

REPORT

Preliminary Soil Contamination Assessment

Burnett Grey Gardens, 11-13 Glen Eira Rd, Ripponlea VIC 3185

Submitted to:

City of Port Phillip

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St Kilda, VIC, 3182

Submitted by:

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1.0 INTRODUCTION

Golder Associates (Golder) was engaged by the City of Port Phillip (CoPP) to undertake a Preliminary Soil Contamination Assessment of the approximately 0.35 hectare (ha) Burnett Grey Gardens located at 11-13 Glen Eira Rd, Ripponlea (the site) (Figure 1, Appendix A). Golder understands that CoPP is not proposing to change the existing land use for this site which will remain as an open space recreation reserve and children's playground.

2.0 OBJECTIVES

The objectives of this Preliminary Soil Contamination Assessment are:

- To assist Council to meet its obligations under the Environment Protection Act 2017 (EP Act) and to prioritise the site for further investigation and/or remediation, if required; and
- To advise Council if there is a Duty to Notify EPA Victoria of contaminated land and whether there will be an ongoing Duty to Manage contaminated land.

3.0 SCOPE OF WORKS

The scope of the assessment work described in this document includes the following tasks:

- Limited desktop site history information.
- Drilling three soil boreholes and collecting surface soil samples from five separate locations across the site.
- Selected laboratory analysis of soil samples; and
- Preparation of this report.

4.0 SITE DESCRIPTION AND ENVIRONMENTAL SETTING

4.1 Site Details

Table 1: Site Location and Setting

Item	Description
Street Address	11-13 Glen Eira Rd, Ripponlea VIC 3185
Council	City of Port Phillip
Approximate Site Area	0.35 ha
Legal Description	Allotment 238A on Part of Parcel 3416
Current Zoning and Planning Overlays	Public Park and Recreation Zone (Pprz) Schedule to the Public Park and Recreation Zone (Pprz) Planning Overlay: Heritage Overlay (Ho) Heritage Overlay - Schedule (Ho137) Special Building Overlay (Sbo)

Item	Description
	Special Building Overlay - Schedule 2 (Sbo2)

4.2 Environmental Setting

Table 2: Geology, Soils, and Hydrogeology

Topic	Data
Topography Source: https://gsv.vic.gov.au/sd_weave/anonymous.html	The site is at an elevation of approximately 11 to 12 m Australian Height Datum (AHD). The topography has a slight decreasing elevation in a south-westerly direction. 
Nearest surface water body	The nearest surface water body to the site is Port Phillip Bay approximately 2 km west of the site.
Geology	The Geological Survey of Victoria 1:63 360 'Melbourne' mapsheet indicates the site is underlain by Sediments of the Brighton Group formation, specifically Red Bluff Sand. This geological unit typically comprises of red-brown and yellow mottled sand with cross bedded silty sand with some clay.
Acid Sulfate Soil	Based on the CSIRO-ASRIS maps the site is located within an area which has an extremely low probability with very low confidence of the occurrence of acid sulfate soils. Further assessment of potential ASS was not undertaken as part of this assessment.
Regional Hydrogeology	Based on Visualising Victoria's Groundwater (VVG) website groundwater beneath the site is expected to be encountered at depths between 5 to 10 m below ground level (m bgl). Based on the site topography, the regional groundwater flow is likely to be to the southwest towards Port Phillip Bay.

Topic	Data
Groundwater Segment	Groundwater quality in the region is expected to be in a range between 500 and 1,000 mg/L total dissolved solids (TDS) (VVG). The Environment Reference Standard (GoV, 2021), classifies this TDS concentration range as Segment C to Segment D.
Regional Groundwater Use	There are 63 registered groundwater well identified within 500 m of the site (VVG). The use of 18 of the bores is for observation/investigation whilst one (88696) was listed for domestic use. The use of the remaining wells is unknown. The bore listed for domestic use is located approximately 150 m southwest of the site and installed at a depth of 24.5 m bgl. The remaining bores range in depth between 1.22 and 60 m bgl. No chemical information was supplied for this well.

5.0 SITE HISTORY

The following sources of site history information were reviewed:

- Certificates of title;
- Historic aerial imagery photography;
- Publicly available EPA reports including completed Audit and EPA Priority Sites Register.

The findings of the review are discussed in the following sections.

5.1 Site Ownership – Certificate of Title

A review of current and historical titles was undertaken to identify past site ownership. The information obtained from the certificate of title review is summarised in Table 3 whilst the titles are presented in Appendix B.

Table 3: Summary of Certificates of Title Information

Title	Parent Title	Date	Owner	Inferred Site Use
Vol: 3233, Fol: 554	NA	02/11/2016	Victorian Rail Track	Inferred open space
Vol: 3233, Fol: 554	NA	01/02/1884	Victorian Railways Commissioners	Inferred open space

According to the available titles for the site located at 11-13 Glen Eira Rd, Ripponlea is owned by Victorian Rail Track and has been since 1884 when the site was first released.

5.2 Historic Aerial Imagery Review

Aerial photographs for the site were sourced to evaluate with respect to the historical data drawn from the previous sections. Table 4 provides a summary of observations of the site and surrounding land based on the review of aerial imagery from 1945 to 2022.

Table 4: Summary of Aerial Imagery Observations

Year	Description
1945	The 1945 photograph shows the site as an underdeveloped recreational reserve. Minimal landscaping is apparent, with the exception of several trees located throughout the almost entirely grassed site. There are (possibly gravel) pathways throughout three defined sections of the site.

Year	Description
	The surrounding area appears to be developed for residential/commercial purposes. The Sandringham train line runs through the site with the Ripponlea Train Station visible on the site's eastern boundary.
1963	The 1963 aerial photograph shows no significant changes to the site or the surrounding area.
1977	The 1977 aerial photograph shows no significant changes to the site or the surrounding area.
2000	The 2000 aerial image indicates the gravel footpaths have been paved and a statue has been erected in the south-western section of the site. The surrounding land use remains unchanged.
2022	The 2022 aerial image shows the site as it is today and remains operating as a public recreation space. Changes of note include the installation of a children's playground in the northern portion of the site, as well as possible garden bed upgrades (may have been present, but not visible in other aerals). Surrounding land use is predominantly residential to the north, south and west of the site, and commercial to the east.

The aerial photographs are presented in Appendix B.

5.3 Regulatory Review

EPA Victoria Priority Sites Register

A search of the EPA Victoria Priority Sites Register indicated that the site is neither listed as a Priority Site nor is in a 500 m radius of a site listed on the Priority Sites Register published on 28 February 2022.

EPA Environmental Audits

A search of the EPA Victoria public library indicated three completed 53X Environmental Audit reports within 500 m of the Site. The report has been summarised below in Table 5.

Table 5: Summary of Completed Environmental Audits

Address	Approx. Distance and Direction from Site	Date	CARMS No.	Audit Outcome
168-176 Hotham St and 2 Acacia St, Elsternwick	300 m south-east	18/10/2013	54245-1	SoEA
160 Hotham St, Elsternwick	300 m east	05/03/2014	70169-1	SoEA
65-67 Grosvenor St, Balaclava	300 m north-west	13/09/2012	70168-1	SoEA

Note: SoEA = Statement of Environmental Audit

The abovementioned Environmental Audit Reports were reviewed with the key findings of the completed Audits summarised below.

168-176 Hotham St and 2 Acacia St, Elsternwick (service station)

The Environmental Audit report for the Audit site on Hotham and Acacia Streets reported that the site was occupied by Mobil, for utilisation as a service station. Peraco Environmental Services Pty Ltd (Peraco) was engaged by Mobil to undertake the audit for the purpose of future site divestment. The audit included a soil and groundwater investigation and remediation.

Results of the soil investigations conducted following remediation works indicated that residual concentrations of chemicals of concern, except for TPH C₆-C₉ aliphatic, benzene and total xylenes (at a given location) were below the adopted investigation levels.

The groundwater assessment identified elevated BTEX and MTBE exceeding adopted assessment criteria. Groundwater was deemed unsuitable for beneficial uses including 'Agriculture, Parks and Gardens', 'Primary Contact Recreation', 'Stock Watering' and 'Industrial'.

The Audit concluded that the Audit site was suitable in its current state for sensitive use, parks and reserves, agricultural, recreational / open space, commercial and industrial uses.

160 Hotham St, St Kilda East (former motor engineers, service station, and car dealership)

The Audit site consisting of 160 Hotham St was historically occupied as a motor engineering company, a service station, and a car dealership, which was redeveloped for residential land use. As part of the assessment, Prensa Pty Ltd undertook a soil and groundwater investigation.

Soil investigation post remediation works indicated the presence of elevated concentrations of certain metals (i.e., arsenic and vanadium), fluoride, pH, benzene, ethylbenzene, xylenes (total), TRHs (C₆ – C₁₀ and C₁₀ – C₁₆ fractions), naphthalene and total PAHs.

The auditor stated that the remaining groundwater contamination did not pose a human health risk to offsite users or future occupiers of the Audit site.

The Audit concluded the Audit site was suitable for the proposed high density residential land use and a Groundwater Quality Restricted Use Zone was applied to the site.

65-67 Grosvenor St, Balaclava (motor engineers)

The Environmental Audit report for the Audit site on Grosvenor Street reported that the site was occupied by as a motor engineers and panel beating workshop. OTEK Australia Pty Ltd (OTek) were engaged to undertake the audit for the purpose of future site redevelopment to high density residential land use. The audit included a soil and groundwater investigation and remediation.

Results of the soil investigations conducted following remediation works indicated that fill material contained residual concentrations of heavy metals above the EILs and concentrations of Total PAHs and benzo(a)pyrene which necessitated the issue of a conditional statement.

Groundwater assessment displayed the presence of elevated levels of chloride, sodium, metals, ammonia, and nitrate. These exceedances were considered to represent regional groundwater levels.

The Audit concluded the Audit site was suitable for the proposed high density residential land use.

5.4 Previous Environmental Site Investigation

It is understood that there have been no previous site investigation pertaining to the Burnett Grey Gardens site.

6.0 SITE INSPECTION

The site is bordered Maryville Street to the north, Glen Eira Road to the south, Morres Street to the west and the Sandringham train line to the east. The site is situated in a predominantly residential area and is triangular with a grassed open space recreation area and children's playground on site. The site is divided into three sections by paved footpaths with park benches, garden beds and trees spaced throughout.

A site walkover was conducted by Golder staff on 27 March 2022 with key observations summarised below.

- The site was raised above the paved footpaths by approximately 0.1 m using imported fill.
- Approximately 75% of the site is grassed, 15% sealed with garden mulch or soft fall (pine bark) beneath the children's play equipment and in the garden beds, and the remaining 10% sealed with asphalt walkways.
- The macro vegetation onsite consists of mixed species mature trees scattered around the site, with garden beds at the corners of each of the three sections, and another along the boundary with the rail corridor in the south-eastern section of the site. All vegetation and grass appeared healthy at the time of the inspection.
- A park bench was situated in the middle and northern section of the site, and two more situated along the train line border adjacent to the southern section.
- A children's playground is located in the northern portion of the site and covers approximately 5% of the land. The play area comprises of a polyethylene and steel playground and covers an area which is covered in pine bark soft fall. The pine bark has partially degraded but is considered to be suitable to reduce exposure to the underlying soils under typical use.
- Surface water will be absorbed naturally into the grassed areas onsite whilst overland flow is directed into the municipal stormwater drainage system.
- The site is relatively flat with the exception of a slight incline in the northern section outside the children's playground indicating the potential presence mounded fill.
- There were no visible signs of contamination noted during the inspection.

A selection of photographs taken during this site inspection are presented in Appendix D.

7.0 POTENTIAL CONTAMINATION RISK

The desktop site history review and site inspection assessed the potential for past and current activities on the site to have resulted in contamination. Table 6 presents a summary of potential sources of contamination, details on potential contaminants and provides a relative risk ranking for investigation of each item with respect to contamination at the site. It should be noted the risk ranking is not intended to imply severity or extent of impact; rather, it is the intention to indicate the potential for the contamination issue to exist at the site.

Table 6: Potential Contamination Risks

Activity	Description	Indicative Potential Contaminants	Contamination Risk Ranking	
			Soil	Groundwater
On-Site Land Use				
Open Space Recreation	Aerial images show the site has operated as a recreational space since at least 1945.	Metals, pesticides, herbicides	Low	Low
Importation of fill and buried waste	Potential for soil to have been imported onto site during development for use in site levelling and building up garden beds.	Broad range including metals, PAH, TPH and asbestos.	Low to moderate	Low
Off-site Land Use				
Rail Corridor	To the immediate east of the site	Metals, PAH, asbestos, pesticides	Low to moderate	Low
Residential use	Surrounding the site	Metals, PAH, wastes	Low	Low
Importation of fill and buried waste	Surrounding the site	As for on-site land uses above.	Low	Low

Notes:

PAH Polycyclic Aromatic Hydrocarbons MAH Monocyclic Aromatic Hydrocarbons TPH Total Petroleum Hydrocarbons S/VOC Volatile or Semi Volatile Organic Compounds

8.0 SOIL INVESTIGATION

8.1 Methodology

Soil sampling was undertaken across the site and included drilling three boreholes on site and the collection of surface soil samples from a further five locations. Borehole sampling was undertaken using a hand auger to a depth of 0.95 m bgl. Soil samples were collected at regular intervals throughout the soil profile. Surface sampling was undertaken using a clean stainless-steel spatula. The Golder borehole log and surface soil sample descriptions are provided in Appendix C.

Soil sampling was undertaken in accordance with Golder's standard sampling protocols. Primary samples were assessed in the field for the potential presence of visual or olfactory evidence of contamination and screened for volatile organic compounds (VOCs) using a photoionization detector (PID).

Soil samples were collected in jars which were capped with Teflon lined lids supplied by the laboratory. The jars were labelled immediately and stored in a chilled cooler. The samples were then dispatched to the laboratory accompanied by chain of custody documentation.

During this investigation, all soils sampled were submitted to Eurofins which is National Association of Testing Authorities (NATA) accredited for the analyses performed. The analytical suite included the following:

- Eight samples were analysed for metals and PAH;

- Three borehole samples were analysed for a broader suite of analytes as presented in Table 3 of the Victoria Environment Protection Authority (Vic EPA) Publication 1828.2 for an assessment of waste soil classification for off-site disposal.

Laboratory documentation including chain of custody (CoC) is included in Appendix E.

8.2 Soil Assessment Framework

8.2.1 Environmental Values

The Environment Reference Standard (GoV, 2021) outlines land use categories and specifies environmental values that apply to the land use categories. It is understood that the site is proposed to be used for ongoing open space recreational use. The relevant environmental values for this land use are presented below.

Table 7: Summary of Environmental Values

Environmental Value	Land Use Category – Recreation/Open Space
1. Land Dependent Ecosystems and Species: - Natural Ecosystems - Modified Ecosystems - Highly Modified Ecosystems	No Yes Yes
2. Human Health	Yes
3. Buildings & Structures	Yes
4. Aesthetics	Yes
5. Production of food, flora & fibre	No

8.2.2 Adopted Soil Assessment Criteria

The adopted soil assessment guidelines considered to be applicable are summarised below.

Table 8: Summary of Adopted Criteria for Soil

Beneficial Use	Adopted Screening Criteria
1. Maintenance of Ecosystems - Modified	Amended National Environment Protection Measure (NEPM) 2013 EIL and ESL (urban residential & public open space)
2. Human Health	Amended NEPM 2013, HIL-C (open space recreation) and HSL-C (sand).
3. Buildings & Structures	AS2159 – 2009 EPA Publication 655 – 2009
4. Aesthetics	Field observations
5. Production of food, flora & fibre	NA

Notes: EILs calculated using information from the Soil and Landscape Grid of Australia website. The values adopted for the EIL guideline calculations, were collected from the 5-15 cm estimated values as the bulk of the exceedances were in the shallow fill. The values adopted for the calculations were as follows CEC = 5 meq+/100g, OC = 0.5% and Clay = <10% whilst the lowest recorded soil pH (6.4) was also adopted. The soils are considered coarse due to the sand content.

Refer to Appendix F for EIL calculations.

8.2.3 Waste Soil Classification Framework

The EPA Victoria Waste Resource Guidelines (IWRG) 2009 and Publication 1828.2 *Waste Disposal Categories – characteristics and thresholds* (2021) provides guidance in relation to the sampling and categorisation of waste soils to be moved off-site for re-use or disposal.

In accordance with Publication 1828.2, dated March 2021, potentially contaminated soils must be categorised into one of six hazard categories, prior to off-site re-use or disposal. The hazard categories are as follows:

- Category A;
- Category B;
- Category C;
- Category D;
- Fill Material; and
- Soil containing asbestos only.

9.0 SUMMARY OF RESULTS

The results of the soil sampling are summarised in the sections below.

9.1 Sub-surface Ground Conditions

Details of the subsurface conditions encountered at the site at all sampling locations investigated by Golder are provided in Appendix C.

Approximately 75% of the site is unsealed and covered by grass with the remainder of the site covered with asphalt footpaths or pine bark soft fall beneath the children's play equipment. A layer of imported fill extending up to at least 0.45 m bgl. The fill typically comprised of brown fine to coarse grained sand with a trace gravel and rootlets.

