

APPENDIX 5. INVESTIGATIONS - UPDATED PRELIMINARY SITE INVESTIGATION



Preliminary site investigation

Environmental site history and limited soil investigation

JOB NUMBER:	S01895 - 281059
CLIENT:	South Australian Jockey Club Inc.
SITE ADDRESS:	Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043
DATE:	01/08/2022
REVISION:	1

Engineering VOUR SUCCESS. SYDNEY

ADEL MELBOURNE

Client:	South Australian Jockey Club Inc.
Site:	Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043

© Koukourou Pty Ltd trading as FMG Engineering

The work carried out in the preparation of this document has been performed in accordance with the requirements of FMG Engineering's Quality Management System which is certified by a third party accredited auditor to comply with the requirements of ISO9001.

This document is and shall remain the property of FMG Engineering. The document is specific to the Client and site detailed in the document. Use of the document must be in accordance with the Terms of Engagement for the commission and any unauthorised use of this document in any form whatsoever is prohibited. No part of this document including the whole of same shall be used for any other purpose nor by any third party without the prior written consent of FMG Engineering.

The opinions expressed in this document are based upon a visual inspection conducted with reasonable care. Areas not reasonably accessible and not readily viewed without disturbing the existing structure, finishes or furnishings have not been inspected, unless noted otherwise.

FMG Engineering has not carried out a review with respect to combustibility, fire resistance or fire safety provisions of the external insulation and finishing system, wall panelling, cladding or façade material or any associated fixing system that is to be or that may be applied to this project. Cladding systems must comply with the Building Code of Australia, the NCC, relevant Australian Standards and any other applicable regulations and test requirements. FMG advises that project specific advice with respect to fitness for purpose and statutory compliance of any proposed cladding materials shall be sought from a suitably qualified and experienced Materials or Fire Services Engineer.

FMG Engineering reserves the right to append, amend and / or modify the contents of this document upon receipt of additional information.

The document is not a guarantee or warranty, but is a professional assessment of the condition of the premises, or part thereof, at the time of inspection.

			APPROVE FOR ISSUE	
REV	STATUS	AUTHOR	NAME	ISSUE DATE
0	Final	T. Stanton	Drew Gowling	30/05/2022
1	Final (updated to include updated ESH)	T. Stanton	Drew Gowling	01/08/2022

Document Status

Table of contents

Exe	Executive summary		
Glo	ssary	9	
1.0	Introduction	10	
	1.2 Background	10	
	1.3 Objectives	10	
	1.4 Scope of work	11	
	1.5 Sources of information	12	
2.0	Site identification	13	
3.0	Site history	14	
	3.2 Historical ownership	14	
	3.3 Aerial photography review	14	
	3.4 Sands and McDougall	17	
	3.5 SafeWork SA Dangerous Substances	17	
	3.6 Environment protection authority	17	
	3.7 Anecdotal information	18	
	3.8 Summary of site history	18	
4.0	Environmental setting	20	
	4.1 Site topography & drainage	20	
	4.2 Regional geology	20	
	4.3 Regional hydrogeology	21	
	4.4 Surface hydrology	21	
	4.5 Site Inspection	21	
	4.6 Site setting	22	
	4.7 Visual evidence of contamination	22	
5.0	Data Quality Objectives (DQO), Quality Assurance (QA) and Quality Control (QC)	23	
	5.1 Quality assurance and quality control	24	
	5.2 Field QA/QC	24	
	5.3 Laboratory QA/QC	25	

Clien Site:	nt: South Australian Jockey Club Inc. Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043	
6.0	Sampling plan methodology	26
	6.1 Sampling location rationale	26
	6.2 Soil sampling methodology	28
	6.3 Laboratory analysis of soil samples	28
	6.4 Storage, preservation and transport of samples	29
	6.5 Assessment criteria	29
	6.5.1 Health investigation levels (HILs)	29
	6.5.2 Health screening levels (HSLs)	30
	6.5.3 Ecological investigation levels (EILs)	30
	6.5.4 Ecological screening levels (ESLs)	31
7.0	Soil assessment and results	32
	7.1 Field observations	32
	7.2 Field testing	32
	7.3 Laboratory results	32
8.0	Quality assurance and quality control	34
	8.1 Data quality objectives	34
	8.2 Data quality indicators	34
	8.3 Field QA/QC	34
	8.4 Soil analysis	35
	8.4.1 Intra-laboratory and Inter-laboratory duplicate	35
	8.4.2 Rinsate QA/QC assessment	35
	8.5 Laboratory QA/QC	35
	8.5.1 Method blanks	35
	8.5.2 Laboratory duplicates	35
	8.5.3 Laboratory spikes	36
	8.5.4 Sample Holding times	36
	8.6 QA/QC Conclusions	36
9.0	Preliminary conceptual site model	37
	9.7 Elements of a conceptual site model	37

Client Site:	lient: South Australian Jockey Club Inc. ite: Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043		
	9.8 Potential contaminants and sources		
	9.8.1 On-site sources		
	9.8.2 Off-Site sources		
	9.9 Potentially affected media		
	9.10 Potential receptors and pathways		
	9.11 Site specific considerations		
10.0	Qualitative risk assessment matrix	41	
11.0	Data gaps	45	
12.0	Conclusions	46	
13.0	Report limitations	48	
Арр	endix A	49	
	Figures	49	
Арр	endix B	50	
	Data Quality Indicators (DQI) to be assessed	50	
Арр	endix C	53	
Borehole Logs		53	
Арр	endix D	54	
Chei	mical Results Table	54	
Арр	endix E	55	
Labo	pratory Documentation	55	
Арр	endix F	56	
	Certificate of Titles		
Арр	endix G	57	
	Aerials5		
Арр	Appendix H		
	Safework SA Search Results	58	
Арр	endix I	59	
DEWNR WaterConnect Database Search Results		59	
Арр	endix J	60	

Client: Site:	ient: South Australian Jockey Club Inc. te: Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043	
sa e	EPA Section 7 searches results	60
Appendix	x K	61
Site	Inspection Checklist	61
Appendix L62		
Site	Photographs	62

Executive summary

BACKGROUND	FMG Engineering (FMG) was engaged by South Australian Jockey Club Inc. (SAJC) (the client) to undertake a Preliminary Site Investigation (PSI) - Environmental Site History (ESH) for a property located at Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043 (the site). The site comprises an area of approximately 17,150 square metres (m ²) and currently consists of a car park, stables and commercial properties (Olivers Pets and Plants). The location and boundaries of the site are shown on Figure 1 in Appendix A. FMG understands that the client is currently developing a Master Plan for the Morphettville Racecourse Precinct. An intrusive investigation was required to identify if site contamination is present due to current or historical uses and if it posed an unacceptable risk to future site users. FMG previously completed an Environmental Site History (ESH) for the site in 2014 (on behalf of the South Australian Jockey Club). The report "S01895_228691_PSI_ESH_ Portion A, Morphettville Racecourse Precinct" (FMG, 2014), identified six areas on and offsite where Potentially Contaminating Activities (PCAs) had occurred.
OBJECTIVES OF INVESTIGATION	The objectives of this PSI - ESH are to identify potential sources(s) of contamination associated with current and historical site uses to provide an assessment of the potential contaminants of concern (CoC) in soil within the previously identified PCAs that may pose an unacceptable risk to future users of the site.
SCOPE OF WORK	 The scope of work undertaken within this PSI - ESH included the following: Undertake a desktop study for the site to identify any PCAs which may have occurred at the site; Advancement of 15 soil boreholes to a depth of 2m BGL and collection of 45 soil samples; Collection of five samples for potential asbestos containing material (ACM); Collection of one grab sample from under the pavers in the stable area; Submission of soil samples to a NATA accredited laboratory for analysis of the contaminants of concern; Comparison of the laboratory data to the applicable screening criteria; and Preparation of this report documenting the works undertaken and the results obtained.
SITE HISTORY	Information suggests that SAJC has owned the site since the 1880s. The northern portion of the site was used for stabling horses between circa 1949 to 1969. The site was then cleared of buildings between circa 1979 and 1999 and the current stables and commercial buildings were constructed around 1999.

	From 2005, the northern portion of the site was used for motor vehicle parking.
FIELD INVESTIGATION RESULTS	Intrusive works undertaken consisted of drilling of 15 boreholes targeting previously identified PCAs across the site. The depth of the fill encountered at the site ranged from 0.2 to 0.7m BGL. Natural soils comprising sands and clays were encountered during the investigation. No visible signs of contamination were observed during the intrusive investigation. Groundwater was not encountered during the investigation.
DETERMINATION OF SITE CONTAMINATION	One surface sample from the unsealed vehicle parking area in the northern portion of the site exceeded the ASC NEPM Ecological Screening Levels (ESLs) for TRH C_{16} - C_{34} . This is likely from motor vehicles in the car park and appears to be confined to the surficial fill layer with the concentration in the natural material at 0.5m BGL being less than the laboratory limit of reporting (LOR). Statistical analysis, including the 95% upper confidence level (95% UCL) was conducted on the TRH C_{16} - C_{34} data set, the result was less than the ESL criteria.
PCAs AND SOURCES	 PCAs confirmed to have occurred at the site include the following: Motor vehicles in the unsealed storage area and car parking areas; Importation and placement of fill across the site; and Stabling of horses. Unconfirmed PCAs inferred to have occurred at the site include lead and asbestos underground services beneath the site. Off-site PCAs identified within the investigation include former markets gardens south of the site and the tram depot and tram lines located along the western boundary of the site. The site is used for horse stabling (feedlots), under Practice Direction 14 (2021), this PCA is classified as a Class 3 activity. Additional PCAs identified at the site, were not listed within Practice Direction 14 (2021).
CONCLUSIONS AND RECOMMENDATIONS	Based upon the findings of the PSI, FMG considers that there is a low risk presented to the identified human health and environmental receptors associated with the site. Hence no further investigation is warranted. The results of the preliminary soil waste classification assessment indicate that the materials tested meet the requirements of Waste Fill. It is recommended that a construction environmental management plan (CEMP) be produced and implemented for the proposed civil works to manage discoveries of contamination and/or potential uncovering of lead and/or asbestos underground services. It should be noted that if excess material is proposed to be removed off- site as part of the civil works, a Waste Classification Assessment should be undertaken to classify the soil for disposal at a licensed waste disposal facility.

Glossary

ACRONYM	COMMENT
ALS	Australian Laboratory Services
AS	Australian Standards
ASC NEPM	Assessment of Site Contamination National Environment Protection Measure
BTEX	Benzene, Toluene, Ethyl Benzene and Xylenes
CEC	Cation Exchange Capacity
DQI	Data Quality Indicators
DQO	Data Quality Objectives
EIL	Ecological Investigation Level
ESL	Ecological Screening Level
FMG	FMG Engineering
HIL	Health Investigation Level
HSL	Health Screening Level
LOR	(Laboratory) Limit of Reporting
m	Metres
m²	Square metres
m BGL	Metres below ground level
NATA	National Association of Testing Authorities Australia
OCP	Organochlorine Pesticides
РАН	Polycyclic Aromatic Hydrocarbons
РСА	Potentially Contaminating Activities
РСВ	Polychlorinated Biphenyls
PSI	Preliminary Site Investigation
QA/QC	Quality Assurance/ Quality Control
RPD	Relative Percentage Difference
ТВ	Trip Blank
ТОС	Total Organic Carbon
TRH	Total Recoverable Hydrocarbons

1.0 Introduction

1.2 Background

FMG Engineering (FMG) was engaged by South Australian Jockey Club Inc. (the client) (SAJC) to undertake a Preliminary Site Investigation (PSI) - Environmental Site History (ESH) for a property located at Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043 (the site).

The site comprises an area of approximately 17,150 square metres (m²) and currently consists of a car park, stables and commercial properties (Olivers Pets and Plants). The location and boundaries of the site are shown on Figure 1 in Appendix A.

FMG understands that the client is currently developing a Master Plan for the Morphettville Racecourse Precinct. The objectives of the Master Plan are to identify the highest and best use development of land which is potentially surplus to the core business of racing and how it might fulfil transit orientated development polices of the State Governments 30 Year Plan for Greater Adelaide.

FMG previously completed an Environmental Site History (ESH) for the site in 2014 (on behalf of the South Australian Jockey Club). The report "*S01895_228691_PSI_ESH_ Portion A, Morphettville Racecourse Precinct*" (FMG, 2014), identified six areas with Potentially Contaminating Activities (PCA) which included:

- Storage of motor vehicles on unsealed surfaces;
- Stabling of horses;
- Placement of fill material across the site, including a cinder track;
- Asbestos and lead service pipes located underground across the site;
- The tram depot and tram lines located off-site along the western boundary of the site and on land to the north of the site; and
- Market gardens located to the south of the site.

This report should be read in conjunction with the ESH which recommended an intrusive investigation to investigate whether the identified PCAs have impacted the soils at the site to levels that could pose unacceptable health risks to future residential site users.

1.3 Objectives

The objective of the PSI is to identify the potential for the site to be contaminated based on historical review, detailed site inspection and limited intrusive sampling and analysis. The investigation should:

- Assess the likelihood of contamination being present on the site based on a detailed site inspection and site history research; and
- Assess the presence of any significant surface and shallow subsurface soil contamination, identified as being potentially present by the site history investigation.

The objectives of the first stage of the PSI (i.e. the environmental site history (ESH)) are to:

• Provide information on past and current uses of the site and of the surrounding area and the nature of any potential hazards and physical constraints;

Client: Site South Australian Jockey Club Inc.

Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043

- Provide information on the geology, hydrogeology and hydrology of the site to assist in establishing the conceptual model and in identifying constraints to the development of the site;
- To identify receptors, potential sources of contamination, likely pathways and any features of immediate concern; and
- Provide a preliminary Conceptual Site Model (CSM) of the nature and extent of potential contamination and obtain data for a preliminary qualitative risk assessment.

The objectives of the second stage of the PSI (soil investigation) are to:

- Obtain site specific data on the ground conditions;
- Obtain site specific data regarding the contamination status of the soils;
- Obtain site specific data in order to review and revise the preliminary CSM;
- Identify significant data gaps and include an assessment of the accuracy of the information collected; and
- Provide recommendations for the future management of the site.

1.4 Scope of work

All work was undertaken in accordance with the scope of work outlined in the FMG proposal (EST26785) dated 24 March 2022 and EST27447 dated 10 June 2022. Additionally, all work was undertaken in accordance with the requirements of FMG's Quality Management System, which is certified by BSI Australia to comply with the requirements of ISO9001.

The scope of work undertaken within this PSI included the following:

- Collection and review of relevant historical data available for the site, to understand the historical ownership and use of the site;
- Advancement of 15 soil boreholes to a depth of 2 metres below ground level (mBGL) using push-tube drilling techniques and collection of 45 soil samples for chemical analysis;
- Collection of five soil samples for asbestos identification (ID);
- Collection of one grab sample from under the pavers in the current horse stabling area;
- Submission of soil samples to a NATA accredited laboratory for analysis of contaminants of concern;
- Comparison of the laboratory data to the applicable screening criteria; and
- Preparation of this report documenting the works undertaken and the results obtained.

This report was prepared with reference to the following documents:

- National Environment Protection (Assessment of Site Contamination) Measure (NEPM), 1999 (amended 2013). Referenced as "ASC NEPM" in this report
- Australian Standard AS4482.1-2005, Guide to the investigation and sampling of sites with potentially contaminated soil

Client:South Australian Jockey Club Inc.Site:Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043

- Australian Standard AS1726-1993, Geotechnical Site Investigations, and
- SA EPA, 2018, Guidelines for the assessment and remediation of site contamination.

1.5 Sources of information

The sources of information which have been consulted during the preparation of this report are presented in Table 1:1.

Table 1:1 Sources of information and search results

SOURCE	INFORMATION	SECTION OF THE REPORT
City of Marion Council Development Plan	Planning and Zoning Information	Section 2
Land Services Group DPTI, Property Assist Application	The Certificates of Title (Current and Cancelled) have been obtained and reviewed	Section 3 and Appendix F
DEWNR, Mapland and NearMaps (Accessed 19 July 2022)	Historical aerial photographs have been obtained and reviewed	Section 3 and Appendix G
Sands & McDougall's South Australian Directory	A review of the SA Directory, incorporating Boothby's SA Directory has been undertaken	Section 3
SA EPA Section 7 Search	Records obtained from the SA EPA Database relating to the Land and Business (Sale and Conveyancing) Act 1994.	Section 3 and Appendix J
Anecdotal Information	Anecdotal information in regards to the history of the site building was obtained via an interview on 1 December 2014	Section 3
Nature Maps Website	Information relating to the topography of the site and the surrounding area. Accessed 19 July 2022	Section 4
Department of Primary Industries and Resources South Australia, The Geological Survey of South Australia	Sheet number 6628, Adelaide, Scale 1:100,000	Section 4
DEWNR Water Connect Website	Groundwater data relating to the site. Accessed 19 July 2022.	Section 4
Environmental Protection (Water Quality) Policy 2015	A review of the resources to gain information on the groundwater beneficial uses relating to the groundwater quality of the site.	Section 4
Australian Soil Resource Information System (ASRIS), CSIRO online	Information relating to acid sulphate soils in the vicinity of the site.	Section 4

FMG Ref: 281059 / S01895

2.0 Site identification

The information relating to the site in presented within Table 2:1

Table 2:1 Site details

SITE ADDRESS	86 - 88 Morphett Road, Glengowrie, SA, 5044.
CERTIFICATE OF TITLE(S)	CT 5709/134 (~1,100 m ² in the northern portion of the site)
AND LEGAL DESCRIPTION	CT 6051/410 (~16,050 m ² in the southern portion of the site)
CURRENT OWNERSHIP	South Australian Jockey Club Inc. of Racecourse Morphettville SA 5043
SITE AREA	The site occupies approximately 17,150 m ² .
CURRENT LAND USE	Car parking, horse stables and commercial properties (Olivers Pets and Plants).
CURRENT LAND USE SENSITIVITY [#]	Class 6 - Commercial class 1
LOCAL GOVERNMENT AUTHORITY	City of Marion
CURRENT ZONING	Racecourse (Morphettville) Policy Area of the City of Marion Development Plan dated 9 June 2020.
PROPOSED LAND USE	High density residential building. Residential land use with limited accessible soil as defined within the ASC NEPM.
PROPOSED LAND USE SENSITIVITY [#]	Class 2 - Residential Class 2 (medium to high density domestic residential)
SURROUNDING LAND USES	To the North – Buildings associated with the Glengowrie Tram Depot, Maxwell Terrace, tram lines, Morphettville Medical Centre and Health Facility and Anzac Highway
	To the East – Morphett Road followed by the Morphettville Racecourse
	To the South – Glengowrie Ambulance Station, Vet Clinic and residential properties
	To the West – Tram depot, tram lines and Sturt Drain with residential properties beyond.

<u>Notes</u>

The most sensitive use due to multi-use site

3.0 Site history

3.1 Historical ownership

A review of the current and historic Certificates of Title (CT) was undertaken to identify:

- Previous ownership/ occupiers of the site.
- Periods during which ownership or tenancy is unknown or uncertain.
- Potentially contaminating activities that may have occurred on site.

A review of the historic CTs indicates that the site has been occupied by the SAJC since at least 1954. Due to the duration of the occupancy by SAJC, it is considered unlikely that the contamination status of the site will have been significantly impacted by another former occupier/owner. In addition, information provided by SAJC states that they acquired the site in the late 1880s. Therefore, the likelihood of the site being impacted by a different occupant (to SAJC) is low.

Copies of the CT documentation for the site are presented in Appendix F

3.2 Aerial photography review

Aerial photographs of the site from 1949, 1959, 1969, 1979, 1989, 1999 and 2005, were obtained from the Department of Environment Water and Natural Resources (DEWNR). Additionally, aerial photographs of the site from 2009, 2014, 2019 and 2022 were obtained from Nearmap (accessed 19 July 2022). Copies of the aerial photographs are provided in Appendix G.

Table 3:1 provides a summary of the historical aerial photography review. In addition, any subsequent information has been included in the table, if considered relevant.

PHOTOGRAPHY DATA	FEATURES IDENTIFIED
Survey: 017	The photograph is black and white and of moderate quality.
Photo: 39	The site
Date: 23 January 1949	Horse stables and training areas are visible in the northern portion of the site. The remaining areas of the site are unsealed.
	Surrounding land
	The Morphettville Racecourse is located across Morphett Road, to
	the east. Residential development is visible to the west of the site.
	Mainly vacant land with a few properties located to the north of the
	site.
Survey: 325	The photograph is black and white and of poor to moderate quality.
Photo: 9296	The site
Date: 3 January 1959	Horse stables and training areas are visible in the northern portion of
	the site. The remaining areas of the site are unsealed. No significant
	changes are visible since the 1949 photo.

Table 3:1 Historical aerial photograph review table

Client:South Australian Jockey Club Inc.Site:Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043

PHOTOGRAPHY DATA	FEATURES IDENTIFIED
	Surrounding land
	Residential development has occurred to the west of the site.
Survey: 1133A	The photograph is black and white and is of moderate quality.
Photo: 630	The site
Date: 9 January 1969	The stables in the northern portion of the site have been demolished. It appears that the site is being used to store unknown objects. The site remains unsealed. The southern portion of the site remains unchanged.
	Surrounding land
	Residential development has increased in the surrounding area. The Sturt River has been converted to a concrete drain. Development of the racecourse has occurred to the southeast of the site. The land immediately to the west of the site is also being used for storage.
Survey: 2406	The site
Photo: 105	The site is no longer used for storage and is vacant of structures.
Date: 1 January 1979	Surrounding land
	been removed.
Survey: 4091	The site
Photo: 135	No significant changes are visible since the 1979 photograph.
Date [:] 6 September 1989	Surrounding land
Bate. o September 1909	The tram depot located to the west of the site has been developed and comprises tracks along the length of the depot land and a central building. Tracks are visible which run the length of the site, with a large building in the centre.
Survey: 5718	The site
Photo: 820	Stables have been constructed in the southern portion of the site along with associated asphalt car parking.
Date. 20 September 1999	Surrounding land
	The surrounding land appears unchanged.
Survey: 7013	The site
Photo: 88	The northern portion appears to comprise gravel surfacing.
Date: 31 January 2005	Surrounding land
	The wetlands in the centre of the Morphettville Racecourse have been developed.
Date: 19 October 2009	The site
	New commercial building (Olivers Pets and Plants) constructed north of the stables surrounded by bitumen with a car parking area between the stables and new building. A nursery area adjoins the north-eastern corner of the building along and a storage area adjoins the north-western corner of the building.

Client: Site:

PHOTOGRAPHY DATA	FEATURES IDENTIFIED
	The northern portion of the site is fenced off with construction trucks
	and materials building a new structure.
	Surrounding land
	No significant changes are visible since the 2005 aerial photograph.
Date: 17 October 2014	The site
	The northern portion of the site has been turned in to a gravel carpark.
	Surrounding land
	A new building used for tram maintenance is present adjoining the north-western corner of the site.
	Three small buildings and car park area located west of the stables have been demolished.
	Three larger rectangular buildings have been constructed west of the stables.
	The tram storage area west of the stables have been expanded and resurfaced.
	New building (tram administration offices) constructed to the northwest of the site.
Date: 1 October 2019	The site
	Area north of the commercial building (Olivers Pets and Plants) is being used for the storage of boats, trucks and horse trailers.
	Surrounding land
	Building along the southern boundary demolished and replaced by a larger building and car parking area (SA Ambulance Service – Glengowrie Station).
Date: 21 May 2022	The site
	The plant nursery area on the northern side of the commercial building (Olivers Pets and Plants) has expanded to extend along the entire northern side of the building. The storage area north of the commercial building appears to be used for the storage of trucks, horse trailers, hay bales, empty pallets and an above ground tank possibly used to store grain for the borses
	Surrounding land
	No significant changes are visible since the 2019 aerial photograph

3.3 Sands and McDougall

FMG conducted a detailed search of the Sands and McDougall Directories 1902 and 1924 for the site. No information of note was obtained.

3.4 SafeWork SA Dangerous Substances

As part of the previous investigation undertaken by FMG "S01895_228691_PSI_ESH_ Portion A, Morphettville Racecourse Precinct" (FMG, 2014), a Dangerous Substances Register was lodged with SafeWork SA for CT 5709/134 and CT 6051/410. The search indicated the following:

- For CT 5709/134 No licenced items were identified on the SafeWork SA licence search;
- For CT 6051/134 Two items are listed for a 180 kilogram (kg) and a 210kg above ground gas cylinder (external). It is understood that this licence is registered to the Oliver's Pets and Plant property located in the southern portion of the site.

A copy of the search results from Safework SA is presented in Appendix H.

3.5 Environment protection authority

The SA EPA conducted a Section 7 - Land and Business (Sale and Conveyancing) Act 1994 search for the site. A copy of the search results is included in Appendix J and reported the following, as of 19 July 2022:

- There are no mortgages, charges or prescribed encumbrances affecting the site under Sections 59, 93, 99 and 100 of the Environment Protection Act 1993.
- The EPA does not hold copies of any reports on any environmental assessments or any pollution or contamination in relation to the land or any part of the land.
- No licence to operate a waste depot or produce prescribed or listed waste has been issued for the site under the repealed South Australian Waste Management Commission Act 1979, the repealed Waste Management Act 1987 or the Environment Protection Act 1993.

The Section 7 search results note that historical records provided to the SA EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete.

Additionally, FMG searched the SA EPA Site Contamination Index for Adelaide, to determine if the EPA held reports, in relation to site contamination for the site or any nearby sites. The search indicated that the EPA held no reports for the site or surrounding area.

3.6 Anecdotal information

As part of the previous investigation undertaken by FMG "S01895_228691_PSI_ESH_ Portion A, Morphettville Racecourse Precinct" (FMG, 2014), an interview was undertaken on 1 December 2014 with John Tonani from the SAJC, who was the track manager of the Morphettville Racecourse at the time. He indicated the following:

- Historically, horse stables and horse exercising areas were located in the central portion of the site. The stables were moved to the other side of Morphett Road in the 1960s;
- A cinder training track was located within the exercising areas in the central portion of the site. This may have been beneath the tram depot to the west of the site;
- At the time of the interview, the site was used for car parking for the SAJC patrons, a pet shop business and horse stables, which the SAJC rent to trainers;
- It is thought that lead and asbestos piping is located beneath the site but no further information is known; and
- Market gardens were located south of the site. No further information was provided.

3.7 Summary of site history

A chronology table summarising the history of the site is provided within Table 3:2.

Client:

South Australian Jockey Club Inc. Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043 Site:

Table 3:2 Summary of site history

DATE	OWNER	LAND USE	ASSOCIATED	BUILDING \	SURFACE	COMMENTS	SOURCE OF
			CHEMICALS	STRUCTURES	COVER		INFORMATION
1999 to	SAJC	Car parking in northern portion.	Pesticides, fuels	Commercial	Unsealed	Unsealed - Current	Aerial
present		Commercial properties and	and oils, PAH,	buildings and	(gravel surface)	site layout	photographs
		stables in southern portion.	heavy metals	stables in the	with sealed		
		Trailer, boat and truck storage		southern portion of	portions in the		
		north of the commercial property.		the site.	south.		
1979 to	SAJC	Vacant land	Pesticides and	None	Unsealed	-	Aerial
1999			herbicides				photographs
1969 to	SAJC	Storage of unknown items	-	None	Unsealed	The client	Aerial
1979						representative	photographs
						suggested that that	
						the items may be	
						associated with the	
						concrete lining of the	
						Sturt Drain which	
						occurred during this	
						time.	
1949 – c.	SAJC	Northern portion of the site used	Pesticides, heavy	Stable buildings in	Unsealed	-	Aerial
1969		for stabling horses with a cinder	metals, fuels and	northern portion			Photographs and
		track. Southern portion vacant	oils, PAHs,				Client provided
			phenols and				Information.
			solvents.				
Pre 1949	SAJC	-	-	-	-	PSI undertaken by	-
						FMG in 2014 indicated	
						that SAJC stated that	
						they owned the site	
						since the 1880s.	

- Denotes information unknown

4.0 Environmental setting

4.1 Site topography & drainage

Table 4:1 Summary of the Site Topography and Drainage

GEOLOGY	DETAILS	SOURCE
Topography	Pooraka formation consists of sandy clay and	Lester Franks Survey and
	clayey to sandy silt with inter beds and layers	Geographic Pty. Ltd., Drawing
	of clay, sand, gravel, pebbles, cobbles and	BMUP0016, Sheet 1, dated March
	boulders. A topography survey undertaken of	2008.
	the site indicates that the elevation of the site	
	ranges between 10.5m to 9.75m AHD,	
	declining towards the north-east. It is	
	considered that the overland flow will follow	
	the topography of the site. Water will also	
	infiltrate through the unsealed surfaces.	
Site drainage	During rainfall periods, surface water is drained	S01895_228691_PSI_ESH_ Portion
	into a sump onsite and is directed towards the	A, Morphettville Racecourse
	Sturt Drain, 350m west of the site.	Precinct" (FMG, 2014)

4.2 Regional geology

Table 4:2 Summary table of regional geology

GEOLOGY	DETAILS	SOURCE
Pooraka Formation	Pooraka formation consists of sandy clay and clayey to sandy silt with inter beds and layers of clay, sand, gravel, pebbles, cobbles and boulders.	Geological Survey of South Australia, 1:100,000 Barker Series (SI5409), Adelaide 6628 sheet
Unlikely to comprise acid sulphate soils	The site is located in an area where there is no known occurrence of Acid Sulphate Soils.	ASRIS accessed 19 July 2022

4.3 Regional hydrogeology

The Department of Water, Land and Biodiversity Conservation (DWLBC) report, 'Overview of the Hydrogeology of the Adelaide Metropolitan Area' (DWLBC, 2010) indicates that the site lies within Zone 3B. This zone contains five to six Quaternary aquifers and three to four, almost flat lying, Tertiary aquifers. The first and second Tertiary aquifers are the thickest and the most productive, with relatively low salinity. The aquifer (at present) exhibits several cones of drawdown coinciding with known pumping centres, Subzone 3B- Penrice (Industrial)

A search of the WaterConnect Enquiry System (on the DEWNR website) (19 July 2022) identified one groundwater wells on the southern portion of the site. The well was registered for domestic use and was installed on 13 March 1992 to a depth of 9m BGL. This groundwater monitoring could not be located during the site inspection.

Standing water level (SWL) was recorded as 4.8m BGL (5.27m AHD). The total dissolved solids TDS concentrations in this well was measured as 2,830 mg/kg. According to the Environment Protection (Water Quality) Policy (2015), groundwater with this TDS concentrations are deemed potentially suitable for irrigation, livestock drinking water and aquaculture and human consumption of aquatic foods purposes.

The search identified 116 registered groundwater wells within a 1 km radius of the centre of the site. A summary of the WaterConnect database search results is presented in Appendix I.

A review of the reduced standing water levels (RSWLs) reported for the wells located in the vicinity of the site indicated that the localised groundwater flow direction is likely to be north westerly towards Gulf St. Vincent.

4.4 Surface hydrology

-		
ITEM	DETAILS	SOURCE
Closest significant	Sturt Drain which runs from Mount	Google Maps and DEWNR
water course	Lofty to the Barker Inlet, is located	WaterConnect
water course		
	approximately 350m west of	
	the site.	

 Table 4:3 Summary of regional hydrology

4.5 Site Inspection

On 1 August 2022, a suitably qualified FMG representative visited and inspected the site. The features identified during the site inspection were recorded on the Preliminary Site Investigation Checklist, presented in Appendix K.

A summary of the identified site features is indicated on the Site Layout Plan, presented as Figure 2. Selected site photographs taken during the site inspection are presented in Appendix L.

A summary of the identified site features is as follows:

- The majority of the northern portion of the site is used as a 'Park and Ride' for the nearby tram station. The surface is covered with road base gravels
- A storage area containing wooden pallets, metal rods/materials, pavers, cars, trucks and horse trailers was present between the 'Park and Ride' area commercial building
- The southern portion of the site comprises a commercial building (Oliver's Pets and Plants), associated car parking and horse stables; and
- The community stables are rentable stables and sheds where horses and horse equipment can be stored. The horses are stabled with a layer of sawdust topped with a layer of hay . The remainder of the stables have a paved ground cover.

The following were observed during the site inspection:

- Cleaning products inside the horse stables
- Compost / fertilizers on wooden pallets inside the pet/garden shop shed area, and
- Herbicides/pesticides/pet products on shelf with concrete floor inside the pet/garden shop.

The groundwater monitoring well situated within the stables could not be located during the site inspection.

4.6 Site setting

Surrounding current land uses, as observed during the site inspection are listed below:

- North: Office buildings for tram depot, medical centre, and Anzac Highway beyond
- South: Ambulance station and residential dwellings beyond
- East: Morphett Road with Morphettville Racecourse beyond, and
- West: Tram depot and residential dwellings beyond.

4.7 Visual evidence of contamination

No obvious evidence of staining or surface discolouration or stressed vegetation was observed during the site walkover.

5.0 Data Quality Objectives (DQO), Quality Assurance (QA) and Quality Control (QC)

The scope of the PSI was devised broadly in accordance with the seven step data quality objective (DQO) process, as detailed in Section 5 of Australian Standard AS4482.1-2005. The DQO process is outlined as follows:

- (a) State the Problem The purpose of the step is to clearly define the problem that requires assessment and additional data so that the focus of the study will be clear and unambiguous;
- (b) Identify the Decision The purpose of this step is to define the decision that will be resolved using information and data accumulated to address the problem;
- (c) Identify Inputs to the Decision The purpose of this step is to identify the informational inputs that will be required to resolve the decision and to determine which inputs require environmental measurements;
- (d) Define the Boundary of the Assessment The purpose of this step is to specify the spatial and temporal circumstances that are covered by the decision;
- (e) Develop a Decision Rule The purpose of this step is to integrate the outputs from previous steps into a single statement that describes the logical basis for arriving at the appropriate proposed action;
- (f) Specify the Acceptable Limits on Decision Errors The purpose of this step is to specify acceptable limits on decision errors, which are used to establish appropriate performance objectives for limiting uncertainty in the data; and
- (g) Optimise the Design for Obtaining Data The purpose of this step is to identify the most resource-effective sampling and analysis design for producing data that are expected to satisfy the DQOs.

