KPMG

Preliminary Site Investgation

771-781 & 783-797 Mamre Road, Kemps Creek, NSW

25 October 2021

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KPMG Quality Assurance Auditing			
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Contents

Table 1 NSW EPA Consultants Reporting on Contaminated Land – Preliminary Site Investigation Checklist

Report Section	Required Information	Included	Section
Document Control	Date, version number, author and reviewer (including certification details) and who commissioned the report	✓	Title document
Executive Summary	Background	✓	Section 1
	Objectives of the investigation	✓	
	Scope of work	✓	
	A summary of key findings, observations and sapling results (if available)	✓	
	Summary of conclusions and recommendations	✓	
Objectives	The objectives of the investigation/report and the broader objectives for the site/investigation	✓	Section 2
Scope of work	Scope of work performed (and work not undertaken where relevant)	✓	Section 2.1
Site identification	Site identification and detail items from ASC NEPM Field Checklist 'Site information' sheet	✓	Section 3.1
Site history	Site history items from ASC NEPM Field Checklist 'Site information' sheet	✓	Section 3.4
Site condition and surrounding environment	Site condition and surrounding environment items from ASC NEPM Field Checklist 'Site information' sheet	✓	Section 3
Conceptual site model	See Table 2(a)	✓	Appendix D
Data quality objectives (if sampling is undertaken)	See Table 2(b)	✓	Section 4
Sampling and analysis plan and sampling methodology (if sampling is undertaken)	See Table 2.2, and note and explain the rationale for any deviations from the plan	✓	Section 6

Report Section	Required Information	Included	Section
Quality assurance/quality control data evaluation (if sampling is undertaken)	See Table 2(c)	✓	Section 6.5
Field and analytical results (if sampling is undertaken)	Summary of previous results, if applicable	✓	Section 7
	A table(s) of analytical results that:	✓	Appendix C
	• shows all essential details such as sample identification numbers and sampling depth	✓	
	• shows assessment criteria	✓	
	• highlights all results exceeding any assessment criteria	✓	
	Summary/discussion of the analytical results table	✓	Section 8
	Sample descriptions for all media where applicable (e.g. soil, sediment, surface water, groundwater, soil vapour, ground gas, indoor air and biota)	✓	Appendix C
	Test pit or bore logs (well construction details where appropriate for example groundwater level expressed in Australian height datum)	✓	Appendix F
	Site plan showing all sample locations	✓	Appendix A
	Site plan(s) showing the extent of soil and groundwater contamination (if known)	✓	Appendix A
Conclusions and recommendations	Summary of all findings and discussion of results	✓	Section 8
	Conclusions addressing the stated objectives	✓	Section 9
	Assumptions used in reaching the conclusions	✓	Section 8
	Extent of uncertainties in the results (quantified where possible)	✓	Section 8
	Recommendations for further work (if appropriate)	✓	Section 9

Table 2 - Glossary of General Terms

Glossary of General Terms	
BTEX	Benzene, toluene, ethylbenzene, xylenes
COCs	Chemicals of concern
CSM	Conceptual site model
DQO	Data quality objective
DGV	Derived Guideline Value
EILs	Ecological Investigation Levels
EPA	NSW Environment Protection Authority
ESI	Environmental Site Investigation
EILs	Ecological Investigation Levels
ESLs	Ecological Screening Levels
HHRA	Human Health Risk Assessment
HILs	Health Investigation Levels
HSLs	Health Screening Levels
LOR	Limit of laboratory reporting
m	Meters
mbgl	Meters below ground level
mbTOC	Meters below top of casing
mg/kg	Milligram per kilogram
NATA	National Association of Testing Authorities
NEPM ASC	National Environment Protection Council (1999) National Environment Protection (Assessment of Site Contamination) Measure (Amended 2013)
OCPs	Organochlorine pesticides
OPPs	Organophosphorous pesticides
PAHs	Polycyclic aromatic hydrocarbons
PCBs	Polychlorinated biphenyls
PFAS	Per- and polyfluoroalkyl substances
PSI	Preliminary Site Investigation
QA/QC	Quality Assurance / Quality Control
RAP	Remedial Action Plan
RPD	Relative percentage difference
TEI	Targeted Environmental Investigation
TPH	Total petroleum hydrocarbons
TRH	Total recoverable hydrocarbons
µg/L	Microgram per litre
UPSS	Underground petroleum storage system
UST	Underground storage tank

1 Executive Summary

KPMG Property & Environmental Services Pty Limited (KPMG) was engaged by GPT to undertake a Preliminary Site Investigation (PSI) at 771-781 & 783-797 Mamre Road, Kemps Creek, NSW (the site). The site is legally described as Lots 23 & 24 in DP258414. KPMG previously produced an Environmental Assessment (EA) report for the site on 19 July 2021 which recommended that an environmental investigation be undertaken at the site prior to redevelopment to assess the presence and nature of chemicals of concern (COCs), including demolition waste, within soil at the site. It is understood that the site includes areas currently zoned "IN1 - General Industrial", "RE1 - Public Recreation", "ENZ - Environmental Zone", and "SP2 – Special Purpose Zone" as defined in the zoning map prepared by Boxall Surveyors dated 17 May 2021.

Based on the information reviewed, it is understood that the site was undeveloped land, likely used for agricultural (e.g. animal grazing) purposes, since at least 1961 until sometime between 1971 and 1983 when the site appeared to be used for rural residential and horticultural (e.g. market garden) purposes. A creek, that runs through the site, appeared to have been partially infilled during the 1960's with potential infilling of a dam at 771-781 Mamre Road. Large areas of the site continued to be used for horticultural (e.g. market garden) purposes until circa 2004, however greenhouse areas, located within the eastern section of 783-797 Mamre Road, continued to be visible until the mid-2010's. Waste materials were noted around residential buildings located across the site from 2004 to 2021, in particular at 771-781 Mamre Road. No publicly available government records were identified to indicate the presence of contamination at the site. The primary areas of environmental concern (AEC) were identified as areas of potential fill importation, vehicle and equipment storage areas, areas where former buildings/structures have been demolished, and former horticultural areas. No offsite sources of COCs have been identified by KPMG.

The PSI involved the sampling of soil from 20 test pits and stockpiled material. Investigation locations targeted the identified AECs and provided general site coverage. Concentrations of organic COCs in all soil samples analysed were below the adopted guidelines with the exception of one (1) soil sample (TP202_0.1-0.2), collected from fill in the north-eastern section of 783-797 Mamre Road, which contained benzo(a) pyrene at a concentration which exceeded the criteria for the protection of ecological receptors. A layer of black gravelly bitumen was noted within this area to a depth of 0.2 mbgl and the elevated concentration of benzo(a) pyrene is likely attributable to bitumen material observed within the soil sample. KPMG expect that this material could be removed from the site by a shallow surface scrape during site preparation earthworks. Concentrations of inorganic COCs in the majority of soil samples analysed were below the adopted guidelines with the exception of zinc within a soil sample (TP07_0.1-0.2) collected from a location within "ENZ - Environmental Zone". The elevated zinc was identified within a layer of fill material containing building demolition waste located in the north-western section of 771-781 Mamre Road within TP07. Large quantities of building demolition waste (e.g. concrete blocks, steel reinforcing bar, bricks) were observed in this area on the edge of an embankment that falls downwards towards a creek that transects the site.

Approximately 12 stockpiles of soil intermixed with building demolition waste and two (2) stockpiles of soil suspected to be natural material, understood to have been illegally dumped, were identified in the north-eastern section of 783-797 Mamre Road in the vicinity of sampling locations SP01, SP02, and SP03. Asbestos cement material fragments were observed on the surface of two (2) of the stockpiles and on the ground surface of the driveway at 783-797 Mamre Road. Plastic sheeting and waste materials were noted on the ground surface of areas formerly used for horticultural (e.g. market garden) purposes at 783-797 Mamre Road.

Buildings and structures suspected as containing hazardous building materials, including asbestos were identified across the site.

Based upon the findings of the PSI, KPMG consider that the site is generally suitable for the industrial, public recreational, and environmental zone land use subject to the following works being undertaken:

- removal of stockpiles, asbestos containing materials, and bitumen (vicinity of sampling location TP202) located in the north-eastern section of 783-797 Mamre Road
- removal of building demolition waste from the north-western section of 771-781 Mamre Road in the vicinity of sampling location TP107
- removal of buildings and structures located onsite
- validation sampling of the above areas following removal to confirm they are suitable for proposed land use.

2 Background, Objective and Scope of Works

KPMG Property & Environmental Services Pty Limited (KPMG) were commissioned by GPT to undertake a Preliminary Site Investigation (PSI) at 771-781 & 783-797 Mamre Road, Kemps Creek, NSW (the site). The site comprises two (2) properties legally described as Lots 23 and 24 in DP258414. KPMG previously produced an Environmental Assessment (EA) report on 19 July 2021 which recommended that an environmental investigation be undertaken at the site prior to redevelopment to assess the presence and nature of chemicals of concern (COCs), including demolition waste, within soil at the site.

2.1 Scope of Works

The following key scope items were included in the PSI:

2.1.1 Desktop Review

- Review of existing relevant documentation.
- Review of site history based on historical aerial photographs.
- Submit and review response from Safework NSW requesting information held on Storage of Hazardous Chemicals.
- Review of environmental site setting including topography, soil, geology, hydrogeology, and hydrology information.
- Review of relevant government databases relating to contaminated land:
  - NSW Environment Protection Authority (EPA) contaminated land record for orders, notices, voluntary management proposals and site audit statements made under the Contaminated Land Management Act 1997 (CLM Act) and actions taken by the EPA under the Environmentally Hazardous Chemicals Act 1985 (EHC Act)
  - NSW EPA public list of notified potentially contaminated sites under Section 60 of the CLM Act
  - NSW EPA public register of licences, convictions, enforceable undertakings and penalty notices made under the Protection of the Environment Operations Act 1997 (POEO Act)
  - NSW EPA Per- and polyfluoroalkyl substances (PFAS) investigation areas
  - Department of Defence PFAS investigation and management areas.

2.1.2 Fieldwork

The following specific fieldworks were undertaken during the PSI:

- location of underground utilities onsite by a subcontractor
- investigation at a total of 20 test pit locations at targeted areas of the site, utilising a small excavator, to at least 0.5 metres into natural soil or refusal is met
- collection of soil samples at each location including from any fill, disturbed or visually impacted layers.
- detailed logging of each location by an experienced scientist including (but not limited to) description of soil texture, colour, inclusions, moisture, odour, pH etc.

- laboratory analysis of soil samples using NATA accredited methods for COCs including heavy metals, total recoverable hydrocarbons (TRH), benzene, toluene, ethyl benzene, xylenes (collectively known as BTEX), polycyclic aromatic hydrocarbons (PAHs), organochlorine/organophosphate pesticides (OCPs/OPPs), phenols, polychlorinated biphenyls (PCBs), and asbestos.

The PSI provides a description of the site layout, use, and associated sources of COCs based on a previous site inspection carried out by KPMG. Details of the past KPMG inspection are detailed below.

Table 3 – Previous KPMG site works

Date	Purpose	Project	Properties
14 May 2021	Environmental assessment inspection	397835	771-781 Mamre Road 783-797 Mamre Road

2.1.3 Reporting

- Provision of this PSI report detailing the findings of the works undertaken and relevant recommendations. The PSI findings have been considered with reference to relevant guidelines including National Environment Protection (Assessment of Site Contamination) Measure 1999 as amended in 2013 (NEPM) guidelines (Reference 1), the NSW EPA (2020) – Consultants Reporting on Contaminated Sites Guidelines, and the State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55) (Reference 2).

2.2 Review of Existing Documentation

The following existing documentation was reviewed as part of this PSI:

Table 4 Information Reviewed

Documents Reviewed	
• Document titled "11220-001-ZONING AREAS" prepared by Boxall Surveyors Pty Ltd, dated 17 May 2021 (Boxall 2021 Reference 10). • KPMG Property and Environmental Services Pty Ltd – Environmental Assessment, 771-781 & 783-797 Mamre Road, Kemps Creek, NSW, dated 19 July 2021 (KPMG 2021 Reference 11).	
Key Findings	
Boxall 2021	• The document illustrates the "current land use zoning" of 771-783 and 783-797 Mamre Road. • General Industrial land use (IN1) zoned areas were located within the eastern section of the site on land fronting Mamre Road. • The remainder of the site is generally zoned Environmental Zone (ENZ) and Public Recreation (RE1) with a strip of land alongside Mamre Road zoned as Special Purpose Zone (SP2). • An extract of the zoning plan within Boxall 2021 is shown in section 3.1.1 with a full copy of Boxall 2021 included within Appendix A.
KPMG 2021	• KPMG was engaged by GPT to undertake an Environmental Assessment (EA) at the site. • The objective of the EA was to assess the potential for current and historical site uses to have resulted in COC impact to underlying soil or groundwater as part of due diligence considerations associated with potential acquisition of the site. KPMG understood that GPT were considering acquiring the site to allow industrial redevelopment.

- A site inspection was undertaken on 14 May 2021 which identified the following key observations:

  771-781 Mamre Road

  - The majority of the property was vacant undeveloped land that was covered by thick grass vegetation.
  - A single storey brick residential building was located in the south-eastern corner of the property with the area surrounding the building used to store heavy vehicles (e.g. trucks). Access was not permitted to areas of the property in close proximity to the residential building.
  - The western undeveloped section of the property was observed to have been historically raised with mounds evident. Close inspection of these mounds was not possible as access was limited due to vegetation growth, however they were expected to be stockpiles of fill which had become overgrown with vegetation.
  - Surface water was noted in low lying areas of the property.

  783-797 Mamre Road

  - Access was not permitted within the property, as such the following observations were made from the street boundary and from accessible areas of 771-781 Mamre Road:
  - The majority of the property appeared to be vacant undeveloped land.
  - Two (2) residential style buildings, of fibre cement construction, were located in the north-eastern section of the property and were surrounded by several outhouse structures. Areas in the vicinity of the buildings appeared to be used to store landscaping equipment, heavy machinery, and scrap material.
  - A third residential style building, also of fibre cement construction, was noted along the eastern section of the southern boundary, approximately 225 metres from the road frontage.
- Potential areas of environmental concern (AECs) which were considered to be potential sources of COC impact to soil/groundwater were:
  - areas of potential fill importation, particularly in proximity to the creek line running through the site and the former dam at 771-781 Mamre Road
  - vehicle and equipment storage areas, particularly around the residential style buildings
  - areas where former buildings/structures have been demolished
  - former horticultural areas, particularly those used for intensive market gardening.
- KPMG recommended that an environmental investigation should be undertaken at the site prior to redevelopment to assess the presence and nature of COCs, including demolition waste, within soil at the site.

3 Site Characteristics

3.1 Site Identification

The site is located at 771-781 and 783-797 Mamre Road, Kemps Creek, NSW (the site). The site comprises two (2) properties legally described as Lots 23 and 24 in DP258414.

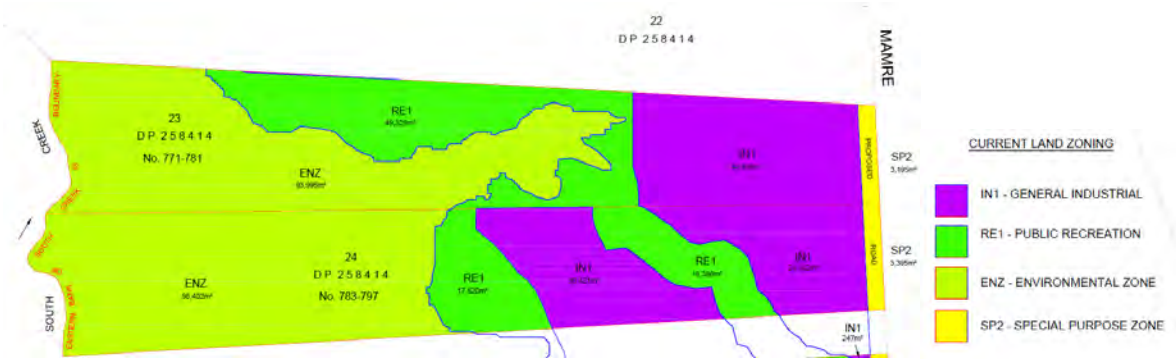
Site and investigation areas details are summarised in Table 5.

Table 5 Site Details

Item	Details
Site Address	771-781 and 783-797 Mamre Road, Kemps Creek, NSW
Land Identifier	Lots 23 and 24 in DP258414
Site Area	Approximately 385,614 m^2
Local Government Authority	Penrith City Council
Zoning	See section 3.1.1
Site Locality Map	Figure 1
Investigation Locations Map	Figure 2

3.1.1 Zoning

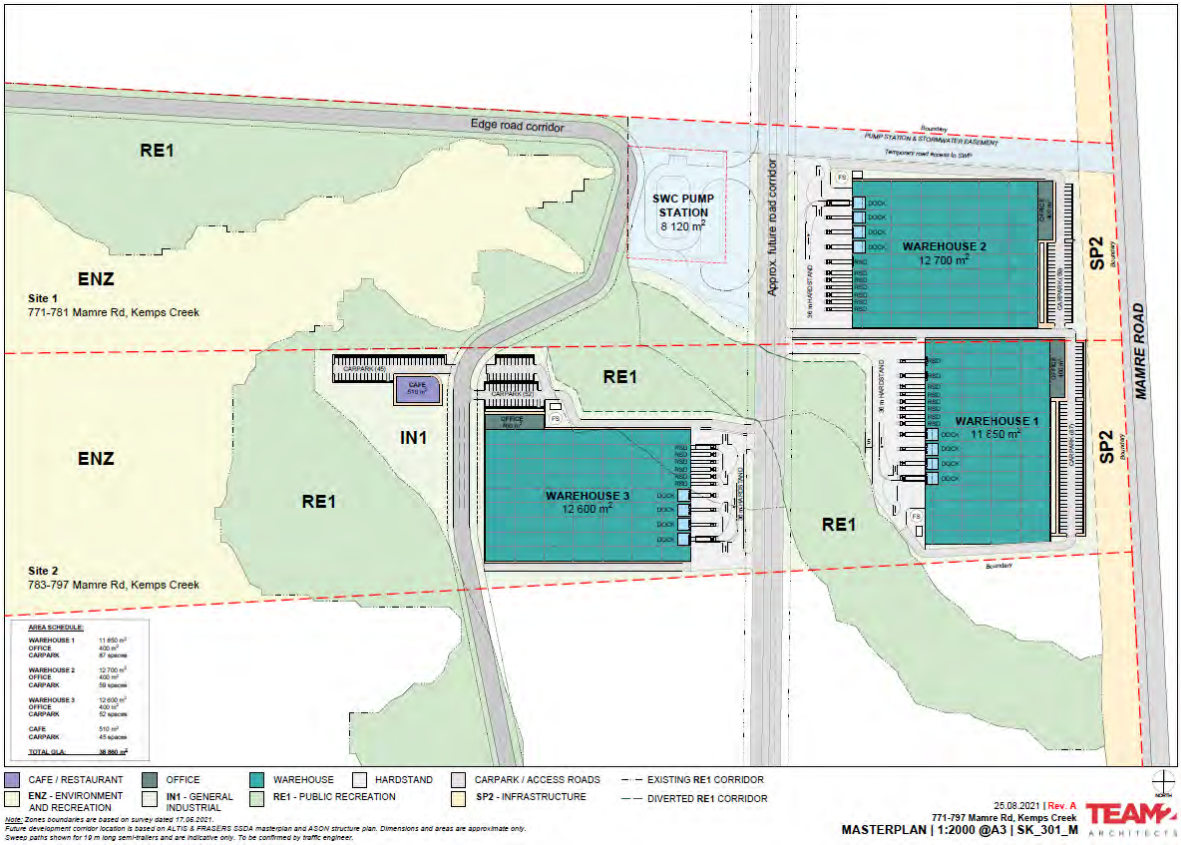
It is understood that the site includes areas currently zoned "IN1 - General Industrial", "RE1 - Public Recreation", "ENZ - Environmental Zone", and "SP2 – Special Purpose Zone" as defined in the zoning map prepared by Boxall Surveyors dated 17 May 2021 (Reference 10). An extract of the zoning map is provided below with a full copy included within Appendix A.



Extract from Boxall Surveyors Zoning Map dated 17 May 2021.

3.1.2 Proposed Development

It is understood that GPT intend to redevelop eastern areas of the site for industrial use as illustrated by the masterplan prepared by Team2 Architects dated 25 August 2021 (Reference 9). An extract of the masterplan is provided below with a full copy included within Appendix A.



Team2 Architects Site Masterplan dated 25 August 2021.

3.2 Environmental Setting

A summary of the environmental setting of the site and surrounding area is provided in Table 6.

Table 6 Environmental Setting

Element	Description
Topography	In general, the topography of the site falls from east to west towards South Creek. South Creek is located approximately 1.1 km west of Mamre Road and forms the western boundary of the site. The site is located between approximately 41 metres Australian Height Datum (mAHD) and 34 mAHD.
Hydrology	The vast majority of the site is unsealed. An unnamed tributary of South Creek bisects the site in an approximate south-east to north-west orientation. It is anticipated that the majority of stormwater falling on the site would drain to ground through unsealed areas and/or drain into the abovementioned tributary.
Soils	The soil profile of the site and the surrounding region has been classed by the Australian Soil Resource Information System (ASRIS Reference 7) as Kurosols, which are defined by the CSIRO Atlas of Australian Soils as soils with a clear or abrupt textural B horizon and in which the major part of the upper 0.2 m of the B2 horizon is strongly acid. Based upon the ASRIS (Reference 7), the site lies within an area with an extremely low probability of acid sulfate soils. Based upon the NSW Government Sharing and Enabling Environmental Data (SEED) acid sulphate soil map (reference 12), the site lies within an area not assessed as having an acid sulfate soil risk.

Element	Description
	In general, subsurface conditions encountered during the PSI fieldworks consisted of reworked sandy clay to an average depth of 0.3 metres below ground level (mbgl) overlying natural clays. A shallow layer (up to 0.2 mbgl) of fill material was observed in locations in close proximity to the residential buildings.
Geology	The geology underlying the site, as described in the Geological Survey NSW (1958) – Sydney 1:250,000 Geological Sheet S1 56-5 (Reference 3), indicates that approximately two thirds of the western section of the site is underlain by Quaternary aged sediments, whereas the eastern third of the site overlies Bringelly shale. The fieldworks undertaken during the PSI encountered the abovementioned geology.
Hydrogeology	A search of the Bureau of Meteorology – Australian Groundwater Explorer did not identify registered groundwater wells within a 1km radius of the site. The nearest registered groundwater bore was located approximately 1.7 km north of the site and was installed to a depth of 0.75 metres below ground level (mbgl) for monitoring purposes. KPMG are aware of two (2) groundwater wells which are located approximately 350 to 400 metres east of the site at 772-782 and 754 Mamre Road. The depth to groundwater within these wells was previously measured by KPMG to be approximately 3 to 4 mbgl. KPMG identified one (1) existing groundwater well onsite at 771-781 Mamre Road. No details of the well or hydrogeological information was provided.
Summary	Based on the soil, geological and hydrogeological review, the site is expected to be underlain by clay, shale, and quaternary aged sediments with an approximate depth to groundwater being less than 3 mbgl. The potential migration of COCs within this geological system is expected to be moderate.

3.3 Review of Government Information

3.3.1 Search of EPA Contaminated Land Registers

A search of the NSW EPA record of notices under section 58 of the Contaminated Land Management Act 1997 (CLM Act), undertaken on 13 September 2021, has identified that the site is not:

- the subject of an order made under Part 3 of the CLM Act
- the subject of an approved voluntary management proposal under Section 17 of the CLM Act that has not been fully carried out and where the approval of the EPA has not been revoked
- the subject of a site audit statement provided to EPA under section 53B of the CLM Act that relate to significantly contaminated land
- the subject of actions taken by the EPA under section 35 or 36 of the Environmentally Hazardous Chemicals Act 1985 (EHC Act).

A search of the NSW EPA List of NSW contaminated sites notified to EPA under section 60 of the CLM Act, undertaken on 13 September 2021, did not identify a listing for the site.

3.3.2 Search of Public Register of POEO Licences

A search of the public register of licenses issued under the Protection of the Environment Operations Act 1997 (POEO), undertaken on 13 September 2021, did not identify any licenses or prosecutions regarding the site.

3.3.3 NSW EPA PFAS investigation areas

A review of the NSW EPA PFAS investigation areas was carried out on 13 September 2021 which identified that the site is not within a current NSW EPA PFAS investigation area.

