8	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	124	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	124	18	18	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	124	20	18	11	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	124	34	21	47	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	124	<0.1	<0.1	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	124	68	46	39	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	124	15/02/2023	15/02/2023		[NT]	[NT]
Date analysed	-			[NT]	124	17/02/2023	17/02/2023		[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	124	6	7	15	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	316402-87
Date prepared	-			14/02/2023	86	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Date analysed	-			14/02/2023	86	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	86	<5	<5	0	104	106

QUALITY CONTROL: Misc Soil - Inorg					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	316402-107
Date prepared	-			[NT]	96	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Date analysed	-			[NT]	96	14/02/2023	14/02/2023		14/02/2023	14/02/2023
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	96	<5	<5	0	102	103

QUALITY CONTROL: Misc Soil - Inorg					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	106	14/02/2023	14/02/2023		[NT]	[NT]
Date analysed	-			[NT]	106	14/02/2023	14/02/2023		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	106	<5	<5	0	[NT]	[NT]

QUALITY CONTROL: Metals from Neutral Leaching Fluid ICPMS						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			21/02/2023	[NT]	[NT]	[NT]	[NT]	21/02/2023	[NT]
Date analysed	-			21/02/2023	[NT]	[NT]	[NT]	[NT]	21/02/2023	[NT]
Lead	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]

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

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

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

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

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

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Acid Extractable Metals in Soil:

- The laboratory RPD acceptance criteria has been exceeded for 316402-86 for Cu and Zn. Therefore a triplicate result has been issued as laboratory sample number 316402-128.
- The laboratory RPD acceptance criteria has been exceeded for 316402-96 for Cr. Therefore a triplicate result has been issued as laboratory sample number 316402-129.
- The laboratory RPD acceptance criteria has been exceeded for 316402-124 for Pb. Therefore a triplicate result has been issued as laboratory sample number 316402-130.

Asbestos-ID in soil: NEPM

This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Factual description of asbestos identified in the soil samples: NEPM

Sample 316402-34; Chrysotile & Amosite asbestos identified in 1.3752g of fibre cement material >7mm

Sample 316402-44; Chrysotile asbestos identified in 6.4891g of fibre cement material >7mm

Note: All samples analysed as received. However, sample 316402-36 is below the minimum recommended 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to ASB-001 asbestos subsampling procedure. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab/MPL recommends supplying 40-60g or 500ml of sample in its own container.

Note: Samples 316402-86-97, 99-104, 106-115 were sub-sampled from bags provided by the client.

Project No: 86548.14	Suburb: Burra Park	To: EnviroLab Services
Project Manager: GAR	Order Number:	Sampler: SCG/AJ
Email ashika.iagdish@douglaspartners.com.au; grant.russell@douglaspartners.com.au		Attn: Nancy Zhang
Turnaround time: ☒ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day		(02) 9910 6200

Prior Storage: ☒ Fridge ☐ Freezer ☐ Esky ☐ Shelf **Do samples contain 'potential' HBM?** ☒ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)

Lab ID	Sample ID			Date Sampled	Sample Type	Container Type	Analytes											Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To		S - soil W - water M - Material	G - glass P - plastic	Metals	PAH	TRH & BTEX	OCP/OPP/PCB	Total Phenols	Asbestos - 50 g	Nickel	Zinc	Arsenic	Asbestos - 500 mL	On hold	
1	TP408/0.4			7.2.23	S	G							x					
2	TP408-N2/0.1			7.2.23	S	G							x					
3	TP408-N4/0.1			7.2.23	S	G											x	
4	TP408-E2/0.1			7.2.23	S	G							x					
5	TP408-E4/0.1			7.2.23	S	G											x	
6	TP408-S2/0.1			7.2.23	S	G							x					
7	TP408-S4/0.1			7.2.23	S	G											x	
8	TP408-W2/0.1			7.2.23	S	G							x					
9	TP408-W4/0.1			7.2.23	S	G											x	
10	BD1/20230207			7.2.23	S	G							x					
11	TP463/0.4			7.2.23	S	G								x	x			
12	TP463-N2/0.1			7.2.23	S	G								x	x			
13	TP463-N4/0.1			7.2.23	S	G											x	
14	TP463/E2/0.1			7.2.23	S	G								x	x			