A summary of the implementation of the DQO process undertaken for this PSI is provided in Table 5:1 below.

DQO	IMPLEMENTATION	
1. State the Problem	The ESH has identified that a number of PCAs have taken place at the site. However, the contamination status of the site is currently unknown. In order to address the uncertainties an intrusive investigation is required to assess whether the site poses any unacceptable risks to site users.	
2. Identify the Decision	The objectives of the intrusive soil investigation are to: Identify the presence and depth of any fill material at the site; Determine if the previously identified PCAs have impacted the site soils;	

Table 5:1 Implementation of the DQO process

DQO	IMPLEMENTATION
	Assess whether the site soils pose any unacceptable risk to identified receptors, and
	Determine whether further investigation or management is required.
3. Identify Inputs into the Decision	Inputs to the decision will include the following:
	Desktop site history review;
	Visual and aesthetic assessment of site soils;
	Soil analytical results; and
	Laboratory reports including QA/QC procedures.
4. Define the Boundary of the Assessment	The lateral boundaries of the investigation are formed by the site boundaries as presented in Appendix A. The vertical boundaries of the soil investigation are determined by the depth of the boreholes, proposed to be advanced to a maximum depth of 2m BGL.
5. Develop a Decision Rule	Targeted sampling locations in areas identified as having historical PCAs that contain aesthetically unsuitable materials or levels of contaminants above their respective soil investigation guidelines will be considered to be impacted.
6. Specify Acceptable Limits of Decision Errors	Error can be introduced from the sampling/sample design strategy and during laboratory analysis. Data precision and accuracy are assessed as part of the field and laboratory QA/QC implemented. Acceptable (tolerable) limits on decision errors, known as Data Quality Indicators (DQIs) are discussed in Appendix B - DQIs.
7. Optimise the Design for Obtaining Data	Strategic sampling and targeted analysis were adopted for the current investigation based on the findings of the site history review.

5.1 Quality assurance and quality control

Quality control procedures implemented during the PSI were based upon the guidelines in AS4482.1-2005 and the ASC NEPM.

5.2 Field QA/QC

The following QA/QC programme was undertaken during the field investigation to meet the ASC NEPM requirements:

- Field work was performed in accordance with FMG's Standard Quality Procedures;
- In addition to the primary soil samples, intra-laboratory and inter-laboratory duplicate samples are to be collected as follows:
 - The intra-laboratory duplicate soil samples were submitted for analysis to the Primary Laboratory to assess the reproducibility and precision of the laboratory data;

- The inter-laboratory triplicate soil samples were submitted for analysis to the Secondary Laboratory to assess the accuracy of laboratory data;
- Both laboratories were NATA accredited for the analysis performed.
- The drilling rods and hand drilling equipment were decontaminated on-site, to ensure that cross contamination between sampling locations did not occur. The drilling rods and hand equipment were decontaminated with a 5% Decon 90 and water solution and then rinsed;
- Rinsate sample were then collected from the drilling rods, to ensure that the decontamination procedures carried out and were sufficient;
- A new pair of clean disposable nitrile gloves were used to collect each soil sample in order to prevent cross-contamination; and
- Soil samples were placed into pre-labelled laboratory supplied glass jars and packed in chilled cool boxes prior to dispatch to the analytical laboratories under standard FMG chain of custody procedures.

5.3 Laboratory QA/QC

As part of their QA/QC program, the laboratories perform internal duplicate analysis, spike and recovery analysis, and blank analysis in accordance with NATA requirements. Details of laboratory QA/QC results were included in the certified laboratory reports appended to the final report.

6.0 Sampling plan methodology

6.1 Sampling location rationale

The rationale behind the locations of each of the boreholes is provided within Table 10.1.

BOREHOLE ID	RATIONALE
BH01	 Advanced to assess: Potential impacts from former market gardens to the south of the site; and Fill imported and placed beneath current stables in the southern portion of the site.
BH02	Advanced to assess impacts from motor vehicles and the depth of fill in the sealed car parking area.
BH03	Advanced to assess impacts from motor vehicles and the depth of fill in the sealed car parking area.
BH04	 Advanced to assess: Potential impacts from tram depot and tram lines located along the western boundary of the site; Impacts from motor vehicles stored in the unsealed area; and Fill imported placed in the vehicle storage area.
BH05	 Advanced to assess: Impacts from motor vehicles stored in the unsealed area; and Fill imported placed under the storage area.
BH06	 Advanced to assess: Potential impacts from tram depot and tram lines located along the western boundary of the site; Impacts from motor vehicles in the unsealed car parking area; and Fill imported placed under the storage area.
ВН07	Advanced to assess: Impacts from motor vehicles in the unsealed car parking area; and Fill imported placed under the car parking area.
ВН08	 Advanced to assess: Impacts from motor vehicles in the unsealed car parking area; and Fill imported placed under the car parking area.
ВН09	 Advanced to assess: Potential impacts from tram depot and tram lines located along the western boundary of the site; Potential impacts from former stables in the area; Impacts from motor vehicles in the unsealed car parking area; and Fill imported placed under the car parking area.
BH10	Advanced to assess:

Table 6:1 Sampling location rationale

BOREHOLE ID	RATIONALE	
	 Potential impacts from former stables in the area; Impacts from motor vehicles in the unsealed car parking area; and Fill imported placed under the car parking area. 	
BH11	 Advanced to assess: Potential impacts from former stables in the area; Impacts from motor vehicles in the unsealed car parking area; and Fill imported placed under the car parking area. 	
BH12	 Advanced to assess: Potential impacts from tram depot and tram lines located along the western boundary of the site; Potential impacts from former stables in the area; Impacts from motor vehicles in the unsealed car parking area; and Fill imported placed under the car parking area. 	
BH13	 Advanced to assess: Potential impacts from former stables in the area; Impacts from motor vehicles in the unsealed car parking area; and Fill imported placed under the car parking area. 	
BH14	 Advanced to assess: Potential impacts from tram depot and tram lines located along the western boundary of the site; Potential impacts from former stables in the area; Impacts from motor vehicles in the unsealed car parking area; and Fill imported placed under the car parking area. 	
BH15 GS01	 Advanced to assess: Potential impacts from tram depot and tram lines located to the north of the site; Potential impacts from former stables in the area; Impacts from motor vehicles in the unsealed car parking area; and Fill imported placed under the car parking area. 	
	 Fill imported and placed beneath current stables in the southern portion of the site; and Impact from horse stabling activities. 	
GS01	 Fill imported and placed beneath current stables in the southern portion of the site; and Impact from horse stabling activities. 	
PACM-01 (soil)	To assess if asbestos containing material (ACM) pipes in the vicinity in the north western corner of the site have impacted soils at the site.	

Client: South Australian Jockey Club Inc. Site: Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043

BOREHOLE ID	RATIONALE
PACM-02 (soil)	To assess potential ACM pipes along the eastern boundary of the site
PACM-03 (soil)	To assess potential ACM pipes along the western boundary of the site.
PACM-04 (soil)	To assess potential ACM pipes along the western boundary of the site.
PACM-05 (soil)	To assess potential ACM pipes in the vicinity of the current stables in the southern portion of the site.

6.2 Soil sampling methodology

A site-specific Health and Safety Plan was prepared and implemented during site works.

On the 12 and 13 May 2022, 15 soil boreholes (BH01 – BH15) were advanced at the site using a push tube drilling rig. All boreholes were advanced to a maximum depth of 2m BGL.

Prior to commencing any intrusive works, all borehole locations were cleared for underground and above ground services by Tron Civil Contracting, a licensed services locator, under the direction of a suitably qualified FMG Environmental Scientist.

A drilling contractor, Geodrill, was engaged to drill the soil boreholes under the direct supervision of a suitably qualified FMG Engineering Environmental Scientist. The soil borehole locations are presented in Appendix A.

Soil samples were collected from the surface, at changes in lithology (including each distinct soil layer) and at the base of each soil borehole. Grab samples were collected from under the paved area in the stables for heavy metals analysis Five samples were collected and analysed where potential ACM was encountered in accordance with SA EPA Guidelines and best industry practice. In total 94 soil samples were collected from the site.

Soil logging was undertaken based on field interpretation and in general accordance with Australian Standard AS1726-1993, *Geotechnical Site Investigations*. The presence of any visual and olfactory evidence of contamination (e.g., fill, staining and odour) was also noted on the borehole logs. Copies of soil borehole logs are presented in Appendix C. QA/QC field procedures were followed as discussed in Section 3.

6.3 Laboratory analysis of soil samples

In total 51 soil samples were selected for analysis, including the five potential ACM samples. The remaining samples were stored at the laboratory, pending the possible requirement for further analysis. Selected samples were analysed for one or more of the following:

- Total Recoverable Hydrocarbons (TRH)
- Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)
- Polycyclic Aromatic Hydrocarbons (PAH)

Client:South Australian Jockey Club Inc.Site:Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043

- Heavy Metals;
- Organochlorine Pesticides (OCP)
- NEPM EIL Screen (Cation Exchange Capacity (CEC), Total Organic Carbon (TOC) and pH)
- Analytes contained within the ASC NEPM Human Health Investigation Level Screen including phenols, and
- Asbestos Identification.

6.4 Storage, preservation and transport of samples

Soil samples were clearly labelled and collected in appropriate sampling jars which were supplied by the NATA accredited laboratory.

All samples were stored with cooling aids in an insulated chest immediately after sampling. Samples were kept chilled prior to and during delivery to the laboratory.

Samples were stored with cooling aids in insulated chests provided by the laboratory. Sample details and analytical requests were recorded on the FMG Chain of Custody (COC) forms included with the samples, prior to dispatching to the laboratory for analysis. Samples were dispatched to the laboratory within appropriate time frames to prevent holding time breaches.

6.5 Assessment criteria

To assess the significance of laboratory chemical analytical results in relation to health and environmental risk, sample concentrations were compared to established health and environmental investigation levels outlined in the amended ASC NEPM, which is adopted as an Environment Protection Policy under the Environment Protection Act (1993).

The ASC NEPM screening criteria are used for assessment of existing contamination only and are intended to prompt an appropriate site specific assessment when they are exceeded.

Site specific health and ecological risk assessments should be conducted where exceedances of investigation levels indicate that there is a likelihood of adverse effects on human health or ecological values for a site.

The adopted screening criteria for the appropriate analytical suite are presented together with the analytical results in the summary tables in Appendix D.

When an analytical result exceeds the adopted criteria threshold, the result is highlighted in the table.

A description of the health-based assessment criteria adopted as part of this investigation is provided below.

6.5.1 Health investigation levels (HILs)

Health Investigation Levels (HILs) have been developed for a broad range of metals and organic substances. The HILs are applicable for assessing human health risk via all relevant pathways of exposure. The HILs are generic to all soil types. The ASC NEPM states that site specific conditions should determine the depth to which HILs apply for other land uses.

Client:South Australian Jockey Club Inc.Site:Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043

Due to the assumed land use of the site being high density residential with limited accessible soil, the site is consistent with the exposure setting described in the ASC NEPM as 'Residential with limited accessible soil'. HILs have been established for this human exposure setting and are referred to as 'HIL B'.

6.5.2 Health screening levels (HSLs)

Health Screening Levels (HSLs) have been developed for selected petroleum compounds and fractions. They are applicable to assessing human health risk via the inhalation of soil vapours.

The HSLs depend upon specific soil physiochemical properties, land use scenarios and the characteristics of building structures. They apply to different soils types, land uses and depths below surface to greater than 4m and have a range of limitations.

Based upon the conditions identified at the site during the intrusive investigation, the HSLs for exposure setting HSL B – High density residential have been adopted. Due to a mix of soil types, a conservative approach of 'sand' soils, 0 to 2m BGL has been adopted.

6.5.3 Ecological investigation levels (EILs)

The ASC NEPM also provides screening criteria to assess the potential risk posed to ecological receptors. EILs have been developed for selected metals and organic substances and are applicable for assessing risk to terrestrial ecosystems. EILs depend on specific soil physiochemical properties and land use scenarios and generally apply to the top 2 m of soil.

Based upon the land use of the site and surrounding area, the criteria for the generic land use setting 'urban residential areas and public open space' have been used.

Selected samples were analysed for Cation Exchange Capacity (CEC), Total Organic Carbon (TOC) and pH in order to generate site specific EILs for many of the heavy metals. The reported CEC and pH levels are presented below.

The soil parameters are entered into the National Environment Protection Council, Ecological Investigation Level Calculation Spreadsheet and the EILs are generated.

The spreadsheet is used to calculate EILs for chromium III, copper, nickel and zinc for coarse sand soils. The parameters entered are as follows:

- CEC = 21.5cmol/kg (average of 19 and 24 mg/kg);
- TOC=6,550 mg/kg;
- pH = 8;
- State = SA;
- Traffic Volume = Low, and
- Clay content = 41%.

The soil specific EILs for 'Aged Contamination' have been selected.

6.5.4 Ecological screening levels (ESLs)

ESLs have been developed for the management of potential risk posed by selected petroleum hydrocarbons. ESLs broadly apply to coarse and fine grained soils and various land uses. They are generally applicable to the top 2m of soil.

Based upon the land use of the site and surrounding area, the criteria for the generic land use setting 'urban residential areas and public open space', for coarse soils have been used

7.0 Soil assessment and results

7.1 Field observations

Details of the sub-surface conditions encountered during the intrusive soil investigation are outlined in the soil borehole logs presented in Appendix C.

Fill material was encountered from surface to depths ranging between 0.2-0.7m BGL. Five distinct fill material types were encountered at the site, and are summarised as follows:

- F1: Gravelly sand, fine to coarse grained, dark grey, fine to coarse gravel;
- F2: Sandy clay, low plasticity, dark grey, fine to coarse sand with trace of gravel;
- F3: Sand; fine to coarse grained, light to dark grey, trace of fine gravel;
- F4: Sandy gravel, fine to medium grained, light brown to orange, fine to coarse sand; and
- F5: Silty gravelly sand, light grey to light brown, fine to coarse gravel.

Natural material was encountered at all locations on the site and included the following

- Gravelly sand, fine to coarse grained, light to dark grey, fine to medium gravel;
- Silty sand, fine to coarse grained, light grey;
- Sandy clay, low plasticity, dark grey/black, fine to coarse sand;
- Sandy clay, low plasticity, light brown, fine to coarse sand;
- Silty sand, fine to coarse light to dark grey; and
- Sandy clay, low plasticity, light brown to yellow, fine to coarse sand.

No visual or olfactory evidence of contamination was observed by the Field Scientist. Groundwater was not encountered during the intrusive investigation.

7.2 Field testing

Field testing was undertaken on each borehole sample by placing a small sample of soil into a polyethylene bag which was sealed to enclose as much air as possible around the soil sample. The polyethylene bag was pierced and a Photo-Ionisation Detector (PID) was inserted to test for ionisable volatile organic compounds.

PID readings were recorded and presented on the soil borehole logs presented in Appendix C.

7.3 Laboratory results

Tabulated summaries of the laboratory results compared to the adopted screening criteria/guidelines are provided in Appendix D. Laboratory certificates of analysis, sample receipt notices and chain of custody documentation are presented in Appendix E.

All soil samples submitted for analysis reported concentrations either less than the laboratory detection limit or below the adopted site assessment criteria, with the exception of BH15_0.0-0.15 which reported a TRH C_{16} - C_{34} concentration of 540 mg/kg, exceeding the ESL criteria of 300mg/kg. This exceedance occurred within gravel fill material located in the unsealed car parking area in the north of the site. The exceedance appears to be confined to the surficial fill layer with the concentration in the natural material at 0.5m BGL being less than the laboratory detection limit.

Statistical analysis, including the 95% upper confidence level (95% UCL) was conducted on the TRH C_{16} - C_{34} data set which indicated that the material was less than the ESL criteria and did not present a risk.

A preliminary waste classification was undertaken on the soil samples. Samples were within the published Waste Fill Criteria with the exception manganese of the following which exceeded the Waste Fill Criteria of 300 mg/kg:

- BH06_1.4-1.6 (630 mg/kg);
- BH13_0.6-0.8 (630 mg/kg); and
- BH14_0.2-0.3 (750 mg/kg).

Statistical analysis, including the 95% upper confidence level (95% UCL) was conducted on the manganese data set and indicated that the material can be classified as Waste Fill.

8.0 Quality assurance and quality control

8.1 Data quality objectives

Data quality objectives (DQOs) were developed (within Section 3) for the soil sampling undertaken to ensure the integrity and reproducibility of the tests and to provide a check on the potential for cross-contamination during the sampling process.

The procedures undertaken to achieve the DQOs included deployment of trained personnel familiar with soil sampling techniques. Laboratory quality assurance and quality control (QA/QC) was undertaken and fulfilled by the primary laboratory (Envirolab Group) and the secondary laboratory (ALS Environmental).

Quality Assurance was maintained by:

- Using qualified environmental scientists and engineers to undertake the field supervision and sampling;
- Following the FMG standard operating procedures for soil sampling, field testing and decontamination as presented detailed in FMG Engineering Quality Management System Field Operating Procedures for Environmental Investigations; and
- Using National Association of Testing Authorities (NATA)-registered laboratories that utilise standard laboratory methods (including in-house test methods) of the USEPA, American Public Health Association (APHA), ASC NEPM and Australian Standards.

8.2 Data quality indicators

The analysis of QC duplicate samples and internal laboratory QA/QC procedures should be assessed against the following data quality indicators (DQIs) for the assessment:

- Conformance with specified holding times;
- Accuracy of spiked sample recoveries within an acceptable range (70-130% for inorganic contaminants/metals and 60%-140% for organics);
- Field and laboratory duplicate will have a precision average of +/- 50% relative percent difference (RPD);
- Concentration of contaminants in laboratory reagents and blanks below the laboratory limit of reporting (LOR);
- Field duplicates will be collected at a minimum frequency of one each for every twenty samples analysed; and
- Field blanks and rinsate blanks to be collected at a rate of one per day of field work.

8.3 Field QA/QC

The QAQC procedures were followed as stated within Section 3.

8.4 Soil analysis

8.4.1 Intra-laboratory and Inter-laboratory duplicate

Two intra-laboratory duplicates were analysed as part of the assessment (BH15_1.8-2.0 / QA01 and BH03_1.8-2.0 / QA05), as well as two inter-laboratory duplicates (BH15_1.8-2.0 / QA02 and BH03_1.8-2.0 / QA06).

The RPD results for the intra-laboratory and inter-laboratory field duplicates were within the absolute 50% acceptance range with the exception of the following:

- Barium (54%) between primary sample BH15_1.8-2.0 and intra-laboratory sample QA01; and
- Manganese (103%) between primary sample BH03_1.8-2.0 and inter-laboratory sample QA06.

It is considered that the RPD exceeding 50% is due to natural heterogeneity in the soil samples. In addition, the reported concentrations in the samples were below the adopted human health screening levels.

RPDs could not be calculated for several analytes due to sample concentrations being below the laboratory's LOR in both samples of the duplicate pair. The consistent 'below laboratory limit' of recording results indicate good analytical data correlation between the sample and duplicate pair.

8.4.2 Rinsate QA/QC assessment

The rinsate sample submitted to Envirolab recorded concentrations below the laboratory detection limits. This indicates that the push tube rods used for drilling the boreholes were cleaned to a sufficient standard.

The results of the rinsate blank sample chemical analyses are presented in Appendix D.

8.5 Laboratory QA/QC

Quality Control (QC) of the laboratory programme was achieved by the following means:

- Method blanks the laboratory ran reagent blanks to confirm the equipment and standards used were sufficient;
- Laboratory duplicates the laboratory split samples internally and constructed tests on separate extracts; and
- Laboratory spikes samples were spiked by the laboratory with a known concentration of contaminants and subsequently tested for recovery.

8.5.1 Method blanks

All method blanks from Envirolab and ALS returned results below the LOR and are, therefore, considered acceptable.

8.5.2 Laboratory duplicates

The RPDs between duplicate pairs are calculated to measure laboratory precision.

Envirolab reported RPD values between 0% and 38%. ALS reported RPD values between 0% and 36.4%.
Client: South Australian Jockey Club Inc. Site: Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043

8.5.3 Laboratory spikes

Envirolab adopts an acceptable range of 70% to 130% recovery of inorganics and metals, and 50% to 140% for organics. ALS adopts various acceptable recovery limits, based on the contaminants, which range from 12% to 174%.

Envirolab laboratory spike results ranged from 73% to 107% and were within their acceptable ranges with the exception of:

- Recovery of pentachlorophenol in BH01_0.06-0.2 which could not be determined due to high concentrations of the analyte in the sample;
- Recoveries of iron in BH01_1.8-2.0 and BH09_0.8-1.0 which could not be determined due to high concentrations of the analyte in the sample; and
- Recoveries of manganese in BH01_1.8-2.0 and BH09_0.8-1.0 which could not be determined due to high concentrations of the analyte in the sample.

ALS spike recovery results were all within the acceptable limits.

8.5.4 Sample Holding times

Samples were generally analysed within the recommended holding times.

8.6 QA/QC Conclusions

- Data quality Indicators indicate that data is deemed to be of suitable quality;
- The number of quality control samples analysed was sufficient to comply with the ASC NEPM quality control guidelines;
- RPD values suggest that no significant laboratory or sampling errors have occurred;
- Holding times were generally acceptable for the analytes targeted;
- Sample temperatures were considered acceptable.
- No significant quality issues regarding sample analysis were identified throughout the quality control procedures.

In summary, FMG considers that precision and accuracy of the analytical data is acceptable for the purposes of the investigation.

Laboratory QA/ QC procedures and results are detailed in the NATA-certified laboratory reports contained in Appendix E.

9.0 Preliminary conceptual site model 9.7 Elements of a conceptual site model

A conceptual site model (CSM) is a representation of site related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The development of a CSM is an essential part of all site assessments and provides the framework for identifying how the site may have become contaminated and how potential receptors may be exposed to contamination, either in the present or the future.

The preliminary CSM is constructed from the results of the PSI and is used to identify data gaps and inform a decision on whether further investigation is required.

The essential elements of a preliminary CSM are:

- Known and potential sources of contamination (potentially contaminating activities) and contaminants of concern including the mechanism(s) of contamination
- Potentially affected media (soil, sediment, groundwater, surface water, indoor and ambient air)
- Human and ecological receptors
- Potential and complete exposure pathways.

In the absence of a plausible exposure pathway there is no risk. Therefore, the presence of measurable concentrations of contaminants of concern does not automatically imply that the site will cause harm. In order for this to be the case a plausible exposure pathway must be present allowing a source to adversely affect a receptor. The nature and importance of both receptors and exposure routes, which are relevant to any particular site, will vary according to its characteristics, intended end-use and its environmental setting.

9.8 Potential contaminants and sources

The following sections use the information gathered during the PSI to provide an indication of the potentially PCAs that have been carried out throughout the duration of the use of the site and surrounding land. Associated potential contaminants are also identified where appropriate.

9.8.1 On-site sources

Based on the information obtained during the desktop study and the intrusive investigation, PCAs have been identified, or were reasonably inferred, to have occurred at the site.

Potentially contaminating activities **confirmed** to have occurred at the site including the following:

- Motor vehicles in the unsealed storage area and car parking areas;
- Importation and placement of fill across the site; and
- Stabling of horses.

Unconfirmed potentially contaminating activities inferred to have occurred at the site include lead and asbestos underground services beneath the site.

No additional PCAs have been identified as occurring at the site since the previous PSI - ESH (FMG, 2014).

As the site is used for horse stabling (feedlots), under Practice Direction 14 (2021), the PCAs at the site are classified as class 3 activities. The additional PCAs identified at the site were not classified as they are not listed within Practice Direction 14 (2021).

9.8.2 Off-Site sources

Based on the information obtained during the desktop study and intrusive investigation, PCAs have been identified, or were reasonably inferred, to have occurred surrounding the site. The identified PCAs include:

- Former market gardens located south of the site; and
- Tram depot and tram lines located along the western boundary of the site.

9.9 Potentially affected media

The potentially affected media from the identified PCAs are described on Table 9:1 (Preliminary Conceptual Site Model).

9.10 Potential receptors and pathways

The potential receptors at the site are described in Table 9:1.

Table 9:1 Potential receptors

RECEPTOR		PATHWAY				
	Current Site Users	Dermal Contact, ingestion and inhalation.				
Human Health	Adjacent (off-site) site users	Dermal Contact, ingestion and inhalation.				
numan nearm	Future site users, residents,	Dermal Contact, ingestion and inhalation.				
	including construction and					
	maintenance workers					
	Groundwater	Leaching through soils, transport via				
Water		groundwater table.				
	Surface water	Surface water run-off, transport via				
		groundwater.				
Ecological	Ecological Receptors (Flora and	Uptake through soils, direct contact.				
Ecological	Fauna)					

The movement of contaminants associated with the identified PCAs is generally controlled by the physical level of exposure to the potentially affected media. The surface conditions should be considered, (i.e. Concrete surfacing) which may prevent access to the soils affecting the receptor via the identified pathway. Other factors which may affect the movement of contaminants includes:

- Site specific geology
- Physical and chemical properties of individual contaminants and weather.

9.11 Site specific considerations

Site specific environmental factors to be considered as part of the CSM are presented within Table 9:2

ITEM	DESCRIPTION				
Groundwater	Groundwater is expected to be encountered beneath the site between 4.8-5.3m BGL.				
Surface Water	The closest surface water body is the Sturt River / Warriparri, located in a concrete lined channel approximately 35m west of the site.				
Site Surface	The majority of the site surface is unsealed and covered with large cobbles, which appears to be ballast. The southern portion of the site is sealed in the vicinity of the shop and associated car parks with the sealed surface appearing to be in good condition. The stables have hay surface with compacted gravels beneath the hay. The remainder of the stables have a paved ground cover. A topography survey previously undertaken of the site indicates that the elevation of the site ranges between 10.5m to 9.75m AHD, declining towards the north-east. It is considered that the overland flow will follow the topography of the site. Water will also infiltrate through the unsealed surfaces.				
Areas of historical filling	During the intrusive investigation fill material was encountered to a maximum depth of 0.7m BGL. The source of the majority of the fill material is likely to be from a quarry (sands and gravels) and the remainder appears to be disturbed natural soils. Laboratory results from samples collected within the fill reported one individual concentration of TRH exceeding the site-specific screening criteria/guidelines, at BH15 in the northern portion of the site in an				

Table 9:2 Site specific conditions

Client:South Australian Jockey Club Inc.Site:Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043

ITEM	DESCRIPTION
	unsealed car parking area. The 95%UCL _{AVERAGE} for the TRH data set was below the adopted site-specific screening criteria/guidelines.
	Visual observations of the fill material did not identify any potential asbestos containing material (PACM).
Contamination within	The laboratory results indicate that natural soils have not been
natural soils	impacted by the identified potential sources of contamination.

10.0 Qualitative risk assessment matrix

The CSM presented in Table 10:3 outlines the results of a two-stage qualitative risk assessment. The first stage of the risk assessment assesses the potential consequence to the identified receptors (human health/ ecology etc) and assigns a classification. The terminology used in the first step is described in Table 10:1. The second step utilises the potential consequence classification (Step 1) and the likelihood of the event occurring. A final Risk classification is then determined, considering the consequence and likelihood.

CLASSIFICATION	HUMAN HEALTH	GROUNDWATER OR SURFACE WATER	ECOLOGICAL
Severe	Irreversible damage to human health	Substantial pollution of sensitive water resources	Significant change to the number of one or more species or ecosystems.
Moderate	Non-permanent health effects to humans	Substantial pollution of non-sensitive water resources or small-scale pollution	Change to population densities of non- sensitive species.
Mild	Slight short-term health effects to humans	Slight pollution to non- sensitive water resources.	Some change to population densities but with no negative effects on the function of the ecosystem.
Negligible	No measurable health effects to humans	Insubstantial pollution to non-sensitive water resources	No significant changes to population densities in the environment or in any ecosystem.

Table 10:1 Potential consequence classification

Table 10:2 Consequence / likelihood matrix

Likelihood Potential consequence Classification	Very unlikely	Unlikely	Possible	Likely	Almost Certain
Severe	Low	Low to moderate	Moderate to high	Very High	Very High
Moderate	Negligible to low	Low	Moderate	Moderate to High	High

Mild	Negligible	Low	Low	Low to Moderate	Moderate
Negligible	Negligible	Negligible	Negligible to low	Low	Low

The overall risk is therefore ranked as follows:

- **Negligible** The presence of the identified source does not give rise to the potential to cause significant harm.
- **Low** It is possible that harm could arise to a designated receptor from an identified source, though this is likely to be mild or unlikely.
- **Moderate** It is possible that harm could arise to a specific receptor, but it is unlikely that such harm would be significant.
- **High** A designated receptor is likely to experience significant arm from an identified source without remedial action.
- **Very High** There Is a high probability that severe harm could arise to a designated receptor from an identified source without appropriate remedial action.

Client: South Australian Jockey Club Inc.

Site: Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043

Table 10:3 Preliminary CSM

SOURCE/ PCA	POTENTIAL CONTAMINANT	POTENTIALLY IMPACTED MEDIA	RECEPTORS	РАТНШАҮ	POTENTIAL EFFECT	exceedance in Adopted Screening Criteria ¹ (Y/N)	POTENTIAL CONSEQUENCES	LIKELIHOOD	RISK CLASSIFICATION
Storage of			Human	Dermal contact, ingestion, inhalation	Toxic, Carcinogenic, Hazardous to Human Health.	N^2	Negligible	Unlikely	Negligible
motor vehicles on	TRH, BTEX, PAHs and heavy metals	Soils across the northern and central portions	Ecological	Uptake through soils, dermal contact	Toxic	Ν	Negligible	Unlikely	Negligible
unsealed surfaces.	(lead)	of the site	e site Water Water Leaching through soil, surface water run-off, transport via groundwater table		Ν	Negligible	Unlikely	Negligible	
		Collo in the	Human	Dermal contact, ingestion, inhalation	Toxic, Carcinogenic, Hazardous to Human Health.	Ν	Negligible	Unlikely	Negligible
Stabling Horses	Phenols, OCPs	northern and southern portions of the	Ecological	Uptake through soils, dermal contact	Toxic	Ν	Negligible	Unlikely	Negligible
		site	Water	Leaching through soil, surface water run-off, transport via groundwater table	Groundwater/ surface water contamination	Ν	Negligible	Unlikely	Negligible
Fill material across the site,	TRH, BTEX, PAHs and heavy metals	Soils across the entire site	Human	Dermal contact, ingestion, inhalation	Toxic, Carcinogenic, Hazardous to Human Health.	Ν	Negligible	Unlikely	Negligible

Client: South Australian Jockey Club Inc.

Site: Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043

SOURCE/ PCA	POTENTIAL CONTAMINANT	POTENTIALLY IMPACTED MEDIA	RECEPTORS	РАТНШАҮ	POTENTIAL EFFECT	exceedance in adopted Screening Criteria ¹ (Y/N)	POTENTIAL CONSEQUENCES	LIKELIHOOD	RISK CLASSIFICATION
including the cinder			Ecological	Uptake through soils, Dermal contact	Toxic	N	Negligible	Unlikely	Negligible
HOISE UACK			Water	Leaching through soil, surface water run-off, transport via groundwater table	Groundwater/ surface water contamination	N	Negligible	Unlikely	Negligible
			Human	Dermal contact, ingestion, inhalation	Carcinogenic, Hazardous to Human Health.	Ν	Moderate	Unlikely	Low
Lead and asbestos undergroun d services			Ecological	Uptake through soils, Dermal contact	Τοχίς	Ν	Mild	Possible	Low
			Water	Leaching through soil, surface water run-off, transport via groundwater table	Groundwater/ surface water contamination	N	Negligible	Unlikely	Low

<u>Notes</u>

1 – Adopted criteria comprises the following:

- NEPM 2013 HILs Residential B Soil
- NEPM 2013 Residential A/B Soil HSL for Vapour Intrusion (sand)
- NEPM 2013 EILs for urban residential areas and public open space
- NEPM 2013 ESLs for urban residential areas and public open space (coarse soil)

2 - Statistical analysis undertaken on data set indicated that material was within the criteria

11.0 Data gaps

The PSI has been sufficient to identify:

- Potential sources of contamination;
- Any areas of the site where potential contamination may be present;
- Potential risk to human receptors; and
- The contamination status of the soils beneath the site in the vicinity of the sampling points.

Schedule B2 of the ASC NEPM states that the PSI report should clearly identify any significant data gaps and include an assessment of the accuracy of the information collected.

The following data gaps have been identified during this assessment:

- Limited soil data from under the horse stabling area, and
- Contamination status of groundwater beneath the site.

Although the assessment of groundwater is technically a data gap, on the basis of the soil results and the limited contaminating activities and site contamination (as defined within the EP Act), groundwater was deemed unlikely to be impacted by historical onsite activities, or by historical and/ or current offsite activities.

It should be noted that a limitation of the soil sampling undertaken as part of the PSI is that the results relate to a relatively limited scope of testing of material. Whilst we infer that the data was representative of soil conditions at the site at the time of sampling, actual conditions between the sampling locations may vary. Therefore, it must be noted that a degree of uncertainty does exist at the site. Groundwater was not assessed as a part of this investigation.

12.0Conclusions

FMG Engineering (FMG) on behalf of South Australian Jockey Club Inc. (the client) has completed a PSI - ESH for land located at Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043. The site is approximately 17,150m² in area and currently comprises car park, stables and commercial properties (Olivers Pets and Plants). The current land sensitivity of the site is classified as "Class 6" (commercial class 1) and it is proposed that the land sensitivity of the site change to "Class 2" (Residential class 2). The PSI was undertaken to provide an assessment of the potential contaminants of concern in soil that may pose an unacceptable risk to the future users of the site.

FMG advanced a total of 15 soil boreholes, to a maximum depth of 2.0m BGL. The soil boreholes were targeted to assess the potentially contaminating activities identified within the ESH undertaken by FMG in 2014.

A total of 45 soil samples from the boreholes were submitted for a range of analysis, including but not limited to OCP /OPP, TRH, BTEX, PAH, heavy metals and analytes contained within the ASC NEPM Screen. Specific analytes were selected based on FMGs experience on similar sites and field observations during sampling. An additional grab sample was collected and analysed from under the paved area in the stables for heavy metals analysis. Five samples were also collected for the identification of potential ACM.