The natural soils encountered comprised of grey fine to medium grain sand. The natural soils were moist and were not odorous or visibly impacted by contamination.

A Photo Ionisation Detector (PID) was used to screen for volatile organic compounds with PID readings ranging from 0.0 ppm to a maximum of 0.1 ppm across the site indicating the risk of volatile organic compounds in the surface soils is low.

It is noted that this soil investigation was undertaken using surface samples and hand auger boreholes only. The small diameter of the investigation technique makes it difficult to observe the presence of asbestos containing material (ACM) that may be within the site fill materials. Whilst no observations of ACM were made during the investigation, due to this investigation limitation and the potential for imported fill, there remains a risk of ACM being present in the site soils. This risk could be further reduced by excavating some test pits through the fill materials to observe for ACM.

Details of each soil sample including PID readings are presented in the borehole logs (Appendix C).

9.2 Analytical Results

Tables 1G and 2G (Appendix G) summarise the results of the soil laboratory analysis compared to the adopted assessment framework (Section 8.2). Laboratory analytical certificates and chain of custody forms are presented in Appendix E.

9.3 Data Quality Assurance

As part of these works, we undertook a review of the data quality the laboratory used during this PSCA. This assessment included examining holding times, laboratory accreditation, sample preservation methods and a review of laboratory quality control sample results. Following this review, we have concluded that the data quality was considered acceptable for the purpose of the assessments.

10.0 DISCUSSION OF SOIL RESULTS

10.1 Assessment of Soil Contamination

The assessment of soil results against the adopted beneficial use criteria identified the following:

- Concentrations of BaP TEQ ranging from 3.2 to 15 mg/kg were reported above the adopted NEPM 2013 – HIL C guidelines, assessing the suitability of the site for the proposed ongoing open space recreation land use in all fill samples analysed. Concentrations of BaP within the natural soils were recorded below the adopted guidelines.
- Concentrations of benzo(a)pyrene (BaP) ranging from 0.7 to 9.6 mg/kg were reported above the adopted ecological guidelines, assessing the suitability of the site for the beneficial uses of maintenance of ecosystems. These elevated concentrations were only detected in fill.
- The consideration of buildings and structures was assessed based on the reported pH results that ranged between 6.4 and 6.5, which represents a non-aggressive exposure classification for concrete or steel piles in all soils above groundwater at the site.
- Minor aesthetic impacts were identified across the site from construction/demolition waste within the fill.
- Whilst ACM was not observed, the investigation method limits the ability to make observations of ACM in soil. As such, some uncertainty remains regarding the risk of ACM in soil.

The preliminary assessment of beneficial uses indicates that the fill may pose an unacceptable risk to protected beneficial uses for the current park use without remediation or management.

10.2 Preliminary Soil Classification for Offsite Disposal

The results of the analysis compared to the adopted guidelines are presented in Table 2G in Appendix G. A preliminary waste classification was undertaken based on the maximum total concentration for individual analytes and indicate the following:

- Fill is likely classified as Category C or D Reportable Priority Waste based on elevated BaP and total PAH concentrations; and
- Natural soils are likely classified as Fill Material for offsite disposal or onsite reuse.

Prior to disposal of any material offsite, the nominated receiver should be contacted to confirm the waste characterisation requirements, including chemical testing and sample density. The transport of all materials from the site should conform to the requirements of EPA Victoria and VicRoads.

10.3 Assessment of Potential Duties under the EP Act

As specified in the EP Act (2017), the Duties for Contaminated Land apply to anyone in management or control of contaminated land and takes into consideration the General Environmental Duty (GED), Duty to Manage and Duty to Notify of Contamination. The Duties for Contaminated Land were assessed considering the following:

- **General Environmental Duty (GED):** relates to the 'state of knowledge' one has in relation to the risk of harm from an activity and the reduction of risks on human health or the environment.
- **Duty to Manage (reduce the risk of harm):** expected when a person knows or ought to reasonably know that the land is potentially contaminated.
- **Duty to Notify:** relates to notifiable contamination that requires management or control. If historical site sampling reported contaminants above human health investigation levels, the site was considered for Notification to EPA of contaminated land. Contaminant concentrations above the human health investigation levels have been identified at this site.

A summary of the Duties for Contaminated Land, including proposed recommendations for ongoing works are provided below and in Table 3G of Appendix G.

Table 9: Summary of Duties for Contaminated Land

Site name	GED	Duty to Manage	Duty to Notify	Recommendations
Burnett Grey Gardens	√	√	√	Interim: ■ Continue management of the existing separation layers including grass, garden mulch and soft fall (pine bark). Develop and implement an interim Site Management Plan (SMP) to document the required management. Long Term: ■ Monitor vegetation health onsite. ■ Update and implement the SMP as necessary following any upgrading works.

11.0 CONCLUSIONS

The following findings and conclusions have been reported for the site:

- The site has been an open space recreation reserve since at least 1945 and is owned by Victorian Rail Track (Vic Track) but managed by Council. The current play equipment appears to have been constructed onsite between 2000 and 2021.
- Separation layers evident onsite included grass, mulch, asphalt, and pine bark soft fall. Whilst the pine bark separation layer was in poor condition, both the pine bark and the grass are considered suitable to prevent exposure to the underlying soils under typical site use.
- Concentrations of BaP TEQ ranging from 3.2 to 15 mg/kg were reported above the adopted NEPM 2013 – HIL C guidelines, assessing the suitability of the site for the proposed ongoing open space recreation

land use in all samples of fill analysed. Concentrations of all chemicals of concern in natural soils were reported below the adopted guidelines.

- Concentrations of benzo(a)pyrene (BaP) ranging from 0.7 to 9.6 mg/kg were reported above the adopted ecological guidelines in fill only, assessing the suitability of the site for the beneficial uses of maintenance of ecosystems.
- Minor aesthetic impacts were identified across the site from crushed rock within the fill. Whilst ACM was not observed, the investigation method limits the ability to make observations of ACM in soil. As such, some uncertainty remains regarding the risk of ACM in soil.
- The contaminated fill on site may pose an unacceptable risk to protected beneficial uses of ecosystem protection and human health for the current park use without remediation or management.
- Laboratory results indicate that the fill onsite is potentially classified as Category C or D Contaminated Soil due to elevated BaP (2 to 9.6 mg/kg) and total PAH concentrations (30.9 to 85.1 mg/kg) in general accordance with Publication 1826.2 (2021). Concentrations of chemicals of concern within the natural soils were reported to be below the upper limits for Fill Material, preliminarily classifying the natural soils as Fill Material for offsite disposal or onsite reuse.

These classifications should be considered preliminary due to the limited sampling density. Further environmental sampling will be required prior to the offsite removal of any soil.

- Under the EP Act, we consider that for this site, CoPP has a Duty to Notify due to the site contamination being elevated above current human health criteria and the likelihood of receptors being exposed to the contamination.
- CoPP also has a Duty to Manage the identified contamination under the Act. Recommendations for management are outlined in Table 9 of this report.

12.0 RECOMMENDATIONS

It is recommended that CoPP:

- Notify EPA of the contamination at the site once notification procedures under the EP Act (2017) are confirmed; and
- Undertake management of the site in accordance with the recommendations set out in Table 9 of this report.

13.0 IMPORTANT INFORMATION

Your attention is drawn to the document titled - "Important Information Relating to this Report", which is included in Appendix H of this report. The statements presented in that document are intended to inform a reader of the report about its proper use. There are important limitations as to who can use the report and how it can be used. It is important that a reader of the report understands and has realistic expectations about those matters. The Important Information document does not alter the obligations Golder has under the contract between it and its client.

14.0 REFERENCES

EIL calculation spread sheet provided in the Assessment of Site Contamination NEPM toolbox (accessible from <http://www.nepc.gov.au/nepms/assessment-site-contamination/toolbox>).

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Standards Australia, 2009, AS2159 *Piling – Design and Installation*.

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Signature Page

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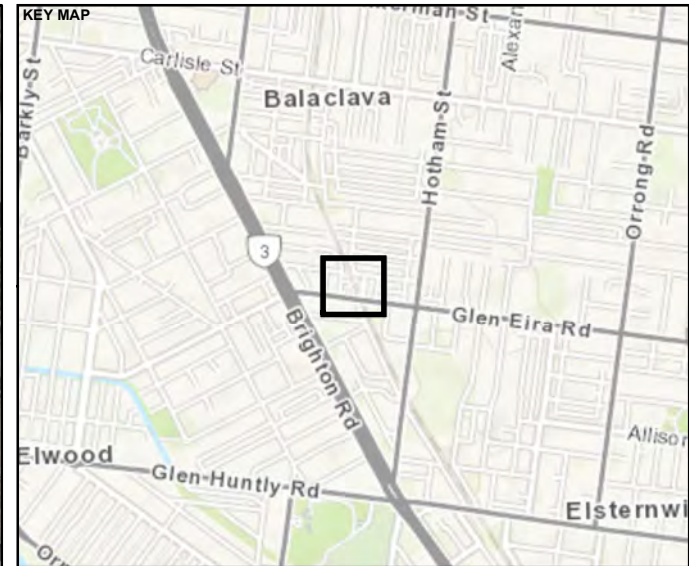
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APPENDIX A

Figure



- LEGEND
- Borehole
 - Soil Sample Location
 - Site Boundary



NOTE(S)
1. PROJECTION: GDA2020 MGA ZONE 55

REFERENCE(S)
1. KEY MAP SOURCED FROM ESRI ONLINE BASEMAPS.
2. ROAD & PROPERTY DATA © THE STATE OF VICTORIA, DEPARTMENT OF ENVIRONMENT, LAND, WATER & PLANNING, 2017.
3. AERIAL IMAGERY SOURCED FROM NEARMAP.COM DATED 12 FEBRUARY 2022.

CLIENT
CITY OF PORT PHILLIP

PROJECT
PRELIMINARY SOIL CONTAMINATION ASSESSMENT -
BURNETT GREY GARDENS

TITLE
SITE LAYOUT AND SAMPLING LOCATIONS

CONSULTANT	YYYY-MM-DD	3/05/2022
	DESIGNED	LG
	PREPARED	LG
	REVIEWED	IMK
	APPROVED	IMK

PROJECT NO. 21467389	CONTROL 017-R	REV. 0	FIGURE 1
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APPENDIX B

Historic Information

PLANNING PROPERTY REPORT

From www.planning.vic.gov.au at 08 April 2022 03:30 PM

PROPERTY DETAILS

Address: **11-13 GLEN EIRA ROAD RIPPONLEA 3185**
Crown Description: **Allot. 238A PARISH OF PRAHRAN**
Standard Parcel Identifier (SPI): **238A\PP3416**
Local Government Area (Council): **PORT PHILLIP**
Council Property Number: **201564**
Planning Scheme: **Port Phillip**
Directory Reference: **Melway 67 E1**

www.portphillip.vic.gov.au

[Planning Scheme - Port Phillip](#)

UTILITIES

Rural Water Corporation: **Southern Rural Water**
Melbourne Water Retailer: **South East Water**
Melbourne Water: **Inside drainage boundary**
Power Distributor: **UNITED ENERGY**

STATE ELECTORATES

Legislative Council: **SOUTHERN METROPOLITAN**
Legislative Assembly: **CAULFIELD**

OTHER

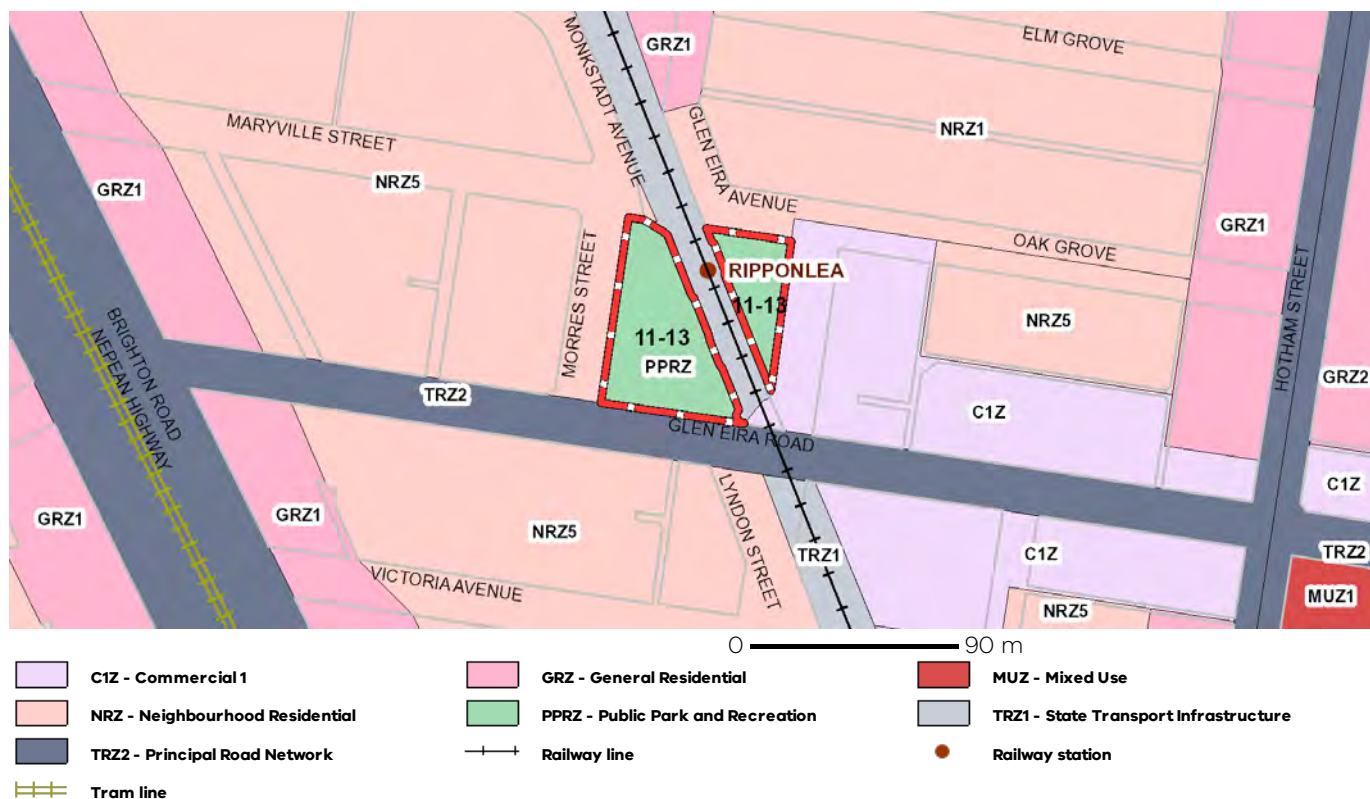
Registered Aboriginal Party: **Bunurong Land Council
Aboriginal Corporation**

[View location in VicPlan](#)

Planning Zones

[PUBLIC PARK AND RECREATION ZONE \(PPRZ\)](#)

[SCHEDULE TO THE PUBLIC PARK AND RECREATION ZONE \(PPRZ\)](#)



Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

Planning Overlays

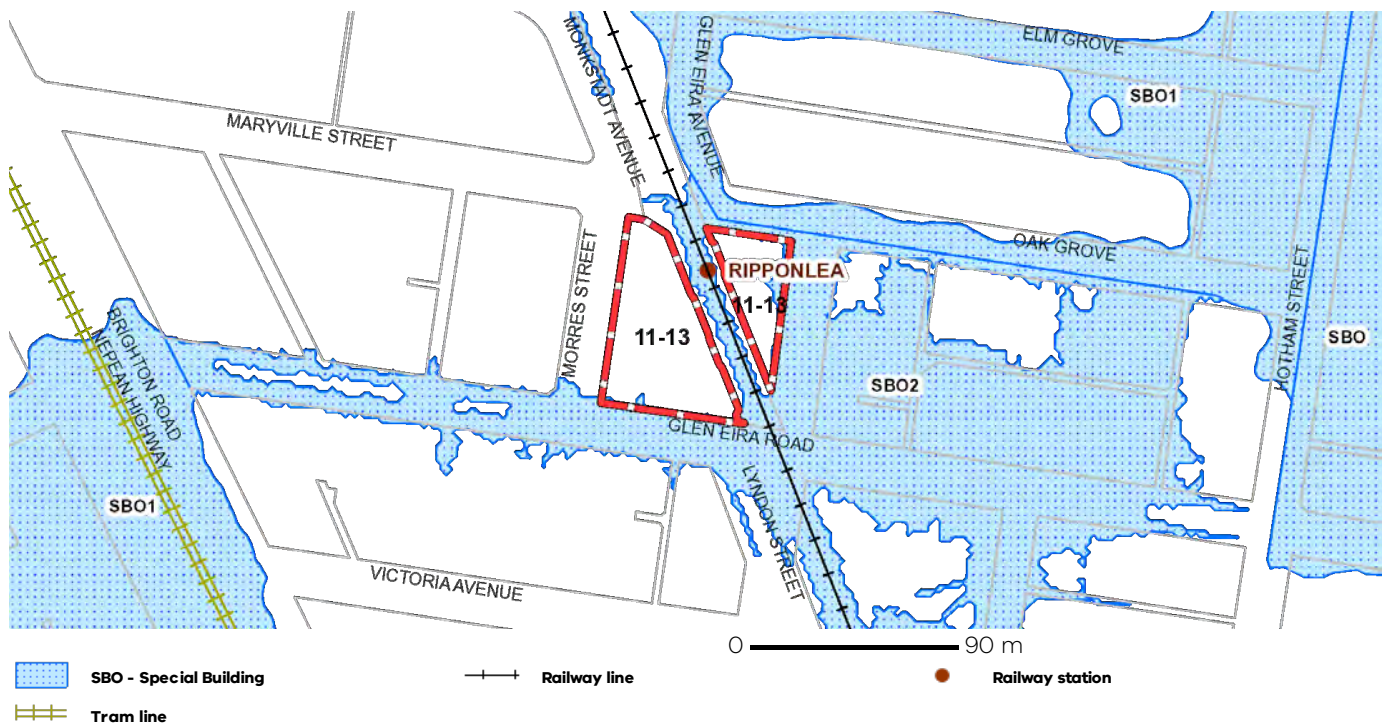
[HERITAGE OVERLAY \(HO\)](#)