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

Job No: 316402

Date Received: 13/02/23
Time Received: 1745
Received By: CR
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

21°C

Metals to analyse:		LAB RECEIPT	
Number of samples in container:	Transported to laboratory by:	Lab Ref. No: 316402	
Send results to: Douglas Partners Pty Ltd		Received by: CR	
Address:	Phone:	Date & Time: 13/02/23 1745	
Relinquished by: AJ/SCG	Date:	Signed:	

Project No: 86548.14					Suburb: Burra Park					To: EnviroLab Services									
Project Manager: GAR										Dispatch date:									
Lab ID	Sample ID			Date Sampled	Sample Type S - soil W - water M -	Container Type G - glass P - plastic	Analytes											Notes/ Preservation/ Additional Requirements	
	Location / Other ID	Depth From	Depth To				Metals	PAH	TRH & BTEX	OCP/OPP/P CB	Total Phenols	Asbestos - 50 g	Nickel	Zinc	Arsenic	Asbestos - 500 mL	On hold		
15	TP463-E4/0.1			7.2.23	S	G												x	
16	TP463-S2/0.1			7.2.23	S	G									x	x			
17	TP463-S4/0.1			7.2.23	S	G												x	
18	TP463-W2/0.1			7.2.23	S	G									x	x			
19	TP463-W4/0.1			7.2.23	S	G												x	316402
20	BD2/20230207			7.2.23	S	G									x	x			13/02/23
21	TP591-T/0-0.6	0	0.6	7.2.23	S	P											x		CR
22	TP591-TN2/0-0.6	0	0.6	7.2.23	S	P											x		
23	TP591-TN4/0-0.6	0	0.6	7.2.23	S	P												x	
24	TP591-TS2/0-0.6	0	0.6	7.2.23	S	P											x		
25	TP591-TS4/0-0.6	0	0.6	7.2.23	S	P												x	
26	TP591-TS6/0-0.6	0	0.6	7.2.23	S	P												x	
27	TP591-TW2/0-0.6	0	0.6	7.2.23	S	P											x		
28	TP591-TW4/0-0.6	0	0.6	7.2.23	S	P											x		
29	TP591-TE2/0-0.6	0	0.6	7.2.23	S	P											x		
30	TP591-TE4/0-0.6	0	0.6	7.2.23	S	P												x	
31	TP591-TE6/0-0.6	0	0.6	7.2.23	S	P												x	
32	TP604-T/0-0.7	0	0.7	8.2.23	S	P											x		

Project No: 86548.14					Suburb: Burra Park					To: EnviroLab Services								
Project Manager: GAR										Dispatch date:								
Lab ID	Sample ID			Date Sampled	Sample Type S - soil W - water M -	Container Type G - glass P - plastic	Analytes											Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To				Metals	PAH	TRH & BTEX	OCP/OPP/P CB	Total Phenols	Asbestos - 50 g	Nickel	Zinc	Arsenic	Asbestos - 500 mL	On hold	
33	TP604-TN2/0-0.7	0	0.7	8.2.23	S	P										x		
34	TP604-TN4/0-0.7	0	0.7	8.2.23	S	P										x		
35	TP604-TN6/0-0.7	0	0.7	8.2.23	S	P										x		
36	TP604-TS2/0-0.7	0	0.7	8.2.23	S	P										x		
37	TP604-TS4/0-0.7	0	0.7	8.2.23	S	P											x	
38	TP604-TW2/0-0.7	0	0.7	8.2.23	S	P										x		
39	TP604-TW4/0-0.7	0	0.7	8.2.23	S	P											x	
40	TP604-TE2/0-0.7	0	0.7	8.2.23	S	P										x		
41	TP604-TE4/0-0.7	0	0.7	8.2.23	S	P											x	
42	TP602-SP1/0-0.7	0	0.7	8.2.23	S	P										x		
43	TP602-SP2/0-0.8	0	0.8	8.2.23	S	P										x		
44	TP602-SP3/0-0.7	0	0.7	8.2.23	S	P										x		
45	TP602-SP4/0-0.4	0	0.4	8.2.23	S	P										x		316402
46	TP602-SP5/0-0.6	0	0.6	8.2.23	S	P										x		13102/23
47	TP602-SP6/0-0.6	0	0.6	8.2.23	S	P										x		CR2
48	TP599-T/0-1.0	0	1	8.2.23	S	P										x		
49	TP599-TN2/0-1.0	0	1	8.2.23	S	P										x		
50	TP599-TN4/0-1.0	0	1	8.2.23	S	P											x	
51	TP599-TS2/0-1.0	0	1	8.2.23	S	P										x		