The analytical results of the PSI indicate that no analyte concentrations within the soil samples tested exceeded the ASC NEPM screening criteria protective of human health in a sensitive (HIL B) land use setting. However, one surface sample from an unsealed car park in the northern portion of the site exceeded the ASC NEPM ESLs for TRH C_{16} - C_{34} . The exceedance is likely from motor vehicles in the car park and appears to be confined to the fill layer with the concentration in the natural material at 0.5m BGL being less than the laboratory detection limit. Statistical analysis, including the 95% upper confidence level (95% UCL) was conducted on the TRH C_{16} - C_{34} data set which indicated that the material was less than the ESL criteria.

The findings of the PSI are used to develop a preliminary CSM. The components of the CSM have been discussed in detail within Section 7 of this report. In summary, potentially contaminating activities **confirmed** to have occurred at the site include the following:

- Motor vehicles in the unsealed storage area and car parking areas;
- Importation and placement of fill across the site; and
- Stabling of horses.

Unconfirmed potentially contaminating activities inferred to have occurred at the site include lead and asbestos underground services beneath the site.

Off-site sources of potential contamination identified within the investigation include former markets gardens south of the site along with the tram depot and tram lines located along the western boundary of the site.



South Australian Jockey Club Inc.

Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043

No additional PCAs have been identified as occurring at the site since the previous PSI - ESH (FMG, 2014). The site is used for horse stabling (feedlots), under Practice Direction 14 (2021), this PCA is classified as a Class 3 activities. Additional PCAs were identified at the site, however these were not classified as they are not listed within Practice Direction 14 (2021).

The CSM has identified that there are potential human health and environmental receptors at the site. These include the future site users, construction and maintenance workers and residents. Based upon the findings of the PSI, FMG considers that there is a low risk presented to the identified human health receptors associated with the site. Hence no further investigation is warranted.

A preliminary waste classification assessment was undertaken as part of the PSI. The results were within the published Waste Fill Criteria with the exception manganese in three samples. Statistical analysis conducted on the manganese data set indicated that the material can be preliminary classified as Waste Fill.

It is recommended that a construction environmental management plan (CEMP) be produced and implemented for the proposed civil works to manage any discoveries of contamination and/or potential uncovering of lead and/or asbestos underground services.

It should be noted that if excess material is proposed to be removed off-site as part of the civil works, a Waste Classification Assessment should be undertaken to classify the soil for disposal at a licensed waste disposal facility.

13.0Report limitations

This report is the subject of copyright and shall not be reproduced either wholly or in part without the prior written permission of FMG Engineering.

This report is intended for the sole use of **South Australian Jockey Club Inc.** (the client) and should not be relied upon by any other party. It has been prepared to meet the objectives of the client with reference to the requirements of the development of the site, as understood by FMG Engineering at the time of writing. Those objectives may not necessarily be the objectives desired by any other third party or any potential purchaser or user of the site.

This report outlines the findings of the Preliminary Site Investigation works undertaken at the site. The nature of the assessment means that the findings are limited in their application and should not be considered as adequately addressing all potential environmental issues and risks.

Reference should be made to Appendix G for further information about the interpretation of this report.





C THIS DRAWING IS COPYRIGHT TO FMG ENGINEERING. NO PART OF THIS DRAWING, INCLUDING THE WHOLE OF SAME, SHALL BE USED FOR ANY PURPOSE OR SITE OTHER THAN WHICH IT WAS PREPARED, NOR BY ANY THIRD PARTY, WITHOUT THE PRIOR WRITTEN CONSENT OF FMG ENGINEERING.



Appendix B

Data Quality Indicators (DQI) to be assessed

DATA QUALITY INDICATORS	FIELD CONSIDERATIONS	LABORATORY CONSIDERATIONS	NOTES		
Completeness A measure of the amount of useable data (expressed as %) from a data collection activity	All critical locations sampled? All samples collected (from grid and at depth) Standard Operating Procedures (SOPs) complied with? Experienced Sampler? Documentation Correct?	All critical samples analytes analysed? All appropriate analytes analysed? Appropriate methods and laboratory Limit of Reporting (LOR) undertaken? Sample documentation complete? Sample holding times complied with?	The required completeness will be assessed at 95% All required data must be obtained for critical samples and contaminants of concern		
Comparability The confidence (expressed qualitatively) that data may be considered equivalent for each sampling and analytical event	Same SOPs used on each occasion? Experienced Sampler? Similar climatic conditions? Same types of samples collected?	What sample analytical methods were used? Were there representative sample PQLs? Were the same laboratories used? Were the same units used?	A level of consistency in techniques used to collect and analyse the samples will be maintained throughout the investigation to ensure a high level of comparability. The scope of works discussed within the proposal will be undertaken so that an adequate number of samples are collected from an appropriate number of locations in order to suitably characterise the site.		
Representativeness The confidence (expressed qualitatively) that data is representative of each medium present on the site	Appropriate media sampled? All media identified sampled?	All critical samples analysed according?			

Client: South Australian Jockey Club Inc.

Site: Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043

DATA QUALITY INDICATORS	FIELD CONSIDERATIONS	LABORATORY CONSIDERATIONS	NOTES			
Precision A quantitative measure of variability (or reproducibility) of data	SOPs appropriate and complied with? Analysis of: Laboratory and inter-laboratory duplicates Field duplicates and triplicates		The precision of the data shall be measured by calculating the Relative Percent Difference (RPD) between duplicate sample pairs. The standard acceptance criteria of 50% RPD will be used. However, it should be noted that this will not always be achieved, is any heterogeneous fill material is identified on the site.			
Accuracy (bias) A quantitative measure of the closeness of the reported data to the true value	SOP appropriate and complied with?	Analysis of: Trip blanks Rinsate Laboratory duplicates samples Laboratory-prepared spikes Laboratory blanks	The "acceptance limits" on laboratory control samples are: Field blanks should be below laboratory LORs. Laboratory duplicates - <30 % for metals/inorganics, <50 % for organics. Laboratory spikes – 70-130 % for metals/inorganics, 60-140 % for organics. Laboratory blanks - <lor< td=""></lor<>			



Borehole Logs

				BOREHOLE LOG	во	REHOLE ID: BH01				
Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Logged By: Dharmsinh Rathod Location: MRC, Morphett Road, MORPHETT Checked By: Drew Gowling Job No.: 281059 Contractor: SPK GeoDrill Pty Ltd Date Commenced: 13/05/2022 Operator: Daniel Date Completed: 13/05/2022 Pig: Pockmaster									: 1 of 1 ing: ning: Diameter: 50mm ntation: °/°	
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moisture	Water	Sample ID	PID (mpm)	Additional Observations	
Î		\bigotimes	FILL	60mm thick Bitumen.						
	-	\bigotimes	FILL	Gravelly SAND, fine to coarse grained, dark grey, gravel, fine to medium grained, non-plastic.	D- M		BH01_0.06-0.20	2.1	0.06m - 0.20m: PACM - 05	
	0.2 -			Sandy CLAY, low plasticity, dark grey, sand, fine to coarse grained, trace of gravels.	м				0.20m - 0.70m: Disturbed natural	
	-	\bigotimes	FILL		м				-	
	0.6 —	\bigotimes					BH01_0.50-0.70	0.8		
				Sandy CLAY, low plasticity, dark grey / black, sand, fine to coarse grained.						
	0.8 –		SM		м					
	-					tered	BH01_0.80-1.00	1.3		
e	1.0 –					incount		<u> </u>		
oush tub			CL	Sandy CLAY, low plasticity, light brown, sand, fine to coarse grained.	м	er Not E				
	-			Sandy CLAY, low plasticity, light brown , sand, fine to coarse grained.		undwat				
	1.2 -					Gro				
	-								-	
	1.4						BH01 1.30-1.50	1.9		
			CL		м					
	-									
	1.6 —						BH01_1.50-1.70	2.1		
	_								-	
	1.8 –			Becomes dark brown and moist.						
	-		CI				BH01_1.80-2.00	0.8		
	2.0 -		0L		IVI				-	
				Hole Terminated at 2.10m - Target depth						
	2.2 _									
	-									
	2.4 —									
No	comm	ent reg	arding	odour, staining or foreign materials (including asbestos) indicates	that n	o sucl	n physical evidence wa	s obser	ved during logging & sampling.	

BOREHOLE LOG									BO	REHOLE ID: BH02
Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Location: MRC, Morphett Road, MORPHETT Checked By: Dharmsinh Rathod Location: MRC, Morphett Road, MORPHETT Checked By: Drew Gowling Job No.: 281059 Contractor: SPK GeoDrill Pty Ltd Date Commenced: 13/05/2022 Operator: Daniel Date Completed: 13/05/2022 Rig: Rockmaster									Page Easti North Hole Orier Surfa	: 1 of 1 ng: ning: Diameter: 50mm ntation: °/° ace Elevation:
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moichiro	INICIDENTIE	Water	Sample ID	PID (ppm)	Additional Observations
		\bigotimes	FILL	60mm thick Bitumen.				1		
	-	\bigotimes	FILL	Gravelly SAND, fine to coarse grained, dark grey, gravel, fine to medium grained, non-plastic.) - VI		BH02_0.06-0.20	2.1	
	0.2 -		FILL	SAND, fine to coarse grained, light to dark grey, trace of fine gravels.	•	и		BH02_0.20-0.40	1.9	0.20m - 0.40m: Inferred quarry product
	- 0.6 -		FILL	Silty gravelly SAND, fine to coarse grained, dark grey, non plasticity, gravel, fine to medium grained.	M	N		BH02_0.45-0.65	0.8	0.45m - 0.65m: Disturbed natural
	- 0.8 —			Sandy CLAY, low plasticity, light brown, sand, fine to coarse grained.	se					
Push tube	- 1.0 -					ter Not Encountered				
	1.2 —		CL		M	N	Groundwa			
	1.4 -						BH02_1.40-1.60	1.9		
	1.6 — -			Sandy CLAY, low plasticity, light brown to yellow, sand, fine to coarse grained.	ine to					
	1.8 — -		CL		η	и		BH02_1.80-2.00	2.3	
	2.0 -			Hole Terminated at 2.10m - Target depth						
	2.2									
	2.4 —									
No	comm	ent reg	arding	odour, staining or foreign materials (including asbestos) indica	tes tha	at no	o sucl	n physical evidence wa	s obser	ved during logging & sampling.

				BOREHOLE LOG	BO	REHOLE ID: BH03					
	E	INGIN	EERI	Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Log Location: MRC, Morphett Road, MORPHETT Che Job No.: 281059 Con Date Commenced: 13/05/2022 Op Date Completed: 13/05/2022 Rig	: Dh by: E : SF Dan tmast	Page: 1 of 1 Dharmsinh Rathod Easting: /: Drew Gowling Northing: SPK GeoDrill Pty Ltd Hole Diameter: 50mm Daniel Orientation: °/° master Surface Elevation:					
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moisture	Water	Sample ID	PID (ppm)	Additional Observations		
		\otimes	FILL	60mm thick Bitumen.							
	- 0.2		FILL	Sandy GRAVEL, fine to medium grained, light brown to orange, sand, fine to coarse grained, non-plastic.	D - M		BH03_0.10-0.30	2.3			
	- 0.4	\bigotimes	FILL	Silty gravelly SAND, fine to coarse grained, light to dark grey, non plasticity, gravel, fine to medium grained.	м		BH03_0.30-0.45	3.2			
	Sandy CLAY, low plasticity, light brown, sand, fine to coarse grained, trace of gravels.										
	- 0.8		0								
	-		UL		M	countered					
Push tube	1.0 -					sroundwater Not End	BH03_1.00-1.20	1.9			
	1.2 -			Becomes darker in colour and moist .							
	- 1.4		SM		м		BH03_1.30-1.50	2.3			
	1.6 –			Sandy CLAY, low plasticity, light brown to yellow, sand, fine to coarse grained.	D						
	- 1.8 –		CL		м				1.80m - 2.00m: QA05/QA06		
	- 2.0						BH03_1.80-2.00	2.9			
				Hole Terminated at 2.10m - Target depth	_						
	2.2 -										
No	No comment regarding odour, staining or foreign materials (including asbestos) indicates that no such physical evidence was observed during logging & sampling.										

				BOREHOLE LOG	во	REHOLE ID: BH04						
	E	NGIN	EERI	Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Logg Location: MRC, Morphett Road, MORPHETT Chec NG Job No.: 281059 Cont Date Commenced: 13/05/2022 Oper Date Completed: 13/05/2022 Rig:	Page: 1 of 1 Easting: Northing: Hole Diameter: 50mm Orientation: °/° Surface Elevation:							
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moisture	Water	Sample ID	PID (ppm)	Additional Observations			
	_	\bigotimes	FILL	Silty gravelly SAND, fine to coarse grained, light grey to light brown, gravel, fine to coarse grained, non-plastic.	D - M		BH04_0.00-0.15	2.3	0.00m - 0.15m: PACM-04			
	0.2 –		FILL	Sandy GRAVEL, fine to medium grained, light yellow to orange, sand, fine to coarse grained, non-plastic.	D	-	BH04_0.15-0.30	1.9				
	- 0.4		CL	Sandy CLAY, low plasticity, light grey, sand, fine to coarse grained.	М							
	0.6 Sandy CLAY, low plasticity, light to dark grey, sand, fine to coarse grained, trace of gravels. BH04_0.50-0.70 2.4											
	- 0.8 –		CL		м							
sh tube	- 1.0 –					Not Encountered			1.00m - 1.20m: Tree roots@0.9m bgl			
Pus	- 1.2 –					Groundwater	BH04_1.00-1.20	3.2				
	-			Becomes darker in colour and moist.								
	1.4 -		SM		м		BH04_1.40-1.60	1.9				
	1.6 -		·	Sandy CLAY, low plasticity, light brown to yellow, sand, fine to coarse grained.	-		-					
	1.8 -		CL		м		BH04_1.80-2.00	2				
-	2.0 -			Hole Terminated at 2.10m - Target depth			•					
	2.2 –											
	- 2.4											
No		ent reg	arding	odour, staining or foreign materials (including asbestos) indicate:	s that r	lo suc	n physical evidence wa	s obser	ved during logging & sampling.			
		5	-	· _ /								

				BOREHOLE LOG	BO	REHOLE ID: BH05						
		INGIN	EERI	Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Logg Location: MRC, Morphett Road, MORPHETT Check Job No.: 281059 Contri Date Commenced: 13/05/2022 Oper Date Completed: 13/05/2022 Rig:	Page Easti North Hole Orier Surfa	: 1 of 1 ng: ning: Diameter: 50mm ntation: °/° ace Elevation:						
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moisture	Water	Sample ID	PID (ppm)	Additional Observations			
	_	\bigotimes	FILL	Sandy GRAVEL, fine to medium grained, light grey, sand, fine to medium grained, non-plastic.	D		BH05_0.00-0.15	0.8				
	0.2		FILL	Silty gravelly SAND, light to dark grey, gravel, fine to coarse grained, non-plastic.	D		BH05_0.20-0.40	1.9				
	- 0.6		SM	Silty SAND, fine to coarse grained, light to dark grey, non-plastic.	D		1					
	0.8 —					T	BH05_0.70-0.90	2.1				
a	- 1.0 -			Silty sandy CLAY, low plasticity, light to dark grey, sand, fine to coarse grained.		ncountered						
Push tub	-					roundwater Not E	BH05_1.00-1.20					
	1.2 — - 1.4 —		CL		D - M	σ		2.9				
	- 1.6 –						BH05_1.50-1.70					
	- 1.8 –			Sandy CLAY, low plasticity, light brown, sand, fine to coarse grained.								
	- 2.0		CL		м		BH05_1.80-2.00	3.9				
				Hole Terminated at 2.10m - Target depth								
	2.2 _											
	-											
	2.4 -											
No	comm	ent reg	arding	odour, staining or foreign materials (including asbestos) indicates	that n	o sucl	n physical evidence wa	s obser	ved during logging & sampling.			

				BOREHOLE LOG	во	REHOLE ID: BH06				
	E	NGIN	EERI	Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Lo Location: MRC, Morphett Road, MORPHET CH Job No.: 281059 Co Date Commenced: 13/05/2022 Op Date Completed: 13/05/2022 Ri	ogged By hecked I ontracto perator: ig: Roc	/: DI 3y: :: SI Dar (mas	narmsinh Rathod Drew Gowling PK GeoDrill Pty Ltd iiel ter	Page: 1 of 1 Easting: Northing: Hole Diameter: 50mm Orientation: °/° Surface Elevation:		
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moisture	Water	Sample ID	PID (ppm)	Additional Observations	
			FILL	Gravelly SAND, fine to coarse grained, light grey, gravel, fine to medium grained, non-plastic.	D	_	BH06_0.00-0.20	2.3	0.00m - 0.45m: PACM-03	
a	- 0.6 - - 0.8 - - 1.0 -		CL	Sandy CLAY, low plasticity, light grey to light brown, sand, fi to coarse grained.	D- M	Encountered	BH06_0.50-0.70	3.9		
Push tu	- 1.2 - - 1.4 -		CL	Sandy CLAY, low plasticity, light to dark grey, sand, fine to coarse grained, trace of fine gravels.		Groundwater Not	BH06_1.10-1.30 BH06_1.40-1.60	1.3		
	1.6 - - 1.8 - - 2.0 -		CL	Sandy CLAY, low plasticity, light brown to yellow, sand, fine coarse grained. Hole Terminated at 2.10m - Target depth	e to M		BH06_1.80-2.00	2.3		
No	2.2 - - 2.4 -	ent reg	arding	odour, staining or foreign materials (including asbestos) indica	ates that		h physical evidence wa	s obser	ved during logging & sampling.	

				BOREHOLE LOG		BO	REHOLE ID: BH07		
	E	INGIN	EERI	Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Logg Location: MRC, Morphett Road, MORPHET Chec Job No.: 281059 Contr Date Commenced: 13/05/2022 Oper- Date Completed: 13/05/2022 Rig:	armsinh Rathod Drew Gowling YK GeoDrill Pty Ltd iel er	Page: 1 of 1 sinh Rathod Easting: Gowling Northing: eoDrill Pty Ltd Hole Diameter: 50mm Orientation: °/° Surface Elevation:			
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moisture	Water	Sample ID	PID (ppm)	Additional Observations
	-		FILL	Gravelly SAND, fine to coarse grained, light grey with cream mottles, gravel, fine to medium grained, angular gravels up to 15mm, non-plastic.	D		BH07_0.00-0.20	3.2	
	0.2 - - 0.4 -		SM	Silty SAND, light grey with cream mottles, non-plastic.	D		BH07_0.40-0.60	1.8	0.40m - 0.60m: Disturbed natural
	0.6 - - 0.8 -			Sandy CLAY, low plasticity, light to dark grey, sand, fine to coarse grained.					
Push tube	- 1.0		CL		м	ter Not Encountered	BH07_0.80-1.00	1.9	
	1.2 - - 1.4 -		SC-	Sandy CLAY, low plasticity, light brown to yellow, sand, fine to coarse grained.	D-	Groundwa			
	- 1.6 –						BH07_1.50-1.70	3.2	
	1.8 - - 2.0 -		SC- SM	Becomes darker and moist.	М		BH07_1.80-2.00	2.3	
	2.2 -			Hole Terminated at 2.10m - Target depth					
	- 2.4 -								
No	comm	ent reg	arding	odour, staining or foreign materials (including asbestos) indicates	that n	o sucl	n physical evidence wa	s obser	ved during logging & sampling.

				BOREHOLE LOG		BO	REHOLE ID: BH08					
		INGIN	IEERI	Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Logg Location: MRC, Morphett Road, MORPHETT Chec Job No.: 281059 Contr Date Commenced: 13/05/2022 Oper Date Completed: 13/05/2022 Rig:	Page: Easti North Hole Orien Surfa	: 1 of 1 ng: ning: Diameter: 50mm ntation: °/° ace Elevation:						
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moisture	Water	Sample ID	PID (ppm)	Additional Observations			
	- 0.2 -		FILL	Gravelly SAND, fine to coarse grained, light grey, gravel, fine to medium grained, non-plastic.	D		BH08_0.00-0.20	2.3				
	0.4 Sandy CLAY, low plasticity, light to dark grey, sand, fine to coarse grained. BH08_0.30-0.50											
ube	0.8 - - 1.0 -					t Encountered	1					
Push ti	- 1.2 -			Silty SAND find to coorde grained light to dark gray, pap		Groundwater Not	BH08_1.00-1.20					
	- 1.4		SC- SM	plastic.	м		BH08_1.20-1.40	3.2				
	- 1.6 -			coarse grained.								
	- 1.8 -		CL		м							
	- 2.0			Hole Terminated at 2.10m - Target depth			BH08_1.80-2.00	1.9				
.	2.2 -											
No	comm	ent reg	arding	odour, staining or foreign materials (including asbestos) indicates	that n	o sucl	n physical evidence wa	s observ	ved during logging & sampling.			

				BOREHOLE LOG		BO	REHOLE ID: BH09					
	E	NGIN	IEERI	Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Log Location: MRC, Morphett Road, MORPHETT Che Job No.: 281059 Com Date Commenced: 13/05/2022 Ope Date Completed: 13/05/2022 Rig:	armsinh Rathod Drew Gowling PK GeoDrill Pty Ltd iel er	Page Easti North Hole Orier Surfa	: 1 of 1 ng: ning: Diameter: 50mm ntation: °/° ace Elevation:					
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moisture	Water	Sample ID	PID (ppm)	Additional Observations			
	_		FILL	Sandy GRAVEL, fine to medium grained, yellow to light brown, sand, fine to coarse grained, non-plastic.	D		BH09_0.00-0.20	2.3	0.00m - 0.10m: Root fibers			
	0.2		SC- SM	Silty SAND, fine to coarse grained, light grey, non-plastic.	D		BH09_0.20-0.40	3.2	0.20m - 0.40m: Disturbed natural			
	0.4 Sandy CLAY, low plasticity, light to dark grey, sand, fine to coarse grained.											
	- 0.8 -		SC		м							
n tube	- 1.0 -					lot Encountered	BH09_0.80-1.00	0.9				
Push	- 1.2 –			Sandy CLAY, low plasticity, light brown to yellow, sand, fine to coarse grained.	0	Groundwater N						
	- 1.4 -		SC- SM		D - M							
	- 1.6						BH09_1.60-1.80	3.2				
	1.8 -			Becomes drier.			BH09_1.80-2.00	1.8				
-	2.0 -		CL	Hole Terminated at 2.10m - Target depth	D							
	2.2 -											
	2.4 -											
No	comm	ent reg	arding	odour, staining or foreign materials (including asbestos) indicate	tes that n	o suc	n physical evidence wa	s obser	ved during logging & sampling.			

				BOREHOLE LOG		во	REHOLE ID: BH10					
		INGIN	EERI	Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Logge Location: MRC, Morphett Road, MORPHET Check Job No.: 281059 Contr Date Commenced: 13/05/2022 Opera Date Completed: 13/05/2022 Rig:	aarmsinh Rathod Drew Gowling PK GeoDrill Pty Ltd iel er	Page: 1 of 1 Easting: Northing: d Hole Diameter: 50mm Orientation: °/° Surface Elevation:						
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moisture	Water	Sample ID	PID (ppm)	Additional Observations			
	-		FILL	Gravelly SAND, fine to coarse grained, light grey, gravel, fine to medium grained, non-plastic.	D		BH10_0.00-0.20	1.2	0.00m - 0.20m: PACM-02			
	0.2 -		FILL	Silty SAND, fine to coarse grained, yellow to light grey, non plasticity.								
	0.4 FILL D 0.40m - 0.60m: Disturbed natural 0.6 0.6 0.9											
	0.6 Sandy CLAY, low plasticity, light to dark grey, sand, fine to coarse grained, trace of gravels.											
tube	- 1.0 -		CL		м	ot Encountered	BH10_0.80-1.10	1.4	0.90m - 1.00m: Tree roots @0.9m bgl			
Push	- 1.2 -			Sandy CLAY, low plasticity, light brown to yellow, sand, fine to coarse grained.		Groundwater N						
	- 1.4 –											
	- 1.6 -		CL		м							
	- 1.8 -								1.80m - 2.00m: QA03/QA04			
•	2.0 -			Hole Terminated at 2.10m - Target depth			BH10_1.80-2.10	3.9				
	2.2											
No	comm	ent reg	arding	odour, staining or foreign materials (including asbestos) indicates	that r	o suc	h physical evidence wa	s obser	ved during logging & sampling.			

				BOREHOLE LOG		BO	REHOLE ID: BH11		
	E	INGIN	EERI	Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Log Location: MRC, Morphett Road, MORPHETT Che Job No.: 281059 Cor Date Commenced: 13/05/2022 Ope Date Completed: 13/05/2022 Rig	ogged By: Dharmsinh Rathoo hecked By: Drew Gowling ontractor: SPK GeoDrill Pty I perator: Daniel ig: Rockmaster			Page: 1 of 1 Easting: Northing: d Hole Diameter: 50mm Orientation: °/° Surface Elevation:	
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moisture	Water	Sample ID	PID (ppm)	Additional Observations
	-		FILL	Gravelly SAND, fine to coarse grained, light to dark grey, gravel, fine to medium grained, non-plastic.	D - M		BH11_0.00-0.20	2.3	
	0.2 - - 0.4 -		FILL	Silty gravelly SAND, fine to coarse grained, light to dark grey, gravel, fine to medium grained, up to 20mm, non-plastic.	D - M				
	0.6 –						BH11_0.50-0.70	1.9	
	- 0.8			Silty SAND, fine to coarse grained, light to dark grey, non- plastic.		-			
ush tube	- 1.0 -		SC- SM		м	er Not Encountered			
	-					Groundwat		2.6	
	- 1.4 -			Sandy CLAY, low plasticity, light grey, sand, fine to coarse grained.		-	вн 11_1.20-1.40	3.0	
	- 1.6 -		CL		м		BH11_1.50-1.70	4.2	
	- 1.8 –			Sandy CLAY, low plasticity, light brown to yellow, sand, fine to coarse grained.	0	-			
	- 2.0 -		CL		м		BH11_1.80-2.00	1.8	
•	2.2 -			Hole Terminated at 2.10m - Target depth					
	- 2.4 -								
No	- comm	ent reg	arding	odour, staining or foreign materials (including asbestos) indicat	es that	no suc	h physical evidence wa	is observ	ved during logging & sampling.

				BOREHOLE LOG		BO	REHOLE ID: BH12				
		NGIN	IEERI	Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Logge Location: MRC, Morphett Road, MORPHETT Check Job No.: 281059 Contra Date Commenced: 13/05/2022 Opera Date Completed: 13/05/2022 Rig:	armsinh Rathod Drew Gowling K GeoDrill Pty Ltd iel er	Page: 1 of 1 Easting: Northing: Hole Diameter: 50mm Orientation: °/° Surface Elevation:					
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moisture	Water	Sample ID	PID (ppm)	Additional Observations		
	- 0.2		FILL	Sandy GRAVEL, fine to medium grained, light to dark grey, sand, fine to medium grained, non-plastic.	D - M		BH12_0.00-0.20	1.2			
	0.4 - Silty gravelly SAND, fine to coarse grained, light to dark grey, gravel, fine to medium grained, up to 20mm, non-plastic.										
	0.6 — - 0.8 —		CL	Sandy CLAY, low plasticity, light to dark grey, sand, fine to coarse grained.	М		BH12_0.60-0.80	0.8			
Push tube	- 1.0			Becomes moist.		vater Not Encountered	BH12_0.90-1.10				
	1.2 - - 1.4 -		SC- SM		М	Ground		1.3			
	- 1.6						BH12_1.50-1.70				
	1.8 -		CL	Sandy CLAY, low plasticity, light brown to yellow, sand, fine to coarse grained.	м						
.	2.0 -			Hole Terminated at 2.10m - Target depth			BH12_1.80-2.10	2.3			
	2.2 _										
No	2.4										

				BOREHOLE LOG		BO	REHOLE ID: BH13				
		NGIN	IEERI	Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Logge Location: MRC, Morphett Road, MORPHETT Check Job No.: 281059 Contra Date Commenced: 13/05/2022 Opera Date Completed: 13/05/2022 Rig:	Page Easti North Hole Orier Surfa	: 1 of 1 ing: ning: Diameter: 50mm ntation: °/° ace Elevation:					
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moisture	Water	Sample ID	PID (ppm)	Additional Observations		
	- 0.2 -		FILL	Sandy GRAVEL, fine to medium grained, light to dark grey, sand, fine to medium grained, non-plastic.	D- M		BH13_0.00-0.20	2.1			
	0.4 -		FILL	Sandy CLAY, light brown, sand, fine to coarse grained, non-palstic.	D- M		BH13_0.40-0.60	0.8			
	- 0.8 -		CL	Sandy CLAY, low plasticity, light to dark grey, sand, fine to coarse grained.	М		BH13_0.60-0.80	2.3			
Push tube	- 1.0 –			Becomes drier.		oundwater Not Encountered					
	1.2 — - 1.4 —		SC- SM		M - D	ō	BH13_1.20-1.40	3.9			
	- 1.6			Sandy CLAY, low plasticity, light brown to yellow, sand, fine to							
	1.8 - - 2.0 -		CL	coarse grained.	М		BH13_1.80-2.00	0.9			
	2.2 -			Hole Terminated at 2.10m - Target depth							
No	comm	ent reg	arding	odour, staining or foreign materials (including asbestos) indicates	that n	o sucl	n physical evidence wa	s obser	ved during logging & sampling.		

				BOREHOLE LOG	во	REHOLE ID: BH14						
		NGIN	EERI	Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Logge Location: MRC, Morphett Road, MORPHETT Chec Job No.: 281059 Contr Date Commenced: 13/05/2022 Opera Date Completed: 13/05/2022 Rig:	Page: 1 of 1 Easting: Northing: Hole Diameter: 50mm Orientation: °/° Surface Elevation:							
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moisture	Water	Sample ID	PID (ppm)	Additional Observations			
	-	\bigotimes	FILL	Gravelly SAND, fine to coarse grained, light to dark grey, gravel, fine to coarse grained, non-plastic.	D		BH14_0.00-0.20	1.2	0.00m - 0.20m: PACM-01			
	0.2 —	\bigotimes	FILL	SAND, fine to coarse grained, cream to yellow, non-plastic.	D		BH14_0.20-0.30	2.1				
	0.4			Gravelly SAND, fine to coarse grained, light to dark grey, gravel, fine to medium grained, up to 20mm, non-plastic.								
	-		SC- SM		D- M		BH14_0.40-0.60	2.3				
	0.6 -		CL	Sandy CLAY, low plasticity, light to dark grey, sand, fine to coarse grained, trace of fine gravels.	D- M		BH14_0.60-0.80	1.9				
	0.8 —			Sandy CLAY, low plasticity, light to dark grey, sand, fine to coarse grained.			-					
	-					ountered						
ush tube	1.0 —		CL		M	er Not End						
ι Δ	-					roundwate	BH14_1.00-1.20	0.8				
	1.2 -			Becomes drier.		U U						
	14_											
	_		SC-		м -							
	1.6 —		SM		D							
	_						BH14_1.60-1.80	1.9				
	1.8 —			Our de OLAV, hun els disite l'addheans de sullare and fins de								
	_			coarse grained.			BH14_1.80-2.00	2.1				
	2.0 —		CL		м							
				Hole Terminated at 2.10m - Target depth								
	2.2 _											
	-											
	2.4 —											
No c	No comment regarding odour, staining or foreign materials (including asbestos) indicates that no such physical evidence was observed during logging & sampling.											

BOREHOLE LOG								BO	REHOLE ID: BH15	
		INGIN	IEERI	Client: South Australian Jockey Club Inc. Project: Preliminary Site Investigation Log Location: MRC, Morphett Road, MORPHETT Che Job No.: 281059 Com Date Commenced: 13/05/2022 Ope Date Completed: 13/05/2022 Rig:	Logged By: Dharmsinh Rathod Checked By: Drew Gowling Contractor: SPK GeoDrill Pty Ltd Operator: Daniel Rig: Rockmaster			Page: 1 of 1 Easting: Northing: Hole Diameter: 50mm Orientation: °/° Surface Elevation:		
Drilling Method	Depth (m)	Graphic Log	Classification Symbol	Description	Moisture	Water	Sample ID	PID (ppm)	Additional Observations	
Push tube	1	\otimes	FILL	Sandy GRAVEL, fine to medium grained, light to dark grey, sand, fine to coarse grained.	D		BH15_0.00-0.15	2.1	0.00m - 0.10m: Road base with bitumen inclusions 1 3 4 4 4 1.80m - 2.00m: QA01/QA02 9	
	0.2		FILL	Silty gravelly SAND, fine to coarse grained, light to dark grey, gravel, fine to medium grained, up to 20mm, non-plastic.	D - M		BH15_0.15-0.50			
	-		SP- SC	Sandy CLAY, low plasticity, light to dark grey, sand, fine to coarse grained, trace of fine gravels.	D - M		BH15_0.50-0.60	2.3		
	0.6 – - 0.8 –		SC- SM Be	Sandy CLAY, low plasticity, light to dary grey, sand, fine to coarse grained.	М	7	BH15_0.60-0.90	3.4		
	1.0 -			Becomes moist.	D-	roundwater Not Encountered				
	1.2 - - 1.4 -		SM		M	σ	BH15_1.20-1.50			
	- 1.6 -			Sandy CLAY, low plasticity, light brown to yellow, sand, fine to coarse grained.						
	1.8 - - 2.0 -		CL	Hole Terminated at 2.10m - Tarcet depth	М		BH15_1.80-2.10	1.9		
*	2.2			nore reminiated at 2, rom - Target depth			•			
No	No comment regarding odour, staining or foreign materials (including asbestos) indicates that no such physical evidence was observed during logging & sampling.									