[HERITAGE OVERLAY - SCHEDULE \(HO137\)](#)



[SPECIAL BUILDING OVERLAY \(SBO\)](#)

[SPECIAL BUILDING OVERLAY - SCHEDULE 2 \(SBO2\)](#)



Planning Overlays

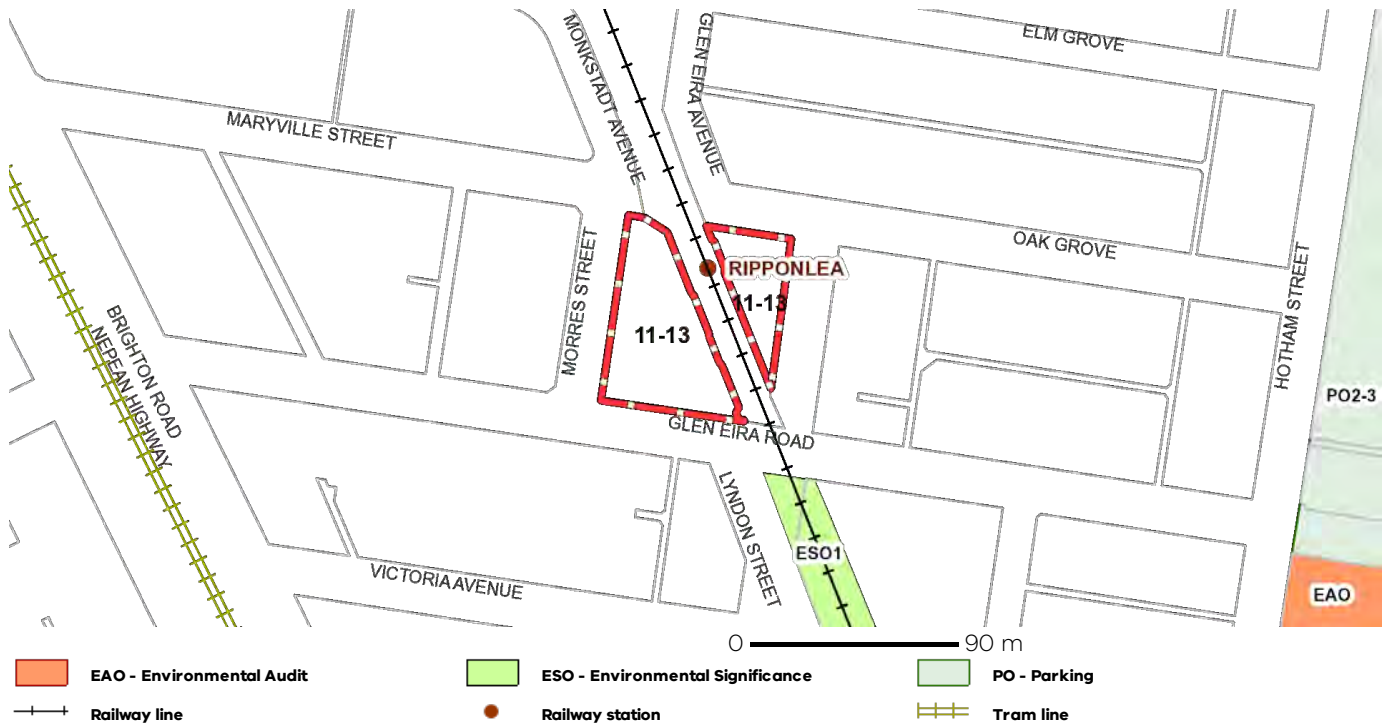
OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

[ENVIRONMENTAL AUDIT OVERLAY \(EAO\)](#)

[ENVIRONMENTAL SIGNIFICANCE OVERLAY \(ESO\)](#)

[PARKING OVERLAY \(PO\)](#)



Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

Heritage Register

This property is affected by an entry on the Victorian Heritage Register.

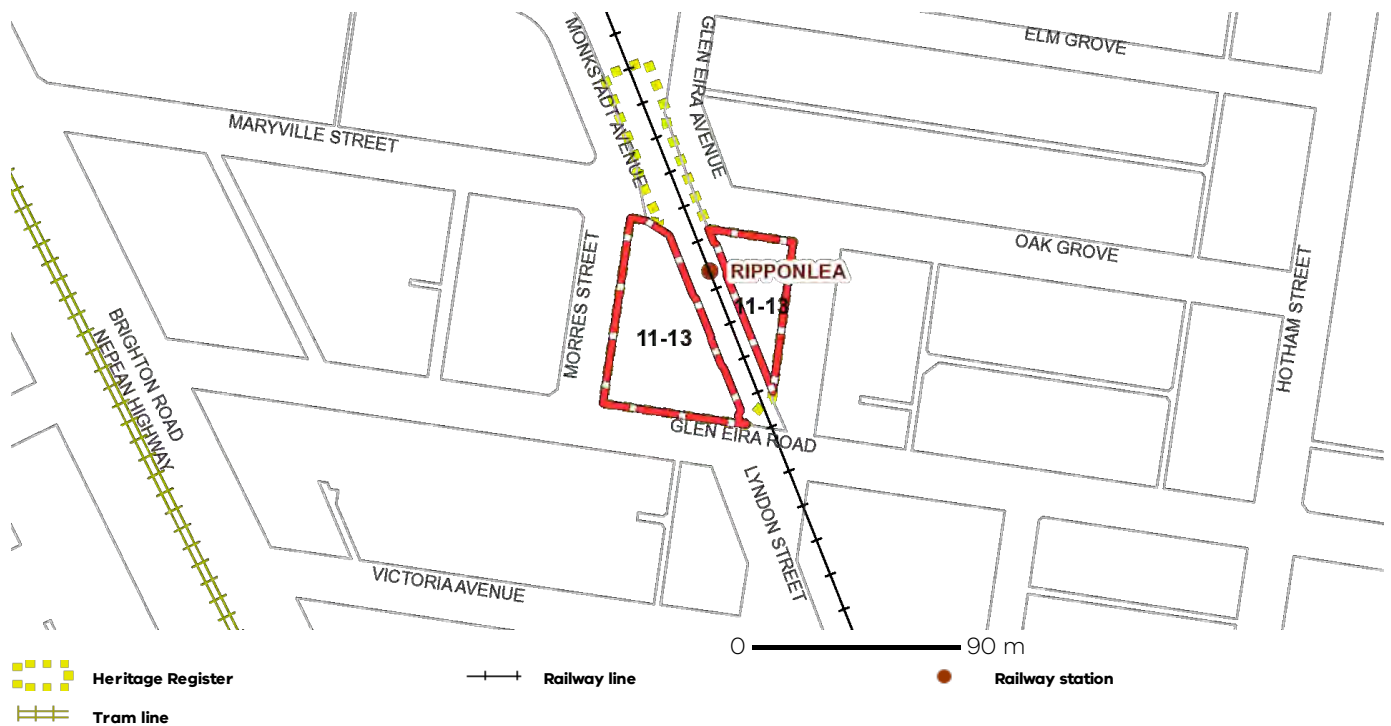
View information about [VHR Number H1588](#) - RIPPONLEA RAILWAY STATION COMPLEX

Heritage Register data last updated on 6 April 2022.

This report is NOT a **Heritage Certificate** issued pursuant to Section 50 of the Heritage Act 1995.
It does not show places which may be under consideration for inclusion in the Victorian Heritage Register.

For more information on the **Victorian Heritage Register** go to [Victorian Heritage Database](#)

Other information about the heritage status of this property, how to obtain a Heritage Certificate, and any heritage approvals that may be required, may be obtained from [Heritage Victoria](#)



Further Planning Information

Planning scheme data last updated on 6 April 2022.

A **planning scheme** sets out policies and requirements for the use, development and protection of land. This report provides information about the zone and overlay provisions that apply to the selected land. Information about the State and local policy, particular, general and operational provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting <https://www.planning.vic.gov.au>

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the **Planning and Environment Act 1987**. It does not include information about exhibited planning scheme amendments, or zonings that may affect the land. To obtain a Planning Certificate go to Titles and Property Certificates at Landata - <https://www.landata.vic.gov.au>

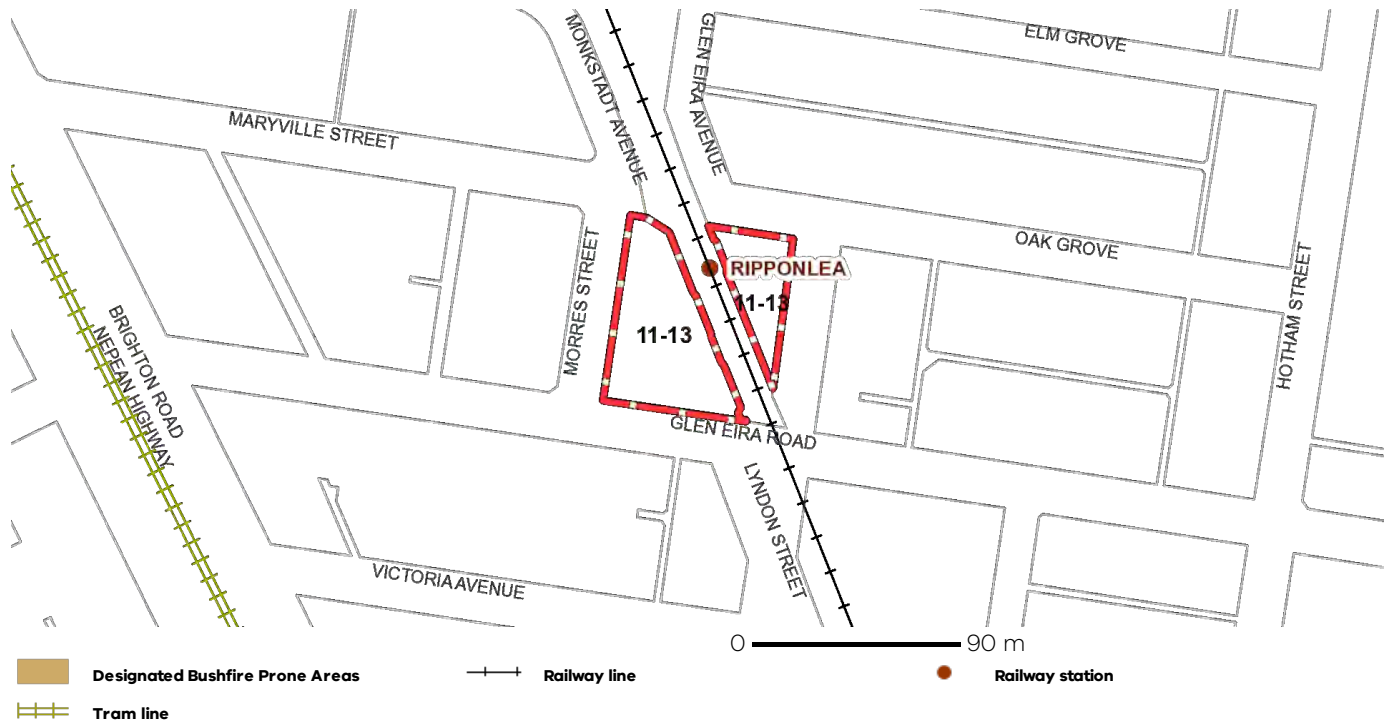
For details of surrounding properties, use this service to get the Reports for properties of interest.

To view planning zones, overlay and heritage information in an interactive format visit <https://mapshare.maps.vic.gov.au/vicplan>

For other information about planning in Victoria visit <https://www.planning.vic.gov.au>

Designated Bushfire Prone Areas

This property is not in a designated bushfire prone area.
No special bushfire construction requirements apply. Planning provisions may apply.



Designated bushfire prone areas as determined by the Minister for Planning are in effect from 8 September 2011 and amended from time to time.

The Building Regulations 2018 through application of the Building Code of Australia, apply bushfire protection standards for building works in designated bushfire prone areas.

Designated bushfire prone areas maps can be viewed on VicPlan at <https://mapshare.maps.vic.gov.au/vicplan> or at the relevant local council.

Note: prior to 8 September 2011, the whole of Victoria was designated as bushfire prone area for the purposes of the building control system.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website <https://www.vba.vic.gov.au>

Copies of the Building Act and Building Regulations are available from <http://www.legislation.vic.gov.au>

For Planning Scheme Provisions in bushfire areas visit <https://www.planning.vic.gov.au>

Native Vegetation

Native plants that are indigenous to the region and important for biodiversity might be present on this property. This could include trees, shrubs, herbs, grasses or aquatic plants. There are a range of regulations that may apply including need to obtain a planning permit under Clause 52.17 of the local planning scheme. For more information see [Native Vegetation \(Clause 52.17\)](#) with local variations in [Native Vegetation \(Clause 52.17\) Schedule](#)

To help identify native vegetation on his property and the application of Clause 52.17 please visit the Native Vegetation Information Management system <https://nvim.delwp.vic.gov.au/> and [Native vegetation \(environment.vic.gov.au\)](https://nativevegetation.environment.vic.gov.au/) or please contact your relevant council.

You can find out more about the natural values on your property through NatureKit [NatureKit \(environment.vic.gov.au\)](https://naturekit.environment.vic.gov.au/)

Historical Search

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The Victorian Government acknowledges the Traditional Owners of Victoria and pays respects to their ongoing connection to their Country, History and Culture. The Victorian Government extends this respect to their Elders, past, present and emerging.

HISTORICAL SEARCH STATEMENT Land Use Victoria

Produced 27/04/2022 02:53 PM

Volume 3233 Folio 554

Folio Creation: Created as paper folio continued as computer folio

THE IMAGE OF THE FOLIO CEASED TO BE THE DIAGRAM LOCATION ON 04/12/2007 12:18:17 PM

RECORD OF HISTORICAL DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details
---------------------------------	------------------------------	---------	--------	-----------------------------

RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged
---------------------------------	------------------------------	---------	--------

04/02/2004	04/02/2004	AC645814S	Y
------------	------------	-----------	---

RECTIFICATION LAND REFER TO INSTRUMENT

Conversion history

Crown Allotment 238A Parish of Prahran.

02/11/2016	02/11/2016	AN237261P	Y
------------	------------	-----------	---

RECORDING OF DISPOSITION OF LAND

FROM:

THE VICTORIAN RAILWAYS COMMISSIONERS

TO:

VICTORIAN RAIL TRACK

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

VICTORIAN RAIL TRACK of LEVEL 8 1010 LA TROBE STREET DOCKLANDS VIC 3008
AN237261P 02/11/2016

STATEMENT END

CROWN GRANT

LAND DESCRIPTION

Crown Allotment 238A Parish of Prahran.

REGISTERED PROPRIETOR

Estate Fee Simple

Sole Proprietor

THE VICTORIAN RAILWAYS COMMISSIONERS

ENCUMBRANCES, CAVEATS AND NOTICES

Any crown grant reservations exceptions conditions limitations and powers noted on the plan or imaged folio set out under DIAGRAM LOCATION below. For details of any other encumbrances see the plan or imaged folio set out under DIAGRAM LOCATION below.

NOTICE Section 47(2) Heritage Act 1995

REGISTER NO. 1588

W235610P 19/08/1999

DIAGRAM LOCATION

SEE DIAGRAM ON IMAGED FOLIO VOLUME 3233 FOLIO 554 FOR FURTHER DETAILS AND BOUNDARIES

Delivered from the LANDATA® System by InfoTrack Pty Ltd.

PREHRAN 37
151 PARCEL

Vol. 3233 Fol. 646554

Entere
a 1. 1. 1.