Project No: 86548.14					Suburb: Burra Park					To: EnviroLab Services								
Project Manager: GAR										Dispatch date:								
Lab ID	Sample ID			Date Sampled	Sample Type S - soil W - water M -	Container Type G - glass P - plastic	Analytes											Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To				Metals	PAH	TRH & BTEX	OCP/OPP/P CB	Total Phenols	Asbestos - 50 g	Nickel	Zinc	Arsenic	Asbestos - 500 mL	On hold	
52	TP599-TS4/0-1.0	0	1	8.2.23	S	P											x	
53	TP599-TW2/0-1.0	0	1	8.2.23	S	P											x	
54	TP599-TW4/0-1.0	0	1	8.2.23	S	P											x	
55	TP599-TE2/0-1.0	0	1	8.2.23	S	P											x	
56	TP599-TE4/0-1.0	0	1	8.2.23	S	P											x	
57	TP599-TE4/1.0-1.7	1	1.7	8.2.23	S	P											x	
58	TP599-TE6/0-1.0	0	1	8.2.23	S	P											x	
59	ACM-T/0-0.5	0	0.5	9.2.23	S	P											x	
60	ACM-TW2/0-0.5	0	0.5	9.2.23	S	P											x	
61	ACM-TW4/0-0.5	0	0.5	9.2.23	S	P											x	
62	ACM-TE2/0-0.5	0	0.5	9.2.23	S	P											x	316402
63	ACM-TE4/0-0.5	0	0.5	9.2.23	S	P											x	13/02/23
64	ACM-TS2/0-0.5	0	0.5	9.2.23	S	P											x	CR
65	ACM-TS4/0-0.5	0	0.5	9.2.23	S	P											x	
66	ACM-TN2/0-0.5	0	0.5	9.2.23	S	P											x	
67	ACM-TN4/0-0.5	0	0.5	9.2.23	S	P											x	
68	ACM-TN6/0-0.5	0	0.5	9.2.23	S	P											x	
69	ACM-TN8/0-0.5	0	0.5	9.2.23	S	P											x	
70	TP-PACM/0-0.5	0	0.5	9.2.23	S	P											x	

Project No: 86548.14					Suburb: Burra Park					To: EnviroLab Services									
Project Manager: GAR										Dispatch date:									
Lab ID	Sample ID			Date Sampled	Sample Type S - soil W - water M -	Container Type G - glass P - plastic	Analytes											Notes/ Preservation/ Additional Requirements	
	Location / Other ID	Depth From	Depth To				Metals	PAH	TRH & BTEX	OCP/OPP/P CB	Total Phenols	Asbestos - 50 g	Nickel	Zinc	Arsenic	Asbestos - 500 mL	On hold		
71	FM-1/0-1.0	0	1	9.2.23	S	P											x		316402
72	FM-2/0-1.0	0	1	9.2.23	S	P											x		13102/23
73	FM-3/0-1.0	0	1	9.2.23	S	P											x		42
74	FM-4/0-1.0	0	1	9.2.23	S	P											x		
75	FM-5/0-1.0	0	1	9.2.23	S	P											x		
76	TP581-T/0-0.6	0	0.6	9.2.23	S	P											x		
77	TP581-TN2/0-0.6	0	0.6	9.2.23	S	P											x		
78	TP581-TN4/0-0.6	0	0.6	9.2.23	S	P												x	
79	TP581-TE2/0-0.6	0	0.6	9.2.23	S	P											x		
80	TP581-TE4/0-0.6	0	0.6	9.2.23	S	P												x	
81	TP581-TS2/0-0.6	0	0.6	9.2.23	S	P											x		
82	TP581-TS4/0-0.6	0	0.6	9.2.23	S	P												x	
83	TP581-TW2/0-0.6	0	0.6	9.2.23	S	P											x		
84	TP581-TW4/0-0.6	0	0.6	9.2.23	S	P												x	
85	594-G			9.2.23	S	P													Please do ASLP Analysis for Lead leaching
86	GS-1/0.1			7.2.23	S	G & P	x	x	x	x	x	x							combo 8a
87	GS-2/0.1			7.2.23	S	G & P	x	x	x	x	x	x							combo 8a
88	GS-3/0.1			7.2.23	S	G & P	x	x	x	x	x	x							combo 8a
89	GS-4/0.1			7.2.23	S	G & P	x	x	x	x	x	x							combo 8a