3.3.4 Department of Defence PFAS investigation and management areas

A review of the Department of Defence PFAS investigation and management areas was carried out on 13 September 2021 which identified that the site is not within a current Department of Defence PFAS investigation and management area.

3.3.5 SafeWork Stored Chemical Inventory Database

A search for information on Storage of Hazardous Chemicals held by SafeWork NSW was submitted on 7 September 2021 for the site. A response was received on 25 October 2021 and is included in Appendix H. The search did not locate any records relating to the storage of hazardous chemicals at the site.

3.4 Historical Site Use

The following provides a summary of site use following a review of available historical aerial photos obtained from the NSW Government Spatial Collaboration Portal, Google Earth, and Nearmap:

- **1961** - the site appeared to be vacant land likely used for agricultural (e.g. animal grazing) purposes. A creek ran from east to west across the site with 771-781 Mamre Road containing a large dam along the creek-line.
- **1971** – the site remained vacant, however the creek within the site appeared less prominent (likely partially infilled) and the dam at 771-781 Mamre Road was no longer visible (likely infilled).
- **1983** – a residential-style building, with various outbuildings, had been constructed in the north eastern corner of 783-797 Mamre Road. Areas of land in the eastern and western sections of 783-797 Mamre Road appeared to be used for horticultural (e.g. marketing gardening) purposes, with the remainder of the site appearing to remain generally used for agricultural (e.g. animal grazing) purposes.
- **1991** – a residential-style building, with various outbuildings, had been constructed in the south eastern corner of 771-781 Mamre Road. The horticultural activities in the eastern section of 783-797 Mamre Road appeared to have intensified with additional buildings, including an additional residential-style building, and structures (e.g. greenhouses) constructed.
- **1998** – a large proportion of the eastern section, and part of the westernmost section, of 771-781 Mamre Road appeared to be used for horticultural activities and an area of disturbed ground (possible stockpile) was visible in the north western section.
- **2004** – the ground appeared to have been disturbed or scalded across a large proportion of the eastern section, and part of the westernmost section, of 771-781 Mamre Road with horticultural activities appearing to have ceased. A small dam had been formed in proximity to the greenhouses at 783-797 Mamre Road with evidence of demolition of some structures with associated waste materials visible.
- **2009** – a number of trucks were visible around the residential-style building at 771-781 Mamre Road.
- **2012** – the horticultural activities at 783-797 Mamre Road appeared to have ceased with the greenhouses appearing to be in a state of disrepair.
- **2016** – the area around the residential-style building at 771-781 Mamre Road appeared to be covered in various waste materials.

- **2017** – the waste materials around the residential-style building at 771-781 Mamre Road appeared to have been removed along with some of the outbuildings; there was evidence of shallow earthworks having been undertaken in the area.
- **2019 to 2021** – truck activity was observed on the north eastern section of 783-797 Mamre Road west of the residential-style building fronting Mamre Road. A stockpile of soil material and various waste material were noted in the area.

3.5 Initial Site Inspection Observations

KPMG initially inspected the site on 14 May 2021 during the Environmental Assessment (Reference 11). For the purposes of describing the inspection, the site has been described on a per property basis as detailed below:

- Northern property 771-781 Mamre Road – mostly vacant and part rural residential
- Southern property 783-797 Mamre Road – mostly vacant and part rural residential.

Northern property – 771-781 Mamre Road

- The majority of the property was vacant undeveloped land that was covered by thick grass vegetation.
- A single storey brick residential building was located in the south-eastern corner of the property with the area surrounding the building used to store heavy vehicles (e.g. trucks). Access was not permitted to areas of the property in close proximity to the residential building.
- The western undeveloped section of the property was observed to have been historically raised with mounds evident. Close inspection of these mounds was not possible as access was limited due to vegetation growth, however they were expected to be stockpiles of fill which had become overgrown with vegetation.
- Surface water was noted in low lying areas of the property.

Southern property – 783-797 Mamre Road

Access was not permitted within the property, as such the following observations were made from the street boundary and from accessible areas of 771-781 Mamre Road:

- The majority of the property appeared to be vacant undeveloped land.
- Two (2) residential style buildings, of fibre cement construction, were located in the north-eastern section of the property and were surrounded by several outhouse structures. Areas in the vicinity of the buildings appeared to be used to store landscaping equipment, heavy machinery, and scrap material.
- A third residential style building, also of fibre cement construction, was noted along the eastern section of the southern boundary, approximately 225 metres from the road frontage.

3.6 Potentially Contaminating Activities

Based on a review of information, the following potentially contaminating activities have been identified at the site:

- areas of potential fill importation
- vehicle and equipment storage areas
- areas where former buildings/structures have been demolished

- former horticultural areas, particularly those used for intensive market gardening.

These activities are considered to be potential sources of COC impact at the site. Further details are presented in Table 8.

Table 7 Potentially Contaminating Activities

Potentially Contaminating Activity	Description	Potentially affected media	Potential Chemicals of Concern
Areas of potential fill importation	Areas of potential fill importation were identified in proximity to the creek line running through the site, the former dam at 771-781 Mamre Road, and the rear of the residential style building on the north-eastern corner of 783-797 Mamre Road.	Soil	Heavy metals, TRH, BTEX, PAHs and asbestos.
Vehicle and equipment storage areas	Vehicle and equipment storage areas were noted around the residential style buildings located at the site.	Soil	Heavy metals, TRH, BTEX, PAHs, phenols and PCBs.
Demolition of buildings/structures	Former buildings/structures at the site have been demolished.	Soil	Heavy metals, PCBs and asbestos
Horticulture	Large areas of the site were historically used for horticultural (market garden) activities.	Soil	Heavy metals and OCPs/OPPs

4 Data Quality Objectives

Development of data quality objectives (DQOs) for each project is a requirement of National Environment Protection Council (NEPC) (1999) – *National Environment Protection (Assessment of Site Contamination) Measure 1999 (Amended 2013)* (NEPM ASC) (Reference 1). This is based on a DQO process formulated by the United States Environmental Protection Agency (USEPA) for contaminated land assessment and remediation. The method provides sound guidance for a consistent approach in understanding site assessment and remediation.

The DQO process has seven steps. Each of these steps has been given due consideration in the undertaking of this project. In brief, these steps are:

Step 1: State the problem and establish the DQO team.

Step 2: Determine the possible and probable actions that will resolve the problems.

Step 3: Identify the informational inputs to assist in the problem resolution.

Step 4: Define the boundaries of the study (geographical, temporal, etc.).

Step 5: Develop and define decision rules.

Step 6: Specify tolerable limits to reduce probability of incorrect decisions.

Step 7: Ensure the quality of the information obtained.

Step 1 — State the Problem

KPMG understand that GPT initially require the PSI for due diligence purposes and are also likely to submit the PSI to the development consent authority as a part of a future Development Application for redevelopment of the site for an industrial land use. The purpose of the PSI is to assess potential for site soils and groundwater to be impacted by COCs and the suitability of the site for its intended land use.

Step 2 — Identify the Decision

The principal decisions to be made are:

- What are the potential COCs associated with the site?
- What are the potential migration pathways for these COCs?
- What are the suitable investigation criteria for the current land use?
- Are concentrations of the nominated COCs within soil above the site criteria when evaluated using the nominated decision rules?
- Do concentrations of the nominated COCs at the targeted sample locations render the investigation area unsuitable for proposed land use from the perspective of protection of human health or the environment?
- Do concentrations of the nominated COCs at the targeted sample locations indicate that significant soil and/or groundwater remediation be required in order to redevelop the site?

Step 3 — Identify the Inputs to the Decision

The study inputs comprised existing information and information collected during the site investigation. These included:

- review of documentation (Section 2.2)
- review of environmental setting (Section 3.2)
- observations made during the field investigations (Section 6.3)
- laboratory results using NATA accredited methods (Section 7 and Appendix C)
- consideration of laboratory results with reference to relevant guidelines (Section 7).

Step 4 — Define the Study Boundaries

The decision scale will be limited to the investigation locations presented on Figure 2.

The following are the primary COCs subject to investigation:

- heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc)
- total recoverable hydrocarbons (TRH)
- benzene, toluene, ethyl-benzene and xylenes (collectively known as BTEX)
- polycyclic aromatic hydrocarbons (PAHs)
- polychlorinated biphenyls (PCBs)
- organochlorine and organophosphorous pesticides (OCPs/OPPs)
- phenols
- asbestos.

Practical constraints to the collection of data include:

- the client brief
- the financial budget consistent with the requirements of the assessment
- the limited timeframe of the investigation
- excavation techniques
- access constraints posed by existing infrastructure on site
- the health and safety issues posed by sampling around underground services and infrastructure.

The physical boundaries of the investigation areas were limited to the soil sampling points depicted in Figure 2, Appendix A. The study is limited to site conditions at the time of the investigation.

Step 5 — Develop and Define Decision Rules

Under the DQO process, it is important to nominate action levels for decision making.

In order to make a correct decision, the input laboratory data obtained needs to be confirmed to be suitable. It is recommended that at least 5 percent of samples (1 in 20) from a site should be collected in duplicate. For split samples, because of error associated with field splitting, a relative percentage difference (RPD) of between <50% and <150% (depending on the substance) will be allowed as the measurement data quality indicators (MDQI). Any value >50% RPD will be noted and discussed, as per Standards Australia requirements, with respect to its acceptability for inclusion in the data-set. These are summarised as the MDQIs presented in Appendix E, which will be used to establish whether the DQOs have been met.

It should be noted that NEPM ASC references Standards Australia AS 4482.1 (Reference 1), which specifies MDQIs for precision should be ≤50% RPD. However, they also acknowledge that low concentrations and organic compounds in particular can be acceptably outside this range. AS 4482.1 (Reference 4) suggests that ≤50% RPD be used as a 'trigger' and values above this level of repeatability need to be noted and explained.

Table 8 Measurement Data Quality Indicators

Data Quality Indicators	Acceptance Criteria
Intralab duplicates	The RPDs will be assessed as acceptable if less than or equal to 50% - 150%. Where the results shows greater than 50% difference a review of the cause will be conducted (NEPM, 2013). It is noted that RPDs that exceed this range may be considered acceptable where: • results are less than 5 times the LOR (no limit) • results are <80-150% for low level (<10 x LOR) • results are <80-150% for medium to high level (>10 x LOR) • heterogeneous materials are encountered.
Laboratory duplicates	RPDs less than: • 20% for high level laboratory duplicates (i.e. >20 x LOR) • 50% for medium level laboratory duplicates (i.e. 10 to 20 x LOR)
Matrix spikes	Recoveries between 70-130% of the theoretical recovery or as nominated in the laboratory's QC report, based on their historical database.
Method blanks	Less than the laboratory LOR.
Laboratory control samples	Recoveries between laboratories specified range for each particular analyte / analytical suite.
Trip Blanks	Not collected during the investigation.
Rinsate blanks	Not collected during the investigation.

Step 6 — Specify Tolerable Limits on Decision Errors

There are two types of decision errors. If one assumes that the site is impacted by COCs (the null hypothesis):

- deciding that the site is not impacted when it actually is (Type I error). The consequence of this error may be unacceptable ecological or health risk for users of the site
- deciding that the site is impacted when it is not (Type II error). The consequence of this error is that the client or a future potential owner may pay for further investigation / remediation that is not necessary.

Step 7 — Optimise the Deign

During the DQO process the sampling deign was optimised through several iterations. Optimisation of the design included evaluating Steps 1-6 of the DQO process. The following are the key steps taken to optimise the sample deign:

- revisions of intrusive investigation locations on site prior to excavation works taking into account access constraints, location of underground services, infrastructure and health and safety considerations
- revision of conceptual site model (CSM) at each stage of the investigation process.

The final field program and sampling pattern is considered optimal taking into account the purpose of the investigation, access constraints, budget and temporal limitations. A detailed discussion on the sampling program is presented in Appendix E.

5 Investigation Levels

5.1 Statutory Guidelines

There are a number of statutory and approved guidelines which have been made or approved by the NSW Environment Protection Authority (EPA) which are relevant to the PSI, including:

Statutory Guidelines

- NSW EPA Consultants Reporting on Contaminated Land – Contaminated Land Guidelines 2020 (Reference 5)
- State Environmental Planning Policy 55 (SEPP 55) – Remediation of Land (Reference 2)

Approved Guidelines

- National Environmental Protection Council (NEPC) National Environment Protection (Assessment of Site Contamination) Measure 1999 as amended in 2013 (NEPM ASC) (Reference 1).

5.2 National Environmental Protection Measure (NEPM)

The National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM 1999) (Reference 1) is made under the National Environment Protection Council Act 1994 and was developed to establish a nationally consistent approach to the assessment of site contamination to ensure sound environmental management practices by the community which includes regulators, site assessors, environmental auditors, landowners, developers and industry. The NEPM 1999 was amended on 16 May 2013, with subsequent national implementation, and is referred to within this report as NEPM ASC.

The NEPM ASC Schedule B1 – Guideline on Investigation Levels for Soil and Groundwater provides a framework for the use of investigation and screening levels for soil, soil gas and groundwater. The framework is based on a matrix of human health, ecological and groundwater investigation and screening levels in conjunction with guidance for specific COCs. The investigation levels and screening levels presented in the NEPM ASC are the concentrations of a COC above which further appropriate investigation and evaluation would be required.

The NEPM ASC guidelines relevant to this assessment include:

- **Health Investigation Levels (HILs)** - for a broad range of metals and organic substances in soil. The HILs are applicable for assessing human health risk via all relevant pathways of exposure – applicable.
- **Health Screening Levels (HSLs)** - for selected petroleum compounds and fractions and are applicable to assessing human health risk via the inhalation pathway – applicable.
- **Ecological Investigation Levels (EILs)** - for selected metals and organic substances and are applicable for assessing risk to terrestrial ecosystems – applicable.
- **Ecological Screening Levels (ESLs)** - for selected petroleum hydrocarbon compounds and total recoverable hydrocarbon (TRH) fractions in soil and are applicable for assessing risk to terrestrial ecosystems – applicable.
- **Petroleum Hydrocarbon Management Limits (Management Limits) -** are applicable to petroleum hydrocarbon compounds in soil only. They are applicable as screening levels following evaluation of human health and ecological risks and risks to groundwater resources – applicable.

5.3 Derivation of Assessment Criteria

It is understood that the site includes areas currently zoned "IN1 - General Industrial", "RE1 - Public Recreation", "ENZ - Environmental Zone", and "SP2 – Special Purpose Zone" as defined in the zoning map prepared by Boxall Surveyors dated 17 May 2021 (Reference 10). The following land uses within NEPM ASC have been applied to sampling locations within each listed zoning, noting that no sampling locations were positioned within the area zoned "SP2 – Special Purpose Zone":

- IN1 – General Industrial = Commercial / Industrial
- RE1 – Public Recreation = Recreational / Urban Residential / Public Open Space
- ENZ – Environmental Zone = Recreational / Residential, parkland and public open space Management Limits / Areas of Ecological Significance.

Application of these investigation and screening levels form the basis of a Tier 1 risk assessment. If concentrations are found to exceed the applicable investigation levels, further investigations and a site-specific risk assessment may be necessary. In the absence of local (Australian) criteria availability for certain chemicals, international criteria is to be used.

5.3.1 Soil Criteria

Health Investigation Levels (HILs)

KPMG has adopted HIL-D values for commercial/industrial land use and HIL-C values for recreational land use.

Health Screening Levels (HSLs)

With consideration to the proposed commercial/industrial, public recreational and ecological zone future land use, HSL-D and HSL-C criteria have been adopted.

Ecological Screening Levels (ESLs)

With consideration to the proposed commercial/industrial, public recreational and ecological zone future land use, HSL-D and HSL-C criteria have been adopted.

Ecological Investigation Levels (EILs)

With consideration to the proposed commercial/industrial future land use, commercial/industrial, urban residential and areas of ecological significance criteria have been adopted.

Petroleum Hydrocarbon Management Limits (Management Limits)

KPMG has adopted the management limits as additional screening levels for petroleum hydrocarbons in soil. Like HILs and HSLs, an exceedance of a Management Limit does not necessarily mean that there is a risk, rather further appropriate evaluation and/or investigation is required. With consideration to the proposed commercial/industrial, public recreational, and ecological zone future land use, commercial/industrial and residential/parkland criteria have been adopted.

5.3.2 Groundwater Criteria

Groundwater has not been assessed by the PSI and therefore groundwater criteria are not applicable.

5.4 Application of Investigation Levels

Table 9 Application of investigation levels

Potential Source of COCs	Media	Applicable Investigation Level
Areas of potential fill importation	Soil	NEPM EILs, ESLs, HSLs and HILs
Vehicle and equipment storage areas		
Demolition of buildings/structures		
Horticulture		NEPM EILs and HILs

The levels of risk associated with these potential sources of COCs is highly dependent on site specific information such as COC constituency and concentrations, subsurface material and the permeability of local soil and rock. These factors are assessed via a desktop study and the field investigation and considered during CSM development.

6 Field Investigation

6.1 Investigation Plan

The fieldwork planning for the investigation considered the project objective, desktop information and initial site inspection observations. The investigation locations targeted potential sources of COCs and were also intended to provide spatial site coverage.

The presence of site structures and underground services influenced the final investigation locations.

Sampling locations are shown in Figure 2. The rationale for sampling locations is presented in Table 12. Further information on the rationale for sampling pattern selection and density is presented in Appendix E. In general, the rationale for location selection was to identify the presence of subsurface COC impact, with consideration given to the conceptual site model.

Table 10 Rationale for investigation locations

Investigation Location	Sample type	Targeting Justification
TP101	Soil	To assess the concentrations of COCs in soil in an area of vehicle and equipment storage
TP102		To assess the concentrations of COCs in soil in an area where former buildings / structures have been demolished
TP103		To assess the concentrations of COCs in soil in an area of potential imported fill
TP104		To assess the concentrations of COCs in soil in an area where former buildings / structures have been demolished
TP105		To assess the concentrations of COCs in soil in an area of potential imported fill
TP106		To assess concentrations of COCs in soil within a former horticultural area
TP107		To assess the concentrations of COCs in soil in an area of potential imported fill
TP108		To assess concentrations of COCs in soil within a former horticultural area
TP109		To assess the concentrations of COCs in soil in an area of potential imported fill
TP110		To assess the concentrations of COCs in soil in an area of potential imported fill
TP201		To assess the concentrations of COCs in soil in an area of vehicle and equipment storage
TP202		To assess the concentrations of COCs in soil in an area of potential imported fill and an area of vehicle and equipment storage
TP203		To assess concentrations of COCs in soil within a former horticultural area
TP204		To assess concentrations of COCs in soil within a former horticultural area
TP205		To assess concentrations of COCs in soil within a former horticultural area
TP206		To assess concentrations of COCs in soil within a former horticultural area
TP207		To assess concentrations of COCs in soil within a former horticultural area and an area of potential imported fill

Investigation Location	Sample type	Targeting Justification
TP208		To assess concentrations of COCs in soil within a former horticultural area
TP209		To assess the concentrations of COCs in soil in an area where former buildings / structures have been demolished
TP210		To assess the concentrations of COCs in soil in an area of potential imported fill
SP01 SP02 SP03		To assess the concentrations of COCs in stockpiled material
MS01 MS02 MS03		To assess for the presence of asbestos in material fragments

6.2 Methodology

Soil sampling was undertaken by a KPMG environmental consultant on 8 and 9 September 2021 and involved the sampling of soil from 20 test pits and also from stockpiled material.

All test pit locations were advanced by a five (5) tonne excavator operated by Dimattia Transport under instruction of KPMG. Soil sampling depths were determined at the discretion of the environmental consultant and with consideration of guidelines referenced in the NEPM ASC (Reference 1).

Each soil sample was collected directly from the test pit wall with disposable nitrile gloves and placed into laboratory provided glass jars with Teflon lined lids with minimal headspace. Each sample container was clearly labelled with the project number, sample location and date of sample collection using a waterproof marker. Upon collection, samples were immediately placed into a chilled cooler for storage and later transport to the laboratory.

Where soil intermixed with building demolition waste was present at TP107, the material was manually screened by spreading a 10 Litre sample over a contrast board and inspected for asbestos material as recommended within Reference 8.

6.3 Field Observations

- Undeveloped sections of the site generally contained topsoil overlying soft reworked natural sandy clay (0 to 0.3 mbgl), overlying firm to stiff natural clay (>0.3 mbgl).
- Areas used for vehicle and equipment storage generally contained gravelly bitumen (0 to 0.2 mbgl) overlying sandy clay fill (0.2 to 0.7 mbgl) overlying firm to stiff natural clay (>0.7 mbgl).
- Fill material containing building demolition waste was observed in the north-western section of 771-781 Mamre Road in the vicinity of sampling location TP107.
- Plastic sheeting and waste materials were noted on the ground surface of areas formerly used for horticultural (e.g. market garden) purposes at 783-797 Mamre Road.
- Approximately 12 stockpiles of soil intermixed with building demolition waste and two (2) stockpiles of soil suspected to be natural material, understood to have been illegally dumped, were identified in the north-eastern section of 783-797 Mamre Road in the vicinity of sampling locations SP01, SP02, and SP03. Asbestos cement material fragments were observed on the

surface of two (2) of the stockpiles and on the ground surface of the driveway at 783-797 Mamre Road.

- No asbestos containing materials (ACMs) were visually identified in soil beneath the surface.

6.4 Laboratory Analysis

All primary and duplicate soil samples were sent to Envirolab Services (Envirolab) laboratory in Sydney, NSW for analysis. A summary of the analytical schedule is presented in Table 14.

Laboratory results are summarised in Table C1 (Appendix C) where they are compared to the investigation levels.

Table 11 Analytical schedule

Date	Media	Sample ID	Maximum sample depth (mbgl)	No. of samples			COCs	Locations
				Primary samples per location	Total primary samples	Intralab duplicate samples		
8 and 9 September 2021	Soil	TP101 to TP110 TP201 to TP210 SP01 to SP03	0.5-0.6	1	16	2	Heavy metals, TRH, BTEX and PAHs	Refer to Figure 2
		TP101 to TP110 TP201 to TP210	0.1-0.2	1	16	0	Heavy metals, TRH, BTEX, PAHs and OCP/OPP	
		TP101 TP201 TP202	0.2-0.3	1	3	0	Heavy metals, TRH, BTEX, PAHs, phenols, PCBs and OCP/OPP	
		TP107	0.1-0.2	1	1	0	Heavy metals, TRH, BTEX, PAHs, phenols, PCBs, OCPs/OPPs and asbestos w/w	
	Material	MS01 to MS03	surface	n/a	3	0	Asbestos fibres	

6.5 Quality Assurance

The quality assurance and quality control (QA/QC) procedures undertaken as part of this project are outlined in Appendix D of this report and procedures are referenced in NEPM ASC (Reference 6). Field procedures were designed to ensure the prevention/minimisation of cross-contamination, analyte loss and to ensure samples and results were representative of actual conditions.

The quality of laboratory data is enhanced by using laboratories with NATA accreditation for the analytical methods used. Envirolab was used for all laboratory analysis of soil and is accredited by NATA for the analysis methods undertaken in this project.

During the PSI two (2) intra-lab soil field duplicate samples were collected and analysed. The results of the duplicate samples were compared to those of the primary samples as a measure of method precision. The calculated RPDs of the duplicate samples were within acceptable ranges.

A detailed discussion on quality procedures and results for this investigation is presented in Appendix E. Based on review of field and laboratory QA/QC results, KPMG conclude that the resultant soil data set is considered to be of sufficient quality for the purpose of this PSI.

7 Laboratory Results

7.1 Soil

The soil analysis results are presented in Table C1 (Appendix C) where they are compared to the adopted investigation levels. The concentrations of COCs within all soil samples analysed were below the adopted investigation levels with the exception of the following:

- the concentrations of benzo(a)pyrene in sample TP202_0.1-0.2 exceeded the criteria for the protection of ecological receptors for commercial/industrial land use
- the concentrations of zinc in sample TP107_0.1-0.2 exceeded the criteria for the protection of ecological receptors for areas of ecological significance.

Exceedances of the investigation levels for soil are illustrated in Figure 3 and Figure 4, Appendix A.

7.2 Material

A total of three (3) material fragments (MS01, MS02, & MS03) were collected and all were confirmed by laboratory analysis to contain asbestos. The sampling locations of the material fragments are presented in Figure 2 and the laboratory analysis results are included in Appendix C.