G14040

Book VII

WILLIAM IV., by the Grace of God of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas King Defender of the Faith Emperor of India To all to whom these presents shall come GREETING ~~Whereas~~ *and decided that* under and by virtue of the provisions of the *Railways Act 1825* and the *Railways Act 1844* the land hereinafter referred to was heretofore ascertained set out taken possession of and appropriated by The Board of Land and Works for the purposes of the construction and maintenance of the ~~and of the works in execution therein and thereupon~~

Land and Works for the purpose of the construction and maintenance of the ~~the Victorian Railways Commission~~^{the Victorian Railways Commission}—and of the works in connection therewith and thereupon became vested in the said The Board of Land and Works And whereas by an order of the Governor in Council published in the Government Gazette pursuant to the provisions of Section 5 of the Railways Act 1891 the said line or Railway was with effect transferred to The Victorian Railways Commissioners with the result that such line and the land acquired by the said board for the purpose of the same and is now vested in the said The Victorian Railways Commissioners for the purposes of the Railways Act under the provisions of the said section AND WHEREAS the said The Victorian Railways Commissioners have applied for the issue to them of a Crown Grant of the said land and am known as that in consideration of the premises WE DO HEREBY GRANT unto the said ~~the Victorian Railways Commission~~

said land Now know ye that in consideration of the premises We do hereby grant unto the said The National Railway Commissioners their successors assigns and transferees so much and such parts as lie above the depth of feet below the surface of All that piece of Land in the Warranwick containing one acre one rood and thirty four pence more or less being allment inclosed and thallright on the City of Bristol Parish of St Martin Church & Benke

delimited with the measurements and abutments thereof in the map drawn in the margin of these presents and therein coloured yellow. Everyman nevertheless that the said grants shall be extended to sink wells for water and the use and benefit of any spring or springs of water upon or within the boundaries of the said land for any one or all purposes as though they held the land without limitation as aforesaid. Extending however unto us our heirs and successors all gold and silver and auriferous and argentiferous earth or stone and all mines seams lodes and deposits containing gold silver copper tin antimony coal and other metals and minerals and mineral ores in upon and under and within the boundaries of the land hereby granted. And also reserving to us our heirs and successors free liberty and authority for us our heirs and successors and our agents and servants at any time or times hereafter to enter upon the said land and to search and mine therein for gold silver copper tin antimony coal and all other metals and minerals ores and to extract and remove therefrom any gold silver and any auriferous and argentiferous earth or stone copper tin antimony coal and other metals and mineral ores and to search for and work dispose of and carry away the gold silver copper tin antimony coal metals minerals and their ores lying in upon or under the land hereby granted and for the purposes aforesaid to sink shafts make drives erect machinery and to carry on any works and do any other things which may be necessary or usual in mining and with all other incidents that are necessary to be used for the getting of the said gold silver copper tin antimony coal and other metals and minerals ores and the working of all mines seams lodes and deposits containing gold silver copper tin antimony coal and other metals and minerals ores in upon or under the land hereby granted. To hold unto the said

The Victorian Railways Commissioners

their successors transferees and assigns for ever _____ PROVIDED ALWAYS that the said land is and shall be subject for mining purposes on under and in the like terms conditions and events as the same might have been resumed under the law in force at the date of these presents And provided also that the said land is and shall be subject to the right of a miner's right or of a licence to search for metals or minerals or of a mining or mineral lease to the same owner and to mine for gold silver copper tin antimony coal and other metals and mineral ores and to erect and to occupy mining plant or machinery thereon in the usual manner and under the same conditions and provisions as those to which the holder of a miner's right or of a mining or mineral lease had at the time of the passing of the *Land Act* 1890 the right to mine for gold and silver in and upon Crown lands _____

Provided that compensation shall be paid to the said *The Victorian Railways Commissioners* _____

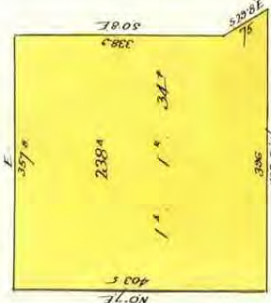
their successors assigns and transferees by such person for surface damage to be done to such lands by reason of mining thereon such compensation to be determined as provided by the 179th section of the *Land Act* 1901 and the payment thereof to be a condition precedent to such right of entry.

MARSHVILLE STREET

Dated Monday in accordance with the provisions of the Land Act 1901 the first day of January in the year of our Lord One thousand eight hundred and eighty four being the day ~~the said~~ The Board of Land and Works the predecessors in title of The Victorian Railways Commissioners became entitled to claim a Grant.

in testimony whereof we have on this *seventh* day of *November* One thousand nine hundred and *seventy* caused this our Grant to be sealed at Melbourne with the Seal of the State of Victoria *in* witness our trusty and well-beloved *John Madden* Esq. and one of the most distinguished Judges of said *Method* and said *George* *William* Governor in and over the said State of Victoria and its Dependencies

Bookbinder



NOTE.—The bearings and measurements are approximately given on this plan.

$\frac{P}{OI(9)}$ The measurements are in links.

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Both text and diagrams for this Folio have been fully converted to a computer Folio.

T03233-554-1-9

ORIGINAL CROWN GRANT.

MEMORIALS OF INSTRUMENTS.

Nature of Instrument.	Time of its Production for Registration.	Names of the Parties to it.	Number or Symbol thereon.
NOTICE SECTION 47(1) HERITAGE ACT 1995 HERITAGE REGISTER NO.1588 4235610P 19/08/99	The day of 19 , at o'clock in the noon.		



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The Victorian Government acknowledges the Traditional Owners of Victoria and pays respects to their ongoing connection to their Country, History and Culture. The Victorian Government extends this respect to their Elders, past, present and emerging.

REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 03233 FOLIO 554

Security no : 124096783847U
Produced 12/04/2022 11:15 AM

CROWN GRANT

LAND DESCRIPTION

Crown Allotment 238A Parish of Prahran.

REGISTERED PROPRIETOR

Estate Fee Simple

Sole Proprietor

VICTORIAN RAIL TRACK of LEVEL 8 1010 LA TROBE STREET DOCKLANDS VIC 3008
AN237261P 02/11/2016

ENCUMBRANCES, CAVEATS AND NOTICES

Any crown grant reservations exceptions conditions limitations and powers noted on the plan or imaged folio set out under DIAGRAM LOCATION below. For details of any other encumbrances see the plan or imaged folio set out under DIAGRAM LOCATION below.

NOTICE Section 47(2) Heritage Act 1995

REGISTER NO. 1588

W235610P 19/08/1999

DIAGRAM LOCATION

SEE TP836729U FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

ADMINISTRATIVE NOTICES

NIL

eCT Control 14410A VICTORIAN RAIL TRACK
Effective from 02/11/2016

DOCUMENT END





LEGEND
 Site Boundary



NOTE(S)
1. PROJECTION: GDA2020 MGA ZONE 55

REFERENCE(S)
1. KEY MAP SOURCED FROM ESRI ONLINE BASEMAPS.
2. ROAD & PROPERTY DATA © THE STATE OF VICTORIA, DEPARTMENT OF ENVIRONMENT, LAND, WATER & PLANNING, 2017.
3. HISTORICAL AERIAL PROVIDED BY THE CLIENT.

CLIENT
CITY OF PORT PHILLIP

PROJECT
PRELIMINARY SOIL CONTAMINATION ASSESSMENT -
BURNETT GREY GARDENS

TITLE
HISTORIC ALAERIAL-1945

CONSULTANT	YYYY-MM-DD	3/05/2022
	DESIGNED	LG
	PREPARED	LG
	REVIEWED	IMK
	APPROVED	IMK

PROJECT NO. 21467389	CONTROL 017-R	REV. 0	FIGURE 2A
-------------------------	------------------	-----------	--------------



LEGEND
[Red outline] Site Boundary



NOTE(S)
1. PROJECTION: GDA2020 MGA ZONE 55

REFERENCE(S)
1. KEY MAP SOURCED FROM ESRI ONLINE BASEMAPS.
2. ROAD & PROPERTY DATA © THE STATE OF VICTORIA, DEPARTMENT OF ENVIRONMENT, LAND, WATER & PLANNING, 2017.
3. HISTORICAL AERIAL PROVIDED BY THE CLIENT.

CLIENT
CITY OF PORT PHILLIP

PROJECT
PRELIMINARY SOIL CONTAMINATION ASSESSMENT -
BURNETT GREY GARDENS

TITLE
HISTORIC ALAERIAL-1963

CONSULTANT	YYYY-MM-DD	3/05/2022
	DESIGNED	LG
	PREPARED	LG
	REVIEWED	IMK
	APPROVED	IMK

PROJECT NO. 21467389	CONTROL 017-R	REV. 0	FIGURE 2B
-------------------------	------------------	-----------	--------------



LEGEND
[Red outline] Site Boundary



NOTE(S)
1. PROJECTION: GDA2020 MGA ZONE 55

REFERENCE(S)
1. KEY MAP SOURCED FROM ESRI ONLINE BASEMAPS.
2. ROAD & PROPERTY DATA © THE STATE OF VICTORIA, DEPARTMENT OF ENVIRONMENT, LAND, WATER & PLANNING, 2017.
3. HISTORICAL AERIAL PROVIDED BY THE CLIENT.

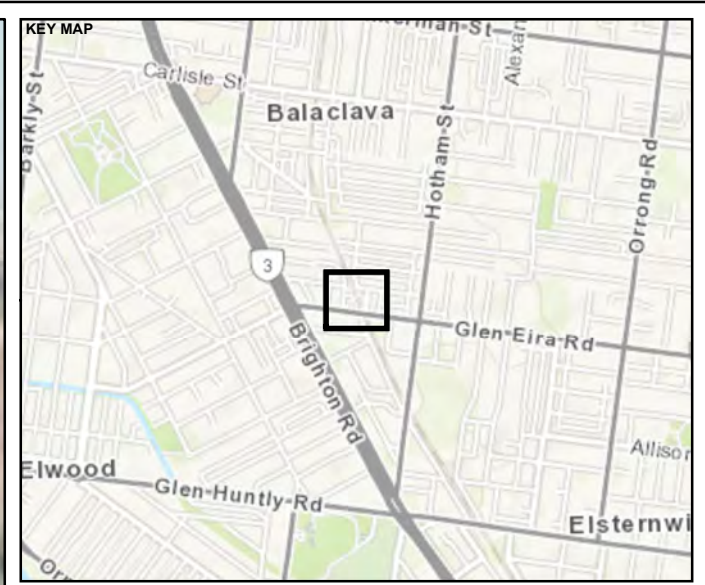
CLIENT
CITY OF PORT PHILLIP

PROJECT
PRELIMINARY SOIL CONTAMINATION ASSESSMENT -
BURNETT GREY GARDENS

TITLE
HISTORIC ALAERIAL-1977

CONSULTANT	YYYY-MM-DD	3/05/2022
	DESIGNED	LG
	PREPARED	LG
	REVIEWED	IMK
	APPROVED	IMK

PROJECT NO. 21467389	CONTROL 017-R	REV. 0	FIGURE 2C
-------------------------	------------------	-----------	--------------



LEGEND
[Red outline] Site Boundary



NOTE(S)
1. PROJECTION: GDA2020 MGA ZONE 55

REFERENCE(S)
1. KEY MAP SOURCED FROM ESRI ONLINE BASEMAPS.
2. ROAD & PROPERTY DATA © THE STATE OF VICTORIA, DEPARTMENT OF ENVIRONMENT, LAND, WATER & PLANNING, 2017.
3. HISTORICAL AERIAL PROVIDED BY THE CLIENT.

CLIENT
CITY OF PORT PHILLIP

PROJECT
PRELIMINARY SOIL CONTAMINATION ASSESSMENT -
BURNETT GREY GARDENS

TITLE
HISTORIC AERIAL- 2000

CONSULTANT	YYYY-MM-DD	3/05/2022
wsp GOLDER	DESIGNED	LG
	PREPARED	LG
	REVIEWED	IMK
	APPROVED	IMK

PROJECT NO. 21467389	CONTROL 017-R	REV. 0	FIGURE 2D
-------------------------	------------------	-----------	--------------



LEGEND
[Red outline] Site Boundary



NOTE(S)
1. PROJECTION: GDA2020 MGA ZONE 55

REFERENCE(S)
1. KEY MAP SOURCED FROM ESRI ONLINE BASEMAPS.
2. ROAD & PROPERTY DATA © THE STATE OF VICTORIA, DEPARTMENT OF ENVIRONMENT, LAND, WATER & PLANNING, 2017.
3. AERIAL IMAGERY SOURCED FROM NEARMAP.COM DATED 12 FEBURARY 2022.

CLIENT
CITY OF PORT PHILLIP

PROJECT
PRELIMINARY SOIL CONTAMINATION ASSESSMENT -
BURNETT GREY GARDENS

TITLE
HISTORIC ALAERIAL- 2022

CONSULTANT	YYYY-MM-DD	3/05/2022
	DESIGNED	LG
	PREPARED	LG
	REVIEWED	IMK
	APPROVED	IMK

PROJECT NO. 21467389	CONTROL 017-R	REV. 0	FIGURE 2E
-------------------------	------------------	-----------	--------------

PROPERTY REPORT

From www.planning.vic.gov.au at 05 April 2022 10:08 PM

PROPERTY DETAILS

Crown Description: **Allot. 238A PARISH OF PRAHRAN**
Address: **11-13 GLEN EIRA ROAD RIPPONLEA 3185**
Standard Parcel Identifier (SPI): **238A\PP3416**
Local Government Area (Council): **PORT PHILLIP**
Council Property Number: **201564**
Directory Reference: **Melway 67 E1**

www.portphillip.vic.gov.au

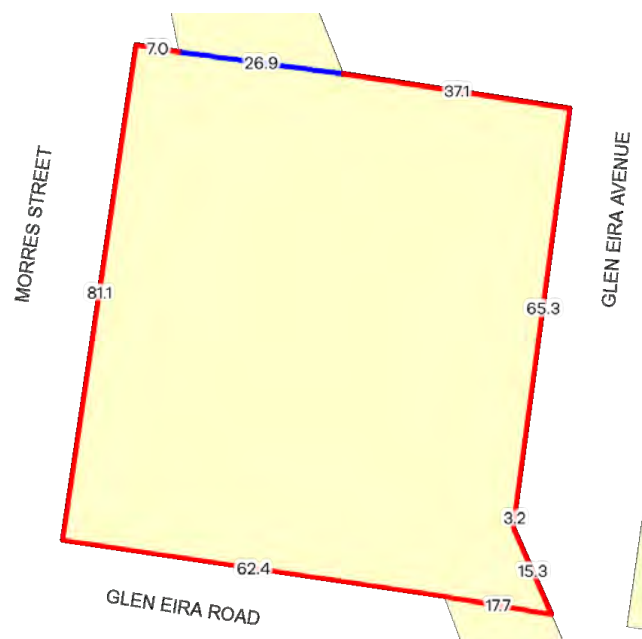
Note: There are 2 properties identified for this site.
These can include units (or car spaces), shops, or part or whole floors of a building.
Dimensions for these individual properties are generally not available.

This parcel is not in a designated bushfire prone area.
No special bushfire construction requirements apply. Planning provisions may apply.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website <https://www.vba.vic.gov.au>

SITE DIMENSIONS

All dimensions and areas are approximate. They may not agree with those shown on a title or plan.



Area: 5858 sq. m

Perimeter: 316 m

For this property:

— Site boundaries

— Road frontages

Dimensions for individual parcels require a separate search, but dimensions for individual units are generally not available.

Calculating the area from the dimensions shown may give a different value to the area shown above

For more accurate dimensions get copy of plan at [Title and Property Certificates](#)

UTILITIES

Rural Water Corporation: **Southern Rural Water**
Melbourne Water Retailer: **South East Water**
Melbourne Water: **Inside drainage boundary**
Power Distributor: **UNITED ENERGY**

STATE ELECTORATES

Legislative Council: **SOUTHERN METROPOLITAN**
Legislative Assembly: **CAULFIELD**

PLANNING INFORMATION

Planning Zone: [COMMERCIAL 1 ZONE \(C1Z\)](#)
[SCHEDULE TO THE COMMERCIAL 1 ZONE \(C1Z\)](#)
[PUBLIC PARK AND RECREATION ZONE \(PPRZ\)](#)
[SCHEDULE TO THE PUBLIC PARK AND RECREATION ZONE \(PPRZ\)](#)
[TRANSPORT ZONE 1- STATE TRANSPORT INFRASTRUCTURE \(TRZ1\)](#)

Planning Overlay: [HERITAGE OVERLAY \(HO\)](#)
[HERITAGE OVERLAY - SCHEDULE \(HO7\)](#)
[HERITAGE OVERLAY - SCHEDULE \(HO137\)](#)
[SPECIAL BUILDING OVERLAY \(SBO\)](#)
[SPECIAL BUILDING OVERLAY - SCHEDULE 2 \(SBO2\)](#)

Heritage Register: [VHR Number H1588](#) - RIPPONLEA RAILWAY STATION COMPLEX

Planning scheme data last updated on 30 March 2022.