Project No: 86548.14					Suburb: Burra Park					To: EnviroLab Services								
Project Manager: GAR										Dispatch date:								
Lab ID	Sample ID			Date Sampled	Sample Type S - soil W - water M -	Container Type G - glass P - plastic	Analytes											Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To				Metals	PAH	TRH & BTEX	OCP/OPP/P CB	Total Phenols	Asbestos - 50 g	Nickel	Zinc	Arsenic	Asbestos - 500 mL	On hold	
90	HS-1/0.1			7.2.23	S	G & P	x	x	x	x	x	x						combo 8a
91	HS-2/0.1			7.2.23	S	G & P	x	x	x	x	x	x						combo 8a
92	HS-3/0.1			7.2.23	S	G & P	x	x	x	x	x	x						combo 8a
93	HS-4/0.1			7.2.23	S	G & P	x	x	x	x	x	x						combo 8a
94	HS-5/0.1			7.2.23	S	G & P	x	x	x	x	x	x						combo 8a
95	HS-6/0.1			7.2.23	S	G & P	x	x	x	x	x	x						combo 8a
96	HS-7/0.1			7.2.23	S	G & P	x	x	x	x	x	x						combo 8a
97	HS-8/0.1			7.2.23	S	G & P	x	x	x	x	x	x						combo 8a
98	BD3/20230207			7.2.23	S	G & P	x	x	x									
99	HBM2-1/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
100	HBM2-2/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
101	HBM2-3/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
102	HBM2-4/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
103	HBM2-5/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
104	HBM2-6/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
105	BD1/20230209			9.2.23	S	G & P	x	x	x									
106	HBM11-1/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
107	HBM11-2/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
108	HBM11-3/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a

Project No: 86548.14		Suburb: Burra Park		To: EnviroLab Services														
Project Manager: GAR				Dispatch date:														
Lab ID	Sample ID			Date Sampled	Sample Type S - soil W - water M -	Container Type G - glass P - plastic	Analytes											Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To				Metals	PAH	TRH & BTEX	OCP/OPP/P CB	Total Phenols	Asbestos - 50 g	Nickel	Zinc	Arsenic	Asbestos - 500 mL	Asbestos ID	
109	HBM11-4/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
110	HBM11-5/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
111	HBM11-6/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
112	HBM11-7/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
113	HBM23a-1/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
114	HBM23a-2/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
115	HBM23a-3/0.1			9.2.23	S	G & P	x	x	x	x	x	x						combo 8a
NPR	BD3/20230209			9.2.23	S	G & P	x	x	x									
116	FM-2/0-1.0			9.2.23	M	P											x	ASBESTOS FRAGMENTS
117	TP591-TW2/0-0.6			7.2.23	M	P											x	ASBESTOS FRAGMENTS
118	TP602-SP3/0-0.7			8.2.23	M	P											x	ASBESTOS FRAGMENTS
119	TP602-SP6/0-0.6			8.2.23	M	P												hold
120	TP604-TN4/0-0.7			8.2.23	M	P												hold
121	ACM-T/0-0.5			9.2.23	M	P											x	ASBESTOS FRAGMENTS
122	ACM-T/PACM			9.2.23	M	P												hold
123	HBM2-PACM			9.2.23	M	P											x	Surface material adjacent sampling location
extras received																		
124	BD2/20230209				126	TP591-T/0-0.6												
125	BD1/20230207				127	TP604-TN2												

TP604/TN2/0-0.7

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Ashika Jagdish, Grant Russell