8 Discussion

8.1 Desktop Review

Based on information reviewed, it is understood that the site was undeveloped land, likely used for agricultural (e.g. animal grazing) purposes, since at least 1961 until sometime between 1971 and 1983 when the site appeared to be used for rural residential and horticultural (e.g. market garden) purposes. A creek, that runs through the site, appeared to have been partially infilled during the 1960's with potential infilling of a dam at 771-781 Mamre Road. Large areas of the site continued to be used for horticultural (e.g. market garden) purposes until circa 2004, however greenhouse areas, located within the eastern section of 783-797 Mamre Road, continued to be visible until the mid-2010's. Waste materials were noted around residential buildings located across the site from 2004 to 2021, in particular at 771-781 Mamre Road.

No publicly available government records were identified to indicate the presence of contamination at the site.

The primary areas of environmental concern (AEC) were identified as areas of potential fill importation, vehicle and equipment storage areas, areas where former buildings/structures have been demolished, and former horticultural areas. No offsite sources of COCs have been identified by KPMG.

8.2 Intrusive Investigation

The PSI involved the sampling of soil from 20 test pits and stockpiled material. Investigation locations targeted the identified AECs and provided general site coverage.

Concentrations of organic COCs in all soil samples analysed were below the adopted guidelines with the exception of one (1) soil sample (TP202_0.1-0.2), collected from fill in the north-eastern section of 783-797 Mamre Road, which contained benzo(a) pyrene at a concentration which exceeded the criteria for the protection of ecological receptors. A layer of black gravelly bitumen was noted within this area to a depth of 0.2 mbgl and the elevated concentration of benzo(a) pyrene is likely attributable to bitumen material observed within the soil sample. KPMG expect that this material could be removed from the site by a shallow surface scrape during site preparation earthworks.

Concentrations of inorganic COCs in the majority of soil samples analysed were below the adopted guidelines with the exception of zinc within a soil sample (TP07_0.1-0.2) collected from a location within "ENZ - Environmental Zone". The concentrations of zinc were identified within a layer of fill material containing building demolition waste located in the north-western section of 771-781 Mamre Road within TP07. Large quantities of building demolition waste (e.g. concrete blocks, steel reinforcing bar, bricks) were observed in this area on the edge of an embankment that falls downwards towards a creek that transects the site.

Approximately 12 stockpiles of soil intermixed with building demolition waste and two (2) stockpiles of soil suspected to be natural material, understood to have been illegally dumped, were identified in the north-eastern section of 783-797 Mamre Road in the vicinity of sampling locations SP01, SP02, and SP03. Asbestos cement material fragments were observed on the surface of two (2) of the stockpiles and on the ground surface of the driveway at 783-797 Mamre Road. Plastic sheeting and waste materials were noted on the ground surface of areas formerly used for horticultural (e.g. market garden) purposes at 783-797 Mamre Road.

Buildings and structures suspected as containing hazardous building materials, including asbestos were identified across the site.

8.3 Conceptual Site Model Analysis

The conceptual site model (CSM) is presented in Appendix D. The CSM has been developed based on the findings of the site investigation and desktop review. This includes a detailed summary of the CSM as well as the source-pathway-receptor analysis and application of relevant investigation levels.

9 Conclusions and Recommendations

Based upon the findings of the PSI, KPMG consider that the site is generally suitable for the industrial, public recreational, and environmental zone land use subject to the following works being undertaken:

- removal of stockpiles, asbestos containing materials, and bitumen (vicinity of sampling location TP202) located in the north-eastern section of 783-797 Mamre Road
- removal of building demolition waste from the north-western section of 771-781 Mamre Road in the vicinity of sampling location TP107
- removal of buildings and structures located onsite
- validation sampling of the above areas following removal to confirm they are suitable for proposed land use.

10 Limitations

This report has been prepared by KPMG in response to and subject to the following limitations:

- The specific instructions received from GPT.
- The specific scope of works, Terms and Conditions and Scope Limitations set out in the Professional Services Agreement between GPT and KPMG dated 30 August 2021.
- The report has been prepared to a specific scope of works as set out in this report.
- May not be relied upon by any third party not named in this report for any purpose except with the prior written consent of KPMG (which consent may or may not be given at the discretion of KPMG).
- This report comprises the formal report, documentation sections, tables, figures and appendices as referred to in the index to this report and must not be released to any third party or copied in part without all the material included in this report for any reason.
- The report only relates to 771-781 & 783-797 Mamre Road, Kemps Creek, NSW (the site) as shown on Figure 2.
- The report relates to the site as at the date of the investigations as conditions may change thereafter due to natural processes and/or site activities.
- No warranty or guarantee is made in regard to any other use than as specified in the scope of works and only applies to the media, locations, samples and the depths tested as reported in this report.
- Other limitations as described under Scope Limitations.

11 References

1. National Environment Protection Council (1999) National Environment Protection (Assessment of Site Contamination) Measure (NEPM) (Amended 2013).
2. NSW Government (2020) - State Environmental Planning Policy 55 (SEPP 55) – Remediation of Land
3. Geological Survey NSW (1991) – Sydney 1:250,000 Geological Sheet S1 56-5.
4. AS4482.1–2005 Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: non-volatile and semi-volatile compounds. Standards Australia.
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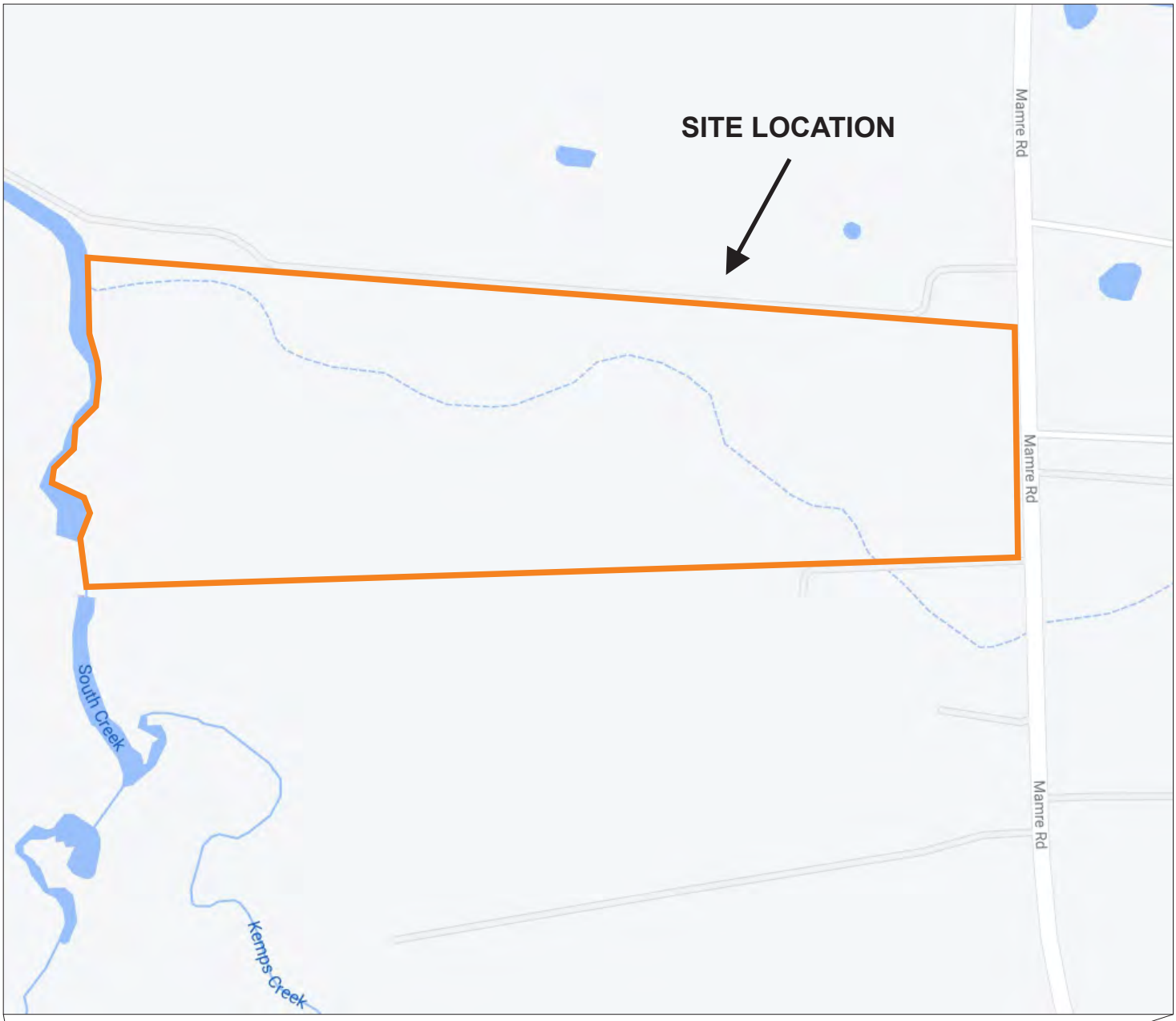
6. AS4482.2–1999 Guide to the sampling and investigation of potentially contaminated soil, Part 2: volatile substances, Standards Australia.
7. CSIRO Australia (2006) Australian Soil Resource Information System (ASRIS). http://www.asris.csiro.au.
8. Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, prepared by the Government of Western Australia, Department of Health, dated May 2009.
9. Team2 Architects - Site Masterplan dated 25 August 2021.
10. Boxall Surveyors – Zoning Map dated 17 May 2021.
11. KPMG Property and Environmental Services Pty Ltd – Environmental Assessment, 771-781 & 783-797 Mamre Road, Kemps Creek, NSW, dated 19 July 2021.
12. NSW Government - Sharing and Enabling Environmental Data (SEED) Acid Sulphate Soil Map. https://geo.seed.nsw.gov.au/Public_Viewer/index.html?viewer=Public_Viewer&locale=en-AU&runWorkflow=AppendLayerCatalog&CatalogLayer=SEED_Catalog.106.

APPENDIX A
FIGURES



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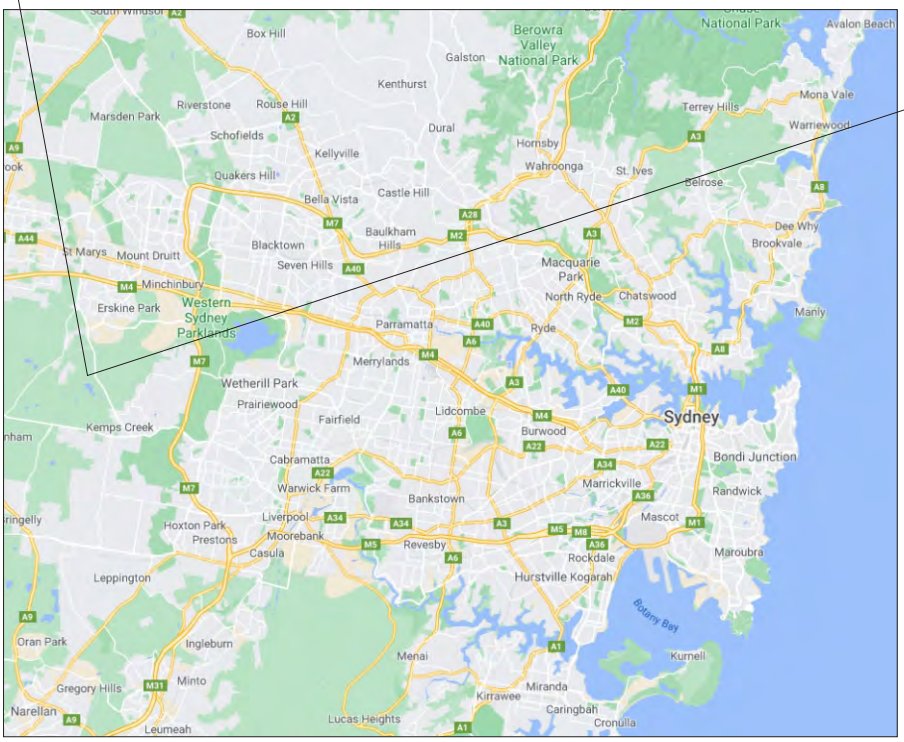

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Source: Google Maps

CLIENT: GPT			
PROJECT: Preliminary Site Investigation 771-781 & 783-797 Mamre Road, Kemps Creek, NSW			
TITLE: Figure 1 - Site Locality			
SCALE: NTS	DATE: 20/09/2021	DRAWING No.: 397835_Figure 1	ISSUE: A
DRAWN: J.L. / CHECKED: J.W.	JOB No.: 397835		

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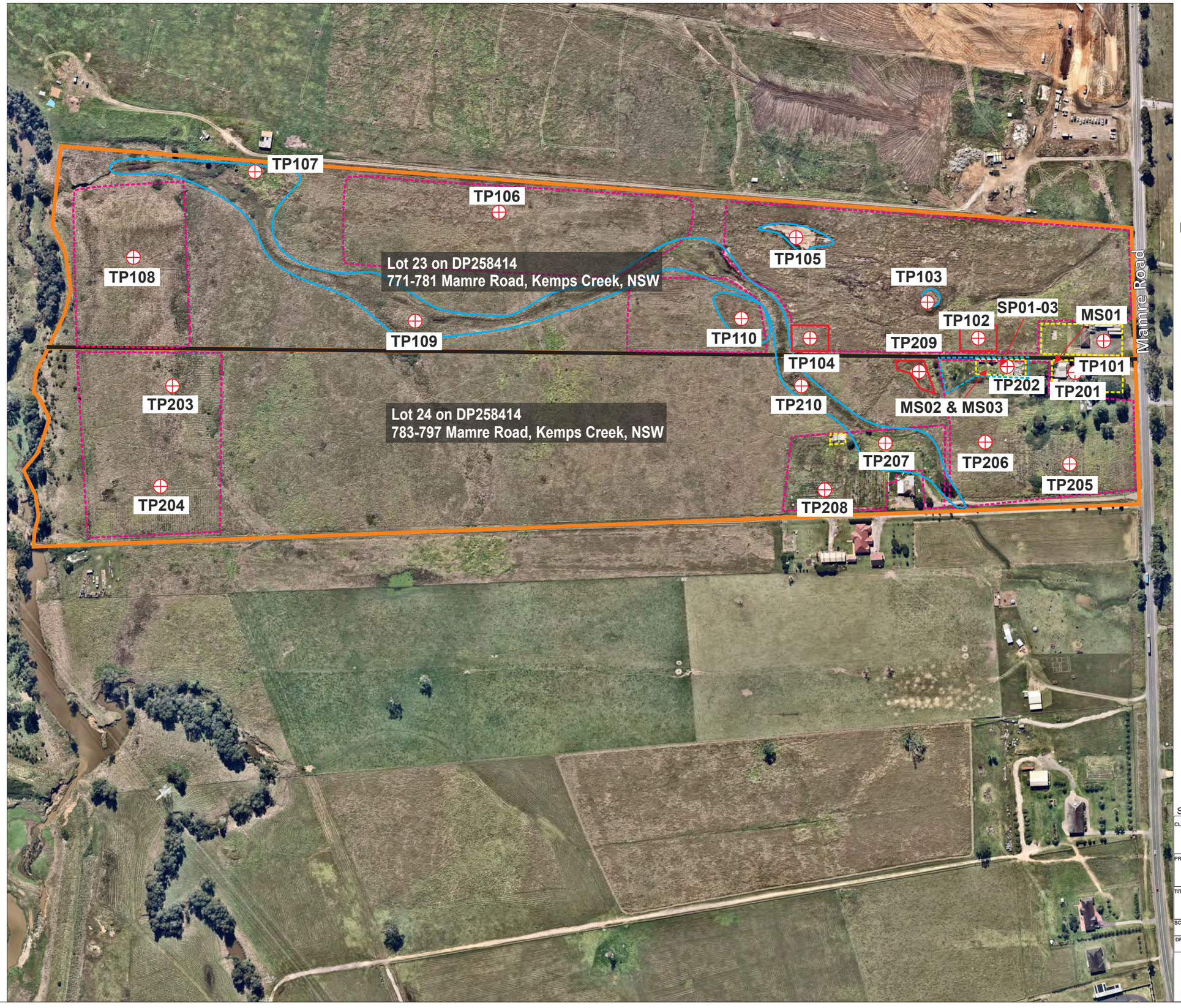

Site Boundary

Property Boundary

Sampling Locations

Test pit sampling location

Note: Sampling locations are approximate

Areas of Environmental Concern

Vehicle & Equipment Storage Areas

Areas of Potential Imported Fill

Former Horticultural Area

Areas where Former Buildings/Structures Demolished

N

0 — 165

Approximate Scale (m)

Source: Nearmap

CLIENT: GPT

PROJECT: Preliminary Site Investigation
771-781 & 783-797 Mamre Road, Kemps Creek, NSW

TITLE: Figure 2 - Sample Locations

SCALE	DATE	DRAWING No.	ISSUE
NTS	23/09/2021	397835 – Figure 2	A

DRAWN	CHECKED	JOB No.
J.L.	J.W.	397835

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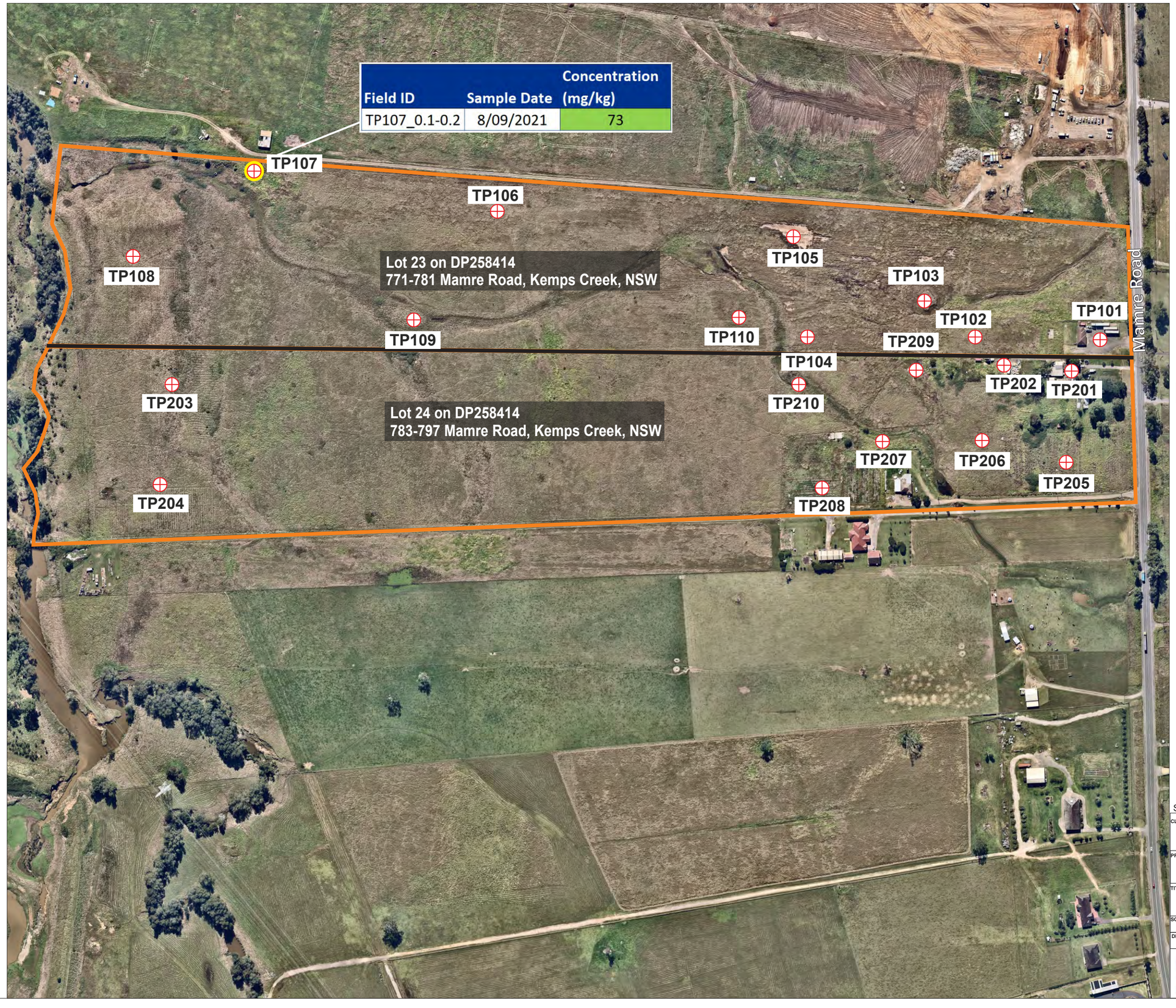

Site Boundary

Property Boundary

Sampling Locations

Test pit sampling location

Note: Sampling locations are approximate

Investigation Level

55 mg/kg — NEPM ASC Calculated EIL for Zinc – Area of Ecological Significance

Zinc Concentration Above EIL

Source: Nearmap

CLIENT
GPT

PROJECT
Preliminary Site Investigation
771-781 & 783-797 Mamre Road, Kemps Creek, NSW

TITLE
Figure 3
Soil Exceedances - Zinc

SCALE	DATE	DRAWING No.	ISSUE
NTS	23/09/2021	397835 – Figure 3	A

DRAWN	CHECKED	JOB No.
J.L.	J.W.	397835

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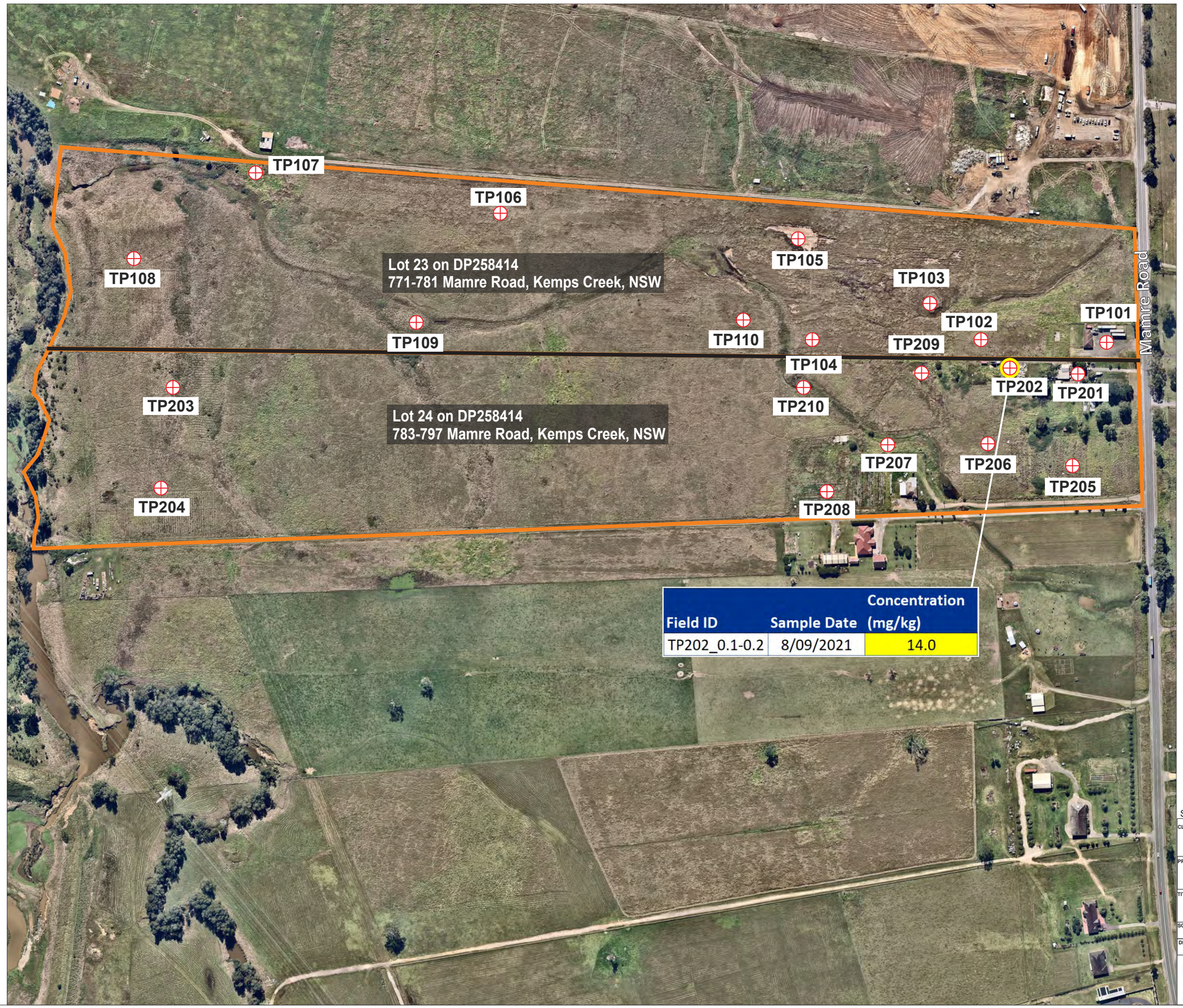

Field ID	Sample Date	Concentration (mg/kg)
TP202_0.1-0.2	8/09/2021	14.0

Site Boundary

Property Boundary

Sampling Locations

Test pit sampling location

Note: Sampling locations are approximate

Investigation Level

1.4 mg/kg — NEPM ASC ESL for benzo(a)pyrene – Commercial/Industrial, fine soil

Benzo(a)pyrene Concentration Above ESL

Source: Nearmap

CLIENT: GPT

PROJECT: Preliminary Site Investigation
771-781 & 783-797 Mamre Road, Kemps Creek, NSW

TITLE: Figure 4
Soil Exceedances - Benzo(a) pyrene

SCALE	DATE	DRAWING No.	ISSUE
NTS	20/09/2021	397835 – Figure 4	A

DRAWN	CHECKED	JOB No.
J.L.	J.W.	397835

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22
D P 2 5 8 4 1 4

MAMRE

MGA2020

CREEK

BOUNDARY

IS

CREEK

23
D P 2 5 8 4 1 4
No. 771-781

RE1
49,328m²

ENZ
93,995m²

IN1
44,879m²

PROPOSED

SP2
3,195m²

SOUTH

OR

BANK

47
D P 270417

SOUTH

EASTERN

ENZ
96,402m²

24
D P 2 5 8 4 1 4
No. 783-797

RE1
17,820m²

IN1
30,421m²

RE1
16,386m²

IN1
28,132m²

ROAD

SP2
3,395m²

IN1
247m²

RE1
7,323m²

WIDENING

SP2
3,496m²

RE1
12,487m²

IN1
54,123m²

26
D P 2 5 8 4 1 4
No. 805-817

ENZ
130,615m²

ROAD

27
D P 2 5 8 4 1 4

28
D P 2 5 8 4 1 4

CURRENT LAND ZONING

- IN1 - GENERAL INDUSTRIAL
- RE1 - PUBLIC RECREATION
- ENZ - ENVIRONMENTAL ZONE
- SP2 - SPECIAL PURPOSE ZONE

NOTES:

1. THE BOUNDARIES SHOWN ON THIS PLAN HAVE BEEN COMPILED FROM DEPOSITED PLANS ON PUBLIC RECORD. NO FIELD SURVEY HAS BEEN UNDERTAKEN TO DETERMINE THE ACCURACY OF THE BOUNDARIES.
2. BOUNDARIES AND AREA ARE SUBJECT TO FINAL SURVEY AND REGISTRATION OF A PLAN OF SURVEY WITH NSW LAND REGISTRY SERVICES.
3. THE ZONE BOUNDARIES ADOPTED WERE SUPPLIED BY THE DEPARTMENT OF PLANNING, INDUSTRY AND ENVIRONMENT DRAWING No. NSW20-0128-01 US R1.DWG.