A **planning scheme** sets out policies and requirements for the use, development and protection of land. This report provides information about the zone and overlay provisions that apply to the selected land. Information about the State and local policy, particular, general and operational provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting <https://www.planning.vic.gov.au>

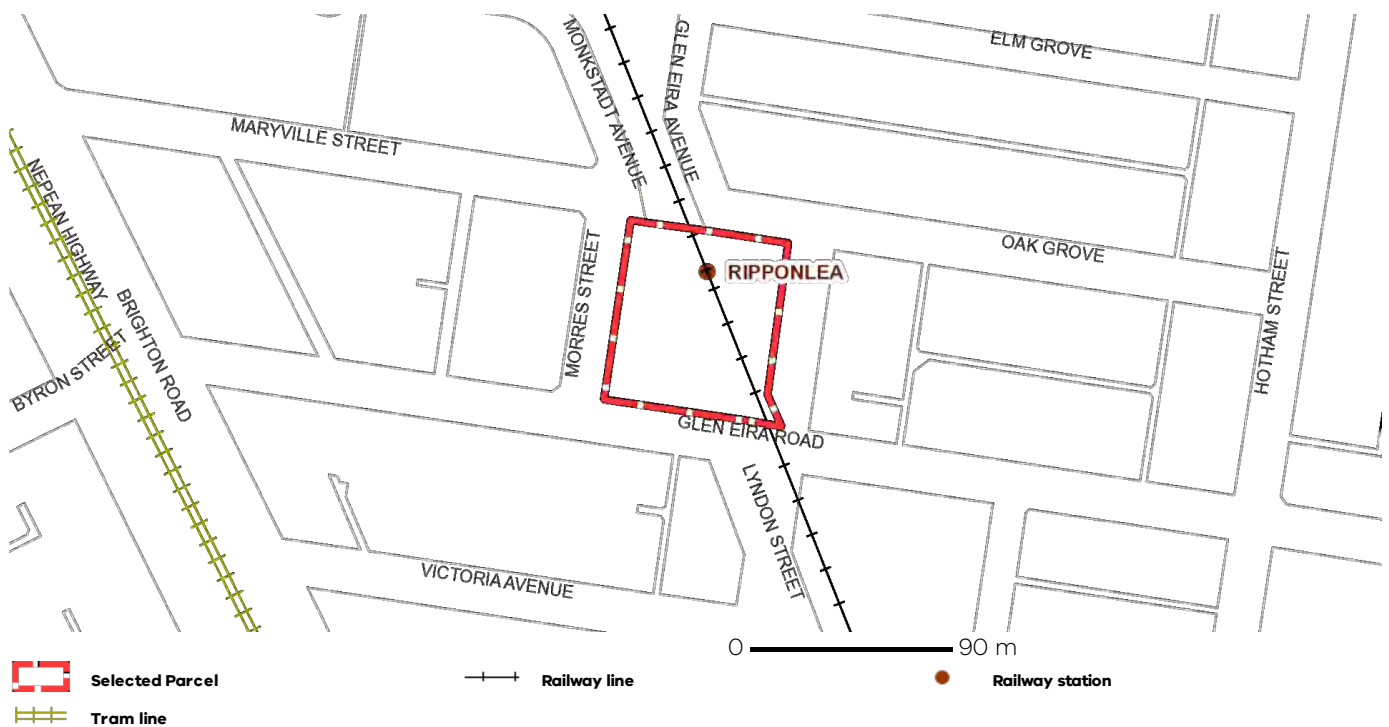
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For other information about planning in Victoria visit <https://www.planning.vic.gov.au>

Area Map



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Notwithstanding this disclaimer, a vendor may rely on the information in this report for the purpose of a statement that land is in a bushfire prone area as required by section 32C (b) of the Sale of Land 1962 (Vic).

APPENDIX C

Geological Borelogs

SITE ADDRESS: Burnett Grey Gardens

DATE: 27 March 2022

STAFF: JJB

[illegible]



GOLDER
MEMBER OF WSP

REPORT OF BOREHOLE: BH01

CLIENT: City of Port Phillip
PROJECT: Soil Investigation
LOCATION: Burnett Grey Gardens
JOB NO: 21467389

COORDS: MGA94 55
SURFACE RL: DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 0.90 m

SHEET: 1 OF 1
DRILL RIG: Hand Auger
CONTRACTOR:
LOGGED: JJB DATE: 27/3/22
CHECKED: MS DATE: 28/4/22

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY	DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					FILL: Sandy TOPSOIL brown, trace gravels, fine to coarse, with boulders <40mm, trace rootlets				
					BH01-01 BH 0.10-0.20 m R = 0A PID = 0.1 ppm							
				0.40				SAND fine grained, grey	M			
			0.5		BH01-02 BH 0.50-0.60 m R = 0A PID = 0.1 ppm							
								END OF BOREHOLE @ 0.90 m TARGET DEPTH				
			1.0									

This report of borehole must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

GAP gINT FN. F01a
RL3



SHEET: 1 OF 1

DRILL RIG: Hand Auger

CONTRACTOR:

LOGGED: JJB DATE: 27/3/22

CHECKED: MS DATE: 28/4/22

CLIENT: City of Port Phillip

COORDS: MGA94 55

PROJECT: Soil Investigation

SURFACE RL: DATUM: AHD

LOCATION: Burnett Grey Gardens

INCLINATION: -90°

JOB NO: 21467389

HOLE DEPTH: 0.95 m

Drilling					Sampling		Field Material Description						
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY	DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			0.0						FILL: Sandy TOPSOIL brown, trace gravel, fine to coarse, trace rootlets				
				0.45	BH02-01 BH 0.10-0.20 m R = 0A PID = 0 ppm								
			0.5		BH02-02 BH 0.50-0.60 m R = 0A PID = 0 ppm				SAND fine to medium grained, grey	M			
			1.0						END OF BOREHOLE @ 0.95 m TARGET DEPTH				

This report of borehole must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

GAP gINT FN. F01a
RL3



SHEET: 1 OF 1

DRILL RIG: Hand Auger

CONTRACTOR:

LOGGED: JJB DATE: 27/3/22

CHECKED: MS DATE: 28/4/22

CLIENT: City of Port Phillip

COORDS: MGA94 55

PROJECT: Soil Investigation

SURFACE RL: DATUM: AHD

LOCATION: Burnett Grey Gardens

INCLINATION: -90°

JOB NO: 21467389

HOLE DEPTH: 0.95 m

A

This report of borehole must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

GAP gINT FN. F01a
RL3

APPENDIX D

Site Photographs



Plate 1: View of the site looking south along Morres Street.



Plate 2: View of state of the pine bark soft fall within the children's playground area.



Plate 3: View of the site looking west towards the train station. Note good quality grass coverage.



Plate 4: View of the site looking southwest along Glen Eira Rd.



Plate 5: Soil profile of borehole BH02.

APPENDIX E

Laboratory Transcripts and Chain of Custody Forms

Golder Job Number: 21467389

Job Location: Burnett Grey Gardens

Laboratory Issued To:

Eurofins

Order No.:

Sampled By (Golder):

Joshua Brand

Golder Job Contact:

Matthew Sheppard & Joshua Brand

Golder Contact Email:

matthew.sheppard@wsp.com & joshua.brand@wsp.com

# OBSERVATIONS	SAMPLE DATE	SAMPLE NUMBER TAA/XXX/MQNN	SAMPLE TYPE	SAMPLE DEPTH (m)	No. OF CONTAINERS	On Hold	metals & PAH	1828.2
1	29/03/2022	BH01-01	SOIL	0.5	1		X	
2		BH01-02					X	
3		BH02-01					X	
4		BH02-02					X	
5		BH03-01					X	
6		BH03-02					X	
7								
8		SS01					X	
9		SS02					X	
10		SS03					X	
11		SS04					X	
12		SS05					X	
13								
14								
15								
16								
17								
18								
19								
20								

Special Instructions:

☐ 1 Working Day ☐ 2 Working Days ☐ 3 Working Days ☐ 4 Working Days ☒ 5 Working Days (standard) ☐ Other			
TURN AROUND TIME REQUIRED			
Relinquished by: <i>Josh Brand</i> Date: <i>29/3/22</i> Organisation: Golder Associates Time:		Received by: <i>Alanna Eurofins</i> Date: <i>29/03/22</i> Organisation: Time: <i>5:53</i>	
Relinquished by: <i>Josh Brand</i> Date: <i>29/3/22</i> Organisation: Golder Associates Time:		Received by: Date: <i>29/03/22</i> Organisation: Time: <i>5:53</i>	
RECEIVING LABORATORY TO CONFIRM RECEIPT OF ANALYTICAL SCHEDULE BY RETURN FAX TO: (03) 8862 3501		DELIVERED BY: ☐ COURIER/LAB ☐ GOLDER ☐ RECEIVED BY: ☐ FAX ☐ HAND	
SAMPLE STATUS: ☒ Security Sealed ☒ Chilled ☐ Frozen ☐ Ambient			

Observations to Assist Analysis and OH&S
C - Expected to be Highly Contaminated
N - NAPL Sample

HS - Expected High Salinity
HOC - Expected High Total Organic Carbon

S - Sheen
O - Odourous

Original (white) - Laboratory
Duplicate (yellow) - Project File
Triplicate (pink) - COC Book

Checked By: Date:

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne

6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261 Site # 1254

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Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane

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Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle

4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth

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Phone : +61 8 6253 4444
NATA # 2377 Site # 2370

Eurofins Environment Testing NZ Limited

NZBN: 9429046024954

Auckland

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Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch

43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Sample Receipt Advice

Company name: Golder Associates Pty Ltd (Richmond)
Contact name: Joshua Brand
Project name: BURNETT GREY GARDENS
Project ID: 21467386
Turnaround time: 5 Day
Date/Time received: Mar 29, 2022 5:29 PM
Eurofins reference: 875848

Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- N/A Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Michael Morrison on phone : 03 8564 5933 or by email: MichaelMorrison@eurofins.com

Results will be delivered electronically via email to Joshua Brand - jbrand@golder.com.

Note: A copy of these results will also be delivered to the general Golder Associates Pty Ltd (Richmond) email address.



Environment Testing

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

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6 Monterey Road
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Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
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Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle
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PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

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NATA # 2377 Site # 2370

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Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Company Name: Golder Associates Pty Ltd (Richmond)
Address: 570-588 Swan Street
Richmond
VIC 3121

Project Name: BURNETT GREY GARDENS
Project ID: 21467386

Order No.:
Report #: 875848
Phone: (03) 8862 3500
Fax: (03) 8862 3501

Received: Mar 29, 2022 5:29 PM
Due: Apr 5, 2022
Priority: 5 Day
Contact Name: Joshua Brand

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail

Sample Detail						Polycyclic Aromatic Hydrocarbons	Metals IWRG 621 : Metals M12	Moisture Set	Vic EPA 1828.2 Table 2 - Basic
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	BH01-01	Mar 29, 2022		Soil	M22-Ma64779			X	X
2	BH01-02	Mar 29, 2022		Soil	M22-Ma64780	X	X	X	
3	BH02-01	Mar 29, 2022		Soil	M22-Ma64781			X	X
4	BH02-02	Mar 29, 2022		Soil	M22-Ma64782	X	X	X	
5	BH03-01	Mar 29, 2022		Soil	M22-Ma64783	X	X	X	
6	BH03-02	Mar 29, 2022		Soil	M22-Ma64784			X	X
7	SS01	Mar 29, 2022		Soil	M22-Ma64785	X	X	X	
8	SS02	Mar 29, 2022		Soil	M22-Ma64786	X	X	X	
9	SS03	Mar 29, 2022		Soil	M22-Ma64787	X	X	X	



Environment Testing

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43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Company Name: Golder Associates Pty Ltd (Richmond)
Address: 570-588 Swan Street
Richmond
VIC 3121

Project Name: BURNETT GREY GARDENS
Project ID: 21467386

Order No.:
Report #: 875848
Phone: (03) 8862 3500
Fax: (03) 8862 3501

Received: Mar 29, 2022 5:29 PM
Due: Apr 5, 2022
Priority: 5 Day
Contact Name: Joshua Brand

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Polycyclic Aromatic Hydrocarbons	Metals IWRG 621 : Metals M12	Moisture Set	Vic EPA 1828.2 Table 2 - Basic
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
10	SS04	Mar 29, 2022		Soil	M22-Ma64788	X	X	X	
11	SS05	Mar 29, 2022		Soil	M22-Ma64789	X	X	X	
Test Counts						8	8	11	3

Golder Associates Pty Ltd (Richmond)
570-588 Swan Street
Richmond
VIC 3121



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
 NATA is a signatory to the ILAC Mutual Recognition
 Arrangement for the mutual recognition of the
 equivalence of testing, medical testing, calibration,
 inspection, proficiency testing scheme providers and
 reference materials producers reports and certificates.

Attention: **Joshua Brand**

Report **875848-S**
 Project name **BURNETT GREY GARDENS**
 Project ID **21467386**
 Received Date **Mar 29, 2022**

Client Sample ID			BH01-01	BH01-02	BH02-01	BH02-02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma64779	M22-Ma64780	M22-Ma64781	M22-Ma64782
Date Sampled			Mar 29, 2022	Mar 29, 2022	Mar 29, 2022	Mar 29, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	-	< 20	-
TRH C10-C14	20	mg/kg	< 20	-	< 20	-
TRH C15-C28	50	mg/kg	240	-	260	-
TRH C29-C36	50	mg/kg	190	-	220	-
TRH C10-C36 (Total)	50	mg/kg	430	-	480	-
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	< 50	-
TRH >C16-C34	100	mg/kg	360	-	400	-
TRH >C34-C40	100	mg/kg	< 100	-	110	-
TRH >C10-C40 (total)*	100	mg/kg	360	-	510	-
Volatile Organics						
Total MAH (as per 1828.2)*	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	-	< 0.5	-
Styrene	0.5	mg/kg	< 0.5	-	< 0.5	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	50	-	57	-
Halogenated Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-

Client Sample ID			BH01-01	BH01-02	BH02-01	BH02-02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma64779	M22-Ma64780	M22-Ma64781	M22-Ma64782
Date Sampled			Mar 29, 2022	Mar 29, 2022	Mar 29, 2022	Mar 29, 2022
Test/Reference	LOR	Unit				
Halogenated Volatile Organics						
1,2-Dichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-
1,2,3-Trichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-
1,3-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1,3-Dichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-
1,4-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromodichloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromoform	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	-	< 0.5	-
Chlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Chloroform	0.5	mg/kg	< 0.5	-	< 0.5	-
Chloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
cis-1,2-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
cis-1,3-Dichloropropene	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibromochloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibromomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Iodomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Methylene Chloride	0.5	mg/kg	< 0.5	-	< 0.5	-
Tetrachloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
trans-1,2-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
trans-1,3-Dichloropropene	0.5	mg/kg	< 0.5	-	< 0.5	-
Trichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Vinyl chloride	0.5	mg/kg	< 0.5	-	< 0.5	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	-	< 0.5	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Bromofluorobenzene (surr.)	1	%	50	-	57	-
Toluene-d8 (surr.)	1	%	60	-	61	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	6.6	< 0.5	5.9	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	6.9	0.6	6.1	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	7.1	1.2	6.4	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	1.2	< 0.5	1.7	< 0.5
Benz(a)anthracene	0.5	mg/kg	2.7	< 0.5	2.7	< 0.5
Benzo(a)pyrene	0.5	mg/kg	5.3	< 0.5	4.7	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	3.9	< 0.5	3.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	1.5	< 0.5	1.2	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	4.1	< 0.5	3.7	< 0.5
Chrysene	0.5	mg/kg	4.6	< 0.5	4.3	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	8.2	< 0.5	8.0	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	1.7	< 0.5	1.4	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	1.6	< 0.5	3.0	< 0.5
Pyrene	0.5	mg/kg	9.3	< 0.5	8.1	< 0.5
Total PAH*	0.5	mg/kg	44.1	< 0.5	42.3	< 0.5

Client Sample ID			BH01-01 Soil M22-Ma64779 Mar 29, 2022	BH01-02 Soil M22-Ma64780 Mar 29, 2022	BH02-01 Soil M22-Ma64781 Mar 29, 2022	BH02-02 Soil M22-Ma64782 Mar 29, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
2-Fluorobiphenyl (surr.)	1	%	146	83	63	73
p-Terphenyl-d14 (surr.)	1	%	116	108	77	103
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	-
Vic EPA 1828.2 OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	-
Vic EPA 1828.2 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	-
a-HCH	0.05	mg/kg	< 0.05	-	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
b-HCH	0.05	mg/kg	< 0.05	-	< 0.05	-
d-HCH	0.05	mg/kg	< 0.05	-	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Toxaphene	0.5	mg/kg	< 0.5	-	< 0.5	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	-
Dibutylchloroendate (surr.)	1	%	123	-	129	-
Tetrachloro-m-xylene (surr.)	1	%	105	-	109	-
Chlorinated Hydrocarbons						
Hexachlorobutadiene	0.05	mg/kg	< 0.05	-	< 0.05	-
Trichlorobenzenes - Total	0.1	mg/kg	< 0.1	-	< 0.1	-
Phthalate Esters						
Bis(2-ethylhexyl)phthalate	0.5	mg/kg	< 0.5	-	< 0.5	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.2	-	< 0.2	-
Aroclor-1221	0.1	mg/kg	< 0.2	-	< 0.2	-
Aroclor-1232	0.1	mg/kg	< 0.2	-	< 0.2	-
Aroclor-1242	0.1	mg/kg	< 0.2	-	< 0.2	-
Aroclor-1248	0.1	mg/kg	< 0.2	-	< 0.2	-
Aroclor-1254	0.1	mg/kg	< 0.2	-	< 0.2	-
Aroclor-1260	0.1	mg/kg	< 0.2	-	< 0.2	-
Total PCB*	0.1	mg/kg	< 0.2	-	< 0.2	-
Dibutylchloroendate (surr.)	1	%	123	-	129	-
Tetrachloro-m-xylene (surr.)	1	%	105	-	109	-
Acid Herbicides						
2,4-D	0.5	mg/kg	< 0.5	-	< 0.5	-