Sample Login Details

Your reference	86548.14, Burra Park
Envirolab Reference	316402
Date Sample Received	13/02/2023
Date Instructions Received	13/02/2023
Date Results Expected to be Reported	21/02/2023

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	119 Soil, 8 Material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	21
Cooling Method	None
Sampling Date Provided	YES

Comments

Missing BD3/20230209

Extra samples
 BD2/20230209
 BD1/20230207
 TP591-T/0-0.6
 TP604/TN2/0-0.7

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	Asbestos ID - soils NEPM	Asbestos ID - materials	Metals from Neutral Leaching Fluid ICPMS	On Hold
TP408/0.4							✓						
TP408-N2/0.1							✓						
TP408-N4/0.1													✓
TP408-E2/0.1							✓						
TP408-E4/0.1													✓
TP408-S2/0.1							✓						
TP408-S4/0.1													✓
TP408-W2/0.1							✓						
TP408-W4/0.1													✓
BD1/20230207							✓						
TP463/0.4							✓						
TP463-N2/0.1							✓						
TP463-N4/0.1													✓
TP463-E2/0.1							✓						
TP463-E4/0.1													✓
TP463-S2/0.1							✓						
TP463-S4/0.1													✓
TP463-W2/0.1							✓						
TP463-W4/0.1													✓
BD2/20230207							✓						



Envirolab Services Pty Ltd

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12 Ashley St Chatswood NSW 2067

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customerservice@envirolab.com.au

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Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	Asbestos ID - soils NEPM	Asbestos ID - materials	Metals from Neutral Leaching Fluid ICPMS	On Hold
TP591-T/0-0.6-0-0.6										✓			
TP591-TN2/0-0.6-0-0.6										✓			
TP591-TN4/0-0.6-0-0.6													✓
TP591-TS2/0-0.6-0-0.6										✓			
TP591-TS4/0-0.6-0-0.6													✓
TP591-TS6/0-0.6-0-0.6													✓
TP591-TW2/0-0.6-0-0.6										✓			
TP591-TW4/0-0.6-0-0.6										✓			
TP591-TE2/0-0.6-0-0.6										✓			
TP591-TE4/0-0.6-0-0.6													✓
TP591-TE6/0-0.6-0-0.6													✓
TP604-T/0-0.7-0-0.7										✓			
TP604-TN2/0-0.7-0-0.7										✓			
TP604-TN4/0-0.7-0-0.7										✓			
TP604-TN6/0-0.7-0-0.7										✓			
TP604-TS2/0-0.7-0-0.7										✓			
TP604-TS4/0-0.7-0-0.7													✓
TP604-TW2/0-0.7-0-0.7										✓			
TP604-TW4/0-0.7-0-0.7													✓
TP604-TE2/0-0.7-0-0.7										✓			



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

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Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	Asbestos ID - soils NEPM	Asbestos ID - materials	Metals from Neutral Leaching Fluid ICPMS	On Hold
TP604-TE4/0-0.7-0-0.7													✓
TP602-SP1/0-0.7-0-0.7										✓			
TP602-SP2/0-0.8-0-0.8										✓			
TP602-SP3/0-0.7-0-0.7										✓			
TP602-SP4/0-0.4-0-0.4										✓			
TP602-SP5/0-0.6-0-0.6										✓			
TP602-SP6/0-0.6-0-0.6										✓			
TP599-T/0-1.0-0-1.0										✓			
TP599-TN2/0-1.0-0-1.0										✓			
TP599-TN4/0-1.0-0-1.0													✓
TP599-TS2/0-1.0-0-1.0										✓			
TP599-TS4/0-1.0-0-1.0													✓
TP599-TW2/0-1.0-0-1.0										✓			
TP599-TW4/0-1.0-0-1.0													✓
TP599-TE2/0-1.0-0-1.0										✓			
TP599-TE4/0-1.0-0-1.0													✓
TP599-TE4/1.0-1.7-1.0-1.7													✓
TP599-TE6/0-1.0-0-1.0													✓
ACM-T/0-0.5-0-0.5										✓			
ACM-TW2/0-0.5-0-0.5										✓			