Appendix D Chemical Results Table


									NEDM	l ccroor	motale	in soil						
			Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium (III+VI)	Cobalt	Copper	E CO	read	Manganese	Mercury	Molybdenum	Nickel	Selenium	Zinc
			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			4	1	1	3	0.4	1	1	1	10	1	1	0.1	1	1	2	1
NEPM 2013 Table 1A(1) HILs Res B So	bil		500		90	40000	150		600	30000		1200	14000	120		1200	1400	60000
NEPM 2013 Table 1A(3) Res A/B Soil	HSL for Vapour Intrusic	on, Sand																
0-1m																		
1-2m																		
NEPM 2013 Table 1B(6) EILs for Urba	n Res		100					650		230		1100				290		790
NEPM 2013 Table 1B(6) ESLs for Urba	an Res, Coarse Soil																	
0-2m																		
SA EPA Waste Fill Criteria			20	300	20		3		170	60		300	500	1		60		200
SA EPA Intermediate Waste - Total D	ry Weight Concentratio	ns	200		40		30		170	2000		1200	6000	30		600		14000
SA EPA Low-level Contaminated - Tot	al Dry Weight Concent	rations	750		150		60		1000	7500		5000	10000	110		3000		50000
Field ID Sample Depth Range	Sampled Date	Soil																
BH01_0.06-0.2 0.06-0.2	13/05/2022	Fill	4	-	<1	<3	<0.4	22	8	11	-	10	450	<0.1	-	15	<2	31
BH01_0.5-0.7 0.5-0.7	13/05/2022	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<u> </u>
BH01_0.8-1.0 0.8-1	13/05/2022	Natural	4	70	<1	6	<0.4	24	11	16	-	22	410	< 0.1	<1	11	<2	34
BH01_1.8-2.0 1.8-2	13/05/2022	Natural	5	31	<1	18	<0.4	30	8	18	-	17	230	< 0.1	<1	15	<2	29
BH02_0.2-0.4 0.2-0.4	13/05/2022	Fill	5	23	<1	<3	<0.4	22	7	16	-	10	430	< 0.1	<1	15	<2	38
BH02_1.4-1.6 1.4-1.6	13/05/2022	Natural	-	-	-	-	-	-	-	-	20,000	-	-	-	-	-	-	-
BH03_0.3-0.45 0.3-0.45	13/05/2022	Fill	5	42	<1	5	<0.4	11	3	15	-	24	290	< 0.1	<1	8	<2	45
BH03_1.0-1.2 1-1.2	13/05/2022	Natural	5	74	<1	6	<0.4	27	10	16	-	23	320	< 0.1	<1	12	<2	34
BH03_1.8-2.0 1.8-2	13/05/2022	Natural	<4	41	<1	22	<0.4	26	8	13	-	14	210	< 0.1	<1	14	<2	24
BH04_0.5-0.7 0.5-0.7	13/05/2022	Natural	18	-	<1	4	<0.4	19	7	17	-	65	260	< 0.1	-	8	<2	33
BH04_1.8-2.0 1.8-2	13/05/2022	Natural	5	67	<1	33	<0.4	27	7	15	-	13	170	< 0.1	<1	13	<2	26
BH05_0.2-0.4 0.2-0.4	13/05/2022	Fill	18	62	<1	5	<0.4	16	6	20	-	64	240	< 0.1	<1	7	<2	36
BH05_0.7-0.9 0.7-0.9	13/05/2022	Natural	<4	48	<1	5	<0.4	25	6	12	-	17	140	<0.1	<1	11	<2	29
BH05_1.5-1.7 1.5-1.7	13/05/2022	Natural	<4	53	<1	25	<0.4	26	6	9	-	15	210	< 0.1	<1	10	<2	19
BH06_0.0-0.2 0-0.2	12/05/2022	Fill	13	54	<1	10	<0.5	14	7	17	-	29	370	<0.1	4	15	<2	64
BH06_1.4-1.6 1.4-1.6	12/05/2022	Natural	<4	110	<1	18	<0.4	25	9	12	-	17	630	<0.1	<1	11	<2	22
BH07_0.0-0.2 0-0.2	12/05/2022	Fill	8	45	<1	5	<0.4	15	5	13	-	34	230	< 0.1	<1	9	<2	40
BH07_0.4-0.6 0.4-0.6	12/05/2022	Natural	4	59	<1	5	<0.4	20	8	13	-	23	360	< 0.1	<1	9	<2	32
BH07_1.5-1.7 1.5-1.7	12/05/2022	Natural	<4	59	<1	27	<0.4	18	5	11	-	9	130	< 0.1	<1	8	<2	16
BH08_0.0-0.2 0-0.2	12/05/2022	Fill	8	48	<1	5	<0.4	12	5	15	-	28	350	<0.1	<1	11	<2	52
BH08_1.0-1.2 1-1.2	12/05/2022	Natural	4	55	<1	17	<0.4	25	8	14	-	18	140	<0.1	<1	11	<2	33
BH09_0.0-0.2 0-0.2	12/05/2022	Fill	6	52	<1	5	<0.4	17	5	12	-	21	270	< 0.1	<1	7	<2	31
BH09_0.8-1.0 0.8-1	12/05/2022	Natural	4	62	<1	14	<0.4	25	7	13	-	17	170	< 0.1	<1	11	<2	32
BH10_0.8-1.0 0.8-1	12/05/2022	Natural	<4	62	<1	44	<0.4	28	6	8	-	14	260	< 0.1	<1	9	<2	21
BH11_0.0-0.2 0-0.2	12/05/2022	Fill	9	30	<1	8	<0.5	8	6	25	-	18	490	<0.1	1	12	<2	55
BH11_1.2-1.4 1.2-1.4	12/05/2022	Natural		-	-	-	-	-	-	-	22,000	-	-	-	-	-	-	
BH11_1.8-2.0 1.8-2	12/05/2022	naturai	4	80	<1	41	<0.4	30	8	15	-	14	250	<0.1	<1	15	<2	24
BH12_0.4-0.6 0.4-0.6	12/05/2022	FIII	6	4/	<1	/	<0.4	18	/	12	-	1/	290	<0.1	<1	9	<2	3/
BH12_0.9-1.1 0.9-1.1	12/05/2022	Naturai	5	78	<1	/	<0.4	26	10	15	-	20	450	<0.1	<1	12	<2	36
BH13_0.0-0.2 0-0.2	12/05/2022	Fill	6	50	<1	5	<0.5	13	4	15	-	20	330	<0.1	<1	9	<2	44
BH13_0.0-0.8 0.0-0.8	12/05/2022	Natural		94	1	20	<0.4	30	15	10	-	23	240	<0.1	<1	14	<2	45
BH12 1.0-2.0 1.0-2	12/05/2022	rinatural		20	<1	20 6	<0.4	2/	0	10	-	72	240	<0.1	<1	17	<2	33
BH14_0.2-0.3 0.2-0.3	12/05/2022	Noture	Ê	4/	<1	6	<0.0	16	9	10	-	23	260	<0.1	<1	1/	<2	93
DH14_0.4-0.0 0.4-0.0	12/05/2022	Natural	1	76	<1	21	<0.4	27	7	0	-	20	300	<0.1	<1	10	<2	41
BH15 05.06 05.06	12/05/2022	Natural	<4	/0	<1	7	<0.4	17	/ c	10	-	10	230	<0.1	<1	9	~2	14
BH15 0 6 0 8 0 6 0 8	12/05/2022	Natural	5	- 66	<1	6	<0.4	10	2	11	-	24	250	<0.1	- 1	0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	30
BH15 1 8-2 0 1 8-2	13/05/2022	Natural		75	1	30	<0.4	34	10	16	-	15	230	<0.1	<1		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	30
G\$02	13/05/2022	Fill	4	15	-1	- 35	<0.4	24	1	20	-	13	130	<0.1	<1	20	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	30
0302	13/03/2022	1000	<u>\4</u>	40	~1	10	NU.4		1	1 4	-	4	130	~0.1	~1	4	~2	
Statistical Analysis																		
No. of samples													36					
Mean value				-					-	-	-	-	309 7		-		-	
Standard deviation				-					-	-	-	-	145.6		-	-	-	-
95% UCL value				-				-	-	-	-		354.1			-		· ·
15576 GEL VAIUE								-	-		-		334.1			-		



											OCP i	n Soil -	NEPM										
	4,4-DDE	a-BHC	Aldrin	addrin + Dieldrin	DHB-Q	Chlordane (cis)	Chlordane (trans)	DHB-D				Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Mirex
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5
NEPM 2013 Table 1A(1) HILs Res B Soil	1			10							600					20			10		15	500	20
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																							
0-1m																							
1-2m																							
NEPM 2013 Table 1B(6) EILs for Urban Res										180													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																							
0-2m																							
SA EPA Waste Fill Criteria				2						2									2				
SA EPA Intermediate Waste - Total Dry Weight Concentrations				2						2									2				
SA EPA Low-level Contaminated - Total Dry Weight Concentrations				50						50									50				

Field ID Sample Depth Range Sampled Date Soil

BH01_0.06-0.2 0.	.06-0.2	13/05/2022	Fill	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5
BH01_0.5-0.7 0.	.5-0.7	13/05/2022	Fill	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH03_0.1-0.3 0.	.1-0.3	13/05/2022	Fill	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH04_0.15-0.3 0.	.15-0.3	13/05/2022	Fill	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH04_0.5-0.7 0.	.5-0.7	13/05/2022	Natural	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5
BH10_0.0-0.2 0-	-0.2	12/05/2022	Fill	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH15_0.5-0.6 0.	.5-0.6	12/05/2022	Natural	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5



												PAHs	in Soil									
			Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Carcinogenic PAHs (as B(a)P TPE	Benzo(a)pyrene TEQ calc (Zero)	PAHs (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
EQL			0.2	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5		0.5	0.05
NEPM 2013 Table 1A(1) HILs Res B Soil																				4		400
NEPM 2013 Table 1A(3) Res A/B Soil H	SL for Vapour Intrusion	, Sand																				
0-1m															3							
1-2m															NL							
NEPM 2013 Table 1B(6) EILs for Urban	Res														170							
NEPM 2013 Table 1B(6) ESLs for Urban	n Res, Coarse Soil																					
0-2m								0.7														
SA EPA Waste Fill Criteria								1														5
SA EPA Intermediate Waste - Total Dry	Weight Concentration	IS						2														40
SA EPA Low-level Contaminated - Tota	I Dry Weight Concentra	ations						5														200
Field ID Sample Depth Range	Sampled Date	Soil																				
BH01_0.06-0.2 0.06-0.2	13/05/2022	Fill	<0.2	<0.1	<0.1	<0.1	<0.1	< 0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.172	<0.5	< 0.05
BH02_0.2-0.4 0.2-0.4	13/05/2022	Fill	<0.2	<0.1	<0.1	<0.1	<0.1	< 0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.172	<0.5	<0.05
BH03_1.0-1.2 1-1.2	13/05/2022	Natural	<0.2	<0.1	<0.1	<0.1	<0.1	< 0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.172	<0.5	< 0.05
BH04_0.5-0.7 0.5-0.7	13/05/2022	Natural	<0.2	<0.1	<0.1	<0.1	<0.1	< 0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.172	<0.5	< 0.05
BH05_0.2-0.4 0.2-0.4	13/05/2022	Fill	<0.2	<0.1	<0.1	<0.1	<0.1	< 0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.172	<0.5	<0.05
BH06_0.0-0.2 0-0.2	12/05/2022	Fill	<0.2	<0.1	<0.1	<0.1	<0.1	< 0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.172	<0.5	< 0.05
BH07_0.0-0.2 0-0.2	12/05/2022	Fill	<0.2	<0.1	< 0.1	<0.1	<0.1	< 0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.172	<0.5	< 0.05
BH08_0.0-0.2 0-0.2	12/05/2022	Fill	<0.2	<0.1	<0.1	<0.1	<0.1	< 0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.172	<0.5	< 0.05
BH09_0.0-0.2 0-0.2	12/05/2022	Fill	<0.2	<0.1	<0.1	<0.1	<0.1	< 0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.172	<0.5	< 0.05
BH10_0.8-1.0 0.8-1	12/05/2022	Natural	<0.2	<0.1	<0.1	<0.1	<0.1	< 0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.172	<0.5	< 0.05
BH11_0.0-0.2 0-0.2	12/05/2022	Fill	<0.4	<0.2	<0.2	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<1	<0.344	<1	< 0.1
BH12_0.4-0.6 0.4-0.6	12/05/2022	Fill	<0.2	<0.1	<0.1	<0.1	<0.1	< 0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.172	<0.5	<0.05
BH13_0.0-0.2 0-0.2	12/05/2022	Fill	<0.2	<0.1	<0.1	<0.1	<0.1	0.06	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	0.121	<0.5	0.06
BH14_0.4-0.6 0.4-0.6	12/05/2022	Natural	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.172	<0.5	< 0.05
BH15_0.5-0.6 0.5-0.6	12/05/2022	Natural	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.172	<0.5	<0.05
BH15_1.8-2.0 1.8-2	13/05/2022	Natural	<0.2	<0.1	<0.1	<0.1	<0.1	< 0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.172	<0.5	<0.05



				PCBs	in Soil			
	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)
	mg/kg							
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Res B Soil								1
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand								
0-1m								
1-2m								
NEPM 2013 Table 1B(6) EILs for Urban Res								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil								
0-2m								
SA EPA Waste Fill Criteria								2
SA EPA Intermediate Waste - Total Dry Weight Concentrations								2
SA EPA Low-level Contaminated - Total Dry Weight Concentrations								50

Field ID	Sample Depth Range	Sampled Date	Soil								
BH01_0.06-0.2	0.06-0.2	13/05/2022	Fill	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04_0.5-0.7	0.5-0.7	13/05/2022	Natural	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH15 0.5-0.6	0.5-0.6	12/05/2022	Natural	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1



							Sp	peciate	d Pheno	ols in So	oil						
	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4-chloro-3-methylphenol	4-Methylphenol	4-Nitrophenol	Cresol Total	Pentachlorophenol	Phenol	Phenolics 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
EQL	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	2	0.4	4	0.2	1	0.2	0.2
NEPM 2013 Table 1A(1) HILs Res B Soil														4700	130	45000	
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																	
0-1m																	
1-2m																	
NEPM 2013 Table 1B(6) EILs for Urban Res																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																	
0-2m																	
SA EPA Waste Fill Criteria																	0.5
SA EPA Intermediate Waste - Total Dry Weight Concentrations																	17000
SA EPA Low-level Contaminated - Total Dry Weight Concentrations																	50000

Field ID	Sample Depth Range	Sampled Date	Soil																	
BH01_0.06-0.2	0.06-0.2	13/05/2022	Fill	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<2	<0.4	<4	<0.2	<1	<0.2	<0.2
BH04_0.5-0.7	0.5-0.7	13/05/2022	Natural	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<2	<0.4	<4	<0.2	<1	<0.2	<0.2
BH15_0.5-0.6	0.5-0.6	12/05/2022	Natural	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<2	<0.4	<4	<0.2	<1	<0.2	<0.2



						т	RH Soil	C10-C4	IO NEPI	м						VTF	RH(C6-C	10)/BT	EXN in	Soil			
				C10-C14	C15-C28	C29-C36	C10-C16	C10-C16 (F2 minus Naphthalene	C16-C34	C34-C40	C10-C40 (Sum of total)	C10-C36	C6-C3	C6-C10	C6-C10 (F1 minus BTEX)	Naphthalene	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX
				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				50	100	100	50	50	100	100	50	50	25	25	25	1	0.2	0.5	1	2	1	_1	1
NEPM 2013 Table	1A(1) HILs Res B Soil																						
NEPM 2013 Table	1A(3) Res A/B Soil H	SL for Vapour Intrusio	in, Sand																				
0-1m					-	-	-	110							45	3	0.5	160	55			40	
1-2m								240							70	NL	0.5	220	NL			60	\vdash
NEPM 2013 Table	1B(6) EILS for Urban	Res											<u> </u>										\vdash
NEPM 2013 Table	1B(6) ESLs for Urban	Res, Coarse Soil						420	200	2000					400		50	05	70			405	
0-2m	C-11-11-							120	300	2800		4000			180		50	85	70	_	_	105	
SA EPA Waste Fill	Criteria											1000	65				1	1.4	3.1			14	
SA EPA Intermedia	ite waste - Total Dry	Weight Concentration	ns									10000	1000				15	50	1000			180	
SA EPA LOW-level (contaminateu - Totai	Dry weight concentr	ations									10000	1000				15	500	1000			1800	
Field ID Sa	male Death Pange	Sampled Date	Soil																				
PH01 0 06 0 2 0 0	niple Depth Kange	12/05/2022	Cill	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25	4	<0.2	<0.5	4	~2	-1		
BH02 0 2 0 4 0 1	2.0.4	12/05/2022	Cill	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25	~1	<0.2	<0.5	<1	<2	<1	<1	~1
BH03 1 0-1 2 1-	1 7	13/05/2022	Natural	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25		<0.2	<0.5	<1	-2	<1	<1	<1
BH04 0 0-0 15 0-0	0.15	13/05/2022	Fill	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25	-1	<0.2	<0.5	<1	-2	<1	- 1	<1
BH04 0.5-0.7 0.5	5-0.7	13/05/2022	Natural	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25	<1	<0.2	<0.5	<1	<2	<1	<1	<1
BH05 0.2-0.4 0.2	2-0.4	13/05/2022	Fill	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25	<1	<0.2	<0.5	<1	<2	<1	<1	<1
BH06 0.0-0.2 0-0	0.2	12/05/2022	Fill	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25	<1	<0.2	<0.5	<1	<2	<1	<1	<1
BH07 0.0-0.2 0-0	0.2	12/05/2022	Fill	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25	<1	< 0.2	< 0.5	<1	<2	<1	<1	<1
BH08 0.0-0.2 0-0	0.2	12/05/2022	Fill	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25	<1	< 0.2	< 0.5	<1	<2	<1	<1	<1
BH09 0.0-0.2 0-0	0.2	12/05/2022	Fill	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25	<1	<0.2	< 0.5	<1	<2	<1	<1	<1
BH10 0.8-1.0 0.8	8-1	12/05/2022	Natural	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25	<1	<0.2	<0.5	<1	<2	<1	<1	<1
BH11 0.0-0.2 0-0	0.2	12/05/2022	Fill	<50	<100	110	<50	<50	<100	240	240	110	<25	<25	<25	<1	<0.2	< 0.5	<1	<2	<1	<1	<1
BH12 0.0-0.2 0-0	0.2	12/05/2022	Fill	<50	<100	210	<50	<50	130	430	560	210	<25	<25	<25	<1	<0.2	< 0.5	<1	<2	<1	<1	<1
BH12 0.4-0.6 0.4	4-0.6	12/05/2022	Fill	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25	<1	<0.2	<0.5	<1	<2	<1	<1	<1
BH13 0.0-0.2 0-0	0.2	12/05/2022	Fill	<50	<100	110	<50	<50	<100	190	190	110	<25	<25	<25	<1	<0.2	<0.5	<1	<2	<1	<1	<1
BH14 0.0-0.2 0-0	0.2	12/05/2022	Fill	<50	<100	260	<50	<50	170	420	580	260	<25	<25	<25	<1	<0.2	< 0.5	<1	<2	<1	<1	<1
BH14_0.4-0.6 0.4	4-0.6	12/05/2022	Natural	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25	<1	<0.2	<0.5	<1	<2	<1	<1	<1
BH15 0.0-0.15 0-0	0.15	12/05/2022	Fill	<50	<100	800	<50	<50	540	1200	1800	800	<25	<25	<25	<1	<0.2	<0.5	<1	<2	<1	<1	<1
BH15_0.5-0.6 0.5	5-0.6	12/05/2022	Natural	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25	<1	<0.2	<0.5	<1	<2	<1	<1	<1
BH15_1.8-2.0 1.8	8-2	13/05/2022	Natural	<50	<100	<100	<50	<50	<100	<100	<50	<50	<25	<25	<25	<1	<0.2	<0.5	<1	<2	<1	<1	<1
Statistical Analysi																							
No. of samples									20														
Mean value				۱÷	<u> </u>	<u> </u>	<u> </u>		127			<u> </u>	+÷	<u> </u>	-		-			-	-		
Standard deviation	n			۱÷	<u> </u>	<u> </u>	<u> </u>		98.62			<u> </u>	<u> </u>		-		-			-	-		
05% LICL value					1	1	1	-	165 1			-	<u> </u>		-		-	-		-	-		
193% OCT Value					· ·	· ·	· ·		105.1		•	•	•	•	•		-	•	•	-	-	-	-



				Triazine Herbicides in Soil	Synthetic Pyrethroids - NEPM	Misc Ir	org - soil	NEPM	Asbestos	Moisture
				Atrazine	Bifenthrin	Chromium (hexavalent)	Cyanide (Free)	TOC	Asbestos ID	Moisture Content
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		%
EQL				0.5	0.5	1	0.5	1000	-	0.1
NEPM 2013 Table	1A(1) HILs Res B Soil			470	840	500	300			
NEPM 2013 Table	1A(3) Res A/B Soil HSL	for Vapour Intrusion,	Sand							
0-1m										
1-2m										
NEPM 2013 Table	1B(6) EILs for Urban R	es								
NEPM 2013 Table	1B(6) ESLs for Urban F	tes, Coarse Soil								⊢
0-2m	6 m									
SA EPA Waste Fill C	criteria ato Wasto Total Dry V	Voight Concontration				200				
SA EPA Low-level (Contaminated - Total Div	or Weight Concentration:	tions			750				
SALE A LOW-REVERC	contaminated - rotal L	ing meight concentra				750				
Field ID Sar	mple Depth Range Sa	ampled Date	Soil							
BH01_0.06-0.2 0.0	06-0.2 1	3/05/2022	Fill	<0.5	<0.5	<1	<0.5	-	-	4.3
BH01_0.5-0.7 0.5	5-0.7 1	3/05/2022	Fill	-	-	-	-	-	-	13
BH01_0.8-1.0 0.8	8-1 1	3/05/2022	Natural			-	-	-	-	18
BH01_1.8-2.0 1.8	8-2 1	3/05/2022	Natural			-	-	-	-	17
BH02_0.2-0.4 0.2	2-0.4 1	3/05/2022	Fill		-	-	-	-	-	4.5
BH02_1.4-1.6 1.4	4-1.6 1	3/05/2022	Natural			-	-	5400	-	17
BH03_0.1-0.3 0.1	1-0.3 1	3/05/2022	Fill		-	-	-	-	-	4.6
BH03_0.3-0.45 0.3	1 2 1	3/05/2022	Fill		-	-	-	-	-	10
BH03 1 8-2 0 1 8	8-7 1	3/05/2022	Natural						-	18
BH04 0.0-0.15 0-0	0.15 1	3/05/2022	Fill	-	-	-	-	-	-	8.7
BH04 0.15-0.3 0.1	15-0.3 1	3/05/2022	Fill		-	-	-	-	-	3.9
BH04_0.5-0.7 0.5	5-0.7 1	3/05/2022	Natural	<0.5	<0.5	<1	<0.5	-	-	7.3
BH04_1.8-2.0 1.8	8-2 1	3/05/2022	Natural		-	-	-	-	-	16
BH05_0.2-0.4 0.2	2-0.4 1	3/05/2022	Fill		-	-	-	-	-	7
BH05_0.7-0.9 0.7	7-0.9 1	3/05/2022	Natural	-	-	-	-	-	-	13
BH05_1.5-1.7 1.5	5-1.7 1	3/05/2022	Natural		-	-	-	-	-	17
BH06_0.0-0.2 0-0	0.2 1.	2/05/2022	FIII		-	-		-	-	15
BH07_0_0_0_2_0_0	4-1.0 1. 0.2 1	2/05/2022	Fill			-	-	-	-	6.3
BH07 0.4-0.6 0.4	4-0.6 1	2/05/2022	Natural					-	-	8.3
BH07 1.5-1.7 1.5	5-1.7 1	2/05/2022	Natural		-	-	-	-	-	12
BH08_0.0-0.2 0-0	0.2 1	2/05/2022	Fill		-	-	-	-	-	5
BH08_1.0-1.2 1-1	1.2 1	2/05/2022	Natural	-	-	-	-	-	-	16
BH09_0.0-0.2 0-0	0.2 1	2/05/2022	Fill		-	-	-	-	-	7.3
BH09_0.8-1.0 0.8	8-1 1	2/05/2022	Natural		-	-	-	-	-	16
BH10_0.0-0.2 0-0	U.Z 1	2/05/2022	Fill	•		-	-	-	-	3.8
BH11 00.0 2 0.0	0.2 1	2/05/2022	Fill				-	-		4.1
BH11 1.2-1.4 1 2	2-1.4	2/05/2022	Natural			-	-	7700	-	17
BH11 1.8-2.0 1.8	8-2 11	2/05/2022	Natural			-	-	-	-	18
BH12_0.0-0.2 0-0	0.2 1	2/05/2022	Fill	-	-	-	-	-	-	5.6
BH12_0.4-0.6 0.4	4-0.6 1	2/05/2022	Fill	-	-	-	-	-	-	13
BH12_0.9-1.1 0.9	9-1.1 1	2/05/2022	Natural		-	-	-	-	-	17
BH13_0.0-0.2 0-0	0.2 1	2/05/2022	Fill			-	-	-	-	5.7
BH13_0.6-0.8 0.6	5-0.8 1	2/05/2022	Natural	•	-	-	-	-	-	23
BH14 00.0 2 0.0	0.2 1	2/05/2022	Fill		-	-	-	-	-	3.2
BH14 0 2-0 3 0 2	7-03 1	2/05/2022	Fill				-		-	43
BH14 0.4-0.6 0.4	4-0.6 1	2/05/2022	Natural		-	-	-	-	-	5.4
BH14_1.6-1.8 1.6	6-1.8 1	2/05/2022	Natural			-	-	-	-	15
BH15 0.0-0.15 0-0	0.15 1	2/05/2022	Fill		-	-	-	-	-	0.3
BH15 0.5-0.6 0.5	5-0.6 1	2/05/2022	Natural	<0.5	<0.5	<1	<0.5	-	-	11
BH15 0.6-0.8 0.6	6-0.8 1	2/05/2022	Natural			-	-	-	-	14
BH15 1.8-2.0 1.8	8-2 1	3/05/2022	Natural		-	-	-	-	-	19
GSU2 -	1	5/05/2022	FILL		-		-	-	-	8.2
PACM - 02 -	1	3/03/2022	Fill		-		-	-	Not Detected	
PACM - 03 -	1	3/05/2022	Fill				-	-	Not Detected	-
PACM - 04 -	1	3/05/2022	Fill		-				Not Detected	-
PACM - 05 -	1	3/05/2022	Fill	-	-	-	-	-	Not Detected	-



		Lab Report	31477	31477		31477	31477		31477	EM2209166		31477	EM2209166	
		Laboratory	Envirolab	Envirolab		Envirolab	Envirolab		Envirolab	ALS		Envirolab	ALS	
		Field ID	BH15_1.8-2.0	QA01	RPD	BH03_1.8-2.0	QA05	RPD	BH15_1.8-2.0	QA02	RPD	BH03_1.8-2.0	QA06	RPD
		Sampled Date/Time	13/05/2022	13/05/2022		13/05/2022	13/05/2022		13/05/2022	13/05/2022		13/05/2022	13/05/2022	
			_											
ChemName	Units	EQL												
Arsenic	mg/kg	4 (Primary): 5 (Interlab)	4.0	5.0	22	<4.0	<4.0	0	4.0	6.0	40	<4.0	<5.0	0
Barium	mg/kg	1 (Primary): 10 (Interlab)	75.0	130.0	54	41.0	45.0	9	75.0	50.0	40	41.0	40.0	2
Beryllium	mg/kg	1	1.0	<1.0	0	<1.0	<1.0	0	1.0	<1.0	0	<1.0	<1.0	0
Boron	mg/kg	3 (Primary): 50 (Interlab)	39.0	36.0	8	22.0	24.0	9	39.0	50.0	25	22.0	<50.0	0
Cadmium	mg/kg	0.4 (Primary): 1 (Interlab)	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<1.0	0	<0.4	<1.0	0
Chromium (III+VI)	mg/kg	1 (Primary): 2 (Interlab)	34.0	31.0	9	26.0	27.0	4	34.0	32.0	6	26.0	30.0	14
Cobalt	mg/kg	1 (Primary): 2 (Interlab)	10.0	7.0	35	8.0	7.0	13	10.0	8.0	22	8.0	5.0	46
Copper	mg/kg	1 (Primary): 5 (Interlab)	16.0	15.0	6	13.0	13.0	0	16.0	15.0	6	13.0	12.0	8
Lead	mg/kg	1 (Primary): 5 (Interlab)	15.0	15.0	0	14.0	14.0	0	15.0	14.0	7	14.0	15.0	7
Manganese	mg/kg	1 (Primary): 5 (Interlab)	210.0	150.0	33	210.0	140.0	40	210.0	160.0	27	210.0	67.0	103
Mercury	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Molybdenum	mg/kg	1	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	-	-	<1.0	-	-
Nickel	mg/kg	1 (Primary): 2 (Interlab)	16.0	13.0	21	14.0	12.0	15	16.0	15.0	6	14.0	12.0	15
Selenium	mg/kg	2 (Primary): 5 (Interlab)	<2.0	<2.0	0	<2.0	<2.0	0	<2.0	<5.0	0	<2.0	<5.0	0
Zinc	mg/kg	1 (Primary): 5 (Interlab)	30.0	28.0	7	24.0	25.0	4	30.0	33.0	10	24.0	29.0	19



Field ID	R01	R02
Sampled Date	12/05/2022	13/05/2022
Sample Type	Rinsate	Rinsate

ChemName	Units	EQL		
Arsenic	mg/l	0.05	<0.05	<0.05
Barium	mg/l	0.01	<0.01	<0.01
Beryllium	mg/l	0.01	<0.01	<0.01
Boron	mg/l	0.2	<0.2	<0.2
Cadmium	mg/l	0.01	<0.01	<0.01
Chromium (III+VI)	mg/l	0.01	<0.01	<0.01
Cobalt	mg/l	0.02	<0.02	<0.02
Copper	mg/l	0.01	<0.01	<0.01
Lead (Filtered)	mg/l	0.03	< 0.03	< 0.03
Manganese	mg/l	0.01	<0.01	<0.01
Mercury	mg/l	0.00005	< 0.00005	<0.00005
Molybdenum	mg/l	0.03	< 0.03	< 0.03
Nickel	mg/l	0.02	<0.02	< 0.02
Selenium	mg/l	0.1	<0.1	<0.1
Zinc	mg/l	0.02	<0.02	<0.02



UCL Statistics for Uncensored Full Data Sets

User Selected Options Date/Time of Computation ProUCL 5.126/05/2022 2:45:10 PM From File WorkSheet.xls Full Precision OFF

Confidence Coefficient 95%

Number of Bootstrap Operations 2000

Manganese (mg/kg)

	General Statistics		
Total Number of Observations	36	Number of Distinct Observations	21
		Number of Missing Observations	0
Minimum	130	Mean	309.7
Maximum	750	Median	265
SD	145.6	Std. Error of Mean	24.27
Coefficient of Variation	0.47	Skewness	1.302

Normal GOF Test

Shapiro Wilk Test Statistic 0.886 5% Shapiro Wilk Critical Value 0.935 Lilliefors Test Statistic 0.165 5% Lilliefors Critical Value 0.145

Shapiro Wilk GOF Test Data Not Normal at 5% Significance Level Lilliefors GOF Test Data Not Normal at 5% Significance Level

Data Not Normal at 5% Signific Assuming Normal Distribution

95% Normal UCL	•	95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	350.7	95% Adjusted-CLT UCL (Chen-1995)	355.3
		95% Modified-t UCL (Johnson-1978)	351.6

	Gamma G	OF Test
A-D Test Statistic	0.454	Anderson-Darling Gamma GOF Test
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.121	Kolmogorov-Smirnov Gamma GOF Test
5% K-S Critical Value	0.147	Detected data appear Gamma Distributed at 5% Significance Level
Detected data appea	r Gamma Dist	ributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.362	k star (bias corrected MLE)	4.933
Theta hat (MLE)	57.77	Theta star (bias corrected MLE)	62.78
nu hat (MLE)	386	nu star (bias corrected)	355.2
MLE Mean (bias corrected)	309.7	MLE Sd (bias corrected)	139.4
		Approximate Chi Square Value (0.05)	312.5
Adjusted Level of Significance	0.0428	Adjusted Chi Square Value	310.7

Assuming Gamma Distribution 95% Approximate Gamma UCL (use when n>=50) 352

95% Adjusted Gamma UCL (use when n<50) 354.1

	Lognorma	I GOF Test
Shapiro Wilk Test Statistic	0.969	Shapiro Wilk Lognormal GOF Test
5% Shapiro Wilk Critical Value	0.935	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0928	Lillefors Lognormal GOF Test
5% Lilliefors Critical Value	0.145	Data appear Lognormal at 5% Significance Level
Data appea	ar Lognormal	at 5% Significance Level

	Lognormal Statistics		
Minimum of Logged Data	4.868	Mean of logged Data	5.64
Maximum of Logged Data	6.62	SD of logged Data	0.44
Ass	umina Loanormal Distribution		

95% H-UCL	356	90% Chebyshev (MVUE) UCL	379.4
95% Chebyshev (MVUE) UCL	411.3	97.5% Chebyshev (MVUE) UCL	455.5
99% Chebyshev (MVUE) UCL	542.5		

Nonparametric Distribution Free UCL Statistics

to follow a Discernible Distribution at 5% Signifi

Nonparametric Distribution Free UCLs

95% CLT UCL	349.6	95% Jackknife UCL	350.7
95% Standard Bootstrap UCL	350.3	95% Bootstrap-t UCL	359.6
95% Hall's Bootstrap UCL	358.6	95% Percentile Bootstrap UCL	351.9
95% BCA Bootstrap UCL	355.6		
90% Chebyshev(Mean, Sd) UCL	382.5	95% Chebyshev(Mean, Sd) UCL	415.5
97.5% Chebyshev(Mean, Sd) UCL	461.3	99% Chebyshev(Mean, Sd) UCL	551.2

Suggested UCL to Use 95% Adjusted Gamma UCL 354.1

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006). However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.