PRINT IN COLOUR

SHAWN LECLERC
REGISTERED LAND SURVEYOR
BoSSI No. 115

CLIENT: THE GPT GROUP

ADDRESS: 771-797 & 805-817 MAMRE ROAD
KEMPS CREEK

boxall
PO Box 519 Sutherland NSW 1499 | Suite 8/49-51 Eton Street
02 9521 5737 | www.boxallsurveyors.com.au | ACN 114 644 058

TITLE: PLAN SHOWING ZONE AREAS

REV	DATE	REVISION DETAILS

ORIGIN LEVELS:	PM 33567	RL44.262	
AZIMUTH: MGA		DATUM: AHD	
SURVEY: SL		DATE: 17.05.2021	
DRAWN: SL		DATE: 17.05.2021	
APPROVED: SL		DATE: 17.05.2021	
SCALE: 1:2000		SHEET 1 OF 1	
DRAWING No: 11220-001		REV: ----	SIZE: A1

RE1

Edge road corridor

ENZ

Site 1
771-781 Mamre Rd, Kemps Creek

SWC PUMP STATION
8 120 m²

Boundary
PUMP STATION & STORMWATER EASEMENT
Temporary road access to SWP

Approx. future road corridor

FS

DOCK
DOCK
DOCK
DOCK
RSD
RSD
RSD
RSD
RSD
RSD
RSD

36 m HARDSTAND

WAREHOUSE 2
12 700 m²

OFFICE 400 m²

CARPARK (59)

SP2

Boundary

MAMRE ROAD

CARPARK (45)

CAFE
510 m²

RE1

CARPARK (52)

OFFICE
400 m²

FS

IN1

ENZ

RE1

RSD
RSD
RSD
RSD
RSD
RSD
RSD

WAREHOUSE 3
12 600 m²

DOCK
DOCK
DOCK
DOCK

36 m HARDSTAND

RE1

RSD
RSD
RSD
RSD
RSD
RSD
RSD

36 m HARDSTAND

OFFICE 400 m²

WAREHOUSE 1
11 850 m²

DOCK
DOCK
DOCK
DOCK

CARPARK (87)

SP2

Boundary

Boundary

Site 2
783-797 Mamre Rd, Kemps Creek

AREA SCHEDULE:

WAREHOUSE 1	11 850 m²
OFFICE	400 m²
CARPARK	87 spaces
WAREHOUSE 2	12 700 m²
OFFICE	400 m²
CARPARK	59 spaces
WAREHOUSE 3	12 600 m²
OFFICE	400 m²
CARPARK	52 spaces
CAFE	510 m²
CARPARK	45 spaces
TOTAL GLA:	**38 860 m²**

CAFE / RESTAURANT
OFFICE
WAREHOUSE
HARDSTAND
CARPARK / ACCESS ROADS
EXISTING **RE1** CORRIDOR
ENZ - ENVIRONMENT AND RECREATION
IN1 - GENERAL INDUSTRIAL
RE1 - PUBLIC RECREATION
SP2 - INFRASTRUCTURE
DIVERTED **RE1** CORRIDOR

NORTH

Note: Zones boundaries are based on survey dated 17.05.2021.
Future development corridor location is based on ALTIS & FRASERS SSDA masterplan and ASON structure plan. Dimensions and areas are approximate only.
Sweep paths shown for 19 m long semi-trailers and are indicative only. To be confirmed by traffic engineer.

25.08.2021 | **Rev. A**
771-797 Mamre Rd, Kemps Creek
MASTERPLAN | 1:2000 @A3 | SK_301_M

TEAM ARCHITECTS

APPENDIX B
GUIDELINES

Table B1 Health Investigation Levels for Soil Contaminants

Chemical	Health-based Investigation Levels (mg/kg)			
	Residential A [1]	Residential B [1]	Recreational C [1]	Commercial Industrial D [1]
Metals and Inorganics				
Arsenic [2]	100	500	300	3 000
Beryllium	60	90	90	500
Boron	4500	40 000	20 000	300 000
Cadmium	20	150	90	900
Chromium (VI)	100	500	300	3600
Cobalt	100	600	300	4000
Copper	6000	30 000	17 000	240 000
Lead [3]	300	1200	600	1 500
Manganese	3800	14 000	19 000	60 000
Mercury (inorganic)[5]	40	120	80	730
Methyl mercury[4]	10	30	13	180
Nickel	400	1200	1200	6 000
Selenium	200	1400	700	10 000
Zinc	7400	60 000	30 000	400 000
Cyanide (free)	250	300	240	1 500
Polycyclic Aromatic Hydrocarbons (PAHs)				
Carcinogenic PAHs (as BaP TEQ)[6]	3	4	3	40
Total PAHs[7]	300	400	300	4000

1 - HIL A - Residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake (no poultry), also includes childcare centres, preschools and primary schools.
- HIL B - Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.
- HIL C - Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. This does not include undeveloped public open space where the potential for exposure is lower and where a site-specific assessment may be more appropriate.
- HIL D - Commercial/industrial, includes premises such as shops, offices, factories and industrial sites.

2 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability may be important and should be considered where appropriate (refer Schedule B7).

3 Lead: HIL is based on blood lead models (IEUBK for HILs A, B and C and adult lead model for HIL D where 50% oral bioavailability has been considered. Site-specific bioavailability may be important and should be considered where appropriate.

4 Methyl mercury: assessment of methyl mercury should only occur where there is evidence of its potential source. It may be associated with inorganic mercury and anaerobic microorganism activity in aquatic environments. In addition the reliability and quality of sampling/analysis should be considered.

Table B2 Soil-specific added contaminant limits for aged zinc in soil

Zn added contaminant limits (ACL, mg added contaminant/kg)						
***pH*[4]**	***CEC*[5] *(cmol/kg)***					
Areas of ecological significance						
	5	**10**	**20**	**30**	**40**	**60**
4.0	15	20	20	20	20	20
4.5	20	25	25	25	25	25
5.0	30	40	40	40	40	40
5.5	40	60	60	60	60	60
6.0	50	90	90	90	90	90
6.5	50	90	130	130	130	130
7.0	50	90	150	190	190	190
7.5	50	90	150	210	260	280
Urban residential/public open space[1]						
	5	**10**	**20**	**30**	**40**	**60**
4.0	70	85	85	85	85	85
4.5	100	120	120	120	120	120
5.0	130	180	180	180	180	180
5.5	180	270	270	270	270	270
6.0	230	400	400	400	400	400
6.5	230	400	590	590	590	590
7.0	230	400	700	880	880	880
7.5	230	400	700	960	1200	1300
Commercial/industrial						
	5	**10**	**20**	**30**	**40**	**60**
4.0	110	130	130	130	130	130
4.5	150	190	190	190	190	190
5.0	210	290	290	290	290	290
5.5	280	420	420	420	420	420
6.0	360	620	620	620	620	620
6.5	360	620	920	920	920	920
7.0	360	620	1100	1400	1400	1400
7.5	360	620	1100	1500	1900	2000

1 Urban residential/public open space is broadly equivalent to the HIL A, HIL B and HIL C land use scenarios in Table B1.
2 Aged values apply to contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.
3 The EIL is calculated from summing the ACL and the ABC.
4 pH measure using the CaCl2 method (Raymond & Higginson 1992).
5 CEC measured using the silver thiourea method (Chabra et al. 1972).

Table B3 Soil-specific added contaminant limits for aged copper in soil

Cu added contaminant limits (ACL, mg added contaminant/kg)					
Areas of ecological significance					
CEC[5] (cmol/kg) based					
5	**10**	**20**	**30**	**40**	**60**
30	65	70	70	75	80
pH[4] based					
4.5	**5.5**	**6.0**	**6.5**	**7.5**	**8.0**
20	45	65	90	190	270
Urban residential/public open space[1]					
CEC[5] (cmol/kg) based					
5	**10**	**20**	**30**	**40**	**60**
95	190	210	220	220	230
pH[4] based					
4.5	**5.5**	**6.0**	**6.5**	**7.5**	**8.0**
60	130	190	280	560	800
Commercial/industrial					
CEC[5] (cmol/kg) based					
5	**10**	**20**	**30**	**40**	**60**
140	280	300	320	330	340
pH[4] based					
4.5	**5.5**	**6.0**	**6.5**	**7.5**	**8.0**
85	190	280	400	830	1200

1 Urban residential/public open space is broadly equivalent to the HIL A, HIL B and HIL C land use scenarios in Table B1.

2 Aged values apply to contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.

3 The EIL is calculated from summing the ACL and the ABC.

4 pH measure using the CaCl2 method (Raymond & Higginson 1992).

5 CEC measured using the silver thiourea method (Chabra et al. 1972).

Table B4 Soil-specific added contaminant limits for aged chromium III and nickel in soil

Chemical	Clay content (% clay)	Added contaminate limits (mg added contaminant/kg) for various land uses		
		Areas of ecological significance	Urban residential and public open space	Commercial and industrial
Chromium III	**1**	60	190	310
	2.5	80	250	420
	5	100	320	530
	≥10	130	400	660
Nickel	**CEC[a] (cmol/kg)**	**Areas of ecological significance**	**Urban residential and public open space[1]**	**Commercial and industrial**
	5	5	30	55
	10	30	170	290
	20	45	270	460
	30	60	350	600
	40	70	420	730
	60	95	560	960

1 Urban residential/public open space is broadly equivalent to the HIL A, HIL B and HIL C land use scenarios in Table B1.

2 Aged values apply to contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.

3 The EIL is calculated from summing the ACL and the ABC.

a = CEC measured using the silver thiourea method (Chabra et al. 1972).

Table B5 Generic added contaminant limits for lead in soils irrespective of their physiochemical properties

	Pb added contaminant limits (mg added contaminant/kg) for various land uses		
CHEMICAL	**Areas of ecological significance**	**Urban residential/public open space[1]**	**Commercial and industrial**
Lead	470	1100	1800

1 Urban residential/public open space is broadly equivalent to the HIL A, HIL B and HIL C land use scenarios in Table B1.

2 Aged values apply to contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.

3 The EIL is calculated from summing the ACL and the ABC.

Table B6 Generic EIL's for aged As, fresh DDT and fresh naphthalene in soils irrespective of their physiochemical properties

	Ecological Investigation Levels (mg total contaminant/kg)		
CHEMICAL	**Areas of ecological significance**	**Urban residential/public open space[1]**	**Commercial and industrial**
Arsenic[2 4]	40	100	160
DDT[3]	3	180	640
Naphthalene[3 4]	10	170	370

1 Urban residential/public open space is broadly equivalent to the HIL A, HIL B and HIL C land use scenarios in Table B1.

2 Aged values are applicable to arsenic contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.

3 Insufficient data was available to calculate values for DDT and naphthalene, consequently the values for fresh contamination should be used.

4 Insufficient data was available to calculate ACL's for As, DDT and naphthalene. The EIL should be taken directly from Table B7

Table B7 Soil HSLs for vapour intrusion (mg/kg)

	HSL A & HSL B Low – high density residential				HSL C Recreational open space				HSL D Commercial/Industrial				
CHEMICAL	**0 m to <1 m**	**1 m to <2 m**	**2 m to <4m**	**4 m+**	**0 m to <1 m**	**1 m to <2 m**	**2 m to <4 m**	**4 m+**	**0 m to <1 m**	**1 m to <2 m**	**2 m to <4 m**	**4 m+**	**Soil saturation concentration (Csat)**
SAND													
Toluene	160	220	310	540	NL	NL	NL	NL	NL	NL	NL	NL	560
Ethylbenzene	55	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	64
Xylenes	40	60	95	170	NL	NL	NL	NL	230	NL	NL	NL	300
Naphthalene	3	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	9
Benzene	0.5	0.5	0.5	0.5	NL	NL	NL	NL	3	3	3	3	360
F1[9]	45	70	110	200	NL	NL	NL	NL	260	370	630	NL	950
F2[10]	110	240	440	NL	NL	NL	NL	NL	NL	NL	NL	NL	560
SILT													
Toluene	390	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	640
Ethylbenzene	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	69
Xylenes	95	210	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	330
Naphthalene	4	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	10
Benzene	0.6	0.7	1	2	NL	NL	NL	NL	4	4	6	10	440
F1[9]	40	65	100	190	NL	NL	NL	NL	250	360	590	NL	910
F2[10]	230	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	570
CLAY													
Toluene	480	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	630
Ethylbenzene	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	68
Xylenes	110	310	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	330
Naphthalene	5	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	10
Benzene	0.7	1	2	3	NL	NL	NL	NL	4	6	9	20	430
F1[9]	50	90	150	290	NL	NL	NL	NL	310	480	NL	NL	850
F2[10]	280	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	560

1 Land use settings are equivalent to those described in Table 1A(3) Footnote 1 and Schedule B7. HSLs for vapour intrusion for high density residential assume residential occupation of the ground floor. If communal car parks or commercial properties occupy the ground floor, HSL D should be used.

2 The key limitations of the HSLs should be referred to prior to application and are presented in Friebel and Nadebaum (2011b and 2011d).

3 Detailed assumptions in the derivation of the HSLs and information on how to apply the HSLs are presented in Friebel and Nadebaum (2011a and 2011b).

4 Soil HSLs for vapour inhalation incorporate an adjustment factor of 10 applied to the vapour phase partitioning to reflect the differences observed between theoretical estimates of soil vapour partitioning and field measurements. Refer Friebel & Nadebaum (2011a) for further information.

5 The soil saturation concentration (Csat) is defined as the soil concentration at which the porewater phase cannot dissolve any more of an individual chemical. The soil vapour that is in equilibrium with the porewater will be at its

maximum. If the derived soil HSL exceeds Csat, a soil vapour source concentration for a petroleum mixture could not exceed a level that would result in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'.

6 The HSLs for TPH C6-C10 in sandy soil are based on a finite source that depletes in less than seven years, and therefore consideration has been given to use of sub-chronic toxicity values. The >C8-C10 aliphatic toxicity has been adjusted to represent sub-chronic exposure, resulting in higher HSLs than if based on chronic toxicity. For further information refer to Section 8.2 and Appendix J in Friebel and Nadebaum (2011a).

7 The figures in the above table may be multiplied by a factor to account for biodegradation of vapour. A factor of 10 may apply for source depths from 2 m to <4 m or a factor of 100 for source depths of 4 m and deeper. To apply the attenuation factor for vapour degradation, a number of conditions must be satisfied. Firstly the maximum length of the shorter side of the concrete slab and surrounding pavement cannot exceed 15 m, as this would prevent oxygen penetrating to the centre of the slab. Secondly, measurement of oxygen in the subsurface is required to determine the potential for biodegradation. Oxygen must be confirmed to be present at >5% to use these factors.

8 For soil texture classification undertaken in accord with AS 1726, the classifications of sand, silt and clay may be applied as coarse, fine with liquid limit <50% and fine with liquid limit>50% respectively, as the underlying properties to develop the HSLs may reasonably be selected to be similar. Where there is uncertainty, either a conservative approach may be adopted or laboratory analysis should be carried out.

9 To obtain F1 subtract the sum of BTEX concentrations from the C6-C10 fraction.

10 To obtain F2 subtract naphthalene from the >C10-C16 fraction.

Table B8 ESLs for TPH fractions F1-F4, BTEX and benzo(a)pyrene in soil

CHEMICAL	Soil texture	ESLs (mg/kg dry soil)		
		Areas of ecological significance	Urban residential/public open space[1]	Commercial and industrial
F1 C_6 – C_{10}	*Coarse/Fine*	125*	180*	215*
F2 > C_{10} – C_{16}		25*	120*	170*
F3 > C_{16} – C_{34}	*Coarse*	-	300	1700
	Fine	-	1300	2500
F4 > C_{34} – C_{40}	*Coarse*	-	2800	3300
	Fine	-	5600	6600
Benzene	*Coarse*	10	50	75
	Fine	10	65	95
Toluene	*Coarse*	10	85	135
	Fine	65	105	135
Ethylbenzene	*Coarse*	1.5	70	165
	Fine	40	125	185
Xylenes	*Coarse*	10	105	180
	Fine	1.6	45	95
Benzo(a)pyrene	*Coarse*	0.7	0.7	1.4
	Fine	0.7	0.7	1.4

(1) ESLs are of low reliability except where indicated by * which indicates that the ESL is of moderate reliability.

(2) " – " indicates that insufficient data was available to derive a value.

(3) To obtain F1, subtract the sum of BTEX concentrations from C_6 – C_{10} fraction and subtract naphthalene >C_{10} – C_{16} to obtain F2.

Table B9 Management Limits for TPH fractions F1-F4 in soil

TPH Fraction	Soil texture	Management Limits[1] (mg/kg dry soil)	
		Residential, parkland and public open space	Commercial and industrial
F1[2] $C_6 - C_{10}$	*Coarse*	700	700
	Fine	800	800
F2[2] > $C_{10} - C_{16}$	*Coarse*	1000	1000
	Fine	1000	1000
F3 > $C_{16} - C_{34}$	*Coarse*	2500	3500
	Fine	3500	5000
F4 > $C_{34} - C_{40}$	*Coarse*	10 000	10 000
	Fine	10 000	10 000

1 Management Limits are applied after consideration of relevant ESLs and HSLs.

2 Separate management limits for BTEX and naphthalene are not available hence these should not be subtracted from the relevant fractions to obtain F1 and F2.

APPENDIX C
LABORATORY RESULTS SUMMARY AND TRANSCRIPTS

Project number: 397835
Site: 771-781 783-797 Mamre Road, Kemps Creek, NSW
Client: GPT

Table C1: Soil Summary Results

	Soil Properties			Metals								TRH					BTEX					
	Clay content %	pH	CEC	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	C6-C10	C10-C16	C16-C34	C34-C40	C10-C40 (Sum of total)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
				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
Laboratory Limit of Detection				4	0.4	1	1	1	0.1	1	1	25	50	100	100	50	0.2	0.5	1	2	1	3
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil												800	1,000	5,000	10,000							
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil												800	1,000	3,500	10,000							
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Clay												310 | 480 | NL | NL	NL | NL | NL | NL				4 | 6 | 9 | 20	NL | NL | NL | NL	NL | NL | NL | NL			NL | NL | NL | NL
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay												NL | NL | NL | NL	NL | NL | NL | NL				NL | NL | NL | NL	NL | NL | NL | NL	NL | NL | NL | NL			NL | NL | NL | NL
NEPM 2013 Table 1B(5) EIL - Areas of Ecological Significance				40		190	45	470		15	55											
NEPM 2013 Table 1B(5) EIL - Comm/Ind				160		910	150	1,800		60	300											
NEPM 2013 Table 1B(5) EIL - Urban Res & Public Open Space				100		550	110	1100		35	200											
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Fine Soil												125	25				10	65	40			1.6
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil												215	170	2,500	6,600		95	135	185			95
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil												180	120	1,300	5,600		65	105	125			45
NEPM 2013 Table 1A(1) HILs Rec C Soil				300	90		17,000	600	80	1,200	30,000											
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil				3,000	900		240,000	1,500	730	6,000	400,000											
Field ID	**Depth**	**Zoning**	**Date**																			
FD01 / TP201_0.2-0.3	**0.2-0.3**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	6	ND	18	10	16	ND	6	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FD02 / TP210.1-0.2	**0.1-0.2**	**RE1 – Public Recreation**	**9/09/2021**	NA	NA	NA	5	ND	13	15	16	ND	11	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP01	**0.5**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	7	1	15	40	180	ND	5	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP02	**0.5**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	7	ND	13	19	32	ND	10	69	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP03	**0.5**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	5	0.6	9	23	74	ND	3	96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP101_0.1-0.2	**0.2-0.2**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	ND	ND	31	83	13	ND	11	50	ND	ND	510	640	1,100	ND	ND	ND	ND	ND
TP101_0.3-0.4	**0.3-0.4**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	4	ND	11	6	10	ND	4	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP102_0.1-0.2	**0.1-0.2**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	ND	ND	11	12	7	ND	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP103_0.1-0.2	**0.1-0.2**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	ND	ND	9	21	13	ND	11	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP104_0.1-0.2	**0.1-0.2**	**RE1 – Public Recreation**	**8/09/2021**	NA	NA	NA	ND	ND	11	13	13	ND	3	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP105_0.1-0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	6	ND	14	6	14	ND	4	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP105_0.5-0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	ND	ND	14	13	12	ND	7	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP106_0.1-0.2	**0.1-0.2**	**RE1 – Public Recreation**	**8/09/2021**	NA	NA	NA	9	ND	26	2	20	ND	2	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP106_0.5-0.6	**0.5-0.6**	**RE1 – Public Recreation**	**8/09/2021**	NA	NA	NA	ND	ND	9	7	7	ND	2	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP107_0.1-0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	4	ND	12	17	19	ND	10	73	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP107_0.5-0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	ND	ND	10	6	11	ND	3	9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP108_0.1-0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	25	5.6	4.8	4	ND	11	12	18	ND	5	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP108_0.5-0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	5	ND	12	22	12	ND	8	31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP109_0.1-0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	4	ND	13	16	19	ND	10	36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP110_0.1-0.2	**0.1-0.2**	**RE1 – Public Recreation**	**8/09/2021**	NA	NA	NA	5	ND	28	4	15	ND	2	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP201_0.2-0.3	**0.2-0.3**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	ND	ND	14	7	10	ND	4	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP202_0.1-0.2	**0.1-0.2**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	ND	ND	10	93	16	ND	10	38	ND	ND	1,700	1,200	2,900	ND	ND	ND	ND	ND
TP202_0.4-0.5	**0.4-0.5**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	6	ND	12	24	19	ND	8	40	ND	ND	150	120	270	ND	ND	ND	ND	ND
TP203_0.1_0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	4	ND	11	19	17	ND	10	49	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP203_0.5_0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	ND	ND	9	10	11	ND	10	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP204_0.1_0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	ND	ND	10	16	16	ND	12	34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP204_0.5_0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	4	ND	12	18	17	ND	6	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP205_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	NA	NA	NA	8	ND	17	22	27	ND	7	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP206_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	NA	NA	NA	7	ND	20	19	20	ND	7	23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP207_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	NA	NA	NA	6	0.8	19	110	26	ND	10	97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP208_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	NA	NA	NA	6	ND	19	18	16	ND	5	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP208_0.5_0.6	**0.5-0.6**	**IN1 – General Industrial**	**9/09/2021**	NA	NA	NA	ND	ND	7	9	7	ND	6	9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP209_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	NA	NA	NA	7	ND	15	17	21	ND	7	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP209_0.5_0.6	**0.5-0.6**	**IN1 – General Industrial**	**9/09/2021**	NA	NA	NA	ND	ND	10	18	9	ND	8	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP210_0.1_0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**9/09/2021**	NA	NA	NA	7	ND	16	17	19	ND	12	27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP210_0.5_0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**9/09/2021**	NA	NA	NA	4	ND	14	23	12	ND	7	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Note
NA = not analysed
ND - non detect
EILs have been calculated using a 4.8 cmol/kg CEC and 5.6 pH
Zoning is based upon Boxall Surveyors "Plan Showing Zone Areas" dated 17 May 2021
The following land uses within NEPM 2013 have been applied to sampling locations within each listed Zoning:
a) Commercial / Industrial = IN1 – General Industrial
b) Recreational / Urban Residential / Public Open Space = RE1 – Public Recreation
c) Recreational / Residential, parkland and public open space Management Limits / Areas of Ecological Significance = ENZ – Environmental Zone