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	Asbestos ID - soils NEPM	Asbestos ID - materials	Metals from Neutral Leaching Fluid ICPMS	On Hold
ACM-TW4/0-0.5-0-0.5													✓
ACM-TE2/0-0.5-0-0.5									✓				
ACM-TE4/0-0.5-0-0.5													✓
ACM-TS2/0-0.5-0-0.5									✓				
ACM-TS4/0-0.5-0-0.5													✓
ACM-TN2/0-0.5-0-0.5									✓				
ACM-TN4/0-0.5-0-0.5													✓
ACM-TN6/0-0.5-0-0.5													✓
ACM-TN8/0-0.5-0-0.5													✓
TP-PACM/0-0.5-0-0.5													✓
FM-1/0-1.0-0-1.0									✓				
FM-2/0-1.0-0-1.0									✓				
FM-3/0-1.0-0-1.0									✓				
FM-4/0-1.0-0-1.0									✓				
FM-5/0-1.0-0-1.0									✓				
TP581-T/0-0.6-0-0.6									✓				
TP581-TN2/0-0.6-0-0.6									✓				
TP581-TN4/0-0.6-0-0.6													✓
TP581-TE2/0-0.6-0-0.6									✓				
TP581-TE4/0-0.6-0-0.6													✓



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Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	Asbestos ID - soils NEPM	Asbestos ID - materials	Metals from Neutral Leaching Fluid ICPMS	On Hold
TP581-TS2/0-0.6-0-0.6									✓				
TP581-TS4/0-0.6-0-0.6													✓
TP581-TW2/0-0.6-0-0.6									✓				
TP581-TW4/0-0.6-0-0.6													✓
594-G												✓	
GS-1/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
GS-2/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
GS-3/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
GS-4/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HS-1/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HS-2/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HS-3/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HS-4/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HS-5/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HS-6/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HS-7/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HS-8/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
BD3/20230207	✓	✓	✓				✓						
HBM2-1/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HBM2-2/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				



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Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	Asbestos ID - soils NEPM	Asbestos ID - materials	Metals from Neutral Leaching Fluid ICPMS	On Hold
HBM2-3/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HBM2-4/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HBM2-5/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HBM2-6/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
BD1/20230209	✓	✓	✓				✓						
HBM11-1/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HBM11-2/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HBM11-3/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HBM11-4/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HBM11-5/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HBM11-6/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HBM11-7/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HBM23a-1/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HBM23a-2/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
HBM23a-3/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
FM-2/0-1.0											✓		
TP591-TW2/0-0.6											✓		
TP602-SP3/0-0.7											✓		
TP602-SP6/0-0.6													✓
TP604-TN4/0-0.7													✓



Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	Asbestos ID - soils NEPM	Asbestos ID - materials	Metals from Neutral Leaching Fluid ICPMS	On Hold
ACM-T/0-0.5											✓		
ACM-T/PACM													✓
HBM2-PACM											✓		
BD2/20230209	✓	✓	✓				✓						
BD1/20230213													✓
TP591-T/0-0.6													✓
TP604/TN2/0-0.7													✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

CERTIFICATE OF ANALYSIS

Work Order : **ES2304568**
Client : **DOUGLAS PARTNERS PTY LTD**
Contact : GRANT RUSSELL
Address : UNIT 5/50 TOPHAN ROAD
 SMEATON GRANGE NSW 2567
Telephone : 02 4647 0075
Project : 86548.14
Order number : ----
C-O-C number : ----
Sampler : JH
Site : BURRA PARK
Quote number : EN/222
No. of samples received : 1
No. of samples analysed : 1

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : Cez Bautista
Address : 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone : +61-2-8784 8555
Date Samples Received : 13-Feb-2023 15:25
Date Analysis Commenced : 15-Feb-2023
Issue Date : 17-Feb-2023 10:27



Accreditation No. 825
 Accredited for compliance with
 ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Franco Lentini	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BD3	----	----	----	----
Sampling date / time					09-Feb-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2304568-001	-----	-----	-----	-----
					Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		10.7	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		0.0003	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		0.0003	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		0.0014	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		0.0289	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		0.0016	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		0.0011	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		0.0003	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		0.0008	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BD3	----	----	----	----
Sampling date / time					09-Feb-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2304568-001	-----	-----	-----	-----
					Result	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	----	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		0.0349	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		0.0303	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		0.0330	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		109	----	----	----	----
13C8-PFOA	----	0.0002	%		83.5	----	----	----	----