UCL Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	ProUCL 5.120/07/2022 11:52:23 AM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

TRH C16-C34

	General S	Statistics	
Total Number of Observations	20	Number of Distinct Observations	4
		Number of Missing Observations	0
Minimum	100	Mean	127
Maximum	540	Median	100
SD	98.63	Std. Error of Mean	22.05
Coefficient of Variation	0.777	Skewness	4.278
	Normal G	OF Test	
Shapiro Wilk Test Statistic	0.308	Shapiro Wilk GOF Test	
5% Snapiro Wilk Critical Value	0.905	Data Not Normal at 5% Significance Level	
5% Lilliefors Critical Value	0.438	Data Not Normal at 5% Significance Level	
Data N	lot Normal at 5	& Significance Level	
	Assuming Norm	al Distribution	
95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	165.1	95% Adjusted-CLT UCL (Chen-1995)	185.8
		95% Modified-t UCL (Johnson-1978)	168.7
	0		
A-D Test Statistic	Gamma G 5 776	Anderson-Darling Gemme GOE Test	
5% A-D Critical Value	0.745	Data Not Gamma Distributed at 5% Significance Lev	/el
K-S Test Statistic	0.478	Kolmonorov-Smirnov Germe GOF Test	101
5% K-S Critical Value	0.195	Data Not Gamma Distributed at 5% Significance Lev	/el
Data Not Ga	mma Distribute	d at 5% Significance Level	
		•	
	Gamma S	Statistics	
k hat (MLE)	4.506	k star (bias corrected MLE)	3.863
Theta hat (MLE)	28.18	Theta star (bias corrected MLE)	32.87
nu hat (MLE)	180.2	nu star (bias corrected)	154.5
MLE Mean (bias corrected)	127	MLE Sd (bias corrected)	64.61
		Approximate Chi Square Value (0.05)	126.8
Adjusted Level of Significance	0.038	Adjusted Chi Square Value	124.8
	anuming Com	no Diatribution	
95% Approximate Gamma LICL (use when n>=50))	154.8	95% Adjusted Gamma LICI (use when n<50)	157.2
	101.0		107.2
	Lognormal	GOF Test	
Shapiro Wilk Test Statistic	0.372	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.905	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.475	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.192	Data Not Lognormal at 5% Significance Level	
Data No	t Lognormal at	5% Significance Level	
	Lognormal	Statistics	
Minimum of Logged Data	4 605	Mean of logged Data	4 729
Maximum of Logged Data	6.292	SD of logged Data	0.39
As	suming Lognor	mal Distribution	
95% H-UCL	145	90% Chebyshev (MVUE) UCL	154.2
95% Chebyshev (MVUE) UCL	168.9	97.5% Chebyshev (MVUE) UCL	189.4
99% Chebyshev (MVUE) UCL	229.6		
Nonparar Dete do po	netric Distributi	on Free UCL Statistics	
Non	parametric Distr	Ibution Free UCLs	
95% CLT UCL	163.3	95% Jackknife UCL	165.1
95% Standard Bootstrap UCL	N/A	95% Bootstrap-t UCL	N/A
95% Hall's Bootstrap UCL	N/A	95% Percentile Bootstrap UCL	N/A
95% BCA Bootstrap UCL	N/A		000.4
90% Cnebyshev(Mean, Sd) UCL	193.2	95% Chebyshev(Mean, Sd) UCL	223.1
97.5% Chebyshev(Mean, Sd) UCL	204.7	99% Chebyshev(Mean, Sd) UCL	340.4
	Suggested I	JCL to Use	
95% Student's-t UCI	165.1	or 95% Modified-t UCI	168.7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. Recommendations are based upon data size, data distribution, and skewness. These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006). However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Appendix E Laboratory Documentation





Envirolab Services Pty Ltd ABN 37 112 535 645 - 002 25 Research Drive Croydon South VIC 3136 ph 03 9763 2500 fax 03 9763 2633 melbourne@envirolab.com.au www.envirolab.com.au

CERTIFICATE OF ANALYSIS 31477

Client Details	
Client	FMG Engineering
Attention	Dharmsinh Rathod
Address	67 Greenhill Road, WAYVILLE, SA, 5034

Sample Details	
Your Reference	281059 Environmental Soil Assessment
Number of Samples	92 Soil, 2 Water
Date samples received	16/05/2022
Date completed instructions received	16/05/2022

Analysis Details

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

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

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

Please refer to the last page of this report for any comments relating to the results.

Report Details	
Date results requested by	23/05/2022
Date of Issue	23/05/2022
NATA Accreditation Number 2901. This do	ocument shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 1	7025 - Testing. Tests not covered by NATA are denoted with *

Asbestos Approved By

Analysed by Asbestos Approved Analyst: Lucy Zhu Authorised by Asbestos Approved Signatory: Lucy Zhu **Results Approved By** Chris De Luca, Operations Manager Ken Nguyen, Reporting Supervisor

Authorised By

Pamela Adams, Laboratory Manager



vTRH(C6-C10)/BTEXN in Soil						
Our Reference		31477-1	31477-8	31477-14	31477-17	31477-19
Your Reference	UNITS	BH01_0.06-0.2	BH02_0.2-0.4	BH03_1.0-1.2	BH04_0.0-0.15	BH04_0.5-0.7
Date Sampled		13/05/2022	13/05/2022	13/05/2022	13/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
vTRH C6 - C9	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total BTEX	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	106	106	102	106	108
vTRH(C6-C10)/BTEXN in Soil						
vTRH(C6-C10)/BTEXN in Soil Our Reference		31477-24	31477-29	31477-34	31477-39	31477-44
vTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference	UNITS	31477-24 BH05_0.2-0.4	31477-29 BH06_0.0-0.2	31477-34 BH07_0.0-0.2	31477-39 BH08_0.0-0.2	31477-44 BH09_0.0-0.2
vTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled	UNITS	31477-24 BH05_0.2-0.4 13/05/2022	31477-29 BH06_0.0-0.2 12/05/2022	31477-34 BH07_0.0-0.2 12/05/2022	31477-39 BH08_0.0-0.2 12/05/2022	31477-44 BH09_0.0-0.2 12/05/2022
vTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled Type of sample	UNITS	31477-24 BH05_0.2-0.4 13/05/2022 Soil	31477-29 BH06_0.0-0.2 12/05/2022 Soil	31477-34 BH07_0.0-0.2 12/05/2022 Soil	31477-39 BH08_0.0-0.2 12/05/2022 Soil	31477-44 BH09_0.0-0.2 12/05/2022 Soil
vTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled Type of sample Date extracted	UNITS	31477-24 BH05_0.2-0.4 13/05/2022 Soil 18/05/2022	31477-29 BH06_0.0-0.2 12/05/2022 Soil 18/05/2022	31477-34 BH07_0.0-0.2 12/05/2022 Soil 18/05/2022	31477-39 BH08_0.0-0.2 12/05/2022 Soil 18/05/2022	31477-44 BH09_0.0-0.2 12/05/2022 Soil 18/05/2022
vTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled Type of sample Date extracted Date analysed	UNITS - -	31477-24 BH05_0.2-0.4 13/05/2022 Soil 18/05/2022 18/05/2022	31477-29 BH06_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022	31477-34 BH07_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022	31477-39 BH08_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022	31477-44 BH09_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022
vTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled Type of sample Date extracted Date analysed vTRH C ₆ - C ₉	UNITS - - mg/kg	31477-24 BH05_0.2-0.4 13/05/2022 Soil 18/05/2022 18/05/2022 <25	31477-29 BH06_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25	31477-34 BH07_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25	31477-39 BH08_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25	31477-44 BH09_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25
vTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled Type of sample Date extracted Date analysed vTRH C ₆ - C ₉ vTRH C ₆ - C ₁₀	UNITS - mg/kg mg/kg	31477-24 BH05_0.2-0.4 13/05/2022 Soil 18/05/2022 18/05/2022 <25 <25	31477-29 BH06_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25	31477-34 BH07_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25	31477-39 BH08_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25	31477-44 BH09_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25
vTRH(C6-C10)/BTEXN in SoilOur ReferenceYour ReferenceDate SampledType of sampleDate extractedDate analysedvTRH $C_6 - C_9$ vTRH $C_6 - C_{10}$ TRH $C_6 - C_{10}$ less BTEX (F1)	UNITS - mg/kg mg/kg mg/kg	31477-24 BH05_0.2-0.4 13/05/2022 Soil 18/05/2022 18/05/2022 <25 <25	31477-29 BH06_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25	31477-34 BH07_0.0-0.2 12/05/20222 Soil 18/05/2022 18/05/2022 <25 <25	31477-39 BH08_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25	31477-44 BH09_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25
vTRH(C6-C10)/BTEXN in SoilOur ReferenceYour ReferenceDate SampledType of sampleDate extractedDate analysedvTRH $C_6 - C_9$ vTRH $C_6 - C_{10}$ TRH $C_6 - C_{10}$ less BTEX (F1)Benzene	UNITS - - mg/kg mg/kg mg/kg mg/kg	31477-24 BH05_0.2-0.4 13/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <0.2	31477-29 BH06_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 25 <25 <25 <0.2	31477-34 BH07_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <0.2	31477-39 BH08_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <25 <0.2	31477-44 BH09_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 225 <25 <25 <0.2
vTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled Type of sample Date extracted Date analysed vTRH C6 - C9 vTRH C6 - C10 TRH C6 - C10 TRH C6 - C10 Toluene	UNITS - - mg/kg mg/kg mg/kg mg/kg mg/kg	31477-24 BH05_0.2-0.4 13/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2	31477-29 BH06_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2	31477-34 BH07_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <25 <25 <0.2	31477-39 BH08_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <25 <0.2	31477-44 BH09_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2
VTRH(C6-C10)/BTEXN in SoilOur ReferenceYour ReferenceDate SampledType of sampleDate extractedDate analysedvTRH C6 - C9vTRH C6 - C10TRH C6 - C10 less BTEX (F1)BenzeneTolueneEthylbenzene	UNITS - - mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	31477-24 BH05_0.2-0.4 13/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <25 <0.2 <0.2	31477-29 BH06_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <0.2 <0.2 <0.5	31477-34 BH07_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <25 <0.2 <0.2	31477-39 BH08_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <0.2 <0.2 <0.5	31477-44 BH09_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2 <0.2 <0.5
VTRH(C6-C10)/BTEXN in SoilOur ReferenceYour ReferenceDate SampledType of sampleDate extractedDate analysedvTRH C6 - C9vTRH C6 - C10TRH C6 - C10TRH C6 - C10TRH C6 - C10EnzeneTolueneEthylbenzenem+p-xylene	UNITS - - mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	31477-24 BH05_0.2-0.4 13/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <25 <0.2 <0.2 <0.5 <1	31477-29 BH06_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1	31477-34 BH07_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1	31477-39 BH08_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <25 <0.2 <0.2 <0.5 <1	31477-44 BH09_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <25 <0.2 <0.2 <0.5 <1
VTRH(C6-C10)/BTEXN in SoilOur ReferenceYour ReferenceDate SampledType of sampleDate extractedDate analysedvTRH C6 - C9vTRH C6 - C10TRH C6 - C10 less BTEX (F1)BenzeneTolueneEthylbenzenem+p-xyleneo-Xylene	UNITS - - mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	31477-24 BH05_0.2-0.4 13/05/2022 Soil 18/05/2022 18/05/2022 <18/05/2022 <25 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1 <2 <1	31477-29 BH06_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 (25 <25 <25 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1 <2 <1	31477-34 BH07_0.0-0.2 12/05/20222 Soil 18/05/2022 18/05/2022 18/05/2022 225 <25 <25 <25 <25 <25 <25 <25 <25 <	31477-39 BH08_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 (25 <25 <25 <25 <25 <25 <25 <25 <25 <25 <	31477-44 BH09_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1 <2 <1
VTRH(C6-C10)/BTEXN in SoilOur ReferenceYour ReferenceDate SampledType of sampleDate extractedDate analysedvTRH $C_6 - C_9$ vTRH $C_6 - C_{10}$ TRH $C_6 - C_{10}$ less BTEX (F1)BenzeneTolueneEthylbenzenem+p-xyleneo-XyleneNaphthalene	UNITS - - mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	31477-24 BH05_0.2-0.4 13/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2 <0.2 <0.5 <1 <2 <1 <2 <1 <1 <1	31477-29 BH06_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2 <0.2 <0.5 <1 <2 <1 <2 <1 <1 <1	31477-34 BH07_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <25 <25 <0.2 <1 <0.5 <1 <2 <1 <2 <1 <1 <1 <1	31477-39 BH08_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <25 <0.2 <0.2 <0.5 <1 <2 <1 <2 <1 <1 <2 <1 <1 <1	31477-44 BH09_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 202 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <
VTRH(C6-C10)/BTEXN in SoilOur ReferenceYour ReferenceDate SampledType of sampleDate extractedDate analysedvTRH C6 - C9vTRH C6 - C10TRH C6 - C10TRH C6 - C10Ethylbenzenem+p-xyleneo-XyleneNaphthaleneTotal BTEX	UNITS - - mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	31477-24 BH05_0.2-0.4 13/05/2022 Soil 18/05/2022 18/05/2022 (25 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1 <2 <1 <2 <1 <1 <1 <1	31477-29 BH06_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 (25 <25 <25 <25 <25 <0.2 <0.2 <0.2 <1 <2 <1 <1 <1 <1	31477-34 BH07_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 (25 <25 <25 <25 <25 <25 <0.2 <25 <0.2 <1 <1 <2 <1 <1 <1 <1	31477-39 BH08_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 (25 <25 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1 <2 <1 <1 <1 <1	31477-44 BH09_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 202 202 202 202 202 202 202 202 20
VTRH(C6-C10)/BTEXN in SoilOur ReferenceYour ReferenceDate SampledType of sampleDate extractedDate analysedvTRH C6 - C9vTRH C6 - C10TRH C6 - C10TRH C6 - C10TRH C6 - C10Ethylbenzenem+p-xyleneo-XyleneNaphthaleneTotal BTEXTotal +ve Xylenes	UNITS - - mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	31477-24 BH05_0.2-0.4 13/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1 <2 <1 <1 <1 <1 <1	31477-29 BH06_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1 <2 <1 <1 <1 <1 <1	31477-34 BH07_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1 <2 <1 <1 <1 <1 <1 <1	31477-39 BH08_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1 <1 <2 <1 <1 <1 <1 <1	31477-44 BH09_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 202 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		31477-51	31477-53	31477-58	31477-59	31477-64
Your Reference	UNITS	BH10_0.8-1.0	BH11_0.0-0.2	BH12_0.0-0.2	BH12_0.4-0.6	BH13_0.0-0.2
Date Sampled		12/05/2022	12/05/2022	12/05/2022	12/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
vTRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
vTRH C6 - C10	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total BTEX	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	100	104	103	103	102
vTRH(C6-C10)/BTEXN in Soil						
vTRH(C6-C10)/BTEXN in Soil Our Reference		31477-69	31477-71	31477-76	31477-78	31477-81
vTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference	UNITS	31477-69 BH14_0.0-0.2	31477-71 BH14_0.4-0.6	31477-76 BH15_0.0-0.15	31477-78 BH15_0.5-0.6	31477-81 BH15_1.8-2.0
vTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled	UNITS	31477-69 BH14_0.0-0.2 12/05/2022	31477-71 BH14_0.4-0.6 12/05/2022	31477-76 BH15_0.0-0.15 12/05/2022	31477-78 BH15_0.5-0.6 12/05/2022	31477-81 BH15_1.8-2.0 13/05/2022
vTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled Type of sample	UNITS	31477-69 BH14_0.0-0.2 12/05/2022 Soil	31477-71 BH14_0.4-0.6 12/05/2022 Soil	31477-76 BH15_0.0-0.15 12/05/2022 Soil	31477-78 BH15_0.5-0.6 12/05/2022 Soil	31477-81 BH15_1.8-2.0 13/05/2022 Soil
vTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled Type of sample Date extracted	UNITS -	31477-69 BH14_0.0-0.2 12/05/2022 Soil 18/05/2022	31477-71 BH14_0.4-0.6 12/05/2022 Soil 18/05/2022	31477-76 BH15_0.0-0.15 12/05/2022 Soil 18/05/2022	31477-78 BH15_0.5-0.6 12/05/2022 Soil 18/05/2022	31477-81 BH15_1.8-2.0 13/05/2022 Soil 18/05/2022
vTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled Type of sample Date extracted Date analysed	UNITS - -	31477-69 BH14_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022	31477-71 BH14_0.4-0.6 12/05/2022 Soil 18/05/2022 18/05/2022	31477-76 BH15_0.0-0.15 12/05/2022 Soil 18/05/2022 18/05/2022	31477-78 BH15_0.5-0.6 12/05/2022 Soil 18/05/2022 18/05/2022	31477-81 BH15_1.8-2.0 13/05/2022 Soil 18/05/2022 18/05/2022
VTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled Type of sample Date extracted Date analysed VTRH C ₆ - C ₉	UNITS - - mg/kg	31477-69 BH14_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25	31477-71 BH14_0.4-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 <25	31477-76 BH15_0.0-0.15 12/05/2022 Soil 18/05/2022 18/05/2022 <25	31477-78 BH15_0.5-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 <25	31477-81 BH15_1.8-2.0 13/05/2022 Soil 18/05/2022 18/05/2022 <25
VTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled Type of sample Date extracted Date analysed vTRH C6 - C9 vTRH C6 - C10	UNITS - mg/kg mg/kg	31477-69 BH14_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25	31477-71 BH14_0.4-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25	31477-76 BH15_0.0-0.15 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25	31477-78 BH15_0.5-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25	31477-81 BH15_1.8-2.0 13/05/2022 Soil 18/05/2022 18/05/2022 <25 <25
VTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled Type of sample Date extracted Date analysed VTRH C ₆ - C ₉ VTRH C ₆ - C ₁₀ TRH C ₆ - C ₁₀ less BTEX (F1)	UNITS - mg/kg mg/kg mg/kg	31477-69 BH14_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25	31477-71 BH14_0.4-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25	31477-76 BH15_0.0-0.15 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25	31477-78 BH15_0.5-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25	31477-81 BH15_1.8-2.0 13/05/2022 Soil 18/05/2022 18/05/2022 <25 <25
vTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled Type of sample Date extracted Date analysed vTRH C6 - C9 vTRH C6 - C10 TRH C6 - C10 TRH C6 - C10 Enzene	UNITS - - mg/kg mg/kg mg/kg mg/kg	31477-69 BH14_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2	31477-71 BH14_0.4-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2	31477-76 BH15_0.0-0.15 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 225 <25 <25 <0.2	31477-78 BH15_0.5-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 25 <25 <25 <0.2	31477-81 BH15_1.8-2.0 13/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <0.2
vTRH(C6-C10)/BTEXN in SoilOur ReferenceYour ReferenceDate SampledType of sampleDate extractedDate analysedvTRH C6 - C9vTRH C6 - C10TRH C6 - C10 less BTEX (F1)BenzeneToluene	UNITS - mg/kg mg/kg mg/kg mg/kg mg/kg	31477-69 BH14_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2	31477-71 BH14_0.4-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2	31477-76 BH15_0.0-0.15 12/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <25 <25 <0.2	31477-78 BH15_0.5-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 (25 <25 <25 <25 <25 <0.2	31477-81 BH15_1.8-2.0 13/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2
VTRH(C6-C10)/BTEXN in Soil Our Reference Your Reference Date Sampled Type of sample Date extracted Date analysed vTRH C6 - C9 vTRH C6 - C10 TRH C6 - C10 TRH C6 - C10 TRH C6 - C10 Ethylbenzene	UNITS - - mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	31477-69 BH14_0.0-0.2 Soil 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2 <0.2 <0.5	31477-71 BH14_0.4-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2 <0.2 <0.5	31477-76 BH15_0.0-0.15 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <25 <0.2 <0.2	31477-78 BH15_0.5-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <0.2 <0.2 <0.5	31477-81 BH15_1.8-2.0 13/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <25 <0.2 <0.2 <0.5
vTRH(C6-C10)/BTEXN in SoilOur ReferenceYour ReferenceDate SampledType of sampleDate extractedDate analysedvTRH C6 - C9vTRH C6 - C10TRH C6 - C10TRH C6 - C10TRH C6 - C10EnzeneTolueneEthylbenzenem+p-xylene	UNITS - mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	31477-69 BH14_0.0-0.2 30il 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2 <0.2 <0.5 <1 <1	31477-71 BH14_0.4-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2 <0.2 <0.5 <1	31477-76 BH15_0.0-0.15 12/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1	31477-78 BH15_0.5-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 25 <25 <25 <25 <0.2 <0.2 <0.5 <1	31477-81 BH15_1.8-2.0 13/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2 <0.2 <0.5 <1
VTRH(C6-C10)/BTEXN in SoilOur ReferenceYour ReferenceDate SampledType of sampleDate extractedDate analysedvTRH C6 - C9vTRH C6 - C10TRH C6 - C10 less BTEX (F1)BenzeneTolueneEthylbenzenem+p-xyleneo-Xylene	UNITS - - mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	31477-69 BH14_0.0-0.2 Soil 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <25 <0.2 <0.2 <0.5 <1 <2 <1	31477-71 BH14_0.4-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 225 <25 <25 <25 <0.2 <0.2 <0.5 <1 <2 <1	31477-76 BH15_0.0-0.15 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <25 <25 <0.2 <0.2 <0.5 <1 <2 <0.5	31477-78 BH15_0.5-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 (25 <25 <25 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1 <2 <1 <2 <1	31477-81 BH15_1.8-2.0 13/05/2022 Soil 18/05/2022 18/05/2022 (25 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1 <2 <1
VTRH(C6-C10)/BTEXN in SoilOur ReferenceYour ReferenceDate SampledType of sampleDate extractedDate analysedvTRH C6 - C9vTRH C6 - C10TRH C6 - C10TRH C6 - C10Ethylbenzenem+p-xyleneo-XyleneNaphthalene	UNITS - - mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	31477-69 BH14_0.0-0.2 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 25 <25 <25 <25 <0.2 <0.2 <0.5 <1 <2 <1 <2 <1 <1	31477-71 BH14_0.4-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 25 <25 <25 <25 <0.2 <0.2 <0.5 <1 <1 <2 <1 <1	31477-76 BH15_0.0-0.15 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 225 <25 <25 <25 <0.2 <0.2 <0.5 <1 <1 <2 <1 <1 <1	31477-78 BH15_0.5-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 225 <25 <25 <0.2 <0.2 <0.5 <1 <1 <2 <1 <1 <1	31477-81 BH15_1.8-2.0 13/05/2022 Soil 18/05/2022 18/05/2022 (25 <25 <25 <25 <0.2 <0.2 <0.2 <1 <1 <2 <1 <1
VTRH(C6-C10)/BTEXN in SoilOur ReferenceYour ReferenceDate SampledType of sampleDate extractedDate analysedvTRH C6 - C9vTRH C6 - C10TRH C6 - C10TRH C6 - C10Ethylbenzenem+p-xyleneo-XyleneNaphthaleneTotal BTEX	UNITS - mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	31477-69 BH14_0.0-0.2 Soil 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <25 <0.2 <0.2 <0.2 <1 <1 <2 <1 <1 <1 <1	31477-71 BH14_0.4-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 (25 <25 <25 <25 <25 <25 <0.2 <0.2 <0.2 <1 <1 <2 <1 <1 <1 <1	31477-76 BH15_0.0-0.15 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <25 <25 <25 <25 <25 <25 <	31477-78 BH15_0.5-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 (25 <25 <25 <25 <25 <25 <25 <25 <25 <25 <	31477-81 BH15_1.8-2.0 13/05/2022 Soil 18/05/2022 (25 <25 <25 <25 <25 <25 <25 <25 <25 <25 <
VTRH(C6-C10)/BTEXN in SoilOur ReferenceYour ReferenceDate SampledType of sampleDate extractedDate analysedvTRH C6 - C9vTRH C6 - C10TRH C6 - C10 less BTEX (F1)BenzeneTolueneEthylbenzenem+p-xyleneo-XyleneNaphthaleneTotal BTEXTotal +ve Xylenes	UNITS - - mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	31477-69 BH14_0.0-0.2 Soil 12/05/2022 Soil 18/05/2022 18/05/2022 <25 <25 <25 <25 <0.2 <0.2 <0.5 <1 <2 <1 <1 <1 <1 <1	31477-71 BH14_0.4-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 18/05/2022 <25 <25 <25 <0.2 <0.2 <0.5 <1 <2 <1 <1 <1 <1 <1	31477-76 BH15_0.0-0.15 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1 <1 <2 <1 <1 <1 <1 <1 <1	31477-78 BH15_0.5-0.6 12/05/2022 Soil 18/05/2022 18/05/2022 225 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1 <1 <2 <1 <1 <1 <1 <1 <1	31477-81 BH15_1.8-2.0 13/05/2022 Soil 18/05/2022 18/05/2022 (25 <25 <25 <25 <0.2 <0.2 <0.2 <0.5 <1 <2 <0.5 <1 <1 <1 <1

TRH Soil C10-C40 NEPM						
Our Reference		31477-1	31477-8	31477-14	31477-17	31477-19
Your Reference	UNITS	BH01_0.06-0.2	BH02_0.2-0.4	BH03_1.0-1.2	BH04_0.0-0.15	BH04_0.5-0.7
Date Sampled		13/05/2022	13/05/2022	13/05/2022	13/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C34 -C40	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	86	93	94	85	94

TRH Soil C10-C40 NEPM						
Our Reference		31477-24	31477-29	31477-34	31477-39	31477-44
Your Reference	UNITS	BH05_0.2-0.4	BH06_0.0-0.2	BH07_0.0-0.2	BH08_0.0-0.2	BH09_0.0-0.2
Date Sampled		13/05/2022	12/05/2022	12/05/2022	12/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	96	93	94	92	87

TRH Soil C10-C40 NEPM						
Our Reference		31477-51	31477-53	31477-58	31477-59	31477-64
Your Reference	UNITS	BH10_0.8-1.0	BH11_0.0-0.2	BH12_0.0-0.2	BH12_0.4-0.6	BH13_0.0-0.2
Date Sampled		12/05/2022	12/05/2022	12/05/2022	12/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	110	210	<100	110
Total +ve TRH (C10-C36)	mg/kg	<50	110	210	<50	110
TRH >C10 -C16	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	130	<100	<100
TRH >C34 -C40	mg/kg	<100	240	430	<100	190
Total +ve TRH (>C10-C40)	mg/kg	<50	240	560	<50	190
Surrogate o-Terphenyl	%	93	83	84	92	83

TRH Soil C10-C40 NEPM						
Our Reference		31477-69	31477-71	31477-76	31477-78	31477-81
Your Reference	UNITS	BH14_0.0-0.2	BH14_0.4-0.6	BH15_0.0-0.15	BH15_0.5-0.6	BH15_1.8-2.0
Date Sampled		12/05/2022	12/05/2022	12/05/2022	12/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
TRH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TRH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	260	<100	800	<100	<100
Total +ve TRH (C10-C36)	mg/kg	260	<50	800	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C16 -C34	mg/kg	170	<100	540	<100	<100
TRH >C34 -C40	mg/kg	420	<100	1,200	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	580	<50	1,800	<50	<50
Surrogate o-Terphenyl	%	82	91	83	93	92

PAHs in Soil						
Our Reference		31477-1	31477-8	31477-14	31477-19	31477-24
Your Reference	UNITS	BH01_0.06-0.2	BH02_0.2-0.4	BH03_1.0-1.2	BH04_0.5-0.7	BH05_0.2-0.4
Date Sampled		13/05/2022	13/05/2022	13/05/2022	13/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j&k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d ₁₄	%	110	110	114	106	114

PAHs in Soil						
Our Reference		31477-29	31477-34	31477-39	31477-44	31477-51
Your Reference	UNITS	BH06_0.0-0.2	BH07_0.0-0.2	BH08_0.0-0.2	BH09_0.0-0.2	BH10_0.8-1.0
Date Sampled		12/05/2022	12/05/2022	12/05/2022	12/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	18/05/2022	18/05/2022	18/05/2022	20/05/2022	18/05/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j&k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d ₁₄	%	106	118	106	116	118

PAHs in Soil						
Our Reference		31477-53	31477-59	31477-64	31477-71	31477-78
Your Reference	UNITS	BH11_0.0-0.2	BH12_0.4-0.6	BH13_0.0-0.2	BH14_0.4-0.6	BH15_0.5-0.6
Date Sampled		12/05/2022	12/05/2022	12/05/2022	12/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Naphthalene	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Benzo(b,j&k)fluoranthene	mg/kg	<0.4	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.1	<0.05	0.06	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.1	<0.05	0.06	<0.05	<0.05
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	<1	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	<1	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (PQL)	mg/kg	<1	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d ₁₄	%	102	116	114	114	102

PAHs in Soil		
Our Reference		31477-81
Your Reference	UNITS	BH15_1.8-2.0
Date Sampled		13/05/2022
Type of sample		Soil
Date extracted	-	18/05/2022
Date analysed	-	18/05/2022
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j&k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc (PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d ₁₄	%	106

Speciated Phenols in Soil				
Our Reference		31477-1	31477-19	31477-78
Your Reference	UNITS	BH01_0.06-0.2	BH04_0.5-0.7	BH15_0.5-0.6
Date Sampled		13/05/2022	13/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	18/05/2022	18/05/2022	18/05/2022
Phenol	mg/kg	<0.2	<0.2	<0.2
2-Chlorophenol	mg/kg	<0.2	<0.2	<0.2
2-Methylphenol	mg/kg	<0.2	<0.2	<0.2
3/4-Methylphenol	mg/kg	<0.4	<0.4	<0.4
2-Nitrophenol	mg/kg	<0.2	<0.2	<0.2
2,4-Dimethylphenol	mg/kg	<0.2	<0.2	<0.2
2,4-Dichlorophenol	mg/kg	<0.2	<0.2	<0.2
2,6-Dichlorophenol	mg/kg	<0.2	<0.2	<0.2
2,4,5-Trichlorophenol	mg/kg	<0.2	<0.2	<0.2
2,4,6-Trichlorophenol	mg/kg	<0.2	<0.2	<0.2
2,4-Dinitrophenol	mg/kg	<2	<2	<2
4-Nitrophenol	mg/kg	<4	<4	<4
2,3,4,6-Tetrachlorophenol	mg/kg	<0.2	<0.2	<0.2
Pentachlorophenol	mg/kg	<1	<1	<1
4-Chloro-3-Methylphenol	mg/kg	<2	<2	<2
Total +ve Cresols	mg/kg	<0.2	<0.2	<0.2
Total +ve Phenols	mg/kg	<0.2	<0.2	<0.2
Surrogate Phenol-d ₆	%	86	86	84
Surrogate 2-fluorophenol	%	78	76	74

OCP in Soil - NEPM						
Our Reference		31477-1	31477-2	31477-12	31477-18	31477-19
Your Reference	UNITS	BH01_0.06-0.2	BH01_0.5-0.7	BH03_0.1-0.3	BH04_0.15-0.3	BH04_0.5-0.7
Date Sampled		13/05/2022	13/05/2022	13/05/2022	13/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlorobenzene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve reported Aldrin + Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve reported DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.5	[NA]	[NA]	[NA]	<0.5
Surrogate 2-chlorophenol-d4	%	82	82	74	80	82

OCP in Soil - NEPM				
Our Reference		31477-49	31477-78	31477-83
Your Reference	UNITS	BH10_0.0-0.2	BH15_0.5-0.6	GS02
Date Sampled		12/05/2022	12/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	20/05/2022	18/05/2022	18/05/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
Hexachlorobenzene	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Total +ve reported Aldrin + Dieldrin	mg/kg	<0.1	<0.1	<0.1
Total +ve reported DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Mirex	mg/kg	[NA]	<0.5	[NA]
Surrogate 2-chlorophenol-d4	%	62	78	86

OP in Soil						
Our Reference		31477-1	31477-2	31477-12	31477-18	31477-19
Your Reference	UNITS	BH01_0.06-0.2	BH01_0.5-0.7	BH03_0.1-0.3	BH04_0.15-0.3	BH04_0.5-0.7
Date Sampled		13/05/2022	13/05/2022	13/05/2022	13/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl	mg/kg	[NA]	<0.1	<0.1	<0.1	[NA]
Bromophos-ethyl	mg/kg	[NA]	<0.1	<0.1	<0.1	[NA]
Chlorpyrifos-methyl	mg/kg	[NA]	<0.1	<0.1	<0.1	[NA]
Diazinon	mg/kg	[NA]	<0.1	<0.1	<0.1	[NA]
Dichlorovos	mg/kg	[NA]	<0.1	<0.1	<0.1	[NA]
Dimethoate	mg/kg	[NA]	<0.1	<0.1	<0.1	[NA]
Ethion	mg/kg	[NA]	<0.1	<0.1	<0.1	[NA]
Fenitrothion	mg/kg	[NA]	<0.1	<0.1	<0.1	[NA]
Malathion	mg/kg	[NA]	<0.1	<0.1	<0.1	[NA]
Parathion	mg/kg	[NA]	<0.1	<0.1	<0.1	[NA]
Ronnel	mg/kg	[NA]	<0.1	<0.1	<0.1	[NA]
Surrogate 2-chlorophenol-d4	%	82	82	74	80	82

OP in Soil				
Our Reference		31477-49	31477-78	31477-83
Your Reference	UNITS	BH10_0.0-0.2	BH15_0.5-0.6	GS02
Date Sampled		12/05/2022	12/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	20/05/2022	18/05/2022	18/05/2022
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1
Azinphos-methyl	mg/kg	<0.1	[NA]	<0.1
Bromophos-ethyl	mg/kg	<0.1	[NA]	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	[NA]	<0.1
Diazinon	mg/kg	<0.1	[NA]	<0.1
Dichlorovos	mg/kg	<0.1	[NA]	<0.1
Dimethoate	mg/kg	<0.1	[NA]	<0.1
Ethion	mg/kg	<0.1	[NA]	<0.1
Fenitrothion	mg/kg	<0.1	[NA]	<0.1
Malathion	mg/kg	<0.1	[NA]	<0.1
Parathion	mg/kg	<0.1	[NA]	<0.1
Ronnel	mg/kg	<0.1	[NA]	<0.1
Surrogate 2-chlorophenol-d4	%	62	78	86

PCBs in Soil				
Our Reference		31477-1	31477-19	31477-78
Your Reference	UNITS	BH01_0.06-0.2	BH04_0.5-0.7	BH15_0.5-0.6
Date Sampled		13/05/2022	13/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	18/05/2022	18/05/2022	18/05/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate 2-fluorobiphenyl	%	96	94	90