Environmental Standards
NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil
2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay
NEPM, 2013, NEPM 2013 Table 1B(5) EIL - Comm/Ind
2013, NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Fine Soil
2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
2013, NEPM 2013 Table 1A(1) HILs Rec C Soil
2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

Project number: 397835
Site: 771-781 783-797 Mamre Road, Kemps Creek, NSW
Client: GPT

Table C1: Soil Summary Results

	PAH																				Phenols	Halogenated Benzenes
	Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of positives)	Phenolics Total	Hexachlorobenzene
	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
Laboratory Limit of Detection	0.2	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.5	0.05	5	0.1
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil																					
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																					
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Clay													NL | NL | NL | NL								
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay													NL | NL | NL | NL								
NEPM 2013 Table 1B(5) EIL - Areas of Ecological Significance													10								
NEPM 2013 Table 1B(5) EIL - Comm/Ind													370								
NEPM 2013 Table 1B(5) EIL - Urban Res & Public Open Space													170								
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Fine Soil						0.7															
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil						1.4															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil						0.7															
NEPM 2013 Table 1A(1) HILs Rec C Soil																3	3	3			10
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil																40	40	40			80
Field ID	**Depth**	**Zoning**	**Date**																				
FD01 / TP201_0.2-0.3	**0.2-0.3**	**IN1 – General Industrial**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
FD02 / TP210.1-0.2	**0.1-0.2**	**RE1 – Public Recreation**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
SP01	**0.5**	**IN1 – General Industrial**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
SP02	**0.5**	**IN1 – General Industrial**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
SP03	**0.5**	**IN1 – General Industrial**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
TP101_0.1-0.2	**0.2-0.2**	**IN1 – General Industrial**	**8/09/2021**	0.2	ND	ND	ND	ND	0.2	1.3	ND	ND	0.1	ND	0.1	ND	0.2	0.2	ND	ND	ND	2.4	ND	ND
TP101_0.3-0.4	**0.3-0.4**	**IN1 – General Industrial**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
TP102_0.1-0.2	**0.1-0.2**	**IN1 – General Industrial**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP103_0.1-0.2	**0.1-0.2**	**IN1 – General Industrial**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP104_0.1-0.2	**0.1-0.2**	**RE1 – Public Recreation**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP105_0.1-0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP105_0.5-0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
TP106_0.1-0.2	**0.1-0.2**	**RE1 – Public Recreation**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP106_0.5-0.6	**0.5-0.6**	**RE1 – Public Recreation**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
TP107_0.1-0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05	ND	ND
TP107_0.5-0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
TP108_0.1-0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP108_0.5-0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
TP109_0.1-0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP110_0.1-0.2	**0.1-0.2**	**RE1 – Public Recreation**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP201_0.2-0.3	**0.2-0.3**	**IN1 – General Industrial**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP202_0.1-0.2	**0.1-0.2**	**IN1 – General Industrial**	**8/09/2021**	21	0.2	1	1.6	10	14	12	6.0	1.6	15	0.2	8.0	ND	3.0	16	20	20	20	110	ND	ND
TP202_0.4-0.5	**0.4-0.5**	**IN1 – General Industrial**	**8/09/2021**	1	ND	ND	0.2	0.8	0.90	0.7	0.4	0.1	1.1	ND	0.5	ND	0.4	1.1	1.3	1.3	1.3	7.7	NA	NA
TP203_0.1_0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP203_0.5_0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
TP204_0.1_0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP204_0.5_0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
TP205_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP206_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP207_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP208_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP208_0.5_0.6	**0.5-0.6**	**IN1 – General Industrial**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
TP209_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP209_0.5_0.6	**0.5-0.6**	**IN1 – General Industrial**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
TP210_0.1_0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
TP210_0.5_0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA

Note
NA = not analysed
ND - non detect
EILs have been calculated using a 4.8 cmol/kg CEC and 5.6 pH
Zoning is based upon Boxall Surveyors "Plan Showing Zone Areas" dated 17 May 2021
The following land uses within NEPM 2013 have been applied to sampling locations within each listed Zoning:
a) Commercial / Industrial = IN1 – General Industrial
b) Recreational / Urban Residential / Public Open Space = RE1 – Public Recreation
c) Recreational / Residential, parkland and public open space Management Limits / Areas of Ecological Significance = ENZ – Environmental Zone

Environmental Standards
NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil
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2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Clay
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NEPM, 2013, NEPM 2013 Table 1B(5) EIL - Comm/Ind
2013, NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Fine Soil
2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
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Project number: 397835
Site: 771-781 783-797 Mamre Road, Kemps Creek, NSW
Client: GPT

Table C1: Soil Summary Results

	Organochlorine Pesticides																				
	4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor
	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
Laboratory Limit of Detection	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
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																				
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Clay																				
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																				
NEPM 2013 Table 1B(5) EIL - Areas of Ecological Significance									3											
NEPM 2013 Table 1B(5) EIL - Comm/Ind									640											
NEPM 2013 Table 1B(5) EIL - Urban Res & Public Open Space									180											
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Fine Soil																				
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																				
NEPM 2013 Table 1A(1) HILs Rec C Soil										400					20			10		400
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil										3,600					100			50		2,500

Field ID	Depth	Zoning	Date																			
FD01 / TP201_0.2-0.3	0.2-0.3	IN1 – General Industrial	8/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FD02 / TP210.1-0.2	0.1-0.2	RE1 – Public Recreation	9/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP01	0.5	IN1 – General Industrial	8/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP02	0.5	IN1 – General Industrial	8/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP03	0.5	IN1 – General Industrial	8/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP101_0.1-0.2	0.2-0.2	IN1 – General Industrial	8/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP101_0.3-0.4	0.3-0.4	IN1 – General Industrial	8/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP102_0.1-0.2	0.1-0.2	IN1 – General Industrial	8/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP103_0.1-0.2	0.1-0.2	IN1 – General Industrial	8/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP104_0.1-0.2	0.1-0.2	RE1 – Public Recreation	8/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP105_0.1-0.2	0.1-0.2	ENZ – Environmental Zone	8/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP105_0.5-0.6	0.5-0.6	ENZ – Environmental Zone	8/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP106_0.1-0.2	0.1-0.2	RE1 – Public Recreation	8/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP106_0.5-0.6	0.5-0.6	RE1 – Public Recreation	8/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP107_0.1-0.2	0.1-0.2	ENZ – Environmental Zone	8/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP107_0.5-0.6	0.5-0.6	ENZ – Environmental Zone	8/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP108_0.1-0.2	0.1-0.2	ENZ – Environmental Zone	8/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP108_0.5-0.6	0.5-0.6	ENZ – Environmental Zone	8/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP109_0.1-0.2	0.1-0.2	ENZ – Environmental Zone	8/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP110_0.1-0.2	0.1-0.2	RE1 – Public Recreation	8/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP201_0.2-0.3	0.2-0.3	IN1 – General Industrial	8/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP202_0.1-0.2	0.1-0.2	IN1 – General Industrial	8/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP202_0.4-0.5	0.4-0.5	IN1 – General Industrial	8/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP203_0.1_0.2	0.1-0.2	ENZ – Environmental Zone	8/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP203_0.5_0.6	0.5-0.6	ENZ – Environmental Zone	8/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP204_0.1_0.2	0.1-0.2	ENZ – Environmental Zone	8/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP204_0.5_0.6	0.5-0.6	ENZ – Environmental Zone	8/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP205_0.1_0.2	0.1-0.2	IN1 – General Industrial	9/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP206_0.1_0.2	0.1-0.2	IN1 – General Industrial	9/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP207_0.1_0.2	0.1-0.2	IN1 – General Industrial	9/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP208_0.1_0.2	0.1-0.2	IN1 – General Industrial	9/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP208_0.5_0.6	0.5-0.6	IN1 – General Industrial	9/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP209_0.1_0.2	0.1-0.2	IN1 – General Industrial	9/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP209_0.5_0.6	0.5-0.6	IN1 – General Industrial	9/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP210_0.1_0.2	0.1-0.2	ENZ – Environmental Zone	9/09/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP210_0.5_0.6	0.5-0.6	ENZ – Environmental Zone	9/09/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Note
NA = not analysed
ND - non detect
EILs have been calculated using a 4.8 cmol/kg CEC and 5.6 pH
Zoning is based upon Boxall Surveyors "Plan Showing Zone Areas" dated 17 May 2021
The following land uses within NEPM 2013 have been applied to sampling locations within each listed Zoning:
a) Commercial / Industrial = IN1 – General Industrial
b) Recreational / Urban Residential / Public Open Space = RE1 – Public Recreation
c) Recreational / Residential, parkland and public open space Management Limits / Areas of Ecological Significance = ENZ – Environmental Zone

Environmental Standards
NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil
2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay
NEPM, 2013, NEPM 2013 Table 1B(5) EIL - Comm/Ind
2013, NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Fine Soil
2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
2013, NEPM 2013 Table 1A(1) HILs Rec C Soil
2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

Project number: 397835
Site: 771-781 783-797 Mamre Road, Kemps Creek, NSW
Client: GPT

Table C1: Soil Summary Results

				Organophosphorous Pesticides											PCBs								Pesticides
				Azinophos methyl	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Ronnel	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	Parathion
				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
Laboratory Limit of Detection				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
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil																							
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																							
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Clay																							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay																							
NEPM 2013 Table 1B(5) EIL - Areas of Ecological Significance																							
NEPM 2013 Table 1B(5) EIL - Comm/Ind																							
NEPM 2013 Table 1B(5) EIL - Urban Res & Public Open Space																							
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Fine Soil																							
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil																							
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																							
NEPM 2013 Table 1A(1) HILs Rec C Soil						250																1	
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil						2,000																7	
Field ID	**Depth**	**Zoning**	**Date**																				
FD01 / TP201_0.2-0.3	**0.2-0.3**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FD02 / TP210.1-0.2	**0.1-0.2**	**RE1 – Public Recreation**	**9/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP01	**0.5**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP02	**0.5**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP03	**0.5**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP101_0.1-0.2	**0.2-0.2**	**IN1 – General Industrial**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP101_0.3-0.4	**0.3-0.4**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP102_0.1-0.2	**0.1-0.2**	**IN1 – General Industrial**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP103_0.1-0.2	**0.1-0.2**	**IN1 – General Industrial**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP104_0.1-0.2	**0.1-0.2**	**RE1 – Public Recreation**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP105_0.1-0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP105_0.5-0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP106_0.1-0.2	**0.1-0.2**	**RE1 – Public Recreation**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP106_0.5-0.6	**0.5-0.6**	**RE1 – Public Recreation**	**8/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP107_0.1-0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP107_0.5-0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP108_0.1-0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP108_0.5-0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP109_0.1-0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP110_0.1-0.2	**0.1-0.2**	**RE1 – Public Recreation**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP201_0.2-0.3	**0.2-0.3**	**IN1 – General Industrial**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP202_0.1-0.2	**0.1-0.2**	**IN1 – General Industrial**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP202_0.4-0.5	**0.4-0.5**	**IN1 – General Industrial**	**8/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP203_0.1_0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP203_0.5_0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP204_0.1_0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**8/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP204_0.5_0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**8/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP205_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP206_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP207_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP208_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP208_0.5_0.6	**0.5-0.6**	**IN1 – General Industrial**	**9/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP209_0.1_0.2	**0.1-0.2**	**IN1 – General Industrial**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP209_0.5_0.6	**0.5-0.6**	**IN1 – General Industrial**	**9/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP210_0.1_0.2	**0.1-0.2**	**ENZ – Environmental Zone**	**9/09/2021**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
TP210_0.5_0.6	**0.5-0.6**	**ENZ – Environmental Zone**	**9/09/2021**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Note
NA = not analysed
ND - non detect
EILs have been calculated using a 4.8 cmol/kg CEC and 5.6 pH
Zoning is based upon Boxall Surveyors "Plan Showing Zone Areas" dated 17 May 2021
The following land uses within NEPM 2013 have been applied to sampling locations within each listed Zoning:
a) Commercial / Industrial = IN1 – General Industrial
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c) Recreational / Residential, parkland and public open space Management Limits / Areas of Ecological Significance = ENZ – Environmental Zone

Environmental Standards
NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil
2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Clay
NEPM, 2013, NEPM 2013 Table 1B(5) EIL - Comm/Ind
2013, NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Fine Soil
2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
2013, NEPM 2013 Table 1A(1) HILs Rec C Soil
2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

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CERTIFICATE OF ANALYSIS 277623

Client Details

Client	KPMG Property & Environmental Services Pty Limited
Attention	James Lean, J.C. Walker
Address	Tower 3, International Towers Sydney, 300 Barangaroo Ave, Sydney, NSW, 2000

Sample Details

Your Reference	**397835**
Number of Samples	44 Soil, 3 Material
Date samples received	09/09/2021
Date completed instructions received	09/09/2021

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	13/09/2021
Date of Issue	13/09/2021

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Asbestos Approved By
Analysed by Asbestos Approved Analyst: Ridwan Wijaya, Panika Wongchanda
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Hannah Nguyen, Metals Supervisor
Josh Williams, LC Supervisor
Lucy Zhu, Asbestos Supervisor
Steven Luong, Organics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		277623-1	277623-2	277623-3	277623-4	277623-5
Your Reference	UNITS	TP101_0.1-0.2	TP101_0.3-0.4	TP201_0.2-0.3	FD01	TP202_0.1-0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	118	108	114	109	97

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		277623-6	277623-8	277623-10	277623-12	277623-13
Your Reference	UNITS	TP202_0.4-0.5	TP102_0.1-0.2	TP103_0.1-0.2	TP104_0.1-0.2	TP105_0.1-0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	108	108	93	99	108

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		277623-14	277623-15	277623-16	277623-17	277623-18
Your Reference	UNITS	TP105_0.5-0.6	TP106_0.1-0.2	TP106_0.5-0.6	TP107_0.1-0.2	TP107_0.5-0.6
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	111	99	112	116	113

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		277623-19	277623-20	277623-21	277623-23	277623-24
Your Reference	UNITS	TP108_0.1-0.2	TP108_0.5-0.6	TP109_0.1-0.2	TP203_0.1_0.2	TP203_0.5_0.6
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	106	112	107	109	107

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		277623-25	277623-26	277623-27	277623-29	277623-31
Your Reference	UNITS	TP204_0.1_0.2	TP204_0.5_0.6	TP110_0.1-0.2	TP205_0.1_0.2	TP206_0.1_0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	09/09/2021	09/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	109	108	114	106	111

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		277623-33	277623-35	277623-36	277623-37	277623-38
Your Reference	UNITS	TP207_0.1_0.2	TP208_0.1_0.2	TP208_0.5_0.6	TP209_0.1_0.2	TP209_0.5_0.6
Depth		-	-	-	-	-
Date Sampled		09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	110	113	111	114	106

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		277623-39	277623-40	277623-41	277623-42	277623-43
Your Reference	UNITS	TP210_0.1_0.2	FD02	TP210_0.5_0.6	SP01	SP02
Depth		-	-	-	0.5	0.5
Date Sampled		09/09/2021	09/09/2021	09/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	106	109	115	113	112

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		277623-44
Your Reference	UNITS	SP03
Depth		0.5
Date Sampled		08/09/2021
Type of sample		Soil
Date extracted	-	10/09/2021
Date analysed	-	10/09/2021
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	<3
Surrogate aaa-Trifluorotoluene	%	114

svTRH (C10-C40) in Soil						
Our Reference		277623-1	277623-2	277623-3	277623-4	277623-5
Your Reference	UNITS	TP101_0.1-0.2	TP101_0.3-0.4	TP201_0.2-0.3	FD01	TP202_0.1-0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	11/09/2021	11/09/2021	11/09/2021	11/09/2021	11/09/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	160	<100	<100	<100	730
TRH C_{29} - C_{36}	mg/kg	520	<100	<100	<100	1,400
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	510	<100	<100	<100	1,700
TRH >C_{34} -C_{40}	mg/kg	640	<100	<100	<100	1,200
Total +ve TRH (>C10-C40)	mg/kg	1,100	<50	<50	<50	2,900
Surrogate o-Terphenyl	%	116	92	92	91	108

svTRH (C10-C40) in Soil						
Our Reference		277623-6	277623-8	277623-10	277623-12	277623-13
Your Reference	UNITS	TP202_0.4-0.5	TP102_0.1-0.2	TP103_0.1-0.2	TP104_0.1-0.2	TP105_0.1-0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	11/09/2021	11/09/2021	11/09/2021	11/09/2021	11/09/2021
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	130	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	150	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	120	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	270	<50	<50	<50	<50
Surrogate o-Terphenyl	%	92	94	95	91	95

svTRH (C10-C40) in Soil						
Our Reference		277623-14	277623-15	277623-16	277623-17	277623-18
Your Reference	UNITS	TP105_0.5-0.6	TP106_0.1-0.2	TP106_0.5-0.6	TP107_0.1-0.2	TP107_0.5-0.6
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	11/09/2021	11/09/2021	11/09/2021	11/09/2021	11/09/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	94	91	93	94	90

svTRH (C10-C40) in Soil						
Our Reference		277623-19	277623-20	277623-21	277623-23	277623-24
Your Reference	UNITS	TP108_0.1-0.2	TP108_0.5-0.6	TP109_0.1-0.2	TP203_0.1_0.2	TP203_0.5_0.6
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	11/09/2021	11/09/2021	11/09/2021	11/09/2021	11/09/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	88	90	93	92	89

svTRH (C10-C40) in Soil						
Our Reference		277623-25	277623-26	277623-27	277623-29	277623-31
Your Reference	UNITS	TP204_0.1_0.2	TP204_0.5_0.6	TP110_0.1-0.2	TP205_0.1_0.2	TP206_0.1_0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	09/09/2021	09/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	11/09/2021	11/09/2021	11/09/2021	11/09/2021	11/09/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	91	91	90	91	91

svTRH (C10-C40) in Soil						
Our Reference		277623-33	277623-35	277623-36	277623-37	277623-38
Your Reference	UNITS	TP207_0.1_0.2	TP208_0.1_0.2	TP208_0.5_0.6	TP209_0.1_0.2	TP209_0.5_0.6
Depth		-	-	-	-	-
Date Sampled		09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	11/09/2021	11/09/2021	11/09/2021	11/09/2021	11/09/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	107	91	103	91	95

svTRH (C10-C40) in Soil						
Our Reference		277623-39	277623-40	277623-41	277623-42	277623-43
Your Reference	UNITS	TP210_0.1_0.2	FD02	TP210_0.5_0.6	SP01	SP02
Depth		-	-	-	0.5	0.5
Date Sampled		09/09/2021	09/09/2021	09/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	11/09/2021	11/09/2021	11/09/2021	11/09/2021	11/09/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	91	95	109	91	97

svTRH (C10-C40) in Soil		
Our Reference		277623-44
Your Reference	UNITS	SP03
Depth		0.5
Date Sampled		08/09/2021
Type of sample		Soil
Date extracted	-	10/09/2021
Date analysed	-	11/09/2021
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	110

PAHs in Soil						
Our Reference		277623-1	277623-2	277623-3	277623-4	277623-5
Your Reference	UNITS	TP101_0.1-0.2	TP101_0.3-0.4	TP201_0.2-0.3	FD01	TP202_0.1-0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Phenanthrene	mg/kg	0.2	<0.1	<0.1	<0.1	3.0
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.6
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	15
Pyrene	mg/kg	0.2	<0.1	<0.1	<0.1	16
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	10
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	6.0
Benzo(b,j+k)fluoranthene	mg/kg	0.2	<0.2	<0.2	<0.2	21
Benzo(a)pyrene	mg/kg	0.2	<0.05	<0.05	<0.05	14
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	8.0
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.6
Benzo(g,h,i)perylene	mg/kg	1.3	<0.1	<0.1	<0.1	12
Total +ve PAH's	mg/kg	2.4	<0.05	<0.05	<0.05	110
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	20
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	20
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	20
Surrogate p-Terphenyl-d14	%	108	102	111	113	101

PAHs in Soil						
Our Reference		277623-6	277623-8	277623-10	277623-12	277623-13
Your Reference	UNITS	TP202_0.4-0.5	TP102_0.1-0.2	TP103_0.1-0.2	TP104_0.1-0.2	TP105_0.1-0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	0.4	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	1.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	1.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.8	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.4	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	1	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.90	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<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	0.7	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	7.7	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	1.3	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	1.3	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	1.3	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	106	116	117	115	119

PAHs in Soil						
Our Reference		277623-14	277623-15	277623-16	277623-17	277623-18
Your Reference	UNITS	TP105_0.5-0.6	TP106_0.1-0.2	TP106_0.5-0.6	TP107_0.1-0.2	TP107_0.5-0.6
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	%	114	115	118	112	114

PAHs in Soil						
Our Reference		277623-19	277623-20	277623-21	277623-23	277623-24
Your Reference	UNITS	TP108_0.1-0.2	TP108_0.5-0.6	TP109_0.1-0.2	TP203_0.1_0.2	TP203_0.5_0.6
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	%	109	116	118	112	116

PAHs in Soil						
Our Reference		277623-25	277623-26	277623-27	277623-29	277623-31
Your Reference	UNITS	TP204_0.1_0.2	TP204_0.5_0.6	TP110_0.1-0.2	TP205_0.1_0.2	TP206_0.1_0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	09/09/2021	09/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	%	114	116	112	114	116

PAHs in Soil						
Our Reference		277623-33	277623-35	277623-36	277623-37	277623-38
Your Reference	UNITS	TP207_0.1_0.2	TP208_0.1_0.2	TP208_0.5_0.6	TP209_0.1_0.2	TP209_0.5_0.6
Depth		-	-	-	-	-
Date Sampled		09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	%	116	114	114	116	69

PAHs in Soil						
Our Reference		277623-39	277623-40	277623-41	277623-42	277623-43
Your Reference	UNITS	TP210_0.1_0.2	FD02	TP210_0.5_0.6	SP01	SP02
Depth		-	-	-	0.5	0.5
Date Sampled		09/09/2021	09/09/2021	09/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	%	114	105	93	114	116

PAHs in Soil		
Our Reference		277623-44
Your Reference	UNITS	SP03
Depth		0.5
Date Sampled		08/09/2021
Type of sample		Soil
Date extracted	-	10/09/2021
Date analysed	-	10/09/2021
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	114

Organochlorine Pesticides in soil						
Our Reference		277623-1	277623-3	277623-5	277623-8	277623-10
Your Reference	UNITS	TP101_0.1-0.2	TP201_0.2-0.3	TP202_0.1-0.2	TP102_0.1-0.2	TP103_0.1-0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	<0.1
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	%	116	128	115	128	126

Organochlorine Pesticides in soil						
Our Reference		277623-12	277623-13	277623-15	277623-17	277623-19
Your Reference	UNITS	TP104_0.1-0.2	TP105_0.1-0.2	TP106_0.1-0.2	TP107_0.1-0.2	TP108_0.1-0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	<0.1
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	%	107	107	124	126	119