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

QUALITY CONTROL REPORT

Work Order	: ES2304568	Page	: 1 of 6
Client	: DOUGLAS PARTNERS PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: GRANT RUSSELL	Contact	: Cez Bautista
Address	: UNIT 5/50 TOPHAN ROAD SMEATON GRANGE NSW 2567	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: 02 4647 0075	Telephone	: +61-2-8784 8555
Project	: 86548.14	Date Samples Received	: 13-Feb-2023
Order number	: ----	Date Analysis Commenced	: 15-Feb-2023
C-O-C number	: ----	Issue Date	: 17-Feb-2023
Sampler	: JH		
Site	: BURRA PARK		
Quote number	: EN/222		
No. of samples received	: 1		
No. of samples analysed	: 1		



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Franco Lentini	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4874649)									
ES2304471-043	Anonymous	EA055: Moisture Content	----	0.1	%	7.4	7.3	2.0	No Limit
ES2304588-004	Anonymous	EA055: Moisture Content	----	0.1	%	4.6	4.4	4.1	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4875422)									
ES2304568-001	BD3	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0014	0.0012	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0289	0.0258	11.5	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	0.0016	0.0015	9.9	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4875422)									
ES2304568-001	BD3	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	0.0002	0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0011	0.0011	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0008	0.0008	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4875422)									
ES2304568-001	BD3	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit

Page : 3 of 6
 Work Order : ES2304568
 Client : DOUGLAS PARTNERS PTY LTD
 Project : 86548.14



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4875422) - continued									
ES2304568-001	BD3	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4875422)									
ES2304568-001	BD3	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4875422)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	121	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	79.6	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4875422)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	115	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	120	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	114	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	116	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	121	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.8	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	98.2	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4875422)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	110	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	119	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	99.5	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	105	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	119	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	116	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4875422)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	104	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	102	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	126	65.0	137



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
Method: Compound		CAS Number	LOR		Unit	Result	Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4875422) - continued									
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)		120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	120	69.2	143

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4875422)							
ES2304568-001	BD3	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	110	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	110	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	107	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	102	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	101	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4875422)							
ES2304568-001	BD3	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	119	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	105	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	125	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	117	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	116	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	124	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	111	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	116	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	86.4	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	111	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	106	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4875422)							
ES2304568-001	BD3	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	98.8	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	112	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	117	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	104	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	104	65.1	134

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 Work Order : ES2304568
 Client : DOUGLAS PARTNERS PTY LTD
 Project : 86548.14



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4875422) - continued							
ES2304568-001	BD3	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	109	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	118	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4875422)							
ES2304568-001	BD3	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	93.2	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	123	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	122	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	90.0	69.2	143

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2304568	Page	: 1 of 4
Client	: DOUGLAS PARTNERS PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: GRANT RUSSELL	Telephone	: +61-2-8784 8555
Project	: 86548.14	Date Samples Received	: 13-Feb-2023
Site	: BURRA PARK	Issue Date	: 17-Feb-2023
Sampler	: JH	No. of samples received	: 1
Order number	: ----	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	ES2304568--001	BD3	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) BD3	09-Feb-2023	----	----	----	15-Feb-2023	23-Feb-2023	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) BD3	09-Feb-2023	16-Feb-2023	08-Aug-2023	✓	17-Feb-2023	28-Mar-2023	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) BD3	09-Feb-2023	16-Feb-2023	08-Aug-2023	✓	17-Feb-2023	28-Mar-2023	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) BD3	09-Feb-2023	16-Feb-2023	08-Aug-2023	✓	17-Feb-2023	28-Mar-2023	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) BD3	09-Feb-2023	16-Feb-2023	08-Aug-2023	✓	17-Feb-2023	28-Mar-2023	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) BD3	09-Feb-2023	16-Feb-2023	08-Aug-2023	✓	17-Feb-2023	28-Mar-2023	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	5	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
Preparation Methods	Method	Matrix	Method Descriptions
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.

About this Report

Douglas Partners



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.

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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; and
- 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.