Client Sample ID			BH01-01 Soil M22-Ma64779 Mar 29, 2022	BH01-02 Soil M22-Ma64780 Mar 29, 2022	BH02-01 Soil M22-Ma64781 Mar 29, 2022	BH02-02 Soil M22-Ma64782 Mar 29, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2,4,5-Trichlorophenol	1	mg/kg	< 1	-	< 1	-
2,4,6-Trichlorophenol	1	mg/kg	< 1	-	< 1	-
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	< 1	-
Pentachlorophenol	1	mg/kg	< 1	-	< 1	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	< 10	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	-	< 20	-
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	-	< 5	-
2-Nitrophenol	1.0	mg/kg	< 1	-	< 1	-
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2,4-Dinitrophenol	5	mg/kg	< 5	-	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	< 0.2	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	< 0.4	-
Total cresols*	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Nitrophenol	5	mg/kg	< 5	-	< 5	-
Dinoseb	20	mg/kg	< 20	-	< 20	-
Phenol	0.5	mg/kg	< 0.5	-	< 0.5	-
Phenol-d6 (surr.)	1	%	123	-	62	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	< 20	-
Semivolatile Organics						
2,4-Dinitrotoluene	0.5	mg/kg	< 0.5	-	< 0.5	-
Nitrobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Chromium (hexavalent)	1	mg/kg	< 1	-	< 1	-
Cyanide (amenable)	5	mg/kg	< 5	-	< 5	-
Cyanide (total)	5	mg/kg	< 5	-	< 5	-
Fluoride (Total)	100	mg/kg	< 100	-	120	-
Formaldehyde in soil*	1	mg/kg	2.0	-	< 1	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	6.4	-	6.5	-
% Moisture	1	%	7.2	3.3	5.3	2.5
Heavy Metals						
Antimony	10	mg/kg	< 10	-	< 10	-
Arsenic	2	mg/kg	9.2	6.2	13	< 2
Barium	10	mg/kg	53	-	29	-
Beryllium	2	mg/kg	< 2	-	< 2	-
Boron	10	mg/kg	< 10	-	< 10	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	14	16	11	8.0
Copper	5	mg/kg	27	< 5	12	< 5
Lead	5	mg/kg	110	9.6	73	7.1
Mercury	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	20	< 5	8.5	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2	< 2

Client Sample ID			BH01-01	BH01-02	BH02-01	BH02-02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma64779	M22-Ma64780	M22-Ma64781	M22-Ma64782
Date Sampled			Mar 29, 2022	Mar 29, 2022	Mar 29, 2022	Mar 29, 2022
Test/Reference	LOR	Unit				
Heavy Metals						
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	67	11	50	< 5

Client Sample ID			BH03-01	BH03-02	SS01	SS02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma64783	M22-Ma64784	M22-Ma64785	M22-Ma64786
Date Sampled			Mar 29, 2022	Mar 29, 2022	Mar 29, 2022	Mar 29, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	< 20	-	-
TRH C15-C28	50	mg/kg	-	< 50	-	-
TRH C29-C36	50	mg/kg	-	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	-	< 50	-	-
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	< 100	-	-
TRH >C34-C40	100	mg/kg	-	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	-	-
Volatile Organics						
Total MAH (as per 1828.2)*	0.5	mg/kg	-	< 0.5	-	-
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	-	-
Styrene	0.5	mg/kg	-	< 0.5	-	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	-	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	-	71	-	-
Halogenated Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID			BH03-01	BH03-02	SS01	SS02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma64783	M22-Ma64784	M22-Ma64785	M22-Ma64786
Date Sampled			Mar 29, 2022	Mar 29, 2022	Mar 29, 2022	Mar 29, 2022
Test/Reference	LOR	Unit				
Halogenated Volatile Organics						
1,4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
Bromodichloromethane	0.5	mg/kg	-	< 0.5	-	-
Bromoform	0.5	mg/kg	-	< 0.5	-	-
Bromomethane	0.5	mg/kg	-	< 0.5	-	-
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	-	-
Chlorobenzene	0.5	mg/kg	-	< 0.5	-	-
Chloroform	0.5	mg/kg	-	< 0.5	-	-
Chloromethane	0.5	mg/kg	-	< 0.5	-	-
cis-1,2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
cis-1,3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	-
Dibromochloromethane	0.5	mg/kg	-	< 0.5	-	-
Dibromomethane	0.5	mg/kg	-	< 0.5	-	-
Iodomethane	0.5	mg/kg	-	< 0.5	-	-
Methylene Chloride	0.5	mg/kg	-	< 0.5	-	-
Tetrachloroethene	0.5	mg/kg	-	< 0.5	-	-
trans-1,2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
trans-1,3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	-
Trichloroethene	0.5	mg/kg	-	< 0.5	-	-
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	-	-
Vinyl chloride	0.5	mg/kg	-	< 0.5	-	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	< 0.5	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	< 0.5	-	-
4-Bromofluorobenzene (surr.)	1	%	-	71	-	-
Toluene-d8 (surr.)	1	%	-	86	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	15	0.6	5.5	1.7
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	15	1.0	5.5	2.0
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	15	1.3	5.5	2.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	1.1	< 0.5	0.6	< 0.5
Benz(a)anthracene	0.5	mg/kg	8.0	< 0.5	2.3	0.8
Benzo(a)pyrene	0.5	mg/kg	9.6	0.6	3.4	1.3
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	6.4	< 0.5	2.6	1.0
Benzo(g,h,i)perylene	0.5	mg/kg	6.7	< 0.5	3.1	1.1
Benzo(k)fluoranthene	0.5	mg/kg	6.7	< 0.5	2.6	1.0
Chrysene	0.5	mg/kg	7.0	0.6	2.7	1.1
Dibenz(a,h)anthracene	0.5	mg/kg	2.1	< 0.5	1.0	< 0.5
Fluoranthene	0.5	mg/kg	13	1.2	4.2	1.3
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	6.1	< 0.5	2.8	1.0
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	3.7	< 0.5	1.0	< 0.5
Pyrene	0.5	mg/kg	14	1.2	4.6	1.9
Total PAH*	0.5	mg/kg	85.1	3.6	30.9	10.5
2-Fluorobiphenyl (surr.)	1	%	87	51	85	99
p-Terphenyl-d14 (surr.)	1	%	86	82	103	105

Client Sample ID			BH03-01	BH03-02	SS01	SS02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma64783	M22-Ma64784	M22-Ma64785	M22-Ma64786
Date Sampled			Mar 29, 2022	Mar 29, 2022	Mar 29, 2022	Mar 29, 2022
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
Vic EPA 1828.2 OCP (Total)*	0.1	mg/kg	-	< 0.1	-	-
Vic EPA 1828.2 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-HCH	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-HCH	0.05	mg/kg	-	< 0.05	-	-
d-HCH	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.05	mg/kg	-	< 0.05	-	-
Toxaphene	0.5	mg/kg	-	< 0.5	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	-	-
Dibutylchloroendate (surr.)	1	%	-	76	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	56	-	-
Chlorinated Hydrocarbons						
Hexachlorobutadiene	0.05	mg/kg	-	< 0.05	-	-
Trichlorobenzenes - Total	0.1	mg/kg	-	< 0.1	-	-
Phthalate Esters						
Bis(2-ethylhexyl)phthalate	0.5	mg/kg	-	< 0.5	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1232	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1242	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1248	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1254	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1260	0.1	mg/kg	-	< 0.1	-	-
Total PCB*	0.1	mg/kg	-	< 0.1	-	-
Dibutylchloroendate (surr.)	1	%	-	76	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	56	-	-
Acid Herbicides						
2,4-D	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID			BH03-01	BH03-02	SS01	SS02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma64783	M22-Ma64784	M22-Ma64785	M22-Ma64786
Date Sampled			Mar 29, 2022	Mar 29, 2022	Mar 29, 2022	Mar 29, 2022
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	-	-
2,4-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
2,4,5-Trichlorophenol	1	mg/kg	-	< 1	-	-
2,4,6-Trichlorophenol	1	mg/kg	-	< 1	-	-
2,6-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	-	-
Pentachlorophenol	1	mg/kg	-	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	-	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	-	< 1	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	-	< 20	-	-
2-Methyl-4,6-dinitrophenol	5	mg/kg	-	< 5	-	-
2-Nitrophenol	1.0	mg/kg	-	< 1	-	-
2,4-Dimethylphenol	0.5	mg/kg	-	< 0.5	-	-
2,4-Dinitrophenol	5	mg/kg	-	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	-	-
Total cresols*	0.5	mg/kg	-	< 0.5	-	-
4-Nitrophenol	5	mg/kg	-	< 5	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Phenol-d6 (surr.)	1	%	-	37	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-	-
Semivolatile Organics						
2,4-Dinitrotoluene	0.5	mg/kg	-	< 0.5	-	-
Nitrobenzene	0.5	mg/kg	-	< 0.5	-	-
Chromium (hexavalent)	1	mg/kg	-	< 1	-	-
Cyanide (amenable)	5	mg/kg	-	< 5	-	-
Cyanide (total)	5	mg/kg	-	< 5	-	-
Fluoride (Total)	100	mg/kg	-	< 100	-	-
Formaldehyde in soil*	1	mg/kg	-	1.4	-	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	6.4	-	-
% Moisture	1	%	7.2	2.9	7.4	14
Heavy Metals						
Antimony	10	mg/kg	-	< 10	-	-
Arsenic	2	mg/kg	5.3	4.4	5.4	11
Barium	10	mg/kg	-	11	-	-
Beryllium	2	mg/kg	-	< 2	-	-
Boron	10	mg/kg	-	< 10	-	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	9.4	11	11	14
Copper	5	mg/kg	17	< 5	32	21
Lead	5	mg/kg	82	14	120	120
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	17	< 5	12	12
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2	< 2

Client Sample ID			BH03-01	BH03-02	SS01	SS02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma64783	M22-Ma64784	M22-Ma64785	M22-Ma64786
Date Sampled			Mar 29, 2022	Mar 29, 2022	Mar 29, 2022	Mar 29, 2022
Test/Reference	LOR	Unit				
Heavy Metals						
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	75	7.6	82	83

Client Sample ID			SS03	SS04	SS05
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22-Ma64787	M22-Ma64788	M22-Ma64789
Date Sampled			Mar 29, 2022	Mar 29, 2022	Mar 29, 2022
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	7.2	3.2	0.7
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	7.2	3.2	1.1
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	7.2	3.2	1.4
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	0.7	< 0.5	< 0.5
Anthracene	0.5	mg/kg	1.1	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	4.8	1.4	< 0.5
Benzo(a)pyrene	0.5	mg/kg	4.7	2.0	0.7
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	3.4	1.6	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	3.0	1.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	3.5	1.6	< 0.5
Chrysene	0.5	mg/kg	4.1	1.7	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	1.0	0.6	< 0.5
Fluoranthene	0.5	mg/kg	8.3	2.1	0.8
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	2.7	1.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	3.2	< 0.5	< 0.5
Pyrene	0.5	mg/kg	8.3	2.7	0.9
Total PAH*	0.5	mg/kg	48.8	16.7	2.4
2-Fluorobiphenyl (surr.)	1	%	90	78	90
p-Terphenyl-d14 (surr.)	1	%	86	84	82
% Moisture	1	%	9.6	7.0	6.9
Heavy Metals					
Arsenic	2	mg/kg	3.6	5.2	2.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	7.3	14	15
Copper	5	mg/kg	15	37	13
Lead	5	mg/kg	99	90	41
Mercury	0.1	mg/kg	0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5
Nickel	5	mg/kg	5.9	14	11
Selenium	2	mg/kg	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10
Zinc	5	mg/kg	57	67	63

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Mar 31, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Mar 31, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Mar 31, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Melbourne	Mar 31, 2022	7 Days
- Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS			
BTEX	Melbourne	Mar 31, 2022	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Halogenated Volatile Organics	Melbourne	Mar 31, 2022	7 Days
- Method: USEPA 8260 MGT 350A Halogenated Volatile Organics			
Polycyclic Aromatic Hydrocarbons	Melbourne	Mar 31, 2022	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Melbourne	Mar 31, 2022	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Chlorinated Hydrocarbons	Melbourne	Mar 31, 2022	14 Days
- Method: USEPA 8121 Chlorinated Hydrocarbons			
Phthalate Esters	Melbourne	Mar 31, 2022	14 Days
- Method: USEPA SW846 8270 in accordance with in-house method LTM-GEN-7030			
Polychlorinated Biphenyls	Melbourne	Mar 31, 2022	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			
Acid Herbicides	Melbourne	Mar 31, 2022	14 Days
- Method: LTM-ORG-2180 Phenoxy Acid Herbicides			
Phenols (Halogenated)	Melbourne	Mar 31, 2022	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Melbourne	Mar 31, 2022	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Semivolatile Organics	Melbourne	Mar 31, 2022	14 Days
- Method: USEPA SW 846 8270			
Chromium (hexavalent)	Melbourne	Mar 31, 2022	28 Days
- Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection			
Cyanide (amenable)	Melbourne	Apr 01, 2022	14 Days
- Method: Cyanide (Amenable) :- as per APHA 45 CN-G			
Cyanide (total)	Melbourne	Apr 01, 2022	14 Days
- Method: LTM-INO-4020 Total Free WAD Cyanide by CFA			
Fluoride (Total)	Melbourne	Apr 01, 2022	28 Days
- Method: LTM-INO-4150 Determination of Total Fluoride PART A – CIC			
- Method: LTM-INO-4150 Determination of Total Fluoride PART B – ISE			
Formaldehyde in soil*	Melbourne	Mar 31, 2022	7 Days
- Method: LTM-INO-4400 Formaldehyde in soil and water			
pH (1:5 Aqueous extract at 25°C as rec.)	Melbourne	Mar 31, 2022	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Metals Vic EPA 1828.2 (excluding TBT)	Melbourne	Mar 31, 2022	28 Days
- Method: SOP #6 Analysis of Volatile Organic Compounds in Passivated Canisters EPA Method TO-15			
% Moisture	Melbourne	Mar 30, 2022	14 Days
- Method: LTM-GEN-7080 Moisture			
Metals IWRG 621 : Metals M12	Melbourne	Mar 31, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

Company Name: Golder Associates Pty Ltd (Richmond)
Address: 570-588 Swan Street
Richmond
VIC 3121

Project Name: BURNETT GREY GARDENS
Project ID: 21467386

Order No.:
Report #: 875848
Phone: (03) 8862 3500
Fax: (03) 8862 3501

Received: Mar 29, 2022 5:29 PM
Due: Apr 5, 2022
Priority: 5 Day
Contact Name: Joshua Brand

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Polycyclic Aromatic Hydrocarbons	Metals IWRG 621 : Metals M12	Moisture Set	Vic EPA 1828.2 Table 2 - Basic
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	BH01-01	Mar 29, 2022		Soil	M22-Ma64779			X	X
2	BH01-02	Mar 29, 2022		Soil	M22-Ma64780	X	X	X	
3	BH02-01	Mar 29, 2022		Soil	M22-Ma64781			X	X
4	BH02-02	Mar 29, 2022		Soil	M22-Ma64782	X	X	X	
5	BH03-01	Mar 29, 2022		Soil	M22-Ma64783	X	X	X	
6	BH03-02	Mar 29, 2022		Soil	M22-Ma64784			X	X
7	SS01	Mar 29, 2022		Soil	M22-Ma64785	X	X	X	
8	SS02	Mar 29, 2022		Soil	M22-Ma64786	X	X	X	
9	SS03	Mar 29, 2022		Soil	M22-Ma64787	X	X	X	

Company Name:	Golder Associates Pty Ltd (Richmond)	Order No.:		Received:	Mar 29, 2022 5:29 PM
Address:	570-588 Swan Street Richmond VIC 3121	Report #:	875848	Due:	Apr 5, 2022
		Phone:	(03) 8862 3500	Priority:	5 Day
		Fax:	(03) 8862 3501	Contact Name:	Joshua Brand
Project Name:	BURNETT GREY GARDENS				
Project ID:	21467386				

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Polycyclic Aromatic Hydrocarbons	Metals IWRG 621 : Metals M12	Moisture Set	Vic EPA 1828.2 Table 2 - Basic
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
10	SS04	Mar 29, 2022		Soil	M22-Ma64788	X	X	X	
11	SS05	Mar 29, 2022		Soil	M22-Ma64789	X	X	X	
Test Counts						8	8	11	3

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre	µg/L: micrograms per litre
ppm: parts per million	ppb: parts per billion	%: Percentage
org/100 mL: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units	MPN/100 mL: Most Probable Number of organisms per 100 millilitres