Organochlorine Pesticides in soil						
Our Reference		277623-21	277623-23	277623-25	277623-27	277623-29
Your Reference	UNITS	TP109_0.1-0.2	TP203_0.1_0.2	TP204_0.1_0.2	TP110_0.1-0.2	TP205_0.1_0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	09/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	<0.1
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	%	103	126	102	102	98

Organochlorine Pesticides in soil						
Our Reference		277623-31	277623-33	277623-35	277623-37	277623-39
Your Reference	UNITS	TP206_0.1_0.2	TP207_0.1_0.2	TP208_0.1_0.2	TP209_0.1_0.2	TP210_0.1_0.2
Depth		-	-	-	-	-
Date Sampled		09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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	<0.1
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	%	129	126	126	108	123

Organophosphorus Pesticides in Soil						
Our Reference		277623-1	277623-3	277623-5	277623-8	277623-10
Your Reference	UNITS	TP101_0.1-0.2	TP201_0.2-0.3	TP202_0.1-0.2	TP102_0.1-0.2	TP103_0.1-0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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
Chlorpyriphos-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
Chlorpyriphos	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	%	116	128	115	128	126

Organophosphorus Pesticides in Soil						
Our Reference		277623-12	277623-13	277623-15	277623-17	277623-19
Your Reference	UNITS	TP104_0.1-0.2	TP105_0.1-0.2	TP106_0.1-0.2	TP107_0.1-0.2	TP108_0.1-0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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
Chlorpyriphos-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
Chlorpyriphos	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	%	107	107	124	126	119

Organophosphorus Pesticides in Soil						
Our Reference		277623-21	277623-23	277623-25	277623-27	277623-29
Your Reference	UNITS	TP109_0.1-0.2	TP203_0.1_0.2	TP204_0.1_0.2	TP110_0.1-0.2	TP205_0.1_0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	09/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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
Chlorpyriphos-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
Chlorpyriphos	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	%	103	126	102	102	98

Organophosphorus Pesticides in Soil						
Our Reference		277623-31	277623-33	277623-35	277623-37	277623-39
Your Reference	UNITS	TP206_0.1_0.2	TP207_0.1_0.2	TP208_0.1_0.2	TP209_0.1_0.2	TP210_0.1_0.2
Depth		-	-	-	-	-
Date Sampled		09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
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
Chlorpyriphos-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
Chlorpyriphos	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	%	129	126	126	108	123

PCBs in Soil					
Our Reference		277623-1	277623-3	277623-5	277623-17
Your Reference	UNITS	TP101_0.1-0.2	TP201_0.2-0.3	TP202_0.1-0.2	TP107_0.1-0.2
Depth		-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	116	128	115	126

Acid Extractable metals in soil						
Our Reference		277623-1	277623-2	277623-3	277623-4	277623-5
Your Reference	UNITS	TP101_0.1-0.2	TP101_0.3-0.4	TP201_0.2-0.3	FD01	TP202_0.1-0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Date analysed	-	13/09/2021	13/09/2021	13/09/2021	13/09/2021	13/09/2021
Arsenic	mg/kg	<4	4	<4	6	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	31	11	14	18	10
Copper	mg/kg	83	6	7	10	93
Lead	mg/kg	13	10	10	16	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	4	4	6	10
Zinc	mg/kg	50	11	6	10	38

Acid Extractable metals in soil						
Our Reference		277623-6	277623-8	277623-10	277623-12	277623-13
Your Reference	UNITS	TP202_0.4-0.5	TP102_0.1-0.2	TP103_0.1-0.2	TP104_0.1-0.2	TP105_0.1-0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Date analysed	-	13/09/2021	13/09/2021	13/09/2021	13/09/2021	13/09/2021
Arsenic	mg/kg	6	<4	<4	<4	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	11	9	11	14
Copper	mg/kg	24	12	21	13	6
Lead	mg/kg	19	7	13	13	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	5	11	3	4
Zinc	mg/kg	40	7	60	11	14

Acid Extractable metals in soil						
Our Reference		277623-14	277623-15	277623-16	277623-17	277623-18
Your Reference	UNITS	TP105_0.5-0.6	TP106_0.1-0.2	TP106_0.5-0.6	TP107_0.1-0.2	TP107_0.5-0.6
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Date analysed	-	13/09/2021	13/09/2021	13/09/2021	13/09/2021	13/09/2021
Arsenic	mg/kg	<4	9	<4	4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	26	9	12	10
Copper	mg/kg	13	2	7	17	6
Lead	mg/kg	12	20	7	19	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	2	2	10	3
Zinc	mg/kg	13	7	6	73	9

Acid Extractable metals in soil						
Our Reference		277623-19	277623-20	277623-21	277623-23	277623-24
Your Reference	UNITS	TP108_0.1-0.2	TP108_0.5-0.6	TP109_0.1-0.2	TP203_0.1_0.2	TP203_0.5_0.6
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Date analysed	-	13/09/2021	13/09/2021	13/09/2021	13/09/2021	13/09/2021
Arsenic	mg/kg	4	5	4	4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	12	13	11	9
Copper	mg/kg	12	22	16	19	10
Lead	mg/kg	18	12	19	17	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	8	10	10	10
Zinc	mg/kg	14	31	36	49	16

Acid Extractable metals in soil						
Our Reference		277623-25	277623-26	277623-27	277623-29	277623-31
Your Reference	UNITS	TP204_0.1_0.2	TP204_0.5_0.6	TP110_0.1-0.2	TP205_0.1_0.2	TP206_0.1_0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	09/09/2021	09/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Date analysed	-	13/09/2021	13/09/2021	13/09/2021	13/09/2021	13/09/2021
Arsenic	mg/kg	<4	4	5	8	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	12	28	17	20
Copper	mg/kg	16	18	4	22	19
Lead	mg/kg	16	17	15	27	20
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	12	6	2	7	7
Zinc	mg/kg	34	21	4	29	23

Acid Extractable metals in soil						
Our Reference		277623-33	277623-35	277623-36	277623-37	277623-38
Your Reference	UNITS	TP207_0.1_0.2	TP208_0.1_0.2	TP208_0.5_0.6	TP209_0.1_0.2	TP209_0.5_0.6
Depth		-	-	-	-	-
Date Sampled		09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Date analysed	-	13/09/2021	13/09/2021	13/09/2021	13/09/2021	13/09/2021
Arsenic	mg/kg	6	6	<4	7	<4
Cadmium	mg/kg	0.8	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	19	7	15	10
Copper	mg/kg	110	18	9	17	18
Lead	mg/kg	26	16	7	21	9
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	5	6	7	8
Zinc	mg/kg	97	17	9	28	20

Acid Extractable metals in soil						
Our Reference		277623-39	277623-40	277623-41	277623-42	277623-43
Your Reference	UNITS	TP210_0.1_0.2	FD02	TP210_0.5_0.6	SP01	SP02
Depth		-	-	-	0.5	0.5
Date Sampled		09/09/2021	09/09/2021	09/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Date analysed	-	13/09/2021	13/09/2021	13/09/2021	13/09/2021	13/09/2021
Arsenic	mg/kg	7	5	4	7	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	1	<0.4
Chromium	mg/kg	16	13	14	15	13
Copper	mg/kg	17	15	23	40	19
Lead	mg/kg	19	16	12	180	32
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	12	11	7	5	10
Zinc	mg/kg	27	24	21	180	69

Acid Extractable metals in soil			
Our Reference		277623-44	277623-48
Your Reference	UNITS	SP03	TP110_0.1-0.2 - [TRIPLICATE]
Depth		0.5	-
Date Sampled		08/09/2021	08/09/2021
Type of sample		Soil	Soil
Date prepared	-	09/09/2021	09/09/2021
Date analysed	-	13/09/2021	13/09/2021
Arsenic	mg/kg	5	4
Cadmium	mg/kg	0.6	<0.4
Chromium	mg/kg	9	26
Copper	mg/kg	23	3
Lead	mg/kg	74	12
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	3	2
Zinc	mg/kg	96	4

Misc Soil - Inorg						
Our Reference		277623-1	277623-3	277623-4	277623-5	277623-17
Your Reference	UNITS	TP101_0.1-0.2	TP201_0.2-0.3	FD01	TP202_0.1-0.2	TP107_0.1-0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Moisture						
Our Reference		277623-1	277623-2	277623-3	277623-5	277623-6
Your Reference	UNITS	TP101_0.1-0.2	TP101_0.3-0.4	TP201_0.2-0.3	TP202_0.1-0.2	TP202_0.4-0.5
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	11/09/2021	11/09/2021	11/09/2021	11/09/2021	11/09/2021
Moisture	%	4.6	14	11	9.9	18

Moisture						
Our Reference		277623-8	277623-10	277623-12	277623-13	277623-14
Your Reference	UNITS	TP102_0.1-0.2	TP103_0.1-0.2	TP104_0.1-0.2	TP105_0.1-0.2	TP105_0.5-0.6
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	11/09/2021	11/09/2021	11/09/2021	11/09/2021	11/09/2021
Moisture	%	19	24	14	16	17

Moisture						
Our Reference		277623-15	277623-16	277623-17	277623-18	277623-19
Your Reference	UNITS	TP106_0.1-0.2	TP106_0.5-0.6	TP107_0.1-0.2	TP107_0.5-0.6	TP108_0.1-0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	11/09/2021	11/09/2021	11/09/2021	11/09/2021	11/09/2021
Moisture	%	18	22	20	14	17

Moisture						
Our Reference		277623-20	277623-21	277623-23	277623-24	277623-25
Your Reference	UNITS	TP108_0.5-0.6	TP109_0.1-0.2	TP203_0.1_0.2	TP203_0.5_0.6	TP204_0.1_0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	11/09/2021	11/09/2021	11/09/2021	11/09/2021	11/09/2021
Moisture	%	14	23	22	18	17

Moisture						
Our Reference		277623-26	277623-27	277623-29	277623-31	277623-33
Your Reference	UNITS	TP204_0.5_0.6	TP110_0.1-0.2	TP205_0.1_0.2	TP206_0.1_0.2	TP207_0.1_0.2
Depth		-	-	-	-	-
Date Sampled		08/09/2021	08/09/2021	09/09/2021	09/09/2021	09/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	11/09/2021	11/09/2021	11/09/2021	11/09/2021	11/09/2021
Moisture	%	16	13	16	23	25

Moisture						
Our Reference		277623-35	277623-36	277623-37	277623-38	277623-39
Your Reference	UNITS	TP208_0.1_0.2	TP208_0.5_0.6	TP209_0.1_0.2	TP209_0.5_0.6	TP210_0.1_0.2
Depth		-	-	-	-	-
Date Sampled		09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	11/09/2021	11/09/2021	11/09/2021	11/09/2021	11/09/2021
Moisture	%	15	13	25	21	23

Moisture						
Our Reference		277623-40	277623-41	277623-42	277623-43	277623-44
Your Reference	UNITS	FD02	TP210_0.5_0.6	SP01	SP02	SP03
Depth		-	-	0.5	0.5	0.5
Date Sampled		09/09/2021	09/09/2021	08/09/2021	08/09/2021	08/09/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Date analysed	-	11/09/2021	11/09/2021	11/09/2021	11/09/2021	11/09/2021
Moisture	%	21	22	15	17	3.4

Asbestos ID - soils		
Our Reference		277623-17
Your Reference	UNITS	TP107_0.1-0.2
Depth		-
Date Sampled		08/09/2021
Type of sample		Soil
Date analysed	-	13/09/2021
Sample mass tested	g	Approx. 50g
Sample Description	-	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected

Asbestos ID - materials				
Our Reference		277623-45	277623-46	277623-47
Your Reference	UNITS	MS01	MS02	MS03
Depth		-	-	-
Date Sampled		08/09/2021	08/09/2021	08/09/2021
Type of sample		Material	Material	Material
Date analysed	-	10/09/2021	10/09/2021	10/09/2021
Mass / Dimension of Sample	-	57x31x6mm	78x44x5mm	84x82x5mm
Sample Description	-	Grey fibre cement material	Grey fibre cement material	Grey fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected Crocidolite asbestos detected	Chrysotile asbestos detected Amosite asbestos detected	Chrysotile asbestos detected Amosite asbestos detected
Trace Analysis	-	[NT]	[NT]	[NT]

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

Method ID	Methodology Summary
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)-BTEX 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)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	277623-3
Date extracted	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Date analysed	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	110	111
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	110	111
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	116	117
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	114	114
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	106	107
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	107	108
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	113	115
naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	113	1	118	106	11	118	117

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	277623-29
Date extracted	-			[NT]	17	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Date analysed	-			[NT]	17	10/09/2021	10/09/2021		10/09/2021	10/09/2021
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	17	<25	<25	0	121	109
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	17	<25	<25	0	121	109
Benzene	mg/kg	0.2	Org-023	[NT]	17	<0.2	<0.2	0	127	116
Toluene	mg/kg	0.5	Org-023	[NT]	17	<0.5	<0.5	0	125	113
Ethylbenzene	mg/kg	1	Org-023	[NT]	17	<1	<1	0	117	104
m+p-xylene	mg/kg	2	Org-023	[NT]	17	<2	<2	0	118	105
o-Xylene	mg/kg	1	Org-023	[NT]	17	<1	<1	0	126	112
naphthalene	mg/kg	1	Org-023	[NT]	17	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	17	116	107	8	127	116

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]	27	10/09/2021	10/09/2021		[NT]	[NT]
Date analysed	-			[NT]	27	10/09/2021	10/09/2021		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	27	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	27	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	27	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	27	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	27	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	27	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	27	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	27	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	27	114	112	2	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	39	10/09/2021	10/09/2021		[NT]	[NT]
Date analysed	-			[NT]	39	10/09/2021	10/09/2021		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	39	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	39	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	39	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	39	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	39	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	39	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	39	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	39	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	39	106	107	1	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	277623-3
Date extracted	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Date analysed	-			11/09/2021	1	11/09/2021	11/09/2021		10/09/2021	11/09/2021
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	86	83
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	160	140	13	84	83
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	520	480	8	89	102
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	86	83
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	510	460	10	84	83
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	640	570	12	89	102
Surrogate o-Terphenyl	%		Org-020	97	1	116	108	7	92	95

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	277623-29
Date extracted	-			[NT]	17	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Date analysed	-			[NT]	17	11/09/2021	11/09/2021		11/09/2021	11/09/2021
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	17	<50	<50	0	89	83
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	17	<100	<100	0	88	84
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	17	<100	<100	0	114	82
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	17	<50	<50	0	89	83
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	17	<100	<100	0	88	84
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	17	<100	<100	0	114	82
Surrogate o-Terphenyl	%		Org-020	[NT]	17	94	94	0	96	94

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	27	10/09/2021	10/09/2021		[NT]	[NT]
Date analysed	-			[NT]	27	11/09/2021	11/09/2021		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	27	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	27	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	27	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	27	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	27	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	27	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	27	90	90	0	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	39	10/09/2021	10/09/2021		[NT]	[NT]
Date analysed	-			[NT]	39	11/09/2021	11/09/2021		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	39	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	39	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	39	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	39	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	39	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	39	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	39	91	103	12	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	277623-3
Date extracted	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Date analysed	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	113	107
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	109	101
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	105	101
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	0.2	0.1	67	120	110
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	0.1	0.1	0	114	110
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.2	0.2	0	107	107
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	85	81
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	0.2	0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	0.2	0.2	0	120	110
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.1	0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	1.3	1.2	8	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	117	1	108	108	0	113	110

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	277623-29
Date extracted	-			[NT]	17	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Date analysed	-			[NT]	17	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	109	111
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	107	103
Fluorene	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	95	101
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	114	116
Anthracene	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	0.1	0	116	112
Pyrene	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	0.1	0	133	105
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	95	95
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	17	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	17	0.05	0.08	46	130	104
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	17	112	111	1	94	113

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	27	10/09/2021	10/09/2021		[NT]	[NT]
Date analysed	-			[NT]	27	10/09/2021	10/09/2021		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	27	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	27	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	27	112	115	3	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	39	10/09/2021	10/09/2021		[NT]	[NT]
Date analysed	-			[NT]	39	10/09/2021	10/09/2021		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	39	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	39	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	39	114	115	1	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	277623-3
Date extracted	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Date analysed	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	100
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	99
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	85
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	120	116
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	96
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	113	111
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	102
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	117
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	110
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	84
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	126	1	116	117	1	107	119

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	277623-29
Date extracted	-			[NT]	17	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Date analysed	-			[NT]	17	10/09/2021	10/09/2021		10/09/2021	10/09/2021
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	114	92
HCB	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	103	85
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	67	81
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	134	118
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	126	96
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	113	113
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	128	100
Endrin	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	119	100
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	110	102
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	80	80
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	17	126	123	2	89	118

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	27	10/09/2021	10/09/2021		[NT]	[NT]
Date analysed	-			[NT]	27	10/09/2021	10/09/2021		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	27	102	117	14	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	39	10/09/2021	10/09/2021		[NT]	[NT]
Date analysed	-			[NT]	39	10/09/2021	10/09/2021		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	39	123	125	2	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	277623-3
Date extracted	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Date analysed	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	77	74
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	120	114
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	83	93
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	91	99
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	112	110
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	76	91
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	115
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	126	1	116	117	1	107	119

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	277623-29
Date extracted	-			[NT]	17	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Date analysed	-			[NT]	17	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	89	66
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	128	112
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	105	85
Malathion	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	106	87
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	124	110
Parathion	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	109	87
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	133	111
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	17	126	123	2	89	118

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	27	10/09/2021	10/09/2021		[NT]	[NT]
Date analysed	-			[NT]	27	10/09/2021	10/09/2021		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	27	102	117	14	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	39	10/09/2021	10/09/2021		[NT]	[NT]
Date analysed	-			[NT]	39	10/09/2021	10/09/2021		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	39	123	125	2	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	277623-3
Date extracted	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Date analysed	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	118	120
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	126	1	116	117	1	107	119

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			[NT]	17	10/09/2021	10/09/2021		10/09/2021	[NT]
Date analysed	-			[NT]	17	10/09/2021	10/09/2021		10/09/2021	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	17	<0.1	<0.1	0	124	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	17	126	123	2	89	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	277623-3
Date prepared	-			09/09/2021	1	09/09/2021	09/09/2021		09/09/2021	09/09/2021
Date analysed	-			13/09/2021	1	13/09/2021	13/09/2021		13/09/2021	13/09/2021
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	96	92
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	96	88
Chromium	mg/kg	1	Metals-020	<1	1	31	23	30	98	98
Copper	mg/kg	1	Metals-020	<1	1	83	84	1	98	104
Lead	mg/kg	1	Metals-020	<1	1	13	11	17	102	99
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	91	70
Nickel	mg/kg	1	Metals-020	<1	1	11	9	20	100	95
Zinc	mg/kg	1	Metals-020	<1	1	50	40	22	106	98

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	277623-29
Date prepared	-			[NT]	17	09/09/2021	09/09/2021		09/09/2021	09/09/2021
Date analysed	-			[NT]	17	13/09/2021	13/09/2021		13/09/2021	13/09/2021
Arsenic	mg/kg	4	Metals-020	[NT]	17	4	<4	0	99	89
Cadmium	mg/kg	0.4	Metals-020	[NT]	17	<0.4	<0.4	0	98	86
Chromium	mg/kg	1	Metals-020	[NT]	17	12	11	9	100	87
Copper	mg/kg	1	Metals-020	[NT]	17	17	19	11	99	100
Lead	mg/kg	1	Metals-020	[NT]	17	19	17	11	103	83
Mercury	mg/kg	0.1	Metals-021	[NT]	17	<0.1	<0.1	0	107	90
Nickel	mg/kg	1	Metals-020	[NT]	17	10	9	11	103	89
Zinc	mg/kg	1	Metals-020	[NT]	17	73	66	10	109	85

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	27	09/09/2021	09/09/2021		[NT]	[NT]
Date analysed	-			[NT]	27	13/09/2021	13/09/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	27	5	<4	22	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	27	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	27	28	17	49	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	27	4	3	29	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	27	15	11	31	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	27	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	27	2	2	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	27	4	3	29	[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]	39	09/09/2021	09/09/2021		[NT]	[NT]
Date analysed	-			[NT]	39	13/09/2021	13/09/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	39	7	5	33	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	39	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	39	16	13	21	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	39	17	15	12	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	39	19	18	5	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	39	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	39	12	9	29	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	39	27	22	20	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	277623-3
Date prepared	-			10/09/2021	17	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Date analysed	-			10/09/2021	17	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	17	<5	<5	0	100	99

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.

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

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures.
We cannot guarantee that this sub-sample is indicative of the entire sample.
Envirolab recommends supplying 40-50g of sample in its own container.
Note: Sample 277623-17 was sub-sampled from a jar provided by the client.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 277623-27 for Cr. Therefore a triplicate result has been issued as laboratory sample number 277623-48.

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CERTIFICATE OF ANALYSIS 277623-A

Client Details

Client	KPMG Property & Environmental Services Pty Limited
Attention	James Lean
Address	Tower 3, International Towers Sydney, 300 Barangaroo Ave, Sydney, NSW, 2000

Sample Details

Your Reference	**397835**
Number of Samples	additional analysis
Date samples received	09/09/2021
Date completed instructions received	15/09/2021

Analysis Details

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

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

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

Report Details

Date results requested by	17/09/2021
Date of Issue	17/09/2021

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Results Approved By
Diego Bigolin, Inorganics Supervisor
Hannah Nguyen, Metals Supervisor
Priya Samarawickrama, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

CEC		
Our Reference		277623-A-19
Your Reference	UNITS	TP108_0.1-0.2
Depth		-
Date Sampled		08/09/2021
Type of sample		Soil
Date prepared	-	17/09/2021
Date analysed	-	17/09/2021
Exchangeable Ca	meq/100g	2.5
Exchangeable K	meq/100g	<0.1
Exchangeable Mg	meq/100g	2.0
Exchangeable Na	meq/100g	0.1
Cation Exchange Capacity	meq/100g	4.8

Misc Inorg - Soil		
Our Reference		277623-A-19
Your Reference	UNITS	TP108_0.1-0.2
Depth		-
Date Sampled		08/09/2021
Type of sample		Soil
Date prepared	-	17/09/2021
Date analysed	-	17/09/2021
Total Organic Carbon (Walkley Black)	mg/kg	3,600
pH 1:5 soil:$CaCl_2$	pH Units	5.6

Clay 50-120g		
Our Reference		277623-A-19
Your Reference	UNITS	TP108_0.1-0.2
Depth		-
Date Sampled		08/09/2021
Type of sample		Soil
Date prepared	-	16/09/2021
Date analysed	-	17/09/2021
Clay in soils <2µm	% (w/w)	25

Acid Extractable metals in soil		
Our Reference		277623-A-19
Your Reference	UNITS	TP108_0.1-0.2
Depth		-
Date Sampled		08/09/2021
Type of sample		Soil
Date prepared	-	17/09/2021
Date analysed	-	17/09/2021
Iron	mg/kg	18,000

Method ID	Methodology Summary
AS1289.3.6.3	Determination Particle Size Analysis using AS1289.3.6.3 and AS1289.3.6.1 and in house method INORG-107. Clay fraction at <2µm reported.
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-036	Total Organic Carbon or Matter - A titrimetric method that measures the oxidisable organic content of soils.
Metals-020	Determination of various metals by ICP-AES.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			17/09/2021	19	17/09/2021	17/09/2021		17/09/2021	[NT]
Date analysed	-			17/09/2021	19	17/09/2021	17/09/2021		17/09/2021	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	19	2.5	2.8	11	82	[NT]
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	19	<0.1	<0.1	0	91	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	19	2.0	2.3	14	82	[NT]
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	19	0.1	0.5	133	98	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			17/09/2021	19	17/09/2021	17/09/2021		17/09/2021	[NT]
Date analysed	-			17/09/2021	19	17/09/2021	17/09/2021		17/09/2021	[NT]
Total Organic Carbon (Walkley Black)	mg/kg	1000	Inorg-036	<1000	19	3600	4100	13	98	[NT]
pH 1:5 soil:$CaCl_2$	pH Units		Inorg-001	[NT]	19	5.6	[NT]		101	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			17/09/2021	[NT]	[NT]	[NT]	[NT]	17/09/2021	[NT]
Date analysed	-			17/09/2021	[NT]	[NT]	[NT]	[NT]	17/09/2021	[NT]
Iron	mg/kg	10	Metals-020	<10	[NT]	[NT]	[NT]	[NT]	93	[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.

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.