Synthetic Pyrethroids - NEPM				
Our Reference		31477-1	31477-19	31477-78
Your Reference	UNITS	BH01_0.06-0.2	BH04_0.5-0.7	BH15_0.5-0.6
Date Sampled		13/05/2022	13/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	18/05/2022	18/05/2022	18/05/2022
Bifenthrin	mg/kg	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d ₁₄	%	110	106	102

Triazine Herbicides in Soil				
Our Reference		31477-1	31477-19	31477-78
Your Reference	UNITS	BH01_0.06-0.2	BH04_0.5-0.7	BH15_0.5-0.6
Date Sampled		13/05/2022	13/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil
Date extracted	-	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	18/05/2022	18/05/2022	18/05/2022
Atrazine	mg/kg	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d ₁₄	%	110	106	102

NEPM screen metals in soil						
Our Reference		31477-1	31477-3	31477-6	31477-8	31477-10
Your Reference	UNITS	BH01_0.06-0.2	BH01_0.8-1.0	BH01_1.8-2.0	BH02_0.2-0.4	BH02_1.4-1.6
Date Sampled		13/05/2022	13/05/2022	13/05/2022	13/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	21/05/2022	21/05/2022	21/05/2022	21/05/2022	21/05/2022
Arsenic	mg/kg	4	4	5	5	[NA]
Beryllium	mg/kg	<1	<1	<1	<1	[NA]
Boron	mg/kg	<3	6	18	<3	[NA]
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	[NA]
Chromium	mg/kg	22	24	30	22	[NA]
Cobalt	mg/kg	8	11	8	7	[NA]
Copper	mg/kg	11	16	18	16	[NA]
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	[NA]
Lead	mg/kg	10	22	17	10	[NA]
Nickel	mg/kg	15	11	15	15	[NA]
Manganese	mg/kg	450	410	230	430	[NA]
Selenium	mg/kg	<2	<2	<2	<2	[NA]
Zinc	mg/kg	31	34	29	38	[NA]
Molybdenum	mg/kg	[NA]	<1	<1	<1	[NA]
Barium	mg/kg	[NA]	70	31	23	[NA]
Iron	mg/kg	[NA]	[NA]	[NA]	[NA]	20,000

NEPM screen metals in soil						
Our Reference		31477-13	31477-14	31477-16	31477-19	31477-22
Your Reference	UNITS	BH03_0.3-0.45	BH03_1.0-1.2	BH03_1.8-2.0	BH04_0.5-0.7	BH04_1.8-2.0
Date Sampled		13/05/2022	13/05/2022	13/05/2022	13/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	21/05/2022	21/05/2022	21/05/2022	21/05/2022	21/05/2022
Arsenic	mg/kg	5	5	<4	18	5
Beryllium	mg/kg	<1	<1	<1	<1	<1
Boron	mg/kg	5	6	22	4	33
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	27	26	19	27
Cobalt	mg/kg	3	10	8	7	7
Copper	mg/kg	15	16	13	17	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Lead	mg/kg	24	23	14	65	13
Nickel	mg/kg	8	12	14	8	13
Manganese	mg/kg	290	320	210	260	170
Selenium	mg/kg	<2	<2	<2	<2	<2
Zinc	mg/kg	45	34	24	33	26
Molybdenum	mg/kg	<1	<1	<1	[NA]	<1
Barium	mg/kg	42	74	41	[NA]	67

NEPM screen metals in soil						
Our Reference		31477-24	31477-25	31477-27	31477-29	31477-32
Your Reference	UNITS	BH05_0.2-0.4	BH05_0.7-0.9	BH05_1.5-1.7	BH06_0.0-0.2	BH06_1.4-1.6
Date Sampled		13/05/2022	13/05/2022	13/05/2022	12/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	21/05/2022	21/05/2022	21/05/2022	21/05/2022	21/05/2022
Arsenic	mg/kg	18	<4	<4	13	<4
Beryllium	mg/kg	<1	<1	<1	<1	<1
Boron	mg/kg	5	5	25	10	18
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.5	<0.4
Chromium	mg/kg	16	25	26	14	25
Cobalt	mg/kg	6	6	6	7	9
Copper	mg/kg	20	12	9	17	12
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Lead	mg/kg	64	17	15	29	17
Nickel	mg/kg	7	11	10	15	11
Manganese	mg/kg	240	140	210	370	630
Selenium	mg/kg	<2	<2	<2	<2	<2
Zinc	mg/kg	36	29	19	64	22
Molybdenum	mg/kg	<1	<1	<1	4	<1
Barium	mg/kg	62	48	53	54	110

NEPM screen metals in soil						
Our Reference		31477-34	31477-35	31477-37	31477-39	31477-41
Your Reference	UNITS	BH07_0.0-0.2	BH07_0.4-0.6	BH07_1.5-1.7	BH08_0.0-0.2	BH08_1.0-1.2
Date Sampled		12/05/2022	12/05/2022	12/05/2022	12/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	21/05/2022	21/05/2022	21/05/2022	21/05/2022	21/05/2022
Arsenic	mg/kg	8	4	<4	8	4
Beryllium	mg/kg	<1	<1	<1	<1	<1
Boron	mg/kg	5	5	27	5	17
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	20	18	12	25
Cobalt	mg/kg	5	8	5	5	8
Copper	mg/kg	13	13	11	15	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Lead	mg/kg	34	23	9	28	18
Nickel	mg/kg	9	9	8	11	11
Manganese	mg/kg	230	360	130	350	140
Selenium	mg/kg	<2	<2	<2	<2	<2
Zinc	mg/kg	40	32	16	52	33
Molybdenum	mg/kg	<1	<1	<1	<1	<1
Barium	mg/kg	45	59	59	48	55

NEPM screen metals in soil						
Our Reference		31477-44	31477-46	31477-51	31477-53	31477-55
Your Reference	UNITS	BH09_0.0-0.2	BH09_0.8-1.0	BH10_0.8-1.0	BH11_0.0-0.2	BH11_1.2-1.4
Date Sampled		12/05/2022	12/05/2022	12/05/2022	12/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	21/05/2022	21/05/2022	21/05/2022	21/05/2022	21/05/2022
Arsenic	mg/kg	6	4	<4	9	[NA]
Beryllium	mg/kg	<1	<1	<1	<1	[NA]
Boron	mg/kg	5	14	44	8	[NA]
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.5	[NA]
Chromium	mg/kg	17	25	28	8	[NA]
Cobalt	mg/kg	5	7	6	6	[NA]
Copper	mg/kg	12	13	8	25	[NA]
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	[NA]
Lead	mg/kg	21	17	14	18	[NA]
Nickel	mg/kg	7	11	9	12	[NA]
Manganese	mg/kg	270	170	260	490	[NA]
Selenium	mg/kg	<2	<2	<2	<2	[NA]
Zinc	mg/kg	31	32	21	55	[NA]
Molybdenum	mg/kg	<1	<1	<1	1	[NA]
Barium	mg/kg	52	62	62	30	[NA]
Iron	mg/kg	[NA]	[NA]	[NA]	[NA]	22,000

NEPM screen metals in soil								
Our Reference		31477-57	31477-59	31477-61	31477-64	31477-66		
Your Reference	UNITS	BH11_1.8-2.0	BH12_0.4-0.6	BH12_0.9-1.1	BH13_0.0-0.2	BH13_0.6-0.8		
Date Sampled		12/05/2022	12/05/2022	12/05/2022	12/05/2022	12/05/2022		
Type of sample		Soil	Soil	Soil	Soil	Soil		
Date digested	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022		
Date analysed	-	21/05/2022	21/05/2022	21/05/2022	21/05/2022	21/05/2022		
Arsenic	mg/kg	4	6	5	6	6		
Beryllium	mg/kg	<1	<1	<1	<1	1		
Boron	mg/kg	41	7	7	6	7		
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.5	<0.4		
Chromium	mg/kg	30	18	26	13	30		
Cobalt	mg/kg	8	7	10	4	13		
Copper	mg/kg	15	12	15	15	18		
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1		
Lead	mg/kg	14	17	20	20	23		
Nickel	mg/kg	15	9	12	9	14		
Manganese	mg/kg	250	290	450	330	630		
Selenium	mg/kg	<2	<2	<2	<2	<2		
Zinc	mg/kg	24	37	36	44	45		
Molybdenum	mg/kg	<1	<1	<1	<1	<1		
Barium	mg/kg	80	47	78	50	94		

NEPM screen metals in soil								
Our Reference		31477-68	31477-70	31477-71	31477-74	31477-78		
Your Reference	UNITS	BH13_1.8-2.0	BH14_0.2-0.3	BH14_0.4-0.6	BH14_1.6-1.8	BH15_0.5-0.6		
Date Sampled		12/05/2022	12/05/2022	12/05/2022	12/05/2022	12/05/2022		
Type of sample		Soil	Soil	Soil	Soil	Soil		
Date digested	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022		
Date analysed	-	21/05/2022	21/05/2022	21/05/2022	21/05/2022	21/05/2022		
Arsenic	mg/kg	5	8	5	<4	<4		
Beryllium	mg/kg	<1	<1	<1	<1	<1		
Boron	mg/kg	26	6	6	31	7		
Cadmium	mg/kg	<0.4	<0.5	<0.4	<0.4	<0.4		
Chromium	mg/kg	27	20	16	27	17		
Cobalt	mg/kg	8	9	6	7	5		
Copper	mg/kg	17	10	12	8	13		
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1		
Lead	mg/kg	15	23	26	15	14		
Nickel	mg/kg	15	17	10	9	6		
Manganese	mg/kg	240	750	360	230	270		
Selenium	mg/kg	<2	<2	<2	<2	<2		
Zinc	mg/kg	33	93	41	21	14		
Molybdenum	mg/kg	<1	<1	<1	<1	[NA]		
Barium	mg/kg	56	47	65	76	[NA]		

NEPM screen metals in soil						
Our Reference		31477-79	31477-81	31477-83	31477-89	31477-92
Your Reference	UNITS	BH15_0.6-0.8	BH15_1.8-2.0	GS02	QA01	QA05
Date Sampled		12/05/2022	13/05/2022	13/05/2022	12/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	21/05/2022	21/05/2022	21/05/2022	21/05/2022	21/05/2022
Arsenic	mg/kg	5	4	<4	5	<4
Beryllium	mg/kg	<1	1	<1	<1	<1
Boron	mg/kg	6	39	<3	36	24
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	34	2	31	27
Cobalt	mg/kg	8	10	1	7	7
Copper	mg/kg	11	16	2	15	13
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Lead	mg/kg	24	15	4	15	14
Nickel	mg/kg	9	16	2	13	12
Manganese	mg/kg	250	210	130	150	140
Selenium	mg/kg	<2	<2	<2	<2	<2
Zinc	mg/kg	30	30	8	28	25
Molybdenum	mg/kg	<1	<1	<1	<1	<1
Barium	mg/kg	66	75	46	130	45
Misc Inorg - soil NEPM						
---------------------------------------	----------	---------------	--------------	--------------	--------------	--------------
Our Reference		31477-1	31477-10	31477-19	31477-55	31477-78
Your Reference	UNITS	BH01_0.06-0.2	BH02_1.4-1.6	BH04_0.5-0.7	BH11_1.2-1.4	BH15_0.5-0.6
Date Sampled		13/05/2022	13/05/2022	13/05/2022	12/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
Date analysed	-	20/05/2022	20/05/2022	20/05/2022	20/05/2022	20/05/2022
Weak Acid Dissociable Cyanide	mg/kg	<0.5	[NA]	<0.5	[NA]	<0.5
Free Cyanide in soil	mg/kg	<0.5	[NA]	<0.5	[NA]	<0.5
Hexavalent Chromium, Cr ⁶⁺	mg/kg	<1	[NA]	<1	[NA]	<1
Clay in soils <2um	% (w/w)	[NA]	45	[NA]	37	[NA]
pH 1:5 soil:CaCl ₂	pH Units	[NA]	7.7	[NA]	8.4	[NA]
Total Organic Carbon (Walkley Black)	mg/kg	[NA]	5,400	[NA]	7,700	[NA]

Cation exchange capacity			
Our Reference		31477-10	31477-55
Your Reference	UNITS	BH02_1.4-1.6	BH11_1.2-1.4
Date Sampled		13/05/2022	12/05/2022
Type of sample		Soil	Soil
Date extracted	-	23/05/2022	23/05/2022
Date analysed	-	23/05/2022	23/05/2022
Exchangeable Ca	meq/100g	12	2.4
Exchangeable K	meq/100g	0.7	0.5
Exchangeable Mg	meq/100g	9.7	7.4
Exchangeable Na	meq/100g	1.4	8.6
Cation Exchange Capacity	meq/100g	24	19

Moisture						
Our Reference		31477-1	31477-2	31477-3	31477-6	31477-8
Your Reference	UNITS	BH01_0.06-0.2	BH01_0.5-0.7	BH01_0.8-1.0	BH01_1.8-2.0	BH02_0.2-0.4
Date Sampled		13/05/2022	13/05/2022	13/05/2022	13/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
Moisture	%	4.3	13	18	17	4.5
Moisture			'			
Our Reference		31477-10	31477-12	31477-13	31477-14	31477-16
Your Reference	UNITS	BH02_1.4-1.6	BH03_0.1-0.3	BH03_0.3-0.45	BH03_1.0-1.2	BH03_1.8-2.0
Date Sampled		13/05/2022	13/05/2022	13/05/2022	13/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
Moisture	%	17	4.6	10	17	18
Moisture						
Our Reference		31477-17	31477-18	31477-19	31477-22	31477-24
Your Reference	UNITS	BH04_0.0-0.15	BH04_0.15-0.3	BH04_0.5-0.7	BH04_1.8-2.0	BH05_0.2-0.4
Date Sampled		13/05/2022	13/05/2022	13/05/2022	13/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
Moisture	%	8.7	3.9	7.3	16	7.0
Moisture						
Our Reference		31477-25	31477-27	31477-29	31477-32	31477-34
Your Reference	UNITS	BH05_0.7-0.9	BH05_1.5-1.7	BH06_0.0-0.2	BH06_1.4-1.6	BH07_0.0-0.2
Date Sampled		13/05/2022	13/05/2022	12/05/2022	12/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
Moisture	%	13	17	6.0	15	6.3
Moisture						
Our Reference		31477-35	31477-37	31477-39	31477-41	31477-44
Your Reference	UNITS	BH07_0.4-0.6	BH07_1.5-1.7	BH08_0.0-0.2	BH08_1.0-1.2	BH09_0.0-0.2
Date Sampled		12/05/2022	12/05/2022	12/05/2022	12/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
Moisture	%	8.3	12	5.0	16	7.3

Moisture						
Our Reference		31477-46	31477-49	31477-51	31477-53	31477-55
Your Reference	UNITS	BH09_0.8-1.0	BH10_0.0-0.2	BH10_0.8-1.0	BH11_0.0-0.2	BH11_1.2-1.4
Date Sampled		12/05/2022	12/05/2022	12/05/2022	12/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
Moisture	%	16	3.8	12	4.1	17
Moisture						
Our Reference		31477-57	31477-58	31477-59	31477-61	31477-64
Your Reference	UNITS	BH11_1.8-2.0	BH12_0.0-0.2	BH12_0.4-0.6	BH12_0.9-1.1	BH13_0.0-0.2
Date Sampled		12/05/2022	12/05/2022	12/05/2022	12/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
Moisture	%	18	5.6	13	17	5.7
Moisture	'					
Our Reference		31477-66	31477-68	31477-69	31477-70	31477-71
Your Reference	UNITS	BH13_0.6-0.8	BH13_1.8-2.0	BH14_0.0-0.2	BH14_0.2-0.3	BH14_0.4-0.6
Date Sampled		12/05/2022	12/05/2022	12/05/2022	12/05/2022	12/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
Moisture	%	23	16	3.2	4.3	5.4
Moisture						
Our Reference		31477-74	31477-76	31477-78	31477-79	31477-81
Your Reference	UNITS	BH14_1.6-1.8	BH15_0.0-0.15	BH15_0.5-0.6	BH15_0.6-0.8	BH15_1.8-2.0
Date Sampled		12/05/2022	12/05/2022	12/05/2022	12/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022
Date analysed	-	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
Moisture	%	15	0.3	11	14	19
Moisture	I	1				1
Our Reference		31477-83	31477-89	31477-92		
Your Reference	UNITS	GS02	QA01	QA05		
Date Sampled		13/05/2022	12/05/2022	13/05/2022		
Type of sample		Soil	Soil	Soil		

18/05/2022

19/05/2022

8.2

-

-

%

18/05/2022

19/05/2022

18

18/05/2022

19/05/2022

16

Date prepared

Date analysed

Moisture

Asbestos ID - soils						
Our Reference		31477-84	31477-85	31477-86	31477-87	31477-88
Your Reference	UNITS	PACM - 01	PACM - 02	PACM - 03	PACM - 04	PACM - 05
Date Sampled		13/05/2022	13/05/2022	13/05/2022	13/05/2022	13/05/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	23/05/2022	23/05/2022	23/05/2022	23/05/2022	23/05/2022
Sample mass tested	g	Approx. 35g	Approx. 35g	Approx. 30g	Approx. 30g	Approx. 30g
Sample Description	-	Grey coarse- grained soil & rocks	Grey coarse- grained soil & rocks	Brown coarse- grained soil & rocks	Brown clayey soil & rocks	Grey coarse- grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic Fibres				
		detected	detected	detected	detected	detected
Trace Analysis	-	No asbestos detected				

Metals in Waters - Total			
Our Reference		31477-93	31477-94
Your Reference	UNITS	R01	R02
Date Sampled		12/05/2022	13/05/2022
Type of sample		Water	Water
Date prepared	-	17/05/2022	17/05/2022
Date analysed	-	17/05/2022	17/05/2022
Arsenic - Total	mg/L	<0.05	<0.05
Boron - Total	mg/L	<0.2	<0.2
Barium - Total	mg/L	<0.01	<0.01
Beryllium - Total	mg/L	<0.01	<0.01
Cadmium - Total	mg/L	<0.01	<0.01
Cobalt - Total	mg/L	<0.02	<0.02
Chromium - Total	mg/L	<0.01	<0.01
Copper - Total	mg/L	<0.01	<0.01
Manganese - Total	mg/L	<0.01	<0.01
Molybdenum - Total	mg/L	<0.03	<0.03
Nickel - Total	mg/L	<0.02	<0.02
Lead - Total	mg/L	<0.03	<0.03
Selenium - Total	mg/L	<0.1	<0.1
Zinc - Total	mg/L	<0.02	<0.02
Mercury-Total	µg/L	<0.05	<0.05

Method ID	Methodology Summary
AS1289.3.6.3	Determination Particle Size Analysis using AS1289.3.6.3 and AS1289.3.6.1 and in house method INORG-107. Clay fraction at <2um reported.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only as analysis outside of the APHA storage times.
Inorg-008	Moisture content determined by heating at 105°C for a minimum of 12 hours.
Inorg-014	Cyanide - free, total, weak acid dissociable by segmented flow analyser (in line dialysis with colourimetric finish).
	Solids/Filters and sorbents are extracted in a caustic media prior to analysis. Impingers are pH adjusted as required prior to analysis.
	Cyanides amenable to Chlorination - samples are analysed untreated and treated with hyperchlorite to assess the potential for chlorination of cyanide forms. Based on APHA latest edition, 4500-CN_G,H.
Inorg-024	Hexavalent Chromium (Cr6+) - determined colourimetrically by discrete analyser. Water samples are filtered on receipt prior to analysis.
Inorg-036	Total Organic Carbon or Matter - A titrimetric method that measures the oxidisable organic content of soils.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
	F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
	Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).

Method ID	Methodology Summary
Org-021/022	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD or GC-
	NS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
	Note, For OCs the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Note, the Total +ve Cresols or Phenols PQL is reflective of the lowest individual PQL and is therefore" Total +ve Cresols or Phenols" is simply a sum of the positive individual Cresols or Phenols.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
	For soil results:-
	 'EQ PQL'values are assuming all contributing PAHs reported as <pql actually="" and="" approach="" are="" at="" be="" calculation="" can="" conservative="" contribute="" false="" give="" given="" is="" li="" may="" most="" not="" pahs="" positive="" pql.="" present.<="" teq="" teqs="" that="" the="" this="" to=""> 'EQ zero'values are assuming all contributing PAHs reported as <pql and="" approach="" are="" below="" but="" calculation="" conservative="" contribute="" false="" is="" least="" li="" more="" negative="" pahs="" pql.<="" present="" susceptible="" teq="" teqs="" that="" the="" this="" to="" when="" zero.=""> 'EQ half PQL'values are assuming all contributing PAHs reported as <pql a="" above.<="" and="" approaches="" are="" between="" conservative="" half="" hence="" least="" li="" mid-point="" most="" pql.="" stipulated="" the=""> Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PAHs" is simply a sum of the positive individual PAHs. </pql></pql></pql>
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONT	QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	31477-8
Date extracted	-			18/05/2022	14	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Date analysed	-			18/05/2022	14	18/05/2022	18/05/2022		18/05/2022	18/05/2022
vTRH C ₆ - C ₉	mg/kg	25	Org-023	<25	14	<25	<25	0	98	99
vTRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	14	<25	<25	0	98	99
Benzene	mg/kg	0.2	Org-023	<0.2	14	<0.2	<0.2	0	85	87
Toluene	mg/kg	0.5	Org-023	<0.5	14	<0.5	<0.5	0	94	96
Ethylbenzene	mg/kg	1	Org-023	<1	14	<1	<1	0	101	102
m+p-xylene	mg/kg	2	Org-023	<2	14	<2	<2	0	105	106
o-Xylene	mg/kg	1	Org-023	<1	14	<1	<1	0	101	102
Naphthalene	mg/kg	1	Org-023	<1	14	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	110	14	102	102	0	110	106

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Du	Spike Recovery %			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	18/05/2022	18/05/2022		[NT]	[NT]
Date analysed	-			[NT]	51	18/05/2022	18/05/2022		[NT]	[NT]
vTRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	51	<25	<25	0	[NT]	[NT]
vTRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	51	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	51	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	51	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	51	100	103	3	[NT]	[NT]

QUALITY CO	QUALITY CONTROL: TRH Soil C10-C40 NEPM							Duplicate			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	31477-8	
Date extracted	-			18/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022	
Date analysed	-			19/05/2022	1	19/05/2022	19/05/2022		19/05/2022	19/05/2022	
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	1	<50	<50	0	102	102	
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	1	<100	<100	0	99	95	
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	1	<100	<100	0	120	106	
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	1	<50	<50	0	102	102	
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	1	<100	<100	0	99	95	
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	1	<100	<100	0	120	106	
Surrogate o-Terphenyl	%		Org-020	93	1	86	85	1	84	97	

QUALITY COM	QUALITY CONTROL: TRH Soil C10-C40 NEPM								Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	53	18/05/2022	18/05/2022		[NT]	[NT]
Date analysed	-			[NT]	53	19/05/2022	19/05/2022		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	53	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	53	<100	<100	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	53	110	120	9	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	53	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	53	<100	<100	0	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	53	240	270	12	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	53	83	83	0	[NT]	[NT]

QUALIT	Y CONTRO	L: PAHs	in Soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	31477-1
Date extracted	-			18/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Date analysed	-			18/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Naphthalene	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	96	89
Acenaphthylene	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	102	95
Fluorene	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	100	91
Phenanthrene	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	102	95
Anthracene	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	100	98
Pyrene	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	106	102
Benzo(a)anthracene	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	100	93
Benzo(b,j&k)fluoranthene	mg/kg	0.2	Org-022	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022	<0.05	1	<0.05	<0.05	0	110	107
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-022	96	1	110	106	4	102	98

QUALIT	Y CONTRO	L: PAHs	in Soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	53	18/05/2022	18/05/2022		[NT]	[NT]
Date analysed	-			[NT]	53	18/05/2022	18/05/2022		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022	[NT]	53	<0.2	<0.2	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022	[NT]	53	<0.2	<0.2	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022	[NT]	53	<0.2	<0.2	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022	[NT]	53	<0.2	<0.2	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022	[NT]	53	<0.2	<0.2	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022	[NT]	53	<0.2	<0.2	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022	[NT]	53	<0.2	<0.2	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022	[NT]	53	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022	[NT]	53	<0.2	<0.2	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022	[NT]	53	<0.2	<0.2	0	[NT]	[NT]
Benzo(b,j&k)fluoranthene	mg/kg	0.2	Org-022	[NT]	53	<0.4	<0.4	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022	[NT]	53	<0.2	<0.2	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022	[NT]	53	<0.2	<0.2	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022	[NT]	53	<0.2	<0.2	0	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-022	[NT]	53	102	98	4	[NT]	[NT]

QUALITY CO	NTROL: Spe	ciated Ph	enols in Soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	31477-1
Date extracted	-		Org-022	18/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Date analysed	-		Org-022	20/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Phenol	mg/kg	0.2	Org-022	<0.2	1	<0.2	<0.2	0	90	85
2-Chlorophenol	mg/kg	0.2	Org-022	<0.2	1	<0.2	<0.2	0	88	78
2-Methylphenol	mg/kg	0.2	Org-022	<0.2	1	<0.2	<0.2	0	96	87
3/4-Methylphenol	mg/kg	0.4	Org-022	<0.4	1	<0.4	<0.4	0	[NT]	[NT]
2-Nitrophenol	mg/kg	0.2	Org-022	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
2,4-Dimethylphenol	mg/kg	0.2	Org-022	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
2,4-Dichlorophenol	mg/kg	0.2	Org-022	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
2,6-Dichlorophenol	mg/kg	0.2	Org-022	<0.2	1	<0.2	<0.2	0	98	87
2,4,5-Trichlorophenol	mg/kg	0.2	Org-022	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
2,4,6-Trichlorophenol	mg/kg	0.2	Org-022	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
2,4-Dinitrophenol	mg/kg	2	Org-022	<2	1	<2	<2	0	[NT]	[NT]
4-Nitrophenol	mg/kg	4	Org-022	<4	1	<4	<4	0	[NT]	[NT]
2,3,4,6-Tetrachlorophenol	mg/kg	0.2	Org-022	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Pentachlorophenol	mg/kg	1	Org-022	<1	1	<1	<1	0	86	#
4-Chloro-3-Methylphenol	mg/kg	2	Org-022	<2	1	<2	<2	0	[NT]	[NT]
Surrogate Phenol-d ₆	%		Org-022	78	1	86	84	2	98	92
Surrogate 2-fluorophenol	%		Org-022	74	1	78	74	5	86	76

QUALITY C	CONTROL: C	OCP in Sc	oil - NEPM			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	31477-1
Date extracted	-			18/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Date analysed	-			18/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022
alpha-BHC	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	98	87
Hexachlorobenzene	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	94	89
gamma-BHC	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	102	98
delta-BHC	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	100	93
Heptachlor Epoxide	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	98	91
gamma-Chlordane	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	98	93
alpha-chlordane	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	106	102
Dieldrin	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	100	98
Endrin	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	100	98
Endrin Aldehyde	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	100	93
Methoxychlor	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.5	Org-022	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022	72	1	82	80	2	90	82

QUAL	ITY CONTR	OL: OP ir	n Soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	31477-1
Date extracted	-			18/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Date analysed	-			20/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Chlorpyrifos	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	96	93
Azinphos-methyl	mg/kg	0.1	Org-022	<0.1	[NT]		[NT]	[NT]	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	[NT]		[NT]	[NT]	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022	<0.1	[NT]		[NT]	[NT]	102	95
Diazinon	mg/kg	0.1	Org-022	<0.1	[NT]		[NT]	[NT]	100	98
Dichlorovos	mg/kg	0.1	Org-022	<0.1	[NT]		[NT]	[NT]	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022	<0.1	[NT]		[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022	<0.1	[NT]		[NT]	[NT]	102	102
Fenitrothion	mg/kg	0.1	Org-022	<0.1	[NT]		[NT]	[NT]	90	89
Malathion	mg/kg	0.1	Org-022	<0.1	[NT]		[NT]	[NT]	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022	<0.1	[NT]		[NT]	[NT]	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022	<0.1	[NT]		[NT]	[NT]	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022	72	1	82	80	2	90	82

QUALIT	Y CONTRO	L: PCBs	in Soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	31477-1
Date extracted	-			18/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Date analysed	-			20/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Aroclor 1016	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	105	95
Aroclor 1260	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-fluorobiphenyl	%		Org-022	92	1	96	92	4	106	98

QUALITY CONT	ROL: Synth	etic Pyret	hroids - NEPM			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	31477-1
Date extracted	-			18/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Date analysed	-			20/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Bifenthrin	mg/kg	0.5	Org-022	<0.5	1	<0.5	<0.5	0	108	109
Surrogate p-Terphenyl-d ₁₄	%		Org-022	96	1	110	106	4	102	98

QUALITY CONTROL: Triazine Herbicides in Soil Test Description Units PQL Method Bland Date extracted - 18/05/20						Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	31477-1
Date extracted	-			18/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Date analysed	-			20/05/2022	1	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Atrazine	mg/kg	0.5	Org-022	<0.5	1	<0.5	<0.5	0	84	86
Surrogate p-Terphenyl-d ₁₄	%		Org-022	96	1	110	106	4	102	98

QUALITY CON	TROL: NEP	M screer	n metals in soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	31477-6
Date digested	-			18/05/2022	3	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Date analysed	-			21/05/2022	3	21/05/2022	21/05/2022		21/05/2022	21/05/2022
Arsenic	mg/kg	4	Metals-020 ICP- AES	<4	3	4	4	0	103	101
Beryllium	mg/kg	1	Metals-020 ICP- AES	<1	3	<1	<1	0	108	101
Boron	mg/kg	3	Metals-020 ICP- AES	<3	3	6	6	0	94	99
Cadmium	mg/kg	0.4	Metals-020 ICP- AES	<0.4	3	<0.4	<0.4	0	106	95
Chromium	mg/kg	1	Metals-020 ICP- AES	<1	3	24	24	0	106	107
Cobalt	mg/kg	1	Metals-020 ICP- AES	<1	3	11	9	20	101	90
Copper	mg/kg	1	Metals-020 ICP- AES	<1	3	16	15	6	104	108
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	3	<0.1	<0.1	0	101	101
Lead	mg/kg	1	Metals-020 ICP- AES	<1	3	22	21	5	104	92
Nickel	mg/kg	1	Metals-020 ICP- AES	<1	3	11	11	0	105	93
Manganese	mg/kg	1	Metals-020 ICP- AES	<1	3	410	280	38	110	#
Selenium	mg/kg	2	Metals-020 ICP- AES	<2	3	<2	<2	0	98	89
Zinc	mg/kg	1	Metals-020 ICP- AES	<1	3	34	33	3	103	95
Molybdenum	mg/kg	1	Metals-020 ICP- AES	<1	3	<1	<1	0	105	73
Barium	mg/kg	1	Metals-020 ICP- AES	<1	3	70	67	4	107	106
Iron	mg/kg	10	Metals-020 ICP- AES	<10	[NT]	[NT]	[NT]	[NT]	107	#

QUALITY CON	TROL: NEP	M screen	metals in soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	31477-46
Date digested	-				24	18/05/2022	18/05/2022		18/05/2022	18/05/2022
Date analysed	-				24	21/05/2022	21/05/2022		21/05/2022	21/05/2022
Arsenic	mg/kg	4	Metals-020 ICP- AES		24	18	19	5	103	108
Beryllium	mg/kg	1	Metals-020 ICP- AES		24	<1	<1	0	108	98
Boron	mg/kg	3	Metals-020 ICP- AES		24	5	4	22	94	119
Cadmium	mg/kg	0.4	Metals-020 ICP- AES		24	<0.4	<0.4	0	106	97
Chromium	mg/kg	1	Metals-020 ICP- AES		24	16	16	0	106	115
Cobalt	mg/kg	1	Metals-020 ICP- AES		24	6	6	0	101	94
Copper	mg/kg	1	Metals-020 ICP- AES		24	20	19	5	104	111
Mercury	mg/kg	0.1	Metals-021 CV-AAS		24	<0.1	<0.1	0	101	97
Lead	mg/kg	1	Metals-020 ICP- AES		24	64	62	3	104	93
Nickel	mg/kg	1	Metals-020 ICP- AES		24	7	8	13	105	104
Manganese	mg/kg	1	Metals-020 ICP- AES		24	240	270	12	110	#
Selenium	mg/kg	2	Metals-020 ICP- AES		24	<2	<2	0	98	94
Zinc	mg/kg	1	Metals-020 ICP- AES		24	36	35	3	103	111
Molybdenum	mg/kg	1	Metals-020 ICP- AES		24	<1	<1	0	105	85
Barium	mg/kg	1	Metals-020 ICP- AES		24	62	53	16	107	106
Iron	mg/kg	10	Metals-020 ICP- AES	[NT]	[NT]	[NT]	[NT]	[NT]	107	#

QUALITY CON	TROL: NEP	M screen	metals in soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date digested	-				44	18/05/2022	18/05/2022		[NT]	[NT]
Date analysed	-				44	21/05/2022	21/05/2022		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020 ICP- AES		44	6	6	0	[NT]	[NT]
Beryllium	mg/kg	1	Metals-020 ICP- AES		44	<1	<1	0	[NT]	[NT]
Boron	mg/kg	3	Metals-020 ICP- AES		44	5	6	18	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP- AES		44	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020 ICP- AES		44	17	19	11	[NT]	[NT]
Cobalt	mg/kg	1	Metals-020 ICP- AES		44	5	6	18	[NT]	[NT]
Copper	mg/kg	1	Metals-020 ICP- AES		44	12	14	15	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS		44	<0.1	<0.1	0	[NT]	[NT]
Lead	mg/kg	1	Metals-020 ICP- AES		44	21	21	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020 ICP- AES		44	7	9	25	[NT]	[NT]
Manganese	mg/kg	1	Metals-020 ICP- AES		44	270	260	4	[NT]	[NT]
Selenium	mg/kg	2	Metals-020 ICP- AES		44	<2	<2	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020 ICP- AES		44	31	36	15	[NT]	[NT]
Molybdenum	mg/kg	1	Metals-020 ICP- AES		44	<1	<1	0	[NT]	[NT]
Barium	mg/kg	1	Metals-020 ICP- AES	[NT]	44	52	65	22	[NT]	[NT]