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (<i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Volatile Organics							
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Halogenated Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1,2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1,3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Chlorinated Hydrocarbons							
Hexachlorobutadiene	mg/kg	< 0.05			0.05	Pass	
Trichlorobenzenes - Total	mg/kg	-			0.1	N/A	
Method Blank							
Phthalate Esters							
Bis(2-ethylhexyl)phthalate	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Acid Herbicides							
2,4-D	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4,5-Trichlorophenol	mg/kg	< 1			1	Pass	
2,4,6-Trichlorophenol	mg/kg	< 1			1	Pass	
2,6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4,6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4,6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2,4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Semivolatile Organics							
2,4-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
Nitrobenzene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Cyanide (amenable)	mg/kg	< 5			5	Pass	
Cyanide (total)	mg/kg	< 5			5	Pass	
Fluoride (Total)	mg/kg	< 100			100	Pass	
Formaldehyde in soil*	mg/kg	< 1			1	Pass	
Method Blank							
Heavy Metals							
Antimony	mg/kg	< 10			10	Pass	
Arsenic	mg/kg	< 2			2	Pass	
Barium	mg/kg	< 10			10	Pass	
Beryllium	mg/kg	< 2			2	Pass	
Boron	mg/kg	< 10			10	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Molybdenum	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	
Silver	mg/kg	< 2			2	Pass	
Tin	mg/kg	< 10			10	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	111			70-130	Pass	
TRH C10-C14	%	102			70-130	Pass	
Naphthalene	%	111			70-130	Pass	
TRH C6-C10	%	111			70-130	Pass	
TRH >C10-C16	%	101			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	89			70-130	Pass	
Toluene	%	97			70-130	Pass	
Ethylbenzene	%	107			70-130	Pass	
m&p-Xylenes	%	110			70-130	Pass	
Xylenes - Total*	%	108			70-130	Pass	
LCS - % Recovery							
Halogenated Volatile Organics							
1.1-Dichloroethene	%	114			70-130	Pass	
1.1.1-Trichloroethane	%	89			70-130	Pass	
1.2-Dichlorobenzene	%	106			70-130	Pass	
1.2-Dichloroethane	%	123			70-130	Pass	
Trichloroethene	%	78			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	89			70-130	Pass	
Acenaphthylene	%	101			70-130	Pass	
Anthracene	%	98			70-130	Pass	
Benz(a)anthracene	%	84			70-130	Pass	
Benzo(a)pyrene	%	92			70-130	Pass	
Benzo(b&j)fluoranthene	%	86			70-130	Pass	
Benzo(g,h,i)perylene	%	83			70-130	Pass	
Benzo(k)fluoranthene	%	72			70-130	Pass	
Chrysene	%	90			70-130	Pass	
Dibenz(a,h)anthracene	%	107			70-130	Pass	
Fluoranthene	%	82			70-130	Pass	
Fluorene	%	93			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	83			70-130	Pass	
Naphthalene	%	89			70-130	Pass	
Phenanthrene	%	90			70-130	Pass	
Pyrene	%	86			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	87			70-130	Pass	
4.4'-DDD	%	76			70-130	Pass	
4.4'-DDE	%	80			70-130	Pass	
4.4'-DDT	%	75			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
a-HCH	%	95			70-130	Pass	
Aldrin	%	78			70-130	Pass	
b-HCH	%	73			70-130	Pass	
d-HCH	%	83			70-130	Pass	
Dieldrin	%	83			70-130	Pass	
Endosulfan I	%	86			70-130	Pass	
Endosulfan II	%	74			70-130	Pass	
Endosulfan sulphate	%	77			70-130	Pass	
Endrin	%	84			70-130	Pass	
Endrin aldehyde	%	105			70-130	Pass	
Endrin ketone	%	74			70-130	Pass	
g-HCH (Lindane)	%	87			70-130	Pass	
Heptachlor	%	89			70-130	Pass	
Heptachlor epoxide	%	80			70-130	Pass	
Hexachlorobenzene	%	81			70-130	Pass	
Methoxychlor	%	89			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	85			70-130	Pass	
LCS - % Recovery							
Acid Herbicides							
2,4-D	%	86			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	79			25-140	Pass	
2,4-Dichlorophenol	%	82			25-140	Pass	
2,4,5-Trichlorophenol	%	54			25-140	Pass	
2,4,6-Trichlorophenol	%	66			25-140	Pass	
2,6-Dichlorophenol	%	70			25-140	Pass	
4-Chloro-3-methylphenol	%	67			25-140	Pass	
Pentachlorophenol	%	35			25-140	Pass	
Tetrachlorophenols - Total	%	59			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4,6-dinitrophenol	%	42			25-140	Pass	
2-Methyl-4,6-dinitrophenol	%	66			25-140	Pass	
2-Nitrophenol	%	90			25-140	Pass	
2,4-Dimethylphenol	%	84			25-140	Pass	
2,4-Dinitrophenol	%	53			25-140	Pass	
2-Methylphenol (o-Cresol)	%	70			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	91			25-140	Pass	
4-Nitrophenol	%	62			25-140	Pass	
Dinoseb	%	79			25-140	Pass	
Phenol	%	77			25-140	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	84			70-130	Pass	
Cyanide (total)	%	107			70-130	Pass	
Fluoride (Total)	%	84			70-130	Pass	
Formaldehyde in soil*	%	117			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Antimony	%	102			80-120	Pass	
Arsenic	%	102			80-120	Pass	
Barium	%	104			80-120	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Beryllium			%	99			80-120	Pass	
Boron			%	99			80-120	Pass	
Cadmium			%	100			80-120	Pass	
Chromium			%	105			80-120	Pass	
Copper			%	105			80-120	Pass	
Lead			%	108			80-120	Pass	
Mercury			%	104			80-120	Pass	
Molybdenum			%	103			80-120	Pass	
Nickel			%	101			80-120	Pass	
Selenium			%	105			80-120	Pass	
Silver			%	106			80-120	Pass	
Tin			%	100			80-120	Pass	
Zinc			%	103			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M22-Ma64912	NCP	%	102			70-130	Pass	
TRH C10-C14	M22-Ma62514	NCP	%	99			70-130	Pass	
Naphthalene	M22-Ma64912	NCP	%	117			70-130	Pass	
TRH C6-C10	M22-Ma64912	NCP	%	111			70-130	Pass	
TRH >C10-C16	M22-Ma62514	NCP	%	98			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M22-Ma64912	NCP	%	76			70-130	Pass	
Toluene	M22-Ma64912	NCP	%	91			70-130	Pass	
Ethylbenzene	M22-Ma64912	NCP	%	99			70-130	Pass	
m&p-Xylenes	M22-Ma64912	NCP	%	100			70-130	Pass	
o-Xylene	M22-Ma64912	NCP	%	95			70-130	Pass	
Xylenes - Total*	M22-Ma64912	NCP	%	98			70-130	Pass	
Spike - % Recovery									
Halogenated Volatile Organics				Result 1					
1.1-Dichloroethene	M22-Ma64912	NCP	%	90			70-130	Pass	
1.1.1-Trichloroethane	M22-Ma64912	NCP	%	78			70-130	Pass	
1.2-Dichlorobenzene	M22-Ma64912	NCP	%	96			70-130	Pass	
1.2-Dichloroethane	M22-Ma64912	NCP	%	110			70-130	Pass	
Trichloroethene	M22-Ma64912	NCP	%	81			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M22-Ma64315	NCP	%	85			70-130	Pass	
Acenaphthylene	M22-Ma64315	NCP	%	96			70-130	Pass	
Anthracene	M22-Ma64315	NCP	%	98			70-130	Pass	
Benz(a)anthracene	M22-Ma64315	NCP	%	101			70-130	Pass	
Benzo(a)pyrene	M22-Ma64315	NCP	%	103			70-130	Pass	
Benzo(b&j)fluoranthene	M22-Ma64315	NCP	%	102			70-130	Pass	
Benzo(g,h,i)perylene	M22-Ma64315	NCP	%	77			70-130	Pass	
Benzo(k)fluoranthene	M22-Ma64315	NCP	%	105			70-130	Pass	
Chrysene	M22-Ma64315	NCP	%	94			70-130	Pass	
Dibenz(a,h)anthracene	M22-Ma64315	NCP	%	99			70-130	Pass	
Fluoranthene	M22-Ma64315	NCP	%	104			70-130	Pass	
Fluorene	M22-Ma64315	NCP	%	99			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M22-Ma64315	NCP	%	72			70-130	Pass	
Naphthalene	M22-Ma64315	NCP	%	86			70-130	Pass	
Phenanthrene	M22-Ma64315	NCP	%	80			70-130	Pass	
Pyrene	M22-Ma64315	NCP	%	103			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	B22-Ma61121	NCP	%	88			70-130	Pass	
4.4'-DDD	M22-Ap0003305	NCP	%	103			70-130	Pass	
4.4'-DDE	B22-Ma61121	NCP	%	112			70-130	Pass	
4.4'-DDT	M22-Ap0003305	NCP	%	79			70-130	Pass	
a-HCH	B22-Ma61121	NCP	%	86			70-130	Pass	
Aldrin	B22-Ma61121	NCP	%	76			70-130	Pass	
b-HCH	B22-Ma61121	NCP	%	80			70-130	Pass	
d-HCH	B22-Ma61121	NCP	%	97			70-130	Pass	
Dieldrin	B22-Ma61121	NCP	%	107			70-130	Pass	
Endosulfan I	B22-Ma61121	NCP	%	80			70-130	Pass	
Endosulfan II	B22-Ma61121	NCP	%	113			70-130	Pass	
Endosulfan sulphate	B22-Ma61121	NCP	%	88			70-130	Pass	
Endrin	B22-Ma61121	NCP	%	107			70-130	Pass	
Endrin aldehyde	M22-Ma53713	NCP	%	88			70-130	Pass	
Endrin ketone	B22-Ma61121	NCP	%	100			70-130	Pass	
g-HCH (Lindane)	B22-Ma61121	NCP	%	77			70-130	Pass	
Heptachlor	M22-Ap0003305	NCP	%	111			70-130	Pass	
Heptachlor epoxide	B22-Ma61121	NCP	%	99			70-130	Pass	
Hexachlorobenzene	B22-Ma61121	NCP	%	87			70-130	Pass	
Methoxychlor	M22-Ap0003305	NCP	%	77			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	B22-Ma61075	NCP	%	101			70-130	Pass	
Aroclor-1260	B22-Ma61075	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Acid Herbicides				Result 1					
2,4-D	M22-Ma64434	NCP	%	117			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	M22-Ma64315	NCP	%	119			30-130	Pass	
2,4-Dichlorophenol	M22-Ma64315	NCP	%	125			30-130	Pass	
2,4,5-Trichlorophenol	M22-Ma64315	NCP	%	121			30-130	Pass	
2,4,6-Trichlorophenol	M22-Ma64315	NCP	%	95			30-130	Pass	
2,6-Dichlorophenol	M22-Ma64315	NCP	%	105			30-130	Pass	
4-Chloro-3-methylphenol	M22-Ma64315	NCP	%	110			30-130	Pass	
Pentachlorophenol	M22-Ma64315	NCP	%	63			30-130	Pass	
Tetrachlorophenols - Total	M22-Ma64315	NCP	%	36			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4,6-dinitrophenol	M22-Ma64315	NCP	%	42			30-130	Pass	
2-Methyl-4,6-dinitrophenol	M22-Ma64315	NCP	%	35			30-130	Pass	
2-Nitrophenol	M22-Ma64315	NCP	%	125			30-130	Pass	
2,4-Dimethylphenol	M22-Ma64315	NCP	%	98			30-130	Pass	
2,4-Dinitrophenol	M22-Ma64315	NCP	%	53			30-130	Pass	
2-Methylphenol (o-Cresol)	M22-Ma64315	NCP	%	107			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-Ma64315	NCP	%	94			30-130	Pass	
4-Nitrophenol	M22-Ma64315	NCP	%	81			30-130	Pass	
Dinoseb	M22-Ma64315	NCP	%	34			30-130	Pass	
Phenol	M22-Ma64315	NCP	%	126			30-130	Pass	
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	M22-Ma64668	NCP	%	88			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Fluoride (Total)	M22-Ma64447	NCP	%	78			70-130	Pass	
Formaldehyde in soil*	M22-Ma64899	NCP	%	9.0			70-130	Fail	
Spike - % Recovery									
Heavy Metals				Result 1					
Antimony	M22-Ma64780	CP	%	104			75-125	Pass	
Arsenic	M22-Ma64780	CP	%	75			75-125	Pass	
Barium	M22-Ma64780	CP	%	103			75-125	Pass	
Beryllium	M22-Ma64780	CP	%	105			75-125	Pass	
Boron	M22-Ma64780	CP	%	98			75-125	Pass	
Cadmium	M22-Ma64780	CP	%	99			75-125	Pass	
Chromium	M22-Ma64780	CP	%	85			75-125	Pass	
Copper	M22-Ma64780	CP	%	103			75-125	Pass	
Lead	M22-Ma64780	CP	%	107			75-125	Pass	
Mercury	M22-Ma64780	CP	%	107			75-125	Pass	
Molybdenum	M22-Ma64780	CP	%	103			75-125	Pass	
Nickel	M22-Ma64780	CP	%	98			75-125	Pass	
Selenium	M22-Ma64780	CP	%	84			75-125	Pass	
Silver	M22-Ma64780	CP	%	105			75-125	Pass	
Tin	M22-Ma64780	CP	%	104			75-125	Pass	
Zinc	M22-Ma64780	CP	%	99			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M22-Ma64841	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M22-Ma62866	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M22-Ma62866	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M22-Ma62866	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Naphthalene	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M22-Ma64841	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M22-Ma62866	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M22-Ma62866	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M22-Ma62866	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
2-Butanone (MEK)	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M22-Ma60157	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M22-Ma60157	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M22-Ma60157	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M22-Ma60157	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M22-Ma60157	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M22-Ma60157	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Halogenated Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Halogenated Volatile Organics				Result 1	Result 2	RPD		
1,2-Dichloroethane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dichloropropane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,3-Trichloropropane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3-Dichlorobenzene	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3-Dichloropropane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,4-Dichlorobenzene	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1,2-Dichloroethene	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1,3-Dichloropropene	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Iodomethane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Methylene Chloride	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,2-Dichloroethene	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,3-Dichloropropene	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-Ma60157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M22-Ma64484	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
α-HCH	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
β-HCH	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
δ-HCH	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Endosulfan I	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Chlorinated Hydrocarbons				Result 1	Result 2	RPD		
Hexachlorobutadiene	M22-Ma64484	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Trichlorobenzenes - Total	M22-Ma64484	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Phthalate Esters				Result 1	Result 2	RPD		
Bis(2-ethylhexyl)phthalate	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M22-Ma64484	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-Ma64484	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-Ma64484	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-Ma64484	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-Ma64484	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-Ma64484	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-Ma64484	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-Ma64484	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Acid Herbicides				Result 1	Result 2	RPD		
2,4-D	M22-Ma64431	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M22-Ma64484	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M22-Ma64484	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-Ma64484	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-Ma64484	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-Ma64484	NCP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	M22-Ma64484	NCP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M22-Ma64484	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-Ma64484	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	M22-Ma64484	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-Ma64484	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-Ma64484	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M22-Ma64484	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-Ma64484	NCP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Semivolatile Organics				Result 1	Result 2	RPD		
2,4-Dinitrotoluene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Nitrobenzene	M22-Ma64484	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Cyanide (amenable)	M22-Ma64719	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Cyanide (total)	M22-Ma64719	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Fluoride (Total)	M22-Ma62866	NCP	mg/kg	< 100	< 100	<1	30%	Pass
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Ma64779	CP	pH Units	6.4	6.2	pass	30%	Pass
% Moisture	M22-Ma64779	CP	%	7.2	6.3	12	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Antimony	M22-Ma64779	CP	mg/kg	< 10	< 10	<1	30%	Pass
Arsenic	M22-Ma64779	CP	mg/kg	9.2	8.6	6.0	30%	Pass
Barium	M22-Ma64779	CP	mg/kg	53	53	1.0	30%	Pass
Beryllium	M22-Ma64779	CP	mg/kg	< 2	< 2	<1	30%	Pass
Boron	M22-Ma64779	CP	mg/kg	< 10	< 10	<1	30%	Pass
Cadmium	M22-Ma64779	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M22-Ma64779	CP	mg/kg	14	16	14	30%	Pass
Copper	M22-Ma64779	CP	mg/kg	27	28	3.0	30%	Pass
Lead	M22-Ma64779	CP	mg/kg	110	110	3.0	30%	Pass
Mercury	M22-Ma64779	CP	mg/kg	0.1	0.1	<1	30%	Pass
Molybdenum	M22-Ma64779	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M22-Ma64779	CP	mg/kg	20	24	18	30%	Pass
Selenium	M22-Ma64779	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M22-Ma64779	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-Ma64779	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M22-Ma64779	CP	mg/kg	67	67	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Antimony	M22-Ma64780	CP	mg/kg	< 10	< 10	<1	30%	Pass
Arsenic	M22-Ma64780	CP	mg/kg	6.2	6.4	2.0	30%	Pass
Barium	M22-Ma64780	CP	mg/kg	15	15	3.0	30%	Pass
Beryllium	M22-Ma64780	CP	mg/kg	< 2	< 2	<1	30%	Pass
Boron	M22-Ma64780	CP	mg/kg	< 10	< 10	<1	30%	Pass
Cadmium	M22-Ma64780	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M22-Ma64780	CP	mg/kg	16	17	2.0	30%	Pass
Copper	M22-Ma64780	CP	mg/kg	< 5	< 5	<1	30%	Pass
Lead	M22-Ma64780	CP	mg/kg	9.6	9.7	1.0	30%	Pass
Mercury	M22-Ma64780	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M22-Ma64780	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M22-Ma64780	CP	mg/kg	< 5	< 5	<1	30%	Pass
Selenium	M22-Ma64780	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M22-Ma64780	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-Ma64780	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M22-Ma64780	CP	mg/kg	11	11	6.0	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Formaldehyde in soil*	M22-Ma64781	CP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-Ma64784	CP	mg/kg	< 1	< 1	<1	30%	Pass
Formaldehyde in soil*	M22-Ma64784	CP	mg/kg	1.4	1.2	<1	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	N/A
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised by:

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Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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APPENDIX F

EIL Calculations

Inputs	
Select contaminant from list below	
As	
Below needed to calculate fresh and aged ACLs	
Below needed to calculate fresh and aged ABCs	
or for fresh ABCs only	
or for aged ABCs only	

Outputs		
Land use	Arsenic generic EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	20	40
Urban residential and open public spaces	50	100
Commercial and industrial	80	160

Inputs
Select contaminant from list below
Cu
Below needed to calculate fresh and aged ACLs
Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)
5
Enter soil pH (calcium chloride method) (values from 1 to 14)
6.4
Enter organic carbon content (%OC) (values from 0 to 50%)
0.5
Below needed to calculate fresh and aged ABCs
Measured background concentration (mg/kg). Leave blank if no measured value
or for fresh ABCs only
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration
or for aged ABCs only
Enter State (or closest State)
VIC
Enter traffic volume (high or low)
high

Outputs		
Land use	Cu soil-specific EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	#NUM!	40
Urban residential and open public spaces	#NUM!	100
Commercial and industrial	#NUM!	150

Inputs	
Select contaminant from list below	
Naphthalene	
Below needed to calculate fresh and aged ACLs	
Below needed to calculate fresh and aged ABCs	
or for fresh ABCs only	
or for aged ABCs only	

Outputs		
Land use	Naphthalene generic EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	10	10
Urban residential and open public spaces	170	170
Commercial and industrial	370	370

Inputs
Select contaminant from list below
Ni
Below needed to calculate fresh and aged ACLs
Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)
5
Below needed to calculate fresh and aged ABCs
Measured background concentration (mg/kg). Leave blank if no measured value
or for fresh ABCs only
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration
or for aged ABCs only
Enter State (or closest State)
VIC
Enter traffic volume (high or low)
high

Outputs		
Land use	Ni soil-specific EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	#NUM!	15
Urban residential and open public spaces	#NUM!	40
Commercial and industrial	#NUM!	65

Inputs	
Select contaminant from list below	
Pb	
Below needed to calculate fresh and aged ACLs	
Below needed to calculate fresh and aged ABCs	
or for fresh ABCs only	
or for aged ABCs only	

Outputs		
Land use	Lead generic EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	110	470
Urban residential and open public spaces	270	1100
Commercial and industrial	440	1800

Inputs	
Select contaminant from list below	
Zn	
Below needed to calculate fresh and aged ACLs	
Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)	
5	
Enter soil pH (calcium chloride method) (values from 1 to 14)	
6.4	
Below needed to calculate fresh and aged ABCs	
Measured background concentration (mg/kg). Leave blank if no measured value	
or for fresh ABCs only	
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration	
or for aged ABCs only	
Enter State (or closest State)	
VIC	
Enter traffic volume (high or low)	
high	

Outputs		
Land use	Zn soil-specific EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	#NUM!	100
Urban residential and open public spaces	#NUM!	290
Commercial and industrial	#NUM!	410

APPENDIX G

Results Tables

						E-Nitrobenzenes	Explosives	Halogenated Benzenes							Heavy Metals														Herbicides		MAH								
						Nitrobenzene	2,4-Dinitrotoluene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Chlorobenzene	Hexachlorobenzene	Trichlorobenzene (Sum of total)	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Chromium (hexavalent)	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	2,4-D	Dinoseb	Benzene	Toluene	Styrene	Ethylbenzene	Xylenes (m & p)	Xylene (o)	Xylenes (Sum of 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	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
EQL						0.5	0.5	0.5	0.5	0.5	0.5	0.1	10	2	10	2	10	0.4	5	1	5	5	0.1	5	5	2	2	10	5	0.5	20	0.1	0.1	0.5	0.1	0.2	0.1	0.3	
z/s Buildings & Structures														100							100*	1100			40*			290*											
NEPM 2013 EILs-Urban Residential and public open space																						100*	1100			40*			290*										
NEPM 2013 ESL- Urban residential and public open space																																50	85		70			45	
NEPM 2013 HIL-Recreational C Soil												10		300		90	20000	90		300	17000	600	80		1200	700			30000	1300									
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																							
0-1m																																	NL	NL		NL		NL	
1-2m																																	NL	NL		NL		NL	
Location	Sample	Depth	Date Sampled	Fill/Natural	Lab Report No.																																		
BH01	BH01-01	0.1-0.2	29/03/2022	Fill	875848	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<10	9.2	53	<2	<10	<0.4	14	<1	27	110	0.1	<5	20	<2	<2	<10	67	<0.5	<20	<0.1	<0.1	<0.5	<0.1	<0.2	<0.1	<0.3	
BH01	BH01-02	0.4-0.5	29/03/2022	Natural	875848	-	-	-	-	-	-	-	-	6.2	-	-	-	<0.4	16	-	<5	9.6	<0.1	<5	<5	<2	<2	<10	11	-	-	-	-	-	-	-	-		
BH02	BH02-01	0.1-0.2	29/03/2022	Fill	875848	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<10	13	29	<2	<10	<0.4	11	<1	12	73	<0.1	<5	8.5	<2	<2	<10	50	<0.5	<20	<0.1	<0.1	<0.5	<0.1	<0.2	<0.1	<0.3	
BH02	BH02-02	0.45-0.5	29/03/2022	Natural	875848	-	-	-	-	-	-	-	-	<2	-	-	-	<0.4	8	-	<5	7.1	<0.1	<5	<5	<2	<2	<10	<5	-	-	-	-	-	-	-	-		
BH03	BH03-01	0.1-0.2	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	5.3	-	-	-	<0.4	9.4	-	17	82	<0.1	<5	17	<2	<2	<10	75	-	-	-	-	-	-	-	-		
BH03	BH03-02	0.45-0.5	29/03/2022	Natural	875848	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<10	4.4	11	<2	<10	<0.4	11	<1	<5	14	<0.1	<5	<5	<2	<2	<10	7.6	<0.5	<20	<0.1	<0.1	<0.5	<0.1	<0.2	<0.1	<0.3	
SS01	SS01	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	5.4	-	-	-	<0.4	11	-	32	120	0.1	<5	12	<2	<2	<10	82	-	-	-	-	-	-	-	-		
SS02	SS02	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	11	-	-	-	<0.4	14	-	21	120	<0.1	<5	12	<2	<2	<10	83	-	-	-	-	-	-	-	-		
SS03	SS03	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	3.6	-	-	-	<0.4	7.3	-	15	99	0.1	<5	5.9	<2	<2	<10	57	-	-	-	-	-	-	-	-		
SS04	SS04	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	5.2	-	-	-	<0.4	14	-	37	90	<0.1	<5	14	<2	<2	<10	67	-	-	-	-	-	-	-	-		
SS05	SS05	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	2.2	-	-	-	<0.4	15	-	13	41	<0.1	<5	11	<2	<2	<10	63	-	-	-	-	-	-	-	-		

[illegible]

						E-Nitrobenzenes		Explosives	Halogenated Benzenes								Heavy Metals														Herbicides		MAH									
						Nitrobenzene		2,4-Dinitrotoluene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Chlorobenzene	Hexachlorobenzene	Trichlorobenzene (Sum of total)	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Chromium (hexavalent)	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	2,4-D	Dinoseb	Benzene	Toluene	Styrene	Ethylbenzene	Xylenes (m & p)		Xylene (o)	Xylenes (Sum of 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	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
EQL						0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.1	10	2	10	2	10	0.4	5	1	5	5	0.1	5	5	0.1	5	5	2	2	10	5	0.5	20	0.1	0.1	0.5	0.1	0.2	0.1	0.3
VIC EPA 1828.2 Fill Material Upper Limit															20				3		1	100	300	1	40	60	10	10	50	200			1									
VIC EPA 1828.2 Cat D Upper Limit						80	5.2	6000		160	1200		120	75	500	6250	100	15000	100		500	5000	1500	75	1000	3000	10000	180		35000	120		4	3200	120	1200			2400			
VIC EPA 1828.2 Cat C Upper Limit						80	5.2	6000		160	1200		120	75	500	6250	100	15000	100		500	5000	1500	75	1000	3000	10000	180		35000	120		4	3200	120	1200			2400			
VIC EPA 1828.2 Cat B Upper Limit						320	21	24000		640	4800		480	300	2000	25000	400	60000	400		2000	20000	6000	300	4000	12000	40000	720		140000	480		16	12800	480	4800			9600			
Location	Sample	Depth	Date Sampled	Fill/Natural	Lab Report No.																																					
Fill																																										
BH01	BH01-01	0.1-0.2	29/03/2022	Fill	875848	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.1	<10	9.2	53	<2	<10	<0.4	14	<1	27	110	0.1	<5	20	<2	<2	<10	67	<0.5	<20	<0.1	<0.1	<0.5	<0.1	<0.2	<0.1	<0.3			
BH02	BH02-01	0.1-0.2	29/03/2022	Fill	875848	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.1	<10	13	29	<2	<10	<0.4	11	<1	12	73	<0.1	<5	8.5	<2	<2	<10	50	<0.5	<20	<0.1	<0.1	<0.5	<0.1	<0.2	<0.1	<0.3				
BH03	BH03-01	0.1-0.2	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	5.3	-	-	-	<0.4	9.4	-	17	82	<0.1	<5	17	<2	<2	<10	75	-	-	-	-	-	-	-	-	-				
SS01	SS01	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	5.4	-	-	-	<0.4	11	-	32	120	0.1	<5	12	<2	<2	<10	82	-	-	-	-	-	-	-	-	-				
SS02	SS02	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	11	-	-	-	<0.4	14	-	21	120	<0.1	<5	12	<2	<2	<10	83	-	-	-	-	-	-	-	-	-				
SS03	SS03	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	3.6	-	-	-	<0.4	7.3	-	15	99	0.1	<5	5.9	<2	<2	<10	57	-	-	-	-	-	-	-	-	-				
SS04	SS04	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	5.2	-	-	-	<0.4	14	-	37	90	<0.1	<5	14	<2	<2	<10	67	-	-	-	-	-	-	-	-	-				
SS05	SS05	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	2.2	-	-	-	<0.4	15	-	13	41	<0.1	<5	11	<2	<2	<10	63	-	-	-	-	-	-	-	-	-				
Natural																																										
BH01	BH01-02	0.4-0.5	29/03/2022	Natural	875848	-	-	-	-	-	-	-	-	6.2	-	-	-	<0.4	16	-	<5	9.6	<0.1	<5	<5	<2	<2	<10	11	-	-	-	-	-	-	-	-	-				
BH02	BH02-02	0.45-0.5	29/03/2022	Natural	875848	-	-	-	-	-	-	-	-	<2	-	-	-	<0.4	8	-	<5	7.1	<0.1	<5	<5	<2	<2	<10	<5	-	-	-	-	-	-	-	-	-				
BH03	BH03-02	0.45-0.5	29/03/2022	Natural	875848	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.1	<10	4.4	11	<2	<10	<0.4	11	<1	<5	14	<0.1	<5	<5	<2	<2	<10	7.6	<0.5	<20	<0.1	<0.1	<0.5	<0.1	<0.2	<0.1	<0.3				

[illegible][illegible]

						Phenolics											Phenolics-Halogenated										Phthalates		Polychlorinated Biphenyls										Other				Solvents
						2,4-Dimethylphenol	2,4-Dinitrophenol	2-Methylphenol	2-Nitrophenol	3- & 4- Methylphenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexylphenol	4-Nitrophenol	Cresols (Sum of total)	Phenol	Non-Halogenated Phenols (Sum of total)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol	2-Chlorophenol	4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols (Sum of total)	Halogenated Phenols (Sum of total)	Bis(2-ethylhexyl) phthalate	Arador 1016	Arador 1232	Arador 1242	Arador 1248	Arador 1254	Arador 1260	Arador 1221	PCB (Sum of total)	Cyanide (total)	Cyanide (amenable)	Fluoride	pH (aqueous extract)	Methyl Ethyl Ketone				
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg							
EQL						0.5	5	0.2	1	0.4	5	20	5	0.5	0.5	20	1	1	0.5	0.5	0.5	1	1	10	1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	5	5	100	0.1	0.5						
VIC EPA 1828.2 Fill Material Upper Limit																60													2	50		450											
VIC EPA 1828.2 Cat D Upper Limit																8000	560	16000	80	800		1200					40			2	2500	300	10000		8000								
VIC EPA 1828.2 Cat C Upper Limit																8000	560	16000	80	800		1200					40			50	2500	300	10000		8000								
VIC EPA 1828.2 Cat B Upper Limit																32000	2200	64000	320	3200		4800					160					10000	1200	40000		32000							
Location	Sample	Depth	Date Sampled	Fill/Natural	Lab Report No.																																						
Fill																																											
BH01	BH01-01	0.1-0.2	29/03/2022	Fill	875848	<0.5	<5	<0.2	<1	<0.4	<5	<20	<5	<0.5	<0.5	<20	<1	<1	<0.5	<0.5	<0.5	<1	<1	<10	<1	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<5	<100	6.4	<0.5					
BH02	BH02-01	0.1-0.2	29/03/2022	Fill	875848	<0.5	<5	<0.2	<1	<0.4	<5	<20	<5	<0.5	<0.5	<20	<1	<1	<0.5	<0.5	<0.5	<1	<1	<10	<1	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<5	120	6.5	<0.5					
BH03	BH03-01	0.1-0.2	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
SS01	SS01	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
SS02	SS02	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
SS03	SS03	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
SS04	SS04	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
SS05	SS05	0-0.1	29/03/2022	Fill	875848	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Natural																																											
BH01	BH01-02	0.4-0.5	29/03/2022	Natural	875848	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
BH02	BH02-02	0.45-0.5	29/03/2022	Natural	875848	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
BH03	BH03-02	0.45-0.5	29/03/2022	Natural	875848	<0.5	<5	<0.2	<1	<0.4	<5	<20	<5	<0.5	<0.5	<20	<1	<1	<0.5	<0.5	<0.5	<1	<1	<10	<1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<5	<100	6.4	<0.5					

APPENDIX H

Important Information

The document ("Report") to which this page is attached and which this page forms a part of, has been issued by Golder Associates Pty Ltd ("Golder") subject to the important limitations and other qualifications set out below.

This Report constitutes or is part of services ("Services") provided by Golder to its client ("Client") under and subject to a contract between Golder and its Client ("Contract"). The contents of this page are not intended to and do not alter Golder's obligations (including any limits on those obligations) to its Client under the Contract.

This Report is provided for use solely by Golder's Client and persons acting on the Client's behalf, such as its professional advisers. Golder is responsible only to its Client for this Report. Golder has no responsibility to any other person who relies or makes decisions based upon this Report or who makes any other use of this Report. Golder accepts no responsibility for any loss or damage suffered by any person other than its Client as a result of any reliance upon any part of this Report, decisions made based upon this Report or any other use of it.

This Report has been prepared in the context of the circumstances and purposes referred to in, or derived from, the Contract and Golder accepts no responsibility for use of the Report, in whole or in part, in any other context or circumstance or for any other purpose.

The scope of Golder's Services and the period of time they relate to are determined by the Contract and are subject to restrictions and limitations set out in the Contract. If a service or other work is not expressly referred to in this Report, do not assume that it has been provided or performed. If a matter is not addressed in this Report, do not assume that any determination has been made by Golder in regards to it.

At any location relevant to the Services conditions may exist which were not detected by Golder, in particular due to the specific scope of the investigation Golder has been engaged to undertake. Conditions can only be verified at the exact location of any tests undertaken. Variations in conditions may occur between tested locations and there may be conditions which have not been revealed by the investigation and which have not therefore been taken into account in this Report.

Golder accepts no responsibility for and makes no representation as to the accuracy or completeness of the information provided to it by or on behalf of the Client or sourced from any third party. Golder has assumed that such information is correct unless otherwise stated and no responsibility is accepted by Golder for incomplete or inaccurate data supplied by its Client or any other person for whom Golder is not responsible. Golder has not taken account of matters that may have existed when the Report was prepared but which were only later disclosed to Golder.

Having regard to the matters referred to in the previous paragraphs on this page in particular, carrying out the Services has allowed Golder to form no more than an opinion as to the actual conditions at any relevant location. That opinion is necessarily constrained by the extent of the information collected by Golder or otherwise made available to Golder. Further, the passage of time may affect the accuracy, applicability or usefulness of the opinions, assessments or other information in this Report. This Report is based upon the information and other circumstances that existed and were known to Golder when the Services were performed and this Report was prepared. Golder has not considered the effect of any possible future developments including physical changes to any relevant location or changes to any laws or regulations relevant to such location.

Where permitted by the Contract, Golder may have retained subconsultants affiliated with Golder to provide some or all of the Services. However, it is Golder which remains solely responsible for the Services and there is no legal recourse against any of Golder's affiliated companies or the employees, officers or directors of any of them.

By date, or revision, the Report supersedes any prior report or other document issued by Golder dealing with any matter that is addressed in the Report.

Any uncertainty as to the extent to which this Report can be used or relied upon in any respect should be referred to Golder for clarification



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