COC rec'd: 1450

CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
Ph 02 9910 6200 / sydney@envirolab.com.au

Perth Lab - MPL Laboratories
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Ph 08 9317 2505 / lab@mpl.com.au

Melbourne Lab - Envirolab Services
1A Dalmore Drive Scoresby VIC 3179
Ph 03 9763 2500 / melbourne@envirolab.com.au

Brisbane Office - Envirolab Services
20a, 10-20 Depot St, Banyo, QLD 4014
Ph 07 3266 9532 / brisbane@envirolab.com.au

Adelaide Office - Envirolab Services
7 Palmerston Road Windsor Gardens, SA 5087
Ph 0406 350 706 / adelaide@envirolab.com.au

Client: KPMG Property & Environmental Services Pty Limited
Contact Person: James Lean
Project Mgr: James Walker
Sampler: James Lean
Address: Tower 3, International Towers
300 Barangaroo Avenue, Sydney NSW 2000
Phone: **Mob:** 407116536
Email: jlean1@kpmg.com.au; jcwalker@kpmg.com.au

Client Project Name / Number / Site etc (ie report title): 397835
PO No.:
Envirolab Quote No. : 2016-R00C3
Date results required: Monday 13/9/21 COB at the latest
Or choose: standard /1 day/2 day/3 day
Note: Inform lab in advance if urgent turnaround is required - surcharges apply
Report format: excel
Lab Comments:

Sample Information | **Tests Required**

Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	TRH/BTEX/PAH/8Ms (Combo 3)	TRH/BTEX/PAH/OC/OP/8Ms/ (Combo 5b)	hold (8)	TRH/BTEX/PAH/OC/OP/PCB/8Ms/Phenols (Combo 8)										
1	TP101_0.1-0.2		8/09/2021	S				x										
2	TP101_0.3-0.4		8/09/2021	S	x													
3	TP201_0.2-0.3		8/09/2021	S				x										
4	FD01		8/09/2021	S	x													
5	TP202_0.1-0.2		8/09/2021	S				x										
6	TP202_0.4-0.5		8/09/2021	S	x													
7	TP202_0.9-1.0		8/09/2021	S			x											
8	TP102_0.1-0.2		8/09/2021	S		x												
9	TP102_0.5-0.6		8/09/2021	S			x											
10	TP103_0.1-0.2		8/09/2021	S		x												
11	TP103_0.5-0.6		8/09/2021	S			x											
12	TP104_0.1-0.2		8/09/2021	S		x												
13	TP105_0.1-0.2		8/09/2021	S		x												
14	TP105_0.5-0.6		8/09/2021	S	x													
15	TP106_0.1-0.2		8/09/2021	S		x												
16	TP106_0.5-0.6		8/09/2021	S	x													

Relinquished by (Company): KPMG
Print Name: James Lean
Date & Time: 09/09/2021 @ 1300
Signature:

Received by (Company): ELS - SYD
Print Name: V. VEGA
Date & Time: 9/9/21 @ 1300
Signature:

Lab use only:
Samples Received Cool or Ambient (circle one)
Temperature Received at: 4°C (if applicable)
Transported by: Hand delivered / courier

White - Lab copy / Blue - Client copy / Pink - Retain in Book

ENVIROLAB GROUP
12 Ashley
Chatswood NSW 2
Ph: (02) 9910 62

Job No: 277623
Date Received: 9/9/21
Time Received: 1300
Received By: VU
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/

CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
Ph 02 9910 6200 / sydney@envirolab.com.au

Perth Lab - MPL Laboratories
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Ph 08 9317 2505 / lab@mpl.com.au

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Brisbane Office - Envirolab Services
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Ph 07 3266 9532 / brisbane@envirolab.com.au

Adelaide Office - Envirolab Services
7 Palmerston Road Windsor Gardens, SA 5087
Ph 0406 350 706 / adelaide@envirolab.com.au

Client: KPMG Property & Environmental Services Pty Limited	**Client Project Name / Number / Site etc (ie report title):** 397835
Contact Person: James Lean	**PO No.:**
Project Mgr: James Walker	**Envirolab Quote No. :** 2016-R00C3
Sampler: James Lean	**Date results required:** Monday 13/9/21 COB at the latest
Address: Tower 3, International Towers 300 Barangaroo Avenue, Sydney NSW 2000	**Or choose:** standard /1 day/2 day/3 day *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone: **Mob:** 407116536	**Report format:** excel
Email: jlean1@kpmg.com.au; jcwalker@kpmg.com.au	**Lab Comments:**

Sample information					Tests Required														
Envirolab Sample ID	**Client Sample ID or information**	**Depth**	**Date sampled**	**Type of sample**	TRH/BTEX/PAH/8Ms (**Combo 3**)	TRH/BTEX/PAH/OC/OP/8Ms/ (**Combo 5b**)	hold	TRH/BTEX/PAH/OC/OP/PCB/8Ms/Phenols/asbestos w/w (**Combo 8a**)											
17	TP107_0.1-0.2		8/09/2021	S				x											
18	TP107_0.5-0.6		8/09/2021	S	x														
19	TP108_0.1-0.2		8/09/2021	S		x													
20	TP108_0.5-0.6		8/09/2021	S	x														
21	TP109_0.1-0.2		8/09/2021	S		x													
22	TP109_0.5-0.6		8/09/2021	S			x												
23	TP203_0.1_0.2		8/09/2021	S		x													
24	TP203_0.5_0.6		8/09/2021	S	x														
25	TP204_0.1_0.2		8/09/2021	S		x													
26	TP204_0.5_0.6		8/09/2021	S	x														
27	TP110_0.1-0.2		8/09/2021	S		x													
28	TP110_0.5-0.6		8/09/2021	S			x												
29	TP205_0.1_0.2		9/09/2021	S		x													
30	TP205_0.5_0.6		9/09/2021	S			x												
31	TP206_0.1_0.2		9/09/2021	S		x													
32	TP206_0.5_0.6		9/09/2021	S			x												

Relinquished by (Company):	KPMG	**Received by (Company):**	ELS - SYD
Print Name:	James Lean	**Print Name:**	V. VEGA
Date & Time:	09/09/2021 @ 1300	**Date & Time:**	9/9/21 @ 1300
Signature:		**Signature:**	

Lab use only:
Samples Received: Cool or Ambient (circle one)
Temperature Received at: 4°C (if applicable)
Transported by: Hand delivered / courier

White - Lab copy / Blue - Client copy / Pink - Retain in Book

* 277623 9/9/21

CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
Ph 02 9910 6200 / sydney@envirolab.com.au

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7 Palmerston Road Windsor Gardens, SA 5087
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Client: KPMG Property & Environmental Services Pty Limited
Contact Person: James Lean
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Address: Tower 3, International Towers
300 Barangaroo Avenue, Sydney NSW 2000
Phone: **Mob:** 407116536
Email: jlean1@kpmg.com.au; jcwalker@kpmg.com.au

Client Project Name / Number / Site etc (ie report title): 397835
PO No.:
Envirolab Quote No. : 2016-R00C3
Date results required: Monday 13/9/21 COB at the latest
Or choose: standard /1 day/2 day/3 day
Note: Inform lab in advance if urgent turnaround is required - surcharges apply
Report format: excel
Lab Comments:

Sample Information					Tests Required															Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	TRH/BTEX/PAH/8Ms (Combo 3)	TRH/BTEX/PAH/OC/OP/8Ms/ (Combo 5b)	hold	asbestos ID												Provide as much information about the sample as you can
33	TP207_0.1_0.2		9/09/2021	s		x														
34	TP207_0.5_0.6		9/09/2021	s			x													
35	TP208_0.1_0.2		9/09/2021	s		x														
36	TP208_0.5_0.6		9/09/2021	s	x															
37	TP209_0.1_0.2		9/09/2021	s		x														
38	TP209_0.5_0.6		9/09/2021	s	x															
39	TP210_0.1_0.2		9/09/2021	s		x														
40	FD02		9/09/2021	s	x															
41	TP210_0.5_0.6		9/09/2021	s	x															
42	SP01	0.5	8/09/2021	s	x															
43	SP02	0.5	8/09/2021	s	x															
44	SP03	0.5	8/09/2021	s	x															
45	MS01		8/09/2021	m				x												
46	MS02		8/09/2021	m				x												
47	MS03		8/09/2021	m				x												

Relinquished by (Company): KPMG
Print Name: James Lean
Date & Time: 09/09/2021 @ 1300
Signature:

Received by (Company): ELS - SYD
Print Name: V. VEGA
Date & Time: 9/9/21 @ 1300
Signature:

Lab use only:
Samples Received: Cool or Ambient (circle one)
Temperature Received at: 4°C (if applicable)
Transported by: Hand delivered / courier

White - Lab copy / Blue - Client copy / Pink - Retain in Book

* 277623 9/9/21

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

SAMPLE RECEIPT ADVICE

Client Details

Client	KPMG Property & Environmental Services Pty Limited
Attention	James Lean, J.C. Walker

Sample Login Details

Your reference	397835
Envirolab Reference	277623
Date Sample Received	09/09/2021
Date Instructions Received	09/09/2021
Date Results Expected to be Reported	13/09/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	44 Soil, 3 Material
Turnaround Time Requested	2 days
Temperature on Receipt (°C)	4
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:

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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	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils	Asbestos ID - materials	On Hold
TP101_0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
TP101_0.3-0.4	✓	✓	✓				✓				
TP201_0.2-0.3	✓	✓	✓	✓	✓	✓	✓	✓			
FD01	✓	✓	✓				✓	✓			
TP202_0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
TP202_0.4-0.5	✓	✓	✓				✓				
TP202_0.9-1.0											✓
TP102_0.1-0.2	✓	✓	✓	✓	✓		✓				
TP102_0.5-0.6											✓
TP103_0.1-0.2	✓	✓	✓	✓	✓		✓				
TP103_0.5-0.6											✓
TP104_0.1-0.2	✓	✓	✓	✓	✓		✓				
TP105_0.1-0.2	✓	✓	✓	✓	✓		✓				
TP105_0.5-0.6	✓	✓	✓				✓				
TP106_0.1-0.2	✓	✓	✓	✓	✓		✓				
TP106_0.5-0.6	✓	✓	✓				✓				
TP107_0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓		
TP107_0.5-0.6	✓	✓	✓				✓				
TP108_0.1-0.2	✓	✓	✓	✓	✓		✓				
TP108_0.5-0.6	✓	✓	✓				✓				
TP109_0.1-0.2	✓	✓	✓	✓	✓		✓				
TP109_0.5-0.6											✓
TP203_0.1_0.2	✓	✓	✓	✓	✓		✓				
TP203_0.5_0.6	✓	✓	✓				✓				
TP204_0.1_0.2	✓	✓	✓	✓	✓		✓				
TP204_0.5_0.6	✓	✓	✓				✓				
TP110_0.1-0.2	✓	✓	✓	✓	✓		✓				
TP110_0.5-0.6											✓
TP205_0.1_0.2	✓	✓	✓	✓	✓		✓				
TP205_0.5_0.6											✓
TP206_0.1_0.2	✓	✓	✓	✓	✓		✓				
TP206_0.5_0.6											✓

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12 Ashley St Chatswood NSW 2067
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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	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils	Asbestos ID - materials	On Hold
TP207_0.1_0.2	✓	✓	✓	✓	✓		✓				
TP207_0.5_0.6											✓
TP208_0.1_0.2	✓	✓	✓	✓	✓		✓				
TP208_0.5_0.6	✓	✓	✓				✓				
TP209_0.1_0.2	✓	✓	✓	✓	✓		✓				
TP209_0.5_0.6	✓	✓	✓				✓				
TP210_0.1_0.2	✓	✓	✓	✓	✓		✓				
FD02	✓	✓	✓				✓				
TP210_0.5_0.6	✓	✓	✓				✓				
SP01-0.5	✓	✓	✓				✓				
SP02-0.5	✓	✓	✓				✓				
SP03-0.5	✓	✓	✓				✓				
MS01										✓	
MS02										✓	
MS03										✓	

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.

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

SAMPLE RECEIPT ADVICE

Client Details

Client	KPMG Property & Environmental Services Pty Limited
Attention	James Lean

Sample Login Details

Your reference	403725
Envirolab Reference	278621
Date Sample Received	21/09/2021
Date Instructions Received	21/09/2021
Date Results Expected to be Reported	28/09/2021

Sample Condition

Samples received in appropriate condition for analysis	
No. of Samples Provided	1 Material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	23
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:

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ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
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Sample ID	Asbestos ID - materials
MS01	✓

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.

APPENDIX D
CONCEPTUAL SITE MODEL ANALYSIS

Proposed Industrial, Public Recreational, and Environmental Zone Land Use Scenario							
Sources	**COC**	**Media**	**Receptor**	**Exposure Route**	**Comments**	**Investigation Level**	**Pathway complete**
Areas of potential fill importation (stockpiles)	Heavy metals, TRH, BTEX, PAHs and asbestos	Soil	Human	Direct contact, inhalation and ingestion of dust, ingestion	Approximately 12 stockpiles of soil intermixed with building demolition waste and two (2) stockpiles of soil suspected to be natural material, understood to have been illegally dumped, were identified in the north-eastern section of 783-797 Mamre Road in the vicinity of sampling locations SP01, SP02, and SP03. Asbestos cement material fragments were observed on the surface of two (2) of the stockpiles and on the ground surface of the driveway at 783-797 Mamre Road. The stockpiles and asbestos containing materials should be removed from the site. Validation sampling should be undertaken following removal to confirm the area is suitable for the proposed land use.	**HSLs** **HILs** **Management Limits**	**Yes**
			Ecological species and soil microbial processes	Direct Contact and ingestion	Concentrations of COCs were below the laboratory LOR and below the adopted ecological protection guidelines. KPMG note that the sampling methodology was not designed for waste classification purposes. The stockpiles and asbestos containing materials should be removed from the site. Validation sampling should be undertaken following removal to confirm the area is suitable for the proposed land use.	**ESLs** **EILs**	**Possible**
Areas of potential fill importation	Heavy metals, TRH, BTEX, PAHs and OCPs/OPPs	Soil	Human and Ecological	Direct contact, inhalation and ingestion of dust, ingestion	Fill material containing building demolition waste was observed in the north-western section of 771-781 Mamre Road in the vicinity of sampling location TP107. Concentrations of all COCs were below the human health and ecological protection criteria, with the exception of zinc in sample TP07_0.1-0.2 which marginally exceeded ecological guidelines. The fill containing building demolition waste should be removed from the site. Validation sampling should be undertaken following removal to confirm the area is suitable for the proposed land use. The north-eastern section of 783-797 Mamre Road in the vicinity of sampling locations SP01, SP02, SP03, and TP202 has been subject to historical filling. A layer of fill between 0.2 and 0.7 mbgl was identified in TP202. The concentration of benzo(a) pyrene exceeded the criteria for the protection of ecological receptors in sample TP202_0.1-0.2. The area should be validated when the bitumen layer is removed from the site to confirm the area is suitable for the proposed land use.	**HSLs** **HILs** **Management Limits** **ESLs** **EILs**	**Possible**

Proposed Industrial, Public Recreational, and Environmental Zone Land Use Scenario							
Sources	**COC**	**Media**	**Receptor**	**Exposure Route**	**Comments**	**Investigation Level**	**Pathway complete**
	Asbestos		Human	Inhalation and ingestion of dust	Fill material containing building demolition waste was observed in the north-western section of 771-781 Mamre Road in the vicinity of sampling location TP107. No asbestos material was identified. The fill containing building demolition waste should be removed from the site. Validation sampling should be undertaken following removal to confirm the area is suitable for the proposed land use.	**HSLs**	**No**
Vehicle and equipment storage areas	Heavy metals, BTEX, TRH, phenols and PAHs	Soil	Human	Direct contact, inhalation and ingestion of dust, ingestion	Concentrations of COCs were below the laboratory LOR or below the adopted ecological protection guidelines.	**HSLs HILs Management Limits**	**No**
			Ecological species and soil microbial processes	Direct Contact and ingestion	Concentrations of benzo(a)pyrene above ecological protection criteria have been identified in a sample (TP202_0.1-0.2) collected from shallow fill material in the north-eastern section of 783-797 Mamre Road. The area should be validated when the bitumen layer is removed from the site to confirm the area is suitable for the proposed land use.	**ESLs EILs**	**Yes**
Demolition of buildings and structures	Heavy metals, TRH, BTEX, PAHs, phenols, PCBs, OCPs/OPPs and asbestos	Soil	Human	Direct contact, inhalation and ingestion of dust, ingestion	Concentrations of COCs were below the laboratory LOR or below the adopted human health guidelines.	**HSLs HILs Management Limits**	**No**
			Ecological species and soil microbial processes	Direct Contact and ingestion	Concentrations of COCs were below the laboratory LOR or below the adopted ecological protection guidelines.	**ESLs EILs**	**No**
Buildings and structures containing hazardous materials	Heavy metals PCBs Asbestos		Human	Inhalation and ingestion of dust	Buildings and structures suspected as containing hazardous building materials, including asbestos, were identified across the site. Removal of buildings and structures located onsite should be undertaken. Validation sampling should be undertaken following removal to confirm the area is suitable for the proposed land use.	**HSLs**	**Possible**
	OCPs/OPPs		Ecological species and soil microbial processes	Direct Contact and ingestion	Concentrations of OCPs/OPPs have not been detected within soil samples analysed.	**EILs**	**No**

Proposed Industrial, Public Recreational, and Environmental Zone Land Use Scenario							
Sources	**COC**	**Media**	**Receptor**	**Exposure Route**	**Comments**	**Investigation Level**	**Pathway complete**
Horticulture			Human	Direct contact, inhalation and ingestion of dust		**HILs**	**No**

APPENDIX E
QUALITY CONTROL AND ASSURANCE

Contents Page E

1 Introduction

The quality assurance and quality control (QA/QC) program is undertaken to ensure the data delivered is precise, accurate and representative of what is sampled.

QA/QC should be considered both in the field and within the laboratory. The objective is to enable evaluation and identification of the data quality objectives (DQOs), the method data quality objectives (MDQOs) and the data quality indicators (DQIs) which we use to assess whether the DQOs have been met.

Development of data quality objectives (DQOs) for each project is a requirement of the National Environment Protection Council (NEPC) (1999) *National Environment Protection (Assessment of Site Contamination) Measure 1999* (Amended 2013). This is based on a DQO process formulated by the USEPA for contaminated land assessment and remediation. DQOs have been developed in Section 4 of the report.

Data quality is typically discussed in terms of precision, accuracy, representativeness, comparability and completeness (PARCC). These are referred to as the PARCC parameters. The PARCC and additional QA parameters are discussed within this report.

2 Quality Control and Quality Assurance

2.1 Measurement Data Quality Indicators

Step 5 of the DQO process is a focus on the quality of the information by measurement, commonly referred to as the measurement data quality indicators (MDQIs). The MDQIs are described in Section 4 of the report.

All soil sampling procedures need to be undertaken according to a standard procedure, in particular those procedures set out in:

- Standards Australia AS4482.1 (2005) Guide to the investigation and sampling of sites with potentially contaminated soil. Part 1 Non-volatile and semi volatile compounds
- Standards Australia AS 4482.2 (1999) Guide to the sampling and investigation of potentially contaminated soil. Part 2: Volatile substances
- National Environment Protection Council (NEPC) (1999) National Environment Protection (Assessment of Site Contamination) Measure (Amended 2013)

Measurement data quality is typically discussed in terms of Measured Parameters and Assessed Parameters. Methods of assessing measured parameters include duplicate samples for repeatability (comparability) and internal laboratory tests on accuracy and precision. Methods of analysing assessed parameters include sample documentation (completeness), representation of site conditions undertaken by development of a conceptual site model, and the comparison of results/investigation criteria to the sensitivity of analytical methods.

The laboratories used should be NATA accredited for the analytical methods undertaken. Containers, sample preservation (if necessary) and holding times should be consistent with industry practices as set out in the NEPM and as defined by ASTM.

2.1.1 Repeatability (Field Collected Intra-laboratory Duplicates)

Field collected intra-laboratory (intralab) duplicate samples provide a check on the analytical performance of the laboratory. All intralab duplicate samples were sent to Envirolab for analysis.

It is recommended that at least 5 percent of samples (1 in 20) from a site should be collected in duplicate. For split samples, because of error associated with field splitting, a relative percentage difference (RPD) of between <50% and <150% (depending on the substance) will be allowed as the MDQI. Any values exceeding the relevant RPD limits will be noted and discussed, as per Standards Australia requirements, with respect to its acceptability for inclusion in the data-set.

During the PSI two (2) intralab soil field duplicate samples were collected and analysed.

2.1.2 Precision

Precision is a measure of the reproducibility of results and is assessed on the basis of agreement between a set of replicate results obtained from duplicate analyses. The precision of a duplicate determination can be measured as relative percentage difference (RPD), and is calculated from the following equation:

$$RPD = \left[\frac{X1 - X2}{\left(\frac{X1 + X2}{2} \right)} \right] \times 100$$

where: X1 is the first duplicate value

X2 is the second duplicate value

The field duplicate results and calculated RPDs for soil are presented in Table E1.

Table E1 Calculated Soil RPDs

	Field ID	TP02_0-0.1	FD01		TP09_0-0.1	FD02	
	Matrix Type	Soil	Soil		Soil	Soil	
	Date	8/9/21	8/9/21	RPD	9/9/21	9/9/21	RPD
	Unit	MDL					
Metals							
Arsenic	mg/kg	4	ND	6	40	7	5	33
Cadmium	mg/kg	0.4	ND	ND	NC	ND	ND	NC
Chromium (III+VI)	mg/kg	1	14	18	25	16	13	21
Copper	mg/kg	1	7	10	35	17	15	12
Lead	mg/kg	1	10	16	46	19	16	17
Mercury	mg/kg	0.1	ND	ND	NC	ND	ND	NC
Nickel	mg/kg	1	4	6	40	12	11	9
Zinc	mg/kg	1	6	10	50	27	24	12
All other analytes	mg/kg	Various	ND	ND	NC	ND	ND	NC

Notes:
1 LOR Laboratory Limit of Reporting
2 RPD relative percentage difference
3 N/A not analysed
4 ND detected concentration below the laboratory limit of reporting
5 NC RPD not calculable
6 Acceptance Criteria - no limit applies to < 5x MDL
7 Acceptance Criteria - 80-150% for low level (<10 x MDL)
8 Acceptance Criteria - 50-130% for medium to high level (>10 x MDL)

No RPD results were reported above 50%. These results are considered acceptable when screened against the relevant Acceptance Criteria referenced above.

2.1.3 Accuracy

Accuracy is a measure of the agreement between an experimental determination and the true value of the parameter being measured. The determination of accuracy can be achieved through the analysis of known reference materials or assessed by the analysis of matrix spikes. Accuracy is measured in terms of percentage recovery as defined by the following equation:

$$\%R = \frac{SSR - SR}{SA} X\ 100$$

where: %R = percentage recovery of the spike

SSR = spiked sample result

SR = sample result (native)

SA = spike added

Laboratory personnel calculate percentage recoveries of spiked compounds, which are evaluated against control or acceptance limits taken from the appropriate method or the Contract Laboratory Program Statement of Work. If the spike recovery for a sample does not fall within the prescribed control limits, laboratory based corrective action is required.

Surrogate spikes consist of spiking non-target compounds into the sample prior to analysis. The spiked compounds are expected to behave during analysis in the same way as the target compounds. Every sample is spiked prior to extraction or analysis with surrogate compounds that are representative of the analysis. If surrogate spike recovery does not meet the prescribed control limits, samples should be reanalysed.

2.1.4 Representativeness

All media identified within the sampling plan was selectively sampled and analysed for relevant COCs.

2.1.5 Completeness

The following information is required to check for completeness of data sets:

- chain-of-custody forms (completed by KPMG and the laboratory)
- sample receipt forms
- all requested sample results reported
- all blank data reported
- all surrogate spike data reported
- all matrix spike data reported
- NATA stamp on reports.

2.1.6 Comparability

Comparability is the evaluation of the similarity of conditions (e.g. sample depth, sample homogeneity, sampling procedures) under which separate sets of data are produced to ensure minimal common error. Data comparability should be demonstrated by the use of standardised sampling and analysis procedures. Data comparability was maintained by undertaking the investigation as follows:

- the soil samples were collected during the investigation by a trained field consultant using standard operating procedures

- laboratories used for analysis for all samples used NATA accredited analytical methods.

2.1.7 Sensitivity

When interferences are present in the sample, a loss of sensitivity can occur resulting in an increase in the method detection limit. In some instances (e.g. where one or more compounds have particularly high concentrations) the sample must be diluted for analysis. This increases the method detection limit by the dilution factor.