QUALITY CON	TROL: NEP	M screer	n metals in soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date digested	-				68	18/05/2022	18/05/2022		[NT]	[NT]
Date analysed	-				68	21/05/2022	21/05/2022		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020 ICP- AES		68	5	5	0	[NT]	[NT]
Beryllium	mg/kg	1	Metals-020 ICP- AES		68	<1	<1	0	[NT]	[NT]
Boron	mg/kg	3	Metals-020 ICP- AES		68	26	31	18	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP- AES		68	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020 ICP- AES		68	27	29	7	[NT]	[NT]
Cobalt	mg/kg	1	Metals-020 ICP- AES		68	8	8	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020 ICP- AES		68	17	18	6	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS		68	<0.1	<0.1	0	[NT]	[NT]
Lead	mg/kg	1	Metals-020 ICP- AES		68	15	15	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020 ICP- AES		68	15	15	0	[NT]	[NT]
Manganese	mg/kg	1	Metals-020 ICP- AES		68	240	240	0	[NT]	[NT]
Selenium	mg/kg	2	Metals-020 ICP- AES		68	<2	<2	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020 ICP- AES		68	33	30	10	[NT]	[NT]
Molybdenum	mg/kg	1	Metals-020 ICP- AES		68	<1	<1	0	[NT]	[NT]
Barium	mg/kg	1	Metals-020 ICP- AES	[NT]	68	56	58	4	[NT]	[NT]

QUALITY CC	ONTROL: Mi	sc Inorg -	soil NEPM			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			19/05/2022	10	19/05/2022	19/05/2022		19/05/2022	
Date analysed	-			20/05/2022	10	20/05/2022	20/05/2022		20/05/2022	
Weak Acid Dissociable Cyanide	mg/kg	0.5	Inorg-014	<0.5	19	<0.5	<0.5	0	91	
Free Cyanide in soil	mg/kg	0.5	Inorg-014	<0.5	19	<0.5	<0.5	0	95	
Hexavalent Chromium, Cr6+	mg/kg	1	Inorg-024	<1	19	<1	<1	0	98	
Clay in soils <2um	% (w/w)		AS1289.3.6.3	[NT]	10	45			[NT]	
pH 1:5 soil:CaCl ₂	pH Units		Inorg-001	[NT]	10	7.7	7.6	1	101	
Total Organic Carbon (Walkley Black)	mg/kg	1000	Inorg-036	<1000	10	5400	5600	4	93	[NT]

QUALITY CONTROL: Misc Inorg - soil NEPM					Du	Spike Recovery %				
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	19	19/05/2022	19/05/2022		[NT]	[NT]
Date analysed	-			[NT]	19	20/05/2022	20/05/2022		[NT]	[NT]

QUALITY CONTROL: Cation exchange capacity						Du	Spike Recovery %			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	31477-55
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	[NT]		[NT]	[NT]	104	89
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	[NT]		[NT]	[NT]	102	98
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	[NT]		[NT]	[NT]	99	123
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	[NT]		[NT]	[NT]	102	110

QUALITY CC	NTROL: Me	tals in W	aters - Total			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			17/05/2022	[NT]	[NT]	[NT]	[NT]	17/05/2022	
Date analysed	-			17/05/2022	[NT]	[NT]	[NT]	[NT]	17/05/2022	
Arsenic - Total	mg/L	0.05	Metals-020 ICP- AES	<0.05	[NT]	[NT]	[NT]	[NT]	110	
Boron - Total	mg/L	0.2	Metals-020 ICP- AES	<0.2	[NT]	[NT]	[NT]	[NT]	81	
Barium - Total	mg/L	0.01	Metals-020 ICP- AES	<0.01	[NT]	[NT]	[NT]	[NT]	109	
Beryllium - Total	mg/L	0.01	Metals-020 ICP- AES	<0.01	[NT]	[NT]	[NT]	[NT]	110	
Cadmium - Total	mg/L	0.01	Metals-020 ICP- AES	<0.01	[NT]	[NT]	[NT]	[NT]	110	
Cobalt - Total	mg/L	0.02	Metals-020 ICP- AES	<0.02	[NT]	[NT]	[NT]	[NT]	106	
Chromium - Total	mg/L	0.01	Metals-020 ICP- AES	<0.01	[NT]	[NT]	[NT]	[NT]	109	
Copper - Total	mg/L	0.01	Metals-020 ICP- AES	<0.01	[NT]	[NT]	[NT]	[NT]	105	
Manganese - Total	mg/L	0.01	Metals-020 ICP- AES	<0.01	[NT]	[NT]	[NT]	[NT]	110	
Molybdenum - Total	mg/L	0.03	Metals-020 ICP- AES	<0.03	[NT]	[NT]	[NT]	[NT]	103	
Nickel - Total	mg/L	0.02	Metals-020 ICP- AES	<0.02	[NT]	[NT]	[NT]	[NT]	109	
Lead - Total	mg/L	0.03	Metals-020 ICP- AES	<0.03	[NT]	[NT]	[NT]	[NT]	108	
Selenium - Total	mg/L	0.1	Metals-020 ICP- AES	<0.1	[NT]	[NT]	[NT]	[NT]	104	
Zinc - Total	mg/L	0.02	Metals-020 ICP- AES	<0.02	[NT]	[NT]	[NT]	[NT]	105	
Mercury-Total	μg/L	0.05	Metals-021 CV-AAS	<0.05	[NT]	[NT]	[NT]	[NT]	102	[NT]

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

Quality Control	Quality Control Definitions						
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.						
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.						
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.						
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.						
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.						

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

Report Comments

Asbestos and clay analysed by ELS Sydney, report number 295760

METALS: # Percent recovery is not possible to report due to the high concentration of Manganese and Iron in the sample/s. However an acceptable recovery was obtained for the LCS.

The PQL has been raised for Cadmium for samples 29, 53, 64 and 70 due to the sample matrix requiring dilution.



DATA QUALITY ASSESSMENT SUMMARY

Report Details	
Envirolab Report Reference	<u>31477</u>
Client ID	FMG Engineering
Project Reference	281059 Environmental Soil Assessment
Date Issued	23/05/2022

QC DATA

All laboratory QC data was within the Envirolab Group's specifications except:

QC Specification Exceptions					
QC Type	Reference	Analysis	Comments		
Spike Recovery %	31477-1	Pentachlorophenol	Fails internal acceptance criteria		
Spike Recovery %	31477-46	Iron	Fails internal acceptance criteria		
Spike Recovery %	31477-46	Manganese	Fails internal acceptance criteria		
Spike Recovery %	31477-6	Iron	Fails internal acceptance criteria		
Spike Recovery %	31477-6	Manganese	Fails internal acceptance criteria		

See Report 31477-[R00] for QA/QC details

HOLDING TIME COMPLIANCE EVALUATION

All preservation / holding times (based on AS/ASPHA/ISO/NEPM/USEPA reference documents and standards) are compliant.

Certain analyses have had their recommended technical holding times elongated by filtering and/or freezing on receipt at the laboratory (e.g. BOD, chlorophyll/Pheophytin, nutrients and acid sulphate soil tests).

COMPLIANCE TO QC FREQUENCY (NEPM)

Internal laboratory QC rate complies with NEPM requirements (LCS/MB/MS 1 in 20, Duplicates 1 in 10 samples). Note, samples are batched together with other sample consignments in order to assign QC sample frequency.

QC Evaluation	
Duplicate(s) was performed as per NEPM frequency	\checkmark
Laboratory Control Sample(s) were analysed with the samples received	\checkmark
A Method Blank was performed with the samples received	\checkmark
Matrix spike(s) was performed as per NEPM frequency (Not Applicable for Air samples)	\checkmark

Refer to Certificate of Analysis for all Quality Control data.



Envirolab Services Pty Ltd ABN 37 112 535 645 - 002 25 Research Drive Croydon South VIC 3136 ph 03 9763 2500 fax 03 9763 2633 melbourne@envirolab.com.au www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details	
Client	FMG Engineering
Attention	Dharmsinh Rathod

Sample Login Details	
Your reference	281059 Environmental Soil Assessment
Envirolab Reference	31477
Date Sample Received	16/05/2022
Date Instructions Received	16/05/2022
Date Results Expected to be Reported	25/05/2022

Sample Condition	
Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	92 Soil, 2 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	17.1
Cooling Method	Icepack
Sampling Date Provided	Not Provided on the COC

Comments Nil

Please direct any queries to:

Pamela Adams	Chris De Luca
Phone: 03 9763 2500	Phone: 03 9763 2500
Fax: 03 9763 2633	Fax: 03 9763 2633
Email: padams@envirolab.com.au	Email: cdeluca@envirolab.com.au

Analysis Underway, details on the following page:



Sample ID	VTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	Speciated Phenols in Soil	OCP in Soil - NEPM	OP in Soil	PCBsin Soil	Synthetic Pyrethroids - NEPM	Triazine Herbicides in Soil	NEPM screen metals in soil	Weak Acid Dissociable Cyanide	Free Cyanide in soil	Hexavalent Chromium, Cr6+	Clay in soils <2um	pH 1:5 soil:CaCl2	Total Organic Carbon(Walkley Black)	Cation exchange capacity	Asbestos ID - soils	Metals in Waters -Total	On Hold
BH01_0.06-0.2	✓	✓	✓	\checkmark	\checkmark	✓	\checkmark	✓	✓	\checkmark	✓	✓	✓							
BH01_0.5-0.7					✓	✓														
BH01_0.8-1.0										\checkmark										
BH01_1.3-1.5																				\checkmark
BH01_1.5-1.7																				\checkmark
BH01_1.8-2.0										\checkmark										
BH02_0.06-0.2																				\checkmark
BH02_0.2-0.4	\checkmark	\checkmark	\checkmark							\checkmark										
BH02_0.45-0.65																				\checkmark
BH02_1.4-1.6										✓				√	✓	✓	✓			
BH02_1.8-2.0																				\checkmark
BH03_0.1-0.3					✓	\checkmark														
BH03_0.3-0.45										✓										
BH03_1.0-1.2	✓	\checkmark	✓							✓										
BH03_1.3-1.5																				\checkmark
BH03_1.8-2.0										✓										
BH04_0.0-0.15	✓	✓																		
BH04_0.15-0.3					\checkmark	\checkmark														
BH04_0.5-0.7	✓	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	✓	\checkmark	\checkmark	\checkmark	✓	✓	✓							
BH04_1.0-1.2																				\checkmark

Envirolab Services Pty Ltd



Sample ID	VTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	Speciated Phenols in Soil	OCP in Soil - NEPM	OP in Soil	PCBsin Soil	Synthetic Pyrethroids - NEPM	Triazine Herbicides in Soil	NEPM screen metals in soil	Weak Acid Dissociable Cyanide	Free Cyanide in soil	Hexavalent Chromium, Cr6+	Clay in soils <2um	pH 1:5 soil:CaCl2	Total Organic Carbon(Walkley Black)	Cation exchange capacity	Asbestos ID - soils	Metals in Waters -Total	On Hold	
BH04_1.4-1.6																				✓	
BH04_1.8-2.0										✓											
BH05_0.0-0.15																				\checkmark	
BH05_0.2-0.4	✓	\checkmark	✓							✓											
BH05_0.7-0.9										✓											
BH05_1.0-1.2																				✓	
BH05_1.5-1.7										✓											
BH05_1.8-2.0																				\checkmark	
BH06_0.0-0.2	\checkmark	\checkmark	\checkmark							\checkmark											
BH06_0.5-0.7																				\checkmark	
BH06_1.1-1.3																				\checkmark	
BH06_1.4-1.6										\checkmark											
BH06_1.8-2.0																				\checkmark	
BH07_0.0-0.2	\checkmark	\checkmark	\checkmark							\checkmark											
BH07_0.4-0.6										\checkmark											
BH07_0.8-1.0																				\checkmark	
BH07_1.5-1.7										\checkmark											
BH07_1.8-2.0																				✓	
BH08_0.0-0.2	✓	\checkmark	✓							\checkmark											
BH08_0.3-0.5																				\checkmark	

Envirolab Services Pty Ltd



Sample ID	VTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	Speciated Phenols in Soil	OCP in Soil - NEPM	OP in Soil	PCBsin Soil	Synthetic Pyrethroids - NEPM	Triazine Herbicides in Soil	NEPM screen metals in soil	Weak Acid Dissociable Cyanide	Free Cyanide in soil	Hexavalent Chromium, Cr6+	Clay in soils <2um	pH 1:5 soil:CaCl2	Total Organic Carbon(Walkley Black)	Cation exchange capacity	Asbestos ID - soils	Metals in Waters -Total	On Hold
BH08_1.0-1.2										✓										
BH08_1.2-1.4																				✓
BH08_1.8-2.0																				✓
BH09_0.0-0.2	✓	✓	✓							✓										
BH09_0.2-0.4																				✓
BH09_0.8-1.0										✓										
BH09_1.6-1.8																				✓
BH09_1.8-2.0																				✓
BH10_0.0-0.2					\checkmark	\checkmark														
BH10_0.4-0.6																				\checkmark
BH10_0.8-1.0	\checkmark	\checkmark	\checkmark							✓										
BH10_1.8-2.0																				\checkmark
BH11_0.0-0.2	\checkmark	\checkmark	✓							\checkmark										
BH11_0.5-0.7																				\checkmark
BH11_1.2-1.4										\checkmark				√	✓	✓	\checkmark			
BH11_1.5-1.7																				\checkmark
BH11_1.8-2.0										\checkmark										
BH12_0.0-0.2	1	\checkmark																		
BH12_0.4-0.6	\checkmark	\checkmark	✓							\checkmark										
BH12_0.6-0.8																				\checkmark

Envirolab Services Pty Ltd



Sample ID	vTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	Speciated Phenols in Soil	OCP in Soil - NEPM	OP in Soil	PCBsin Soil	Synthetic Pyrethroids - NEPM	Triazine Herbicides in Soil	NEPM screen metals in soil	Weak Acid Dissociable Cyanide	Free Cyanide in soil	Hexavalent Chromium, Cr6+	Clay in soils <2um	pH 1:5 soil:CaCl2	Total Organic Carbon(Walkley Black)	Cation exchange capacity	Asbestos ID - soils	Metals in Waters -Total	On Hold
BH12_0.9-1.1										✓										
BH12_1.5-1.7																				✓
BH12_1.8-2.0																				✓
BH13_0.0-0.2	\checkmark	✓	✓							✓										
BH13_0.4-0.6																				\checkmark
BH13_0.6-0.8										✓										
BH13_1.2-1.4																				\checkmark
BH13_1.8-2.0										\checkmark										
BH14_0.0-0.2	\checkmark	\checkmark																		
BH14_0.2-0.3										\checkmark										
BH14_0.4-0.6	\checkmark	\checkmark	\checkmark							\checkmark										
BH14_0.6-0.8																				\checkmark
BH14_1.0-1.2																				\checkmark
BH14_1.6-1.8										✓										
BH14_1.8-2.0																				\checkmark
BH15_0.0-0.15	✓	✓																		
BH15_0.15-0.35																				\checkmark
BH15_0.5-0.6	✓	✓	✓	\checkmark	✓	✓	✓	\checkmark	\checkmark	✓	✓	✓	✓							
BH15_0.6-0.8										\checkmark										
BH15_1.2-1.4																				\checkmark

Envirolab Services Pty Ltd



Sample ID	vTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	Speciated Phenols in Soil	OCP in Soil - NEPM	OP in Soil	PCBsin Soil	Synthetic Pyrethroids - NEPM	Triazine Herbicides in Soil	NEPM screen metals in soil	Weak Acid Dissociable Cyanide	Free Cyanide in soil	Hexavalent Chromium, Cr6+	Clay in soils <2um	pH 1:5 soil:CaCl2	Total Organic Carbon(Walkley Black)	Cation exchange capacity	Asbestos ID - soils	Metals in Waters -Total	On Hold
BH15_1.8-2.0	✓	\checkmark	✓							✓										
GS01																				\checkmark
GS02					✓	✓				✓										
PACM - 01																		✓		
PACM - 02																		\checkmark		
PACM - 03																		\checkmark		
PACM - 04																		\checkmark		
PACM - 05																		\checkmark		
QA01										\checkmark										
QA03																				✓
QA04																				\checkmark
QA05										\checkmark										
R01																			✓	
R02																			✓	

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

Additional Info

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

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

Envirolab Services Pty Ltd



Envirolab Services Pty Ltd ABN 37 112 535 645 - 002 25 Research Drive Croydon South VIC 3136 ph 03 9763 2500 fax 03 9763 2633 melbourne@envirolab.com.au www.envirolab.com.au

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

		ENV	RONMENTAL ANA	LYSIS REQUEST			-	V	BOR	ATC	RY	JETA	LS	100	araa ya ku	ŅΛKO.	MO.KE	\$2,1997	<u>1265</u>	en es a com
			-	Project Title: Environmental Soil Ass	essment]ı	Prima	ary L	abor	ator	y: Em	/iro L	ab						
				Morphettville Racecour	se Morphe	tt						÷							l	· .
ENCINE				Site Address: Road, MORPHETTVILLE	, SA 5043		ļ	Labo	rator	y Qi	ote	Ref:								
ENGINE	EEKING		FN	IG Job Number : ²⁸¹⁰⁵⁹]i	Labo	rator	y Ba	tch F	Ref:								
							1	PO13	9519	9						5 D/	YS (sta	ndard)		
	Obarmainh Rathod	··· 6. =	-	Results to: 'FMG Environmental	~ ~~*			Seco	ndar	y Lal	porat	tory:	ALS					_		
lequested by:	Dhannsinn Raulou			Direct Phone: 8132 6662			li	Labo	rator	ry Ba	tch I	Ref:			EXPE	CTED R	EPORTI	NG DAT	Ε	
irect Phone:	0411 401 135		· · ·	Email: lab.reports@fmgend	ineerina.	- com.	au	PO13	9520	0										
mail:	lab.reports@imger	ngineering.com.o	<u>v</u>				-			_										
		SAMPLE	DESCRIPTION										- 		- 					1
					ି ହ										l '					
					5		1								•					
					n 3 neta		王	- I.								l		1 '		
Date Sampled	Bore-hole	Depth /m	Sample Type	Comments	atio	ŝ	E		<u> </u>	. =								1		
	1				ndin Udir	-	Z		1. j	i jä		1		1						
					E P	lete	tas	e li	Ξlä	5 B										
		0.05.0.2	F III	Gravelly sand			1			+					<u> </u>			[
1	BH01_0.06-0.2	0.00-0.2	Fill	Silty sand					1	Γľ_							<u> </u>			
4	BH01_0.5-0.7	0.5-0.1	Natural	Silty sand		1]							. <u> </u>	 _	
5	BHUL_0.8-1.0	13.15	Natural	Clayey sand											<u> </u>			1	<u> </u>	
<u>4</u>	BH01_1.3-1.3	1.5-1.7	Natural	Sandy clay										_ _	<u> </u>	 				
S IS		1820	Natural	Sandy clay		1					<u> </u>				.l			<u> </u>	 _	
201	BH07_0.06-0.2	0.06-0.2	Fill	Gravelly sand	Τ	Γ.						$ \downarrow \downarrow$		_				┦╼──	<u> </u>	
Ť	BH02 0 2-0 4	0.2-0.4	Fill	Quarry sand	1					4-	_			_ _	_	·l			<u> </u>	
6	BH02 0 45-0 65	0.45-0.65	Fill	Gravelly silty sand										_						-
-1 1	BH02 1.4-1.6	1.4-1.6	Natural	Silty sand				11		_		\vdash		+		<u> </u>				-
10	BH02 1.8-2.0	1.8-2.0	Natural	Sandy clay			_		_		_	╏──┤╸					+			-
12	BH03 0.1-0.3	0,1-0.3	Fill	Sandy gravel		<u> </u>				<u>1 </u>		\vdash				+	+			-
12	BH03 0.3-0.45	0.3-0.45	Fill	Gravelly silty sand		1		┞			+	! — !		+-		+				4
า่ง	BH03 1.0-1.2	1.0-1.2	Natural	Silty sand	1	ļ	<u> </u>	┝	_ -	+							+-			-
	BH03 1,3-1.5	1.3-1.5	Natural	Silty sand				 +			+	┥─┤				+ -	+	+	-	-
10	BH03_1.8-2.0	1.8-2.0	Natural	Sandy clay		1		┼─╂	+	_ -	+	↓ →			+	+		+ -		-
i i i	HO4_0.0-0.15	0.0-0.15	Fill	Gravelly silty sand	_		+	\vdash	4			┼─╊		⊢ ├-	+	+	+	1	<u> </u>	1
1	BH04_0.15-0.3	0.15-0.3	FIII	Sandy gravel	<u> </u>	+-	+ -	╁━─┼	_ <u> </u> _	4		+		\vdash		+	+	+	<u> </u>	-
^ن ا (BH04_0.5-0.7	0.5-0.7	Natural	Silty sand	_	-	<u>+-</u>	+	-+-	-+-	+-	╆━┦			+	+	+	+	1	1
2	C BH04_1.0-1.2	1.0-1.2	Natural	Silty sand		┨━─	-			-+-		+		┝┼╼	1.	1.	1	1	1	1.
2	BH04_1.4-1.6	1,4-1.6	Natural	Silty sand		-				+		+-+				+ -		۰ ۱	1	
- 11	BH04_1.8-2.0	1.8-2.0	Natural	Sandy clay		+ 1	+	+		-+-	-1-	┾╍┥	-	⊢¦−	+	1	1	+	5	Envirolah Constrat
· 23	BH05_0.0-0.15	0.0-0.15	FIN	Sandy gravel	<u> </u>	+		╁━┼	-+-	-+-		<u>+ +</u>		Η	-i	1-	-	0000		25 Research Orbu
1 1	BH05_0.2-0.4	0.2-0.4	Fill	Gravolly slity sand		1	+	+	<u> </u>			+	· . · ·		<u> </u>			- CHWIR	artij	Crovdon South VIC 3136
2	S BH05_0.7-0.9	0.7-0.9	Natural	Silty sand	- -	┼┶	+	+-+	+	- -	- -	+		- -	+	1-		┱╲═	7	Ph: (03) 9763 2500
2	BH05_1.0-1.2	1.0-1.2	Natural	Sitty sand		+		+	╧┼┼	-i-		1-1		t †	-1	1		Job	O:	4117-
27	A BH05_1.5-1.7	1.5-1.7	Natural	Sitty sand		+ *	+	┥┥		-+-			_		1	-		╡╧╧	T.]514+7.
2	BH05_1.8-2.0	1.8-2.0	Natural	Sandy clay	1 1	+		┼╼┤	+	-	-1-	┥─┤				·····-			-	1. John
\cdot \hat{v}	BH06_0.0-0.2	0.0-0.2	FUI	Clavery salu	·	+	+	+	-+	—†-	· • • • •	1-1		<u>† † `</u> `	-		-	uate l	ecei	
1. 21	D BH06_0.5-0.7_	0.5-0.7	Natural	Clayey Sitty Saliti		-		ىلىد					_	نصالحه	•			lime	Recei	ved & HOan
-																		Recei	ved B	v JAS

. .

14-1

. . .

Temp, Cool Ambient Cooling: (colleopact Security intact/Sroken/None
EncineError Project Title: Environmental Sol Assessment. Site Address Academic Morphetulle Assessment. Morphetulle Assessment. Site Address Academic Morphetulle FMG Job Number: 20030 primary Laboratory: Enviro Laboratory: Enviro Laboratory: Enviro Laboratory: Enviro Laboratory: Enviro Laboratory: Enviro Batch Ref: Dote: Phone Dispetified Command 57.000 Requested by: Dispet Phone Dispetified Command Results to: Baberatory: Batch Ref: Dispet Phone Dispetified Command Results to: Baberatory: Batch Ref: Dispet Phone Dispetified Command Source Tools: Baberatory: Batch Ref: Dispetified Command Source Tools: Baberatory: Batch Ref: Dispetified Command Source Tool: Baberatory: Batch	· ·		ENVI	IRONMENTAL ANA	LYSIS REQUEST			L.	<u> </u>	<u> </u>	KAL	UKY	μE.	мп	LJ (877	- 1 (P	2/7 3/ 2		1000	CAR.
FMG Job Number : 281039 Laboratory Batch Ref: Secondary Laboratory: ALS Laboratory: AL	ENGINE	EERING		-	Project Title: Environmental Soll Morphettville Race Read, MORPHETTY	Assessment course Morphe /ILLE, SA 5043	tt	F	Prim:	ary rato	abo ry Q	rato uote	e Re	Env f:	iro l	ab					
Requested by: Divert Proc. Proc. 100 and 100				FN	MG Job Number : ²⁸¹⁰⁵⁹				abo	rato	ry B	atch	Ref	F:			-	5 DA	rS (stan	dard)	
Reguested by: Dotartion Rathed Result to: MM EMPORTMAIL Laboratory Batch Ref. Description Deter Proce 041461135 init 26662										u qa 1 G G G	is Nila	har	ator	v: A							
SAMPLE DESCRIPTION Sample Type Comments Served of generating to the served of generating the served of generits of generits of generating the served of generits of generati	Requested by: Direct Phone: Email:	Dharmsinh Rathod 0411 461 135 <u>Jab.reports@fmgen</u> g	gineering.com.a	<u>.</u>	Results to: FMG Environmental Direct Phone: 8132 6662 Email: Iab.reports@fmg	nengineering.		au l	abo PO13	rato 9952	ory B	atch	Re	f:			EXPE	CTED R	PORTIN	IG DAT	E
Date Sampled Bore-hole Depth /m Sample Type Comments Image of the state of the	r		SAMPLE	EDESCRIPTION				<u> </u>		_			1	—							
31 BH06_11-1.3 1.1-1.3 Natural Silly sand 1 32 BH06_14.16 1.4.16 Natural Sandy day 1 <th>Date Sampled</th> <th>Bore-hole</th> <th>Depíh <i>i</i>m</th> <th>Sample Type</th> <th>Comments</th> <th>Combination 3 (including metals 15)</th> <th>Metals 15</th> <th>Basic NEPM HIL</th> <th>EIL</th> <th>TRH/BTEX</th> <th>OCP/UPP</th> <th></th>	Date Sampled	Bore-hole	Depíh <i>i</i> m	Sample Type	Comments	Combination 3 (including metals 15)	Metals 15	Basic NEPM HIL	EIL	TRH/BTEX	OCP/UPP										
3.1 BH06, 1.4.1.6 Natural Silly sand 1 <th1< th=""> 1</th1<>	31	BH06_1.1-1.3	1.1-1.3	Natural	Silty sand		_		-+				+	+-	_						<u> </u>
3-75 BH05 1.8-2.0 Natural Sandy Clay	32	BH06_1.4-1.6	1.4-1.6	Natural	Silty sand		1	-+		- +		- -		╉							<u>├</u> ──
14 BH07_0.0-0.2 0.0-0.2 Fill Gravely sand 1	33	BH06_1.8-2.0	1.8-2.0	Natural	Sandy clay					-+-		-1-		┥─	_						
S Bitor_0.4-0.6 Fill Sitty sand I 26 Bitor_0.8-1.0 0.8-1.0 Natural Sandy clay 1 I	1 34	BH07_0.0-0.2	0.0-0.2	Fill	Gravelly sand			├{		+	-		+	┼─	-						<u> </u>
26 BH07_0.8-1.0 0.8-1.0 Natural Clayer sity Sand 1	35	BH07_0.4-0.6	0.4-0.6	<u> </u>	Silty sand		╞╌					+		╋			<u> </u>				
3-7 BH07_15-1.7 Natural Sandy Clay 1 <th1<< td=""><td>36</td><td>BH07_0.8-1.0</td><td>0.8-1.0</td><td>Natu<u>ral</u></td><td>Clayey slity sand</td><td></td><td>1</td><td></td><td></td><td>-+</td><td>+</td><td>- -</td><td></td><td></td><td></td><td></td><td></td><td><u> </u></td><td></td><td></td><td>t</td></th1<<>	36	BH07_0.8-1.0	0.8-1.0	Natu <u>ral</u>	Clayey slity sand		1			-+	+	- -						<u> </u>			t
5/5 BH07_18-2.0 1.8-2.0 Natural Stady Glay 1 <th1< th=""> <th1< th=""> 1 <</th1<></th1<>	3	BH07_1.5-1.7	1.5-1.7	Natural	Sandy clay		╞╧╴						+	┼╸	_						
361 BH08_0.0-0.2 0.0-0.2 Fill Craveriy sand 1	30	BH07_1.8-2.0	1.8-2.0	Natural	Sandy clay		-	-		- +		-		+				-			
4C BH08_0.3.0.5 0.3.0.5 Natural Clayey sity sand 1 <td>39</td> <td>BH08_0.0-0.2</td> <td>0.0-0.2</td> <td> Fill</td> <td>Gravely sand</td> <td><u> </u></td> <td>-</td> <td></td> <td>_</td> <td>-</td> <td>-</td> <td>-</td> <td>+</td> <td>╼┼╾</td> <td></td> <td>┝╍╽╌──</td> <td>\vdash</td> <td>i</td> <td></td> <td></td> <td></td>	39	BH08_0.0-0.2	0.0-0.2	Fill	Gravely sand	<u> </u>	-		_	-	-	-	+	╼┼╾		┝╍╽╌──	\vdash	i			
41 BH08_10-1.2 1.0-1.2 Natural Clayey Silly Sand 1 <td>40</td> <td>BH08_0.3-0.5</td> <td>0.3-0.5</td> <td>Natural</td> <td>Clayey silty sand</td> <td></td> <td>1</td> <td>╞─┤</td> <td>-+</td> <td></td> <td>-+</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>+</td> <td></td> <td></td> <td>Г<u> </u></td> <td></td>	40	BH08_0.3-0.5	0.3-0.5	Natural	Clayey silty sand		1	╞─┤	-+		-+	-					+			Г <u> </u>	
42 BH08_1.2.1.4 1.2-1.4 Natural Clayey sity sand	41	BH08_1.0-1.2	1.0 <u>-1.2</u>	Natural	Clayey silty said		<u> '</u>			-+				╅			-	<u> </u>			
H3 BH08_1.8-2.0 1.8-2.0 Natural Sandy Guy 1 <th1< th=""> <th1< th=""> <th1< th=""> <th< td=""><td>· 47</td><td>BH08_1.2-1.4</td><td>1.2-1.4</td><td>Natural</td><td>Clayey silly sand</td><td></td><td>+</td><td></td><td></td><td>-+</td><td>+</td><td>-[-</td><td></td><td>+-</td><td></td><td></td><td></td><td><u> </u></td><td></td><td></td><td>1</td></th<></th1<></th1<></th1<>	· 47	BH08_1.2-1.4	1.2-1.4	Natural	Clayey silly sand		+			-+	+	-[-		+-				<u> </u>			1
Image: state of the s	43	BH08_1.8-2.0	1 <u>.8-2.0</u>	Natural	Sandy clay						-+			+							
BH09_0.2-0.4 0.2-0.4 Fill Stity sand 1 - <th< td=""><td>ય્પ</td><td>BH09_0.0-0.2</td><td>0.0-0.2</td><td>Fill</td><td>Sandy gravel</td><td></td><td>-</td><td></td><td>-</td><td>-+</td><td></td><td></td><td>+-</td><td>╈</td><td></td><td></td><td></td><td></td><td>1</td><td></td><td>1</td></th<>	ય્પ	BH09_0.0-0.2	0.0-0.2	Fill	Sandy gravel		-		-	-+			+-	╈					1		1
46 BH09_0.8-1.0 0.8-1.0 Natural Clayey silty sand 1 1 1 1 12-13/05/200246 BH09_1.6-1.8 1.6-1.8 Natural Clayey silty sand 1 <td< td=""><td>45</td><td>BH09_0.2-0.4</td><td>0.2-0.4</td><td>FIK</td><td>Sitty sand</td><td>-</td><td>1</td><td></td><td>_</td><td></td><td>-</td><td></td><td>+</td><td>- -</td><td></td><td>++</td><td>1</td><td></td><td></td><td></td><td></td></td<>	45	BH09_0.2-0.4	0.2-0.4	FIK	Sitty sand	-	1		_		-		+	- -		++	1				
47 BH09_1.6-1.8 1.6-1.8 Natural Clayey stiry sand 1 1 1 12-13/05/2024 BH09_1.8-2.0 1.8-2.0 Natural Sandy clay 1	-	BH09_0.8-1.0	0.8-1.0	Natural	Clayey sitty sand		- '-	·'		-		-1-		+		+		1	1		\Box
12-13/05/202 BH09_1.8-2.0 1.8-2.0 Natural Sandy clay 1	47	BH09_1.6-1.8	<u>1.6-1.8</u>	Natural			1	╂		- +			-1-	+	_	\square			1		
Izerisdo Addita BH10_0.0-0.2 0.0-0.2 Fill Gravely Safu Image: Clayey Sity sand Image: Clayey Sity Sand <thimage: clayey="" sand<="" sity="" th=""> <thimage: clayey="" s<="" td=""><td>42-42/05/2022</td><td>BH09_1.8-2.0</td><td>1.8-2.0</td><td>Natural</td><td>Sandy clay</td><td>_ </td><td></td><td></td><td></td><td>-+</td><td>1</td><td></td><td></td><td>-†-</td><td></td><td>++-</td><td>1</td><td>1</td><td>1</td><td></td><td></td></thimage:></thimage:>	42-42/05/2022	BH09_1.8-2.0	1.8-2.0	Natural	Sandy clay	_				-+	1			-†-		++-	1	1	1		
SO BH10_0.4-0.6 0.4-0.6 Fill Sitty sand 1	12-13/03/2024	BH10_0.0-0.2	0.0-0.2	Fill	Gravely salu		-	+	┝╼╁	-	<u> </u>		╈	+				1	1		
S1 BH10_0.8-1.0 0.8-1.0 Natural Clayey sity sand 1 C2 BH10_1.8-2.0 1.8-2.0 Natural Sandy clay 1 </td <td>50</td> <td>BH10_0.4-0.6</td> <td>0.4-0.6</td> <td>Fill</td> <td>Sitty said</td> <td>; (</td> <td></td> <td></td> <td></td> <td>-+</td> <td>+</td> <td></td> <td>-1-</td> <td>-</td> <td></td> <td><u> -</u> </td> <td></td> <td></td> <td></td> <td>,</td> <td>1</td>	50	BH10_0.4-0.6	0.4-0.6	Fill	Sitty said	; (-+	+		-1-	-		<u> -</u>				,	1
No. BH10_1.8-2.0 1.8-2.0 Natural Sandy Clay Image: Clay and Clay a	1 <u> </u>	BH10_0.8-1.0	0.8-1.0	Natural	Clayey sitty sand		+	+	├ ── }	-	-+			1			1	1.1			
\$3 BH11_0.0.0.2 0.0-0.2 Fill . Gradity sand 1	57	BH10_1.8-2.0	1.8-2.0	Natural	. Sandy cray			+		-+				-†-			1	1	1	1	1
SU BH11_0.5-0.7 0.5-0.7 Fill Sity sad 1 <th1< th=""> 1 <th1< th=""> <th1< <="" td=""><td>· S</td><td>BH11_0.0-0.2</td><td>0.0-0.2</td><td>Fill</td><td>Gravely sand</td><td><u> </u></td><td> </td><td>+</td><td>i—i</td><td></td><td>-+</td><td></td><td>-1-</td><td>-[-</td><td></td><td><u> </u>-</td><td>1</td><td></td><td>1</td><td>T</td><td>1</td></th1<></th1<></th1<>	· S	BH11_0.0-0.2	0.0-0.2	Fill	Gravely sand	<u> </u>	 	+	i—i		-+		-1-	-[-		<u> </u> -	1		1	T	1
Sb BH11_1.2-1.4 1.2-1.4 Natural Clayey sity said Image: Clayey sity said Ima	ŞL	EH11_0.5-0,7	0.5-0.7	Fill	Sitty sad			<u>.</u>	1			<u> </u>	+	1		11		1-	1	1	ī
SG BH11_1.5-1.7 1.5-1.7 Natural Crayey surves 1	i S	S BH11_1.2-1.4	1.2-1.4	Natural	Clayey sitty sand	·	+-	1					-	╧		11.	1			1	1
Site BH11_1.8-2.0 1.8-2.0 Natural Sandy day 1 <th1< th=""> <th1< th=""> <th1< th=""> <</th1<></th1<></th1<>	- S£	BH11_1.5-1.7	1,5-1.7	Natural	Clayey sury sand		11	t—	<u> </u>	-		-†	-	+		11	- <u> </u>	1	1	1	<u> </u>
Site BH12_0.0-0.2 0.0-0.2 Fill Sancy graver Image: Constraint of the state of t	· _ S'	T BH11_1.8-2.0	1.8-2.0	Natural	Sandy cray		+-	+	$\left - \right $	-	- †	-+-	+	-+-		† - †	-		1		1
\$1 BH12_0.4-0.6 0.4-0.6 Fill Surg sarro 1 <th1< th=""> 1 <th1< th=""> 1 <th1< th=""> 1 <th1< th=""> <th1< <="" td=""><td>S</td><td>BH12_0.0-0.2</td><td>0.0-0.2</td><td>Fill</td><td>Sandy graver</td><td></td><td>+</td><td>+</td><td>\vdash</td><td>-</td><td>+</td><td>-†-</td><td>+</td><td>-†-</td><td>-</td><td> - -</td><td>+</td><td>1</td><td>1</td><td>1</td><td></td></th1<></th1<></th1<></th1<></th1<>	S	BH12_0.0-0.2	0.0-0.2	Fill	Sandy graver		+	+	\vdash	-	+	-†-	+	-†-	-	 - -	+	1	1	1	
60 BH12_0.6-0.8 0.6-0.8 Natural Clayey sitty sairu	S'	BH12_0.4-0.6	0.4-0.6	Fill	- Sitty sand		+	+	+-				1	÷		++		1	1	1	T
	16	0 BH12_0.6-0.8	0.6-0.8	Natural	Crayey sitty saild		_		ــــــا		ـــــــــــــــــــــــــــــــــــــ		<u>_</u>				-4	<u> </u>			