The detection limits achieved by the laboratory, when adjusted for dry weight and interferences from the presence of other chemicals within the sampled matrix, were less than half the site criteria for all analytes tested (i.e. 2 x LOR <site criteria).

2.1.8 Blanks

To meet the QC acceptance criteria, laboratory blanks should have no detectable concentrations of the target compounds. Review of laboratory blanks did not reveal concentrations of COCs above the LOR.

2.1.9 Holding Times

Sample holding times are based on a number of considerations including the integrity of the data required, field storage, laboratory storage and sample container characteristics. All samples were analysed within the required holding times.

2.1.10 Procedures for Anomalous Samples and Confirmation Checking

All results should be checked for discrepancies by the project manager, against the anticipated results and all other results, within 8 hours of receipt of the results from the laboratory.

Any result that is considered by the supervising scientist to be unusually high or at variance with other results is automatically re-analysed. A significantly different result requires immediate remedial action on the whole sample batch (retesting or using an alternative analytical method).

After appropriate checking by laboratories, all sample analysis results worksheets, including those of duplicates and replicate analyses, should be checked by the project manager.

Once confirmation checking is completed the final laboratory report is issued.

For blind duplicates, if one sample has more than two analytes exceeding the MDQIs the sample is carefully checked. If the error is not apparent, the sample is rejected. If more than three samples are rejected all the samples collected at that time are rejected. These samples are then re-sampled and re-analysed.

2.2 Field QA/QC

2.2.1 Details of Field Investigation Team

Fieldwork was conducted by suitably qualified KPMG personnel on 8 and 9 September 2021.

2.2.2 Sampling Controls

Decontamination procedures carried out between sampling events

Undisturbed soil samples were collected from the test pit walls using disposable nitrile gloves which were changed between each sampling event, as such, decontaminating procedures were not required.

Sample notation details

The chemical analyses to be performed on each sample were recorded on the chain of custody documentation which also identified for each sample – the nature of the sample, collection date, analyses to be performed and sample preservation method (if any).

Duplicate sampling

Duplicate samples were collected at a rate of at least one field duplicate sample for every 20 primary samples during the PSI.

2.3 Laboratory QA/QC

Laboratory analysis for this project was completed by Envirolab in Sydney. Envirolab are accredited by NATA for the methods used; details of this accreditation can be viewed at http://www.nata.asn.au/. Details of the samples sent to the laboratories and the analysis requested are contained in the chain of custody documentation. The collection date of samples and laboratory extraction date are also presented on the chain of custody forms and/or laboratory transcripts. All analysis was completed within the allowable holding times.

The laboratories complete laboratory control samples, laboratory blanks, sample duplicates, surrogate spikes and matrix spikes. The laboratory transcripts include details of surrogates and spikes used, percent recoveries of surrogates and spikes used, the instrument detection limits, the method detection limits, the practical quantification limits and the reference sample results.

2.4 QA/QC Data Evaluation

During the investigation, two (2) intralab soil field duplicate samples were collected and analysed.

The results of the duplicate samples were compared to those of the primary samples as a measure of method precision. The calculated RPDs of the duplicate samples were within acceptable ranges.

Based on review of field and laboratory QA/QC results, KPMG conclude that the resultant soil data sets are considered to be of sufficient quality for the purpose of this investigation.

APPENDIX F
TEST PIT LOGS

BOREHOLE LOG TP101

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 08/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		M	FILL: Loose, black road base gravel	No odour
TP101_0.1-0.2	Y	U	0.1			FILL: Loose, black, sandy gravel	
			0.15				
			0.2		SM	NATURAL: Firm, tan/brown, medium grained sandy clay, high plasticity	
			0.25				
TP101_0.3-0.4	Y	U	0.3				
			0.35				
			0.4			End of hole: 0.4 m	
			0.45				
			0.5				
			0.55				
			0.6				
			0.65				
			0.7				
			0.75				
			0.8				
			0.85				
			0.9				
			0.95				

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BOREHOLE LOG TP102

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 08/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0		M	FILL: Loose, black topsoil with rootlets	No odour
			0.05			NATURAL: Soft / firm, brown, medium grained sandy clay, high plasticity	
TP102_0.1-0.2	Y	U	0.1				
			0.15				
			0.2				
			0.25				
			0.3				
			0.35				
			0.4				
			0.45				
TP102_0.5-0.6	N	U	0.5		SM	NATURAL: Firm, orange, medium grained sandy clay, high plasticity	
			0.55				
			0.6				
			0.65				
			0.7			End of hole: 0.7 m	
			0.75				
			0.8				
			0.85				
			0.9				
			0.95				

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BOREHOLE LOG TP103

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 08/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		M	FILL: Loose, black topsoil with rootlets	No odour
			0.1			REWORKED NATURAL: Soft / firm, brown, medium grained sandy clay, low plasticity	
TP103_0.1-0.2	Y	U	0.15				
			0.2				
			0.25				
			0.3			NATURAL: Firm, orange, medium grained sandy clay, high plasticity	
			0.35				
			0.4				
			0.45				
TP103_0.5-0.6	N	U	0.5				
			0.55				
			0.6			End of hole: 0.6 m	
			0.65				
			0.7				
			0.75				
			0.8				
			0.85				
			0.9				
			0.95				

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BOREHOLE LOG TP104

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 08/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		M	FILL: Loose, black topsoil with rootlets	No odour
TP104_0.1-0.2	Y	U	0.1			REWORKED NATURAL: Soft / firm, brown, medium grained sandy clay, low plasticity	
			0.15				
			0.2				
			0.25				
			0.3			NATURAL: Firm, orange, medium grained sandy clay, high plasticity	
			0.35				
			0.4				
			0.45				
			0.5				
			0.55				
			0.6			End of hole: 0.6 m	
			0.65				
			0.7				
			0.75				
			0.8				
			0.85				
			0.9				
			0.95				

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BOREHOLE LOG TP105

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 08/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		M	FILL: Loose, black topsoil with rootlets	No odour
			0.1			REWORKED NATURAL: Soft / firm, brown, medium grained sandy clay, low plasticity	
TP105_0.1-0.2	Y	U	0.15				
			0.2				
			0.25				
			0.3			NATURAL: Firm, orange, medium grained sandy clay, high plasticity	
			0.35				
			0.4				
			0.45				
TP105_0.5-0.6	Y	U	0.5				
			0.55				
			0.6			End of hole: 0.6 m	
			0.65				
			0.7				
			0.75				
			0.8				
			0.85				
			0.9				
			0.95				

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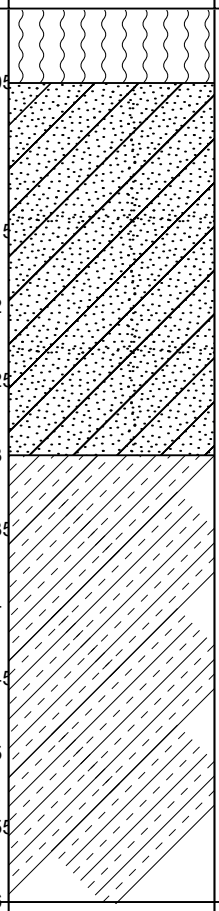
BOREHOLE LOG TP105

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 08/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		M	FILL: Loose, black topsoil with rootlets	No odour
TP106_0.1-0.2	Y	U	0.1			REWORKED NATURAL: Soft / firm, brown, medium grained sandy clay, low plasticity	
			0.15				
			0.2				
			0.25				
			0.3			NATURAL: Firm, orange mottled maroon, high plasticity	
			0.35				
			0.4				
			0.45				
TP106_0.5-0.6	Y	U	0.5				
			0.55				
			0.6			End of hole: 0.6 m	
			0.65				
			0.7				
			0.75				
			0.8				
			0.85				
			0.9				
			0.95				

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BOREHOLE LOG TP107

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 08/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		M	FILL: Loose, black topsoil with rootlets	No odour
			0.1			FILL: dark brown, sandy clay with building demolition waste	
TP107_0.1-0.2	Y	U	0.15				
			0.2				
			0.25				
			0.3			NATURAL: Firm, orange / brown, sandy clay, high plasticity	
			0.35				
			0.4				
			0.45				
TP107_0.5-0.6	Y	U	0.5				
			0.55				
			0.6			End of hole: 0.6 m	
			0.65				
			0.7				
			0.75				
			0.8				
			0.85				
			0.9				
			0.95				

BOREHOLE LOG TP108

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 08/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		SM	FILL: Loose, black topsoil with rootlets	No odour
			0.1			NATURAL: Soft / firm, brown, medium grained sandy clay, low plasticity	
TP108_0.1-0.2	Y	U	0.15				
			0.2				
			0.25				
			0.3			NATURAL: Firm, orange, medium grained sandy clay, high plasticity	
			0.35				
			0.4				
			0.45				
TP108_0.5-0.6	Y	U	0.5				
			0.55				
			0.6				
			0.65				
			0.7				
			0.75				
			0.8			End of hole: 0.8 m	
			0.85				
			0.9				
			0.95				

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BOREHOLE LOG TP109

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 08/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		SM	FILL: Loose, black topsoil with rootlets	No odour
			0.1			REWORKED NATURAL: Soft / firm, brown, medium grained sandy clay, low plasticity	
TP109_0.1-0.2	Y	U	0.15				
			0.2				
			0.25				
			0.3			NATURAL: Soft, orange, medium grained sandy clay, high plasticity	
			0.35				
			0.4				
			0.45				
TP109_0.5-0.6	N	U	0.5				
			0.55				
			0.6				
			0.65				
			0.7				
			0.75				
			0.8			End of hole: 0.8 m	
			0.85				
			0.9				
			0.95				

produced by ESlog.ESdat.net on 17 Sep 2021

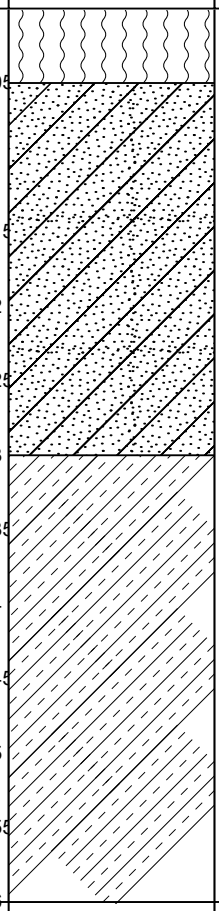
BOREHOLE LOG TP110

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 08/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		M	FILL: Loose, black topsoil with rootlets	No odour
TP110_0.1-0.2	Y	U	0.1			REWORKED NATURAL: Soft / firm, brown, medium grained sandy clay, low plasticity	
			0.15				
			0.2				
			0.25				
			0.3			NATURAL: Firm, orange mottled maroon, high plasticity	
			0.35				
			0.4				
			0.45				
TP110_0.5-0.6	N	U	0.5				
			0.55				
			0.6			End of hole: 0.6 m	
			0.65				
			0.7				
			0.75				
			0.8				
			0.85				
			0.9				
			0.95				

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BOREHOLE LOG TP201

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 08/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		SM	FILL: Loose, black road base gravel	No odour
			0.1			NATURAL: Firm, tan/brown, medium grained sandy clay, high plasticity	
			0.15				
TP201_0.2-0.3 / FD01	Y	U	0.2				
			0.25				
			0.3				
			0.35				
			0.4			End of hole: 0.4 m	
			0.45				
			0.5				
			0.55				
			0.6				
			0.65				
			0.7				
			0.75				
			0.8				
			0.85				
			0.9				
			0.95				

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BOREHOLE LOG TP202

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 08/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.1		M	FILL: Loose, black gravelly bitumen	No odour
TP202_0.1-0.2	Y	U					
			0.2			FILL: Soft, grey / brown, sandy clay, low plasticity	
			0.3				
			0.4				
TP202_0.4-0.5	Y	U					
			0.5				
			0.6				
			0.7		SM	NATURAL: Firm, tan/brown, medium grained sandy clay, high plasticity	
			0.8				
			0.9				
TP202_0.9-1.0	N	U					
			1				
			1.1			End of hole: 1.1 m	
			1.2				
			1.3				
			1.4				

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BOREHOLE LOG TP203

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 08/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		SM	FILL: Loose, black topsoil with rootlets	No odour
TP203_0.1-0.2	Y	U	0.1			REWORKED NATURAL: Soft / firm, brown, medium grained sandy clay, low plasticity	
			0.15				
			0.2				
			0.25				
			0.3			NATURAL: Soft / firm, grey, medium grained sandy clay, low plasticity	
			0.35				
			0.4				
			0.45				
TP203_0.5-0.6	Y	U	0.5				
			0.55				
			0.6				
			0.65				
			0.7				
			0.75				
			0.8			NATURAL: Soft, orange, medium grained sandy clay, high plasticity	
			0.85				
			0.9				
			0.95				
			1			End of hole: 1.0 m	
			1.05				

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BOREHOLE LOG TP204

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 08/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		SM	FILL: Loose, black topsoil with rootlets	No odour
TP204_0.1-0.2	Y	U	0.1			REWORKED NATURAL: Soft / firm, brown, medium grained sandy clay, low plasticity	
			0.2			NATURAL: Soft / firm, light brown, medium grained sandy clay, low plasticity	
TP204_0.5-0.6	Y	U	0.5				
			1			End of hole: 1.0 m	
			1.05				

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BOREHOLE LOG TP205

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 09/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		M	FILL: Loose, black topsoil with rootlets	No odour
			0.1			REWORKED NATURAL: Soft / firm, brown, medium grained sandy clay, low plasticity	
TP205_0.1-0.2	Y	U	0.15				
			0.2			NATURAL: Firm, orange mottled maroon, high plasticity	
			0.25				
			0.3				
			0.35				
			0.4				
			0.45				
TP205_0.5-0.6	N	U	0.5				
			0.55				
			0.6			End of hole: 0.6 m	
			0.65				
			0.7				
			0.75				
			0.8				
			0.85				
			0.9				
			0.95				

BOREHOLE LOG TP206

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 09/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		SM	FILL: Loose, black topsoil with rootlets	No odour
			0.1			REWORKED NATURAL: Soft / firm, brown, medium grained sandy clay, low plasticity	
TP206_0.1-0.2	Y	U	0.15				
			0.2			NATURAL: Firm, orange mottled maroon, high plasticity	
			0.25				
			0.3				
			0.35				
			0.4				
			0.45				
TP206_0.5-0.6	N	U	0.5				
			0.55				
			0.6				
			0.65				
			0.7				
			0.75				
			0.8				
			0.85				
			0.9				
			0.95				
			1			End of hole: 1.0 m	
			1.05				

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BOREHOLE LOG TP207

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 09/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		M	FILL: Loose, black topsoil with rootlets	No odour
TP207_0.1-0.2	Y	U	0.1 0.15			FILL: Soft / firm, black / brown, medium grained sandy clay, low plasticity with some metal waste	
			0.2 0.25 0.3 0.35 0.4 0.45		VM	NATURAL: Firm, orange mottled maroon, high plasticity	
TP207_0.5-0.6	N	U	0.5 0.55				
			0.6			End of hole: 0.6 m	
			0.65 0.7 0.75 0.8 0.85 0.9 0.95				

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BOREHOLE LOG TP208

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 09/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		M	FILL: Loose, black topsoil with rootlets	No odour
			0.1			REWORKED NATURAL: Soft / firm, brown, medium grained sandy clay, low plasticity	
TP208_0.1-0.2	Y	U	0.15				
			0.2			NATURAL: Firm, orange mottled maroon, high plasticity	
			0.25				
			0.3				
			0.35				
			0.4				
			0.45				
TP208_0.5-0.6	Y	U	0.5				
			0.55				
			0.6			End of hole: 0.6 m	
			0.65				
			0.7				
			0.75				
			0.8				
			0.85				
			0.9				
			0.95				

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BOREHOLE LOG TP209

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 09/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		SM	FILL: Loose, black topsoil with rootlets	No odour
			0.1			REWORKED NATURAL: Soft / firm, brown, medium grained sandy clay, low plasticity	
TP209_0.1-0.2	Y	U	0.15				
			0.2			NATURAL: Firm, orange mottled maroon, high plasticity	
			0.25				
			0.3				
			0.35				
			0.4				
			0.45				
TP209_0.5-0.6	Y	U	0.5				
			0.55				
			0.6				
			0.65				
			0.7				
			0.75				
			0.8				
			0.85				
			0.9			End of hole: 0.6 m	
			0.95				

BOREHOLE LOG TP210

PROJECT NUMBER 397835
PROJECT NAME PSI
CLIENT GPT
ADDRESS 771-781 & 783-797 Mamre Road, Kemps Creek, NSW

DRILLING DATE 09/09/21
METHOD Test Pit
DRILLER DMT
EXCAVATOR 5 tonne

COMMENTS

LOGGED BY JL
CHECKED BY JW

Samples	Analysed	Sample Type	Depth (m)	Graphic Log	Moisture	Material Description	Additional Observations
			0.05		SM	FILL: Loose, black topsoil with rootlets	No odour
TP210_0.1-0.2 / FD02	Y	U	0.1			REWORKED NATURAL: Soft / firm, brown, medium grained sandy clay, low plasticity	
			0.2				
			0.3			NATURAL: Firm, orange mottled maroon, high plasticity	
TP210_0.5-0.6	Y	U	0.5				
			0.6				
			0.7				
			0.8				
			0.9				
			1				
			1.1			End of hole: 1.1 m	

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APPENDIX G
PHOTOLOG

Photographs – 771-781 Mamre Road

TP06 – typical subsurface conditions comprising reworked natural sandy clay overlying natural clay

Existing groundwater monitoring well – located in the vicinity of TP05

TP07 – large volumes of building demolition waste identified in the area adjacent a creek transecting the site

TP07 – soil intermixed with bullding demoltiion waste

Area near TP07 – emankment consisting of building demoltion waste, north-easterly aspect

Area near TP07 – emankment consisting of building demoltion waste, westerly aspect

Photographs –783-797 Mamre Road

Area in the vicinity of SP01-SP03 – stockpiles of illegally dumped material contianing asbestos

SP03 – asbestos materials identified on stockpile surface

MS01 – asbestos debris located on the surface of the driveway

TP201 – fibre cement building located in the vinicty of TP201

TP207 – typical subsurface conditions comprising reworked sandy clay overlying natural clay

Areas of former hoticultural activities –plastic lining covering large areas of former horticultural use

APPENDIX H
SAFEWORK SEARCHES

NSW GOVERNMENT | SafeWork NSW

Locked Bag 2906, Lisarow NSW 2252
Customer Experience 13 10 50
ABN 81 913 830 179 | www.safework.nsw.gov.au

Our Ref: D21/181515

25 October 2021

James Lean
KPMG Property and Environmental Services
jlean1@kpmg.com.au

Dear James,

RE: Site - 771-781 Mamre Road, KEMPS CREEK, NSW, 2178

I refer to your site search request received by SafeWork NSW requesting information on Storage of Hazardous Chemicals for the above sites.

A search of the records held by SafeWork NSW has not located any records pertaining to the above-mentioned premises.

For further information or if you have any questions, please call us on 13 10 50 or email licensing@safework.nsw.gov.auw

Yours sincerely

May Neill

Licensing Representative, Licensing and Funds
Licensing and Funds | Better Regulation Division
Department of Customer Service
p 13 10 50
www.customerservice.nsw.gov.au
Level 3, 32 Mann Street, Gosford NSW 2250

NSW GOVERNMENT | SafeWork NSW

Locked Bag 2906, Lisarow NSW 2252
Customer Experience 13 10 50
ABN 81 913 830 179 | www.safework.nsw.gov.au

Our Ref: D21/181515

25 October 2021

James Lean
KPMG Property and Environmental Services
jlean1@kpmg.com.au

Dear James,

RE: Site - 783-797 Mamre Road, KEMPS CREEK, NSW, 2178

I refer to your site search request received by SafeWork NSW requesting information on Storage of Hazardous Chemicals for the above sites.

A search of the records held by SafeWork NSW has not located any records pertaining to the above-mentioned premises.

For further information or if you have any questions, please call us on 13 10 50 or email licensing@safework.nsw.gov.auw

Yours sincerely

May Neill

Licensing Representative, Licensing and Funds
Licensing and Funds | Better Regulation Division
Department of Customer Service
p 13 10 50
www.customerservice.nsw.gov.au
Level 3, 32 Mann Street, Gosford NSW 2250

APPENDIX I
REPORT LIMITATIONS

Property and Environmental Services

Report Limitations

We advise that, unless specifically stated otherwise within the body of this document, the following Limitations apply to our Report;

- Sections within this Report may contain additional Limitations relevant to the reporting discipline concerned. These must be viewed as additional limitations that stand separately, and in addition to, the following Limitations.
- No reliance should be placed on draft reports, draft conclusions or draft advice issued by us as they may be subject to further work, revision and other factors which may mean that drafts are substantially different from any FINAL report or advice issued.
- Parts of the building built in, covered up or otherwise made inaccessible during construction, alteration or fitting out have not been inspected.
- This generally relates to ceiling voids, wall cavities and service risers. Therefore we are unable to comment as to whether such elements are free from defect or infestation.
- We have not undertaken any work of a specific engineering nature, such as engineering calculations, structural analysis, testing or measurements as the Report reflects our interpretation of the condition of the building as apparent from the inspection.
- Building services have been visually inspected where exposed to view only. No internal inspections have been undertaken of plant, equipment and machinery or where services are covered up or hidden by building structural elements or finishes. Building services have not been tested and no design calculations have been undertaken.
- The property has not been inspected specifically for termite infestation and we would only report on such if evidence of termite activity was apparent during our inspection.
- Where a variety of multiple units or tenanted areas are inspected, a random selection of each type of unit / area was inspected and used for the basis of this report.
- This Report is not a certification, a warranty or guarantee and has been scoped in accordance with the instructions given and the time allowed.
- The scope of the Report is described in the fee proposal accepted by the instructing client and disciplines not specifically mentioned are excluded from this report.
- This Report has been prepared for the benefit of the instructing client named on the cover of the document. This Report is not to be reproduced, in whole or in part, without the express written authorisation of KPMG Property & Environmental Services Pty Limited.
- The findings of this Report are valid for six calendar months from the date of issue of the Draft version of the document.
- Unless specifically stated otherwise, all cost estimates provided throughout the Report are subject to the following Limitations;
- Estimates are indicative only and are provided as a guide to “order of magnitude” of the cost item. Items of work are not fully described or detailed reflecting the high level nature of the assessment, the amount of information available and the purpose for which they are prepared;
- Preliminaries, builder’s margins, overheads and contingencies are excluded;
- Professional fees, project management fees, planning and building licence fees are excluded;
- No allowance has been made for Tender Price Inflation throughout the budget terms considered;
- In providing estimates we have assumed that replacements and renewals will be on a like for like basis. Unless specifically stated otherwise we have made no allowances for improvements over and above this standard.
- We have assume that WH&S /OH&S requirements will be similar to those encountered in the present and have made no allowances for any additional measures that may be required in the future.

KPMG Property & Environmental Services

Exceptional chartered building surveying and environmental services

For property investors, owners, tenants, financiers and managers

- Technical Due Diligence – Acquisition / Disposal
- Make Good / Dilapidations Reporting
- End of Lease Make Good / Dilapidations Negotiations
- Schedules of Condition
- Tax Depreciation
- Project & Contract Administration
- CAPEX & Maintenance Forecasting
- Defect Reporting
- Asbestos & Hazardous Materials Assessments / Registers / Remediation
- Environmental Investigations / Remediation
- NABERS & BEEC
- WHS Risk Assessments
- Disability Access Audits
- Building Code Consultancy
- Statutory Compliance

Capitalising on a global skill base, all senior consultants are Chartered Building Surveyors, Engineers or Environmental Scientists, providing the company with a breadth of understanding across many specialist competencies, which is the key to our speed of assessment, service and delivery.

Contact us - pes@kpmg.com.au

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Brindabella Business Park
Canberra Airport ACT 2609
Australia
+61 2 6248 1111

Our reporting date corresponds with a period of significant volatility in global financial markets and widespread macro-economic uncertainty. In light of the emergence and spread of COVID-19, this volatility and uncertainty could persist for some time. The assumptions and cost estimates set out in our report will need to be reviewed and revised to reflect any changes which emerge as a result of COVID-19. As a result of the continued uncertainty in relation to the impact of COVID-19, our work may not have identified, or reliably quantified the impact of, all such uncertainties and implications. If the assumptions provided by Client/Target on which this report is based are subsequently shown to be incorrect or incomplete, this could have the effect of changing the findings set out in this report and these changes could be material. We are under no obligation to amend our report for any subsequent event or new information.

KPMG Property & Environmental Services

KPMG.com.au

October 2020. 57775576DTL