				ENDI		IYSIS REQUEST	•			L	ABO	RATO	DRY	DET/	ALS: 1	di di	si _s τŵ	<u>RNARO</u>	UNDR	QUIRED	1. A.
	•			EINAL					_ [n_:		-	-	ne Fr	wiro I	 ah					
•	-		A. 1965			Project Title: Environmental Soil Ass	essment		ľ	Prim	aryı	abo	ratu	IY. E	IAUO I						
		E- 94				Morphettville Racecour	ise Morph	ett		Labo		n/ ()	inte	Rof						•	
		ENGINE	ERING			Road, MORPHEITVILLE	:, SA 5043				nato			0.4		'					
					FN	AG Job Number: 281059				Laboratory batch Net.						5 DAYS (standard)					
									-	Seco	ndar	v La	bora	torv	: ALS	-					
		Requested by:	Dharmsinh Rathod	•	Ĩ	Results to: FMG Environmental			í	Laho	irato	rv Ba	atch	Ref:			EXP	ECTED I	REPORT	ING DA	TE
		Direct Phone:	0411 461 135	_		Direct Phone: 8132 6662	nineering		สบ	PO1	3952	0					_				
		Email:	lab.reports@fmgen	gineering.com.at	7	Email: <u>Jap.repuris@inigens</u>	Juneening		~~ L							-					
		·			ACCORDING															-	
					DESCRIPTION		G		Ì				Г						1		1
							5														
							E E	1 1	Ħ					1			1		1		
		Date Sampled	Bore-hole	Depth /m	Sample Type	Comments		s.	EPN		<u>ڪ</u> ا ۽	2 2						1			
							l in the second s	15	Ň		8						1				
							E C	Metz	3as)	붋	폰 동	as l de									
					Natural	Clavey silty sand		1		1-1											
		1 PJ	BH12_0.9-1.1	0.9-1.1	Natural	Clayey silty sand			-]			<u> </u>	<u> </u>
		62	BH12_1.5-1.7	1.5-1./	Natural	Sandy clay	1		<u> </u>					1		1	<u> </u>	_		_	
		60	BH12_1.8-2.0	1.8-2.0	Fill	Sandy gravel	1	-			1					Ц_					<u> </u>
		6	BH13_0.0-0.2	0.0-0.2		Silty sand		Τ_					_ _	<u> </u>		11					
		29	BH13_0.4-0.6	80-90	' Natural	Clayey slity sand		1						_		<u> -</u>					+
			BH13_0.6-0.0	1 2-1 4	Natural	Clayey silty sand			<u> </u>								_		+-		+ -
		6	BH13_1.2*1.4	1.8-2.0	Natural	Sandy clay		1				_	_ _	<u> </u>	<u> </u>	┢╌┠─		+	+		
			BH14 0 0-0 2	0.0-0.2	Fill	Gravelly sand			<u> </u>		1	_				┼┼╾					+
			BH14 0 2-0.3	0.2-0.3	Fill	Sand		1	_					1-		╀┼╴			+-		+
		1 2	BH14 0.4-0.6	0.4-0.6	Fill	Gravelly silty sand	1_1_	_	<u> </u>			_			╞───	┼╾┼╴	+-			-	+
		1 7	BH14 0.6-0.8	0.6-0.8	Fitt	Silty sand					-+		+	+		╎┝	+-			+	+
		3	BH14 1.0-1.2	1.0-1.2	Natural	Clayey silty sand	_	+-			┝━╉		- -			++			+-		+
		1 3	BH14 1.6-1.8	1.6-1.8	Natural	Clayey silty sand		-1-		+	\vdash					╆╂╴	+-		+		+
		1 7.	BH14_1.8-2.0	1.8-2.0	Natural	Sandy clay					4		+		┼━──	┼┼╸					
		ી ને	BH15_0.0-0.15	0.0-0.15	Fill	Gravelly sand			-	-	-	-	-1-	-		ti	-1		<u> </u>	-1	-
		1 7	BH15_0.15-0.35	0,15-0,35	- <u>FIII</u>	Gravelly silty sand		+	1		╞─┤	-+-					-			-1	
		1 A	BH15_0.5-0.6	0.5-0.6	FII1	Clayey sand		- 4	1-	╈					+	++-		-	1-		
		3	BH15_0.6-0.8	0.6-0.8	Natural	Clayey silty sand		+ •		-	┼─┼	-+-	- -	1							
		1 8	O BH15_1.2-1.4	1.2-1.4	Natural	Clayey sitty sand	1-1			+-				-!					- 		
		8	BH15_1.8-2.0	1.8-2.0	Natural	Sandy clay			-{					-+	1	T					<u> </u>
		8	2 <u>GS01</u>	0.0-0.30	Fill	Sand		11	╌┼━╌╴	+	1 1	T.		-	+	1-1-			_	1	
• •		5	GS02	0.0-0,30	F11	Sanu		- 		- -		<u> </u>	1	1.		11		<u> </u>			
		8	4 PACM - 01	0,0-0,10	Fill	Grovely sand		-{				- i	1		1	ii		Ĺ		1	<u> </u>
		8	ST PACM - 02	0.0-0.10	Fill '	Grevely sand		+-	+-	-1-		. †	1	1-							
		8	6 PACM - 03	0.0-0.10		Grevely sand		+-	-	-†-	1-1		1								
		. 8	7 PACM - 04	0.0-0.10	En En	Grevelly sand		+-	1-				1	_							·
-		8	6 PACM - 05	0.0-0.10	Ogality			1	1-		· ·										
•		8	1 <u>QAU1</u>		Quality			1	F	orw	ard t	o AL	S	<u> </u>				<u> </u>		_ــلـــ	<u>نى ب</u>
		-	QA02					_						. –							

1.25

.

Project Title: Environmental Soil Assessment Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043 Primary Laboratory: Enviro Lab Laboratory Quote Ref: Laboratory Batch Ref: PO139519 Steaddress: FMG Lob Number : 281059 Secondary Laboratory: ALS Direct Phone: 0411 461 135 Direct Phone: B132 6662		ENVIRONMENTAL ANALYSIS REQUEST		LABORATORY DETAILS	TURNAROUND REQUIRED
	Requested by: Dharmsinh Rathod Direct Phone: 0411 461 135	Project Title: Site Address: FMG Job Number : Results to:]Direct Phone:	Environmental Soil Assessment Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043 281059 FMG Environmental 8132 6662 Lab reports@fmgengineering.com.au	Primary Laboratory: Enviro La Laboratory Quote Ref: Laboratory Batch Ref: PO139519 Secondary Laboratory: ALS Laboratory Batch Ref: PO139520	5 DAYS (standard) EXPECTED REPORTING DATE

		SAMPL	E DESCRIPTION												11	- 1	- 1	- 1	1		1
Date Sampled	Bore-holo	Depth /m	Sample Type	Comments	Combination 3 (Inctuding metals 15)	Metals 15	Basic NEPM HIL	EIL	TRH / BTEX	OCP/OPP	Asbestos ID										
90	OA03		Quality			-		! '	1				_		++						1
) ଜାଁ	0404		Quality		<u> </u>	<u> </u>		–	<u> </u>						-+-+		-+				
02	0405		Quality			1		L	L						┼╇	+	-+				
	0006		Quality			1	F		ard I	o A	LS				┿	-+-		_			
ah			Rinsato			1		<u> </u>	<u> </u>	 '		I.—			-++		<u>+</u>	_			
GIL			Rinsate			1					L			L _	++		+		<u> </u>	<u> </u>	
<u></u>	<u>Kuz</u>		SAMPLE HA	NDLING - STEP 2	13	26	3	2	7	5	5	0	0		10	0			0	<u> </u>	
Relinquished by: Dharmsinh Rathod Date\ 13-05-2022 Signature: Courler & Consignmen	1 Number:	Rolinguished by: Datekime relinguiste Signature: Courier & Consignm	ent Number:	Received by: Datatime received: 16 5/22 Signature:	<u>8.</u>	<u>+</u> 0	ar		o <u>clal 1</u>	Requ	Loguirements: Samples Received in Go Documentation in Samples Received within Recommended f				Good C In Prop eceived I Holdin	ondition er Order Chilled g Times					
		1	•	·					and a second					-							

موجه موسد الماسين مواند موسية و الارون مورد و الارون مرد المالي المالي و المالي المالي و المالي و الم

and the second second



CERTIFICATE OF ANALYSIS

Work Order	EM2209166	Page	: 1 of 3	
Client	: FMG Engineering	Laboratory	: Environmental Division M	<i>Aelbourne</i>
Contact	: DHARMSINH RATHOD	Contact	: Kieren Burns	
Address	: Level 1, 67 GREENHILL ROAD	Address	: 4 Westall Rd Springvale	VIC Australia 3171
	WAYVILLE SA, AUSTRALIA 5034			
Telephone	: 8132 6662	Telephone	: +61881625130	
Project	: 281059	Date Samples Received	: 17-May-2022 15:00	ANUTUR.
Order number	:	Date Analysis Commenced	: 19-May-2022	
C-O-C number	:	Issue Date	: 24-May-2022 12:45	
Sampler	:			Hac-MRA NATA
Site	: Morphettville Racecourse Morphett Road			
Quote number	: EN/222			Accreditation No. 825
No. of samples received	: 2			Accredited for compliance with
No. of samples analysed	: 2			ISO/IEC 17025 - Testing

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

Signatories

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

Signatories	Position	Accreditation Category
Jarwis Nheu	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC

Page	2 of 3
Work Order	: EM2209166
Client	: FMG Engineering
Project	281059



General Comments

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

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

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

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

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

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

Key: CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QA02	QA06	 	
		Samplii	ng date / time	12-May-2022 00:00	13-May-2022 00:00	 	
Compound	CAS Number	LOR	Unit	EM2209166-001	EM2209166-002	 	
				Result	Result	 	
EA055: Moisture Content (Dried @ 105-1	10°C)						
Moisture Content		1.0	%	14.9	15.1	 	
EG005(ED093)T: Total Metals by ICP-AES	3						
Arsenic	7440-38-2	5	mg/kg	6	<5	 	
Barium	7440-39-3	10	mg/kg	50	40	 	
Beryllium	7440-41-7	1	mg/kg	<1	<1	 	
Boron	7440-42-8	50	mg/kg	50	<50	 	
Cadmium	7440-43-9	1	mg/kg	<1	<1	 	
Chromium	7440-47-3	2	mg/kg	32	30	 	
Cobalt	7440-48-4	2	mg/kg	8	5	 	
Copper	7440-50-8	5	mg/kg	15	12	 	
Lead	7439-92-1	5	mg/kg	14	15	 	
Manganese	7439-96-5	5	mg/kg	160	67	 	
Nickel	7440-02-0	2	mg/kg	15	12	 	
Selenium	7782-49-2	5	mg/kg	<5	<5	 	
Vanadium	7440-62-2	5	mg/kg	45	40	 	
Zinc	7440-66-6	5	mg/kg	33	29	 	
EG035T: Total Recoverable Mercury by	FIMS						
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	 	

Page	: 3 of 3
Work Order	: EM2209166
Client	: FMG Engineering
Project	281059





QUALITY CONTROL REPORT

Work Order	: EM2209166	Page	: 1 of 5
Client	: FMG Engineering	Laboratory	: Environmental Division Melbourne
Contact	: DHARMSINH RATHOD	Contact	: Kieren Burns
Address	: Level 1, 67 GREENHILL ROAD WAYVILLE SA, AUSTRALIA 5034	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: 8132 6662	Telephone	: +61881625130
Project	: 281059	Date Samples Received	: 17-May-2022
Order number	:	Date Analysis Commenced	: 19-May-2022
C-O-C number	:	Issue Date	24-May-2022
Sampler	:		Hac-MRA NATA
Site	: Morphettville Racecourse Morphett Road		
Quote number	EN/222		Accreditation No. 825
No. of samples received	: 2		Accredited for compliance with
No. of samples analysed	: 2		ISO/IEC 17025 - Testing

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories

Jarwis Nheu

Senior Inorganic Chemist

Position

Accreditation Category

Melbourne Inorganics, Springvale, VIC

Page	: 2 of 5
Work Order	: EM2209166
Client	: FMG Engineering
Project	: 281059



General Comments

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

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

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

Key: Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

= Indicates failed QC

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: SOIL						Laboratory I	Duplicate (DUP) Report		
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Tot	al Metals by ICP-AES (QC	: Lot: 4348623)							
EM2209013-002	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	150	200	29.5	0% - 50%
		EG005T: Chromium	7440-47-3	2	mg/kg	30	36	16.0	0% - 50%
		EG005T: Cobalt	7440-48-4	2	mg/kg	11	16	32.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	23	30	25.5	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	17	13	27.2	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	19	13	36.4	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	184	190	2.9	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	40	48	16.3	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	50	37	29.7	0% - 50%
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EM2209111-006	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	20	20	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	12	14	15.9	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	2	2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	7	6	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	6	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	12	9	22.7	No Limit
	E	EG005T: Lead	7439-92-1	5	mg/kg	15	12	24.4	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	72	59	20.4	0% - 50%

Page	: 3 of 5
Work Order	: EM2209166
Client	: FMG Engineering
Project	: 281059



Sub-Matrix: SOIL						Laboratory L	Duplicate (DUP) Report	,	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Tot	al Metals by ICP-AES (QC	Lot: 4348623) - continued							
EM2209111-006	Anonymous	EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	21	28	27.7	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	48	38	23.4	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EA055: Moisture Co	ntent (Dried @ 105-110°C)	(QC Lot: 4347934)							
EM2209097-010	Anonymous	EA055: Moisture Content		0.1	%	19.0	18.4	3.7	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4348624)									
EM2209013-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2209111-006	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit



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

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

Sub-Matrix: SOIL		Method Blank (MB)	Laboratory Control Spike (LCS) Report					
				Report	Spike	Spike Recovery (%)	Acceptable	e Limits (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES(QCLot:	4348623)							
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	106	70.0	130
EG005T: Barium	7440-39-3	10	mg/kg	<10	99.3 mg/kg	96.7	70.0	130
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	0.67 mg/kg	106	70.0	130
EG005T: Boron	7440-42-8	50	mg/kg	<50				
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	69.9	50.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	104	70.0	130
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	11.2 mg/kg	94.5	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	98.5	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	100	70.0	130
EG005T: Manganese	7439-96-5	5	mg/kg	<5	590 mg/kg	95.3	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	99.1	70.0	130
EG005T: Selenium	7782-49-2	5	mg/kg	<5				
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	61.3 mg/kg	105	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	78.7	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4348624)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	81.2	70.0	130

Matrix Spike (MS) Report

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

Sub-Matrix: SOIL				Matrix Spike (MS) Report				
				Spike	SpikeRecovery(%)	Acceptable L	imits (%)	
Laboratory sample ID	Sample ID	Method: Compound	Concentration	MS	Low	High		
EG005(ED093)T: T	otal Metals by ICP-AES (QCLot: 4348623)							
EM2209023-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	91.3	78.0	124	
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.1	79.7	116	
		EG005T: Chromium	7440-47-3	50 mg/kg	92.2	79.0	121	
		EG005T: Copper	7440-50-8	250 mg/kg	103	80.0	120	
		EG005T: Lead	7439-92-1	250 mg/kg	95.3	80.0	120	
		EG005T: Nickel	7440-02-0	50 mg/kg	99.4	78.0	120	
		EG005T: Zinc	7440-66-6	250 mg/kg	90.3	80.0	120	
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4348624)								
EM2209023-001	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	82.3	76.0	116	

Page	5 of 5
Work Order	: EM2209166
Client	: FMG Engineering
Project	: 281059





QA/QC Compliance Assessment to assist with Quality Review					
Vork Order	EM2209166	Page	: 1 of 4		
Client	: FMG Engineering	Laboratory	: Environmental Division Melbourne		
Contact	: DHARMSINH RATHOD	Telephone	: +61881625130		
Project	: 281059	Date Samples Received	: 17-May-2022		
Site	: Morphettville Racecourse Morphett Road	Issue Date	: 24-May-2022		
Sampler	:	No. of samples received	: 2		
Order number	:	No. of samples analysed	: 2		

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

- <u>NO</u> Method Blank value outliers occur.
- <u>NO</u> Duplicate outliers occur.
- <u>NO</u> Laboratory Control outliers occur.
- <u>NO</u> Matrix Spike outliers occur.
- For all regular sample matrices, <u>NO</u> surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

• <u>NO</u> Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

• <u>NO</u> Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

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

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

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

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

Matrix: SOIL				Evaluation	: × = Holding time	breach ; 🖌 = Withi	n holding time.
Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) QA02	12-May-2022				19-May-2022	26-May-2022	~
Soil Glass Jar - Unpreserved (EA055) QA06	13-May-2022				19-May-2022	27-May-2022	~
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) QA02	12-May-2022	20-May-2022	08-Nov-2022	1	21-May-2022	08-Nov-2022	~
Soil Glass Jar - Unpreserved (EG005T) QA06	13-May-2022	20-May-2022	09-Nov-2022	~	21-May-2022	09-Nov-2022	~
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) QA02	12-May-2022	20-May-2022	09-Jun-2022	1	23-May-2022	09-Jun-2022	~
Soil Glass Jar - Unpreserved (EG035T) QA06	13-May-2022	20-May-2022	10-Jun-2022	1	23-May-2022	10-Jun-2022	1

Page	: 3 of 4
Work Order	: EM2209166
Client	: FMG Engineering
Project	281059



Quality Control Parameter Frequency Compliance

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

Matrix: SOIL	Evaluation: * = Quality Control frequency not within specification ; 🗸 = Quality Control frequency within specificatio						ot within specification ; \checkmark = Quality Control frequency within specification.
Quality Control Sample Type		Co	unt	Rate (%)			Quality Control Specification
Analytical Methods	Method	00	Reaular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	1	10	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Page	: 4 of 4
Work Order	: EM2209166
Client	: FMG Engineering
Project	281059



Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: EM2209166					
Client Contact Address	: FMG Engineering : DHARMSINH RATHOD : Level 1, 67 GREENHILL ROAD WAYVILLE SA, AUSTRALIA 5034	Laboratory Contact Address	: Environme : Kieren Bui : 4 Westall I 3171	ental Division Melbourne rns Rd Springvale VIC Australia		
E-mail	: dharmsinh.rathod@fmgengineering. com.au	E-mail	: Kieren.Bu	rns@alsglobal.com		
Telephone	: 8132 6662	Telephone	: +6188162	5130		
Facsimile	:	Facsimile	: +61-3-854	9 9626		
Project	: 281059	Page	: 1 of 2			
Order number	:	Quote number	: EM2017K	OUKOU0004 (EN/222)		
C-O-C number	:	QC Level	: NEPM 201	13 B3 & ALS QC Standard		
Site	: Morphettville Racecourse Morphett Road					
Sampler	:					
Dates						
Date Samples Recei	ived : 17-May-2022 15:00	Issue Date		: 18-May-2022		
Client Requested Du Date	.e : 24-May-2022	Scheduled Reporting Date		24-May-2022		
Delivery Deta	ils					
Mode of Delivery	: Carrier	Security Seal		: Intact.		
No. of coolers/boxes	: 1	Temperature		: 5.4°C - Ice present		
Receipt Detail	:	No. of samples receiption	ived / analysed	: 2/2		

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- Sample(s) received in non-ALS container(s).
- Please direct any queries related to sample condition / numbering / breakages to Client Services.
- Sample Disposal Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- Analytical work for this work order will be conducted at ALS Springvale.
- Please refer to the Proactive Holding Time Report table below which summarises breaches of
 recommended holding times that have occurred prior to samples/instructions being received at
 the laboratory. The laboratory will process these samples unless instructions are received from
 you indicating you do not wish to proceed. The absence of this summary table indicates that all
 samples have been received within the recommended holding times for the analysis requested.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: SOIL

component			103 103	M 2
Matrix: SOIL			EA055-	S-03 als (NEF
Laboratory sample	Sampling date /	Sample ID	istur	Met
ID	time		No SO	SO 15
EM2209166-001	12-May-2022 00:00	QA02	1	✓
EM2209166-002	13-May-2022 00:00	QA06	1	1

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

	DMCIN		
DILIA			

Email	dharmsinh.rathod@fmgengineering. com.au
Email	dharmsinh.rathod@fmgengineering. com.au
Email	fmg.environmental@fmgengineering .com.au
Email	labreports@fmgengineering.com.au
	Email Email Email Email Email Email Email Email Email Email Email Email Email Email Email Email Email Email

NEPM 2013 Suite - incl. Digestion)

Project Title: Environmental Sol Assessment Magnetalille Reactorise Mapriett Este Address: Primary Laboratory: Enviro Lab Laboratory Quote Ref: Laboratory Quote Ref: Laboratory Quote Ref: Laboratory Stach Ref: Sol Witten State Address: Final Sol Optimized Primary Laboratory: Enviro Lab Laboratory Batch Ref: Sol Witten Laboratory State Ref: Laboratory State Ref: Sol Witten Laboratory State Ref: Laboratory State Ref: Sol Witten Laboratory State Ref: Laboratory State Ref: Sol Witten Laboratory State R	ENGINEE		CI44.		LYSIS KEQUES		1.1	- 1 C	LAL			5.5° A.A.	<u>, 1917 - 1</u>						
Determinent Ratikod 011 461 135 Inhoregoris@imgengineering.com.au Evaluation: Evaluati		ERING		FĨ	Project Title: Environmental Soil Ass Morphettville Racecou Road, MORPHETTVILL VIG Job Number : 281059	sessment Irse Morphel E, SA 5043	tt	Pi Li Pi	imar ibora bora 0139	y Lai tory tory 519	oorat Quo Batc	ory: Env te Ref: h Ref:	riro La	b	5 D	AVS (stan	Er M	elbour Work (EN	mental Divi rne ^{Order Referer} 12209
SAMPLE DESCRIPTION Comments respective respecive respective re	e sted by: D Phone: 0- <u>la</u>	harmsinh Rathod 411 461 135 ab.reports@fmgeng	ineering.com.au		Results to: FMG Environmental Direct Phone: 8132 6662 Email: lab.reports@fmgen	igineering.c	<u>:om.a</u>	So Li 10 P	econo abora 0139	lary itory 520	Labo Batc	ratory: A h Ref:	ALS		EXPECTE	D REPORT			
Bors-hole Depth /m Sample Type Comments Solution Support	· · · ·		SAMPLE	E DESCRIPTION						1 1				<u> </u>					
BH12_0.9-1.1 Natural Clayey sily sand 1 <th1< th=""> 1 1 <</th1<>	e Sampled	Bore-hole	Depth /m	Sample Type	Comments	Combination 3 (including metals 15)	Metals 15	Basic NEPM HIL.	EIL TRH / BTEX	осріорр	Ashestos ID							ephone :	+ 61-3-8549 9600
BH12_1.5.17 1.5.17 Natural Clayey silly sand Image: Clayey silly		BH12 0.9-1.1	0.9-1.1	Natural	Clayey silty sand		1				┝╌╀			┥─┼			+	+	
BH12 1.8-2.0 Natural Statty city 1 </td <td></td> <td>BH12_1.5-1.7</td> <td>1.5-1.7</td> <td>Natural</td> <td>Clayey silty sand</td> <td></td> <td>┣──</td> <td>+ -</td> <td>- </td> <td>+</td> <td></td> <td>++</td> <td>+</td> <td>++</td> <td></td> <td></td> <td></td> <td></td> <td></td>		BH12_1.5-1.7	1.5-1.7	Natural	Clayey silty sand		┣──	+ -	- 	+		++	+	++					
BH13 0.0.0.2 Fill Satury gards 1 </td <td></td> <td>BH12_1.8-2.0</td> <td>1.8-2.0</td> <td>Natural</td> <td>Sandy dravel</td> <td>-11^{-1}</td> <td></td> <td></td> <td>1</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>T</td> <td></td> <td></td>		BH12_1.8-2.0	1.8-2.0	Natural	Sandy dravel	-11^{-1}			1	-							T		
BH13 0.40.6 0.40.6 Fill Clayey sity sand 1 1 BH13 1.2.1.4 1.2.1.4 Natural Clayey sity sand 1 1 1 1 BH13 1.8.2.0 1.8.2.0 Natural Clayey sity sand 1 1 1 1 1 BH14 0.0.2 0.0.0.2 Fill Gravely sand 1	· · [BH13_0.0-0.2	0.0-0.2	Fill	Sality graver	- <u>†</u>													
BH13 0.6-0.8 0.6-0.8 Natural Clayey sity sand 1	· · •	BH13_0.4-0.6	0.4-0.6	- Fill	Clavey silty sand		1							+ +-			<u> </u>		
BH13_12.1.4 1.21.4 Natural Sandy clay 1	Ļ	BH13_0.6-0.8	0.6-0.8	Natural	Clayey silty sand				_	-	╎┈┥		+	+			+	+	
Ohlow 100 Output Fill Gravely sand 1		BH13_1.2-1.4	1 8-2.0	Naturai	Sandy clay		1		-		+						+	+1	
BH14_0.2-0.3 0.2-0.3 Fill Sand 1	. 1	BH14 0 0-0 2	0.0-0.2	Fill	Gravelly sand			++	1					+ +		-+-		+ - 1	
BH14_0.4-0.6 0.4-0.6 Fill Gravelly silly sand 1		BH14_0.2-0.3	0.2-0.3	Fill	Sand		1	┢──┼	_		+-+	-+		++				1	
BH14_0.6-0.8 0.6-0.8 Fill Silty sand Image: constraint of the stress of the str	· · · F	BH14 0.4-0.6	0.4-0.6	Fill	Gravelly silty sand	1		+									1		
BH14_1.0-1.2 1.0-1.2 Natural Clayey sinty sand 1 <td></td> <td>BH14_0.6-0.8</td> <td>0.6-0.8</td> <td>Fill</td> <td>Silty sand</td> <td></td> <td></td> <td></td> <td></td> <td>+-</td> <td></td> <td></td> <td></td> <td>+-+</td> <td></td> <td></td> <td></td> <td></td> <td></td>		BH14_0.6-0.8	0.6-0.8	Fill	Silty sand					+-				+-+					
BH14_1.6-1.8 1.6-1.8 Natural Clayey sity sand Image: Clayer sity sand	1	BH14_1.0-1.2	1.0-1.2	Natural	Clayey sitty sand		1			<u>†</u> —			_						
BH14_1.8-2.0 1.8-2.0 Natural Oddrog Stress BH15_0.0-0.15 0.0-0.15 Fill Gravelly sand 1		BH14_1.6-1.8	1.6-1.8	Natural	Sandy clay		+-		+	1					_				
BH15_0.0-0.15 0.0-0.15 Fill Gravelly sity sand 1 1 1 1 BH15_0.15.0.35 0.15-0.35 Fill Gravelly sity sand 1 <td></td> <td>BH14_1.8-2.0</td> <td>1.8-2.0</td> <td>Natural</td> <td>Gravelly sand</td> <td></td> <td>+</td> <td></td> <td>1</td> <td>i </td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><u> </u></td> <td></td>		BH14_1.8-2.0	1.8-2.0	Natural	Gravelly sand		+		1	i								<u> </u>	
BH15_0.15-0.35 0.15-0.35 FIII Clayey sand 1		BH15_0.0-0.15	0.0-0.15	<u> </u>	Gravelly silty sand										_ _		<u> </u>	+	
BH15_0.5-0.6 0.5-0.5 rm Clayey silty sand 1 Image: Clayey sand 1 Image: Clayey silty sand 1 1 Image: Clayey silty sand 1		BH15_0.15-0.35	0.15-0.35		Clavey sand			1								_		<u>+</u>	
BH15_1.0.0.0.8 Clove.s Internal Clayey silty sand I <td></td> <td>BH15_0.5-0.6</td> <td>0.0-0.0</td> <td>Natural</td> <td>Clayey silty sand</td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>+</td> <td>_+-</td> <td></td> <td></td> <td></td> <td></td>		BH15_0.5-0.6	0.0-0.0	Natural	Clayey silty sand		1							+	_+-				
Brits_1.2:1.7 12:1.7 <th< td=""><td></td><td>BH15_0.6-0.8</td><td>1 2-1 4</td><td>Natural</td><td>Clayey silty sand</td><td></td><td></td><td>· </td><td></td><td></td><td>+</td><td>╤╍┼</td><td></td><td>-</td><td></td><td></td><td>-</td><td>1</td><td></td></th<>		BH15_0.6-0.8	1 2-1 4	Natural	Clayey silty sand			·			+	╤╍┼		-			-	1	
GS01 0,0-0.30 Fill Sand 1	22 - H	BH15 1 8-2 0	1.8-2.0	Natural	Sandy clay	1	-	++										+	
GS02 0.0-0.30 Fill Sand 1		GS01	0.0-0.30	Fill	Sand		+.	- -		+-		<u>⊢</u> +		┥╌╄	-+-			+	1 A.
PACM - 01 0.0-0.10 FII Grevelly sand 1 1 PACM - 02 0.0-0.10 Fill Grevelly sand 1 1 1 1 PACM - 02 0.0-0.10 Fill Grevelly sand 1 1 1 1 1 PACM - 03 0.0-0.10 Fill Grevelly sand 1 1 1 1 1 PACM - 04 0.0-0.10 Fill Grevelly sand 1		GS02	0.0-0.30	Fal	Sand		1			-+1	1			-					
PACM - 02 0.0-0.10 Fill Grevelly sand 1		PACM - 01	0.0-0.10	Fill	Grevelly sand			+	-+-		1			-++			1	1	
PACM - 03 0.0-0.10 Fill Grevely sand 1 PACM - 04 0.0-0.10 Fill Grevely sand 1		PACM - 02	0.0-0.10	Fill	Grevelly sand	_	+	╷┼╸╷┥			1	┝─┼─┼				- -			
PACM - 04 0.0-0.10 Fill Grevelly sand 1		PACM - 03	0.0-0.10	Fill	Grevelly sand			+			1						-		
Greveny sand	1.1.1.1	PACM - 04	0.0-0.10	Fill	Grevelly sand			+			1				1				
PACM - 05 0.0-0.10 111 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		PACM - 05	0.0-0.10	Fill	Grevelly sand		1				+-		1. The			11 A			· · ·

		ENIVI	PONMENTAL ANA	LYSIS REQUEST				1	I	.AB(DRA	TO	RY	DET	AILS			TUR	VAROL		LOIKED	
ENGINE Requested by: Direct Phone: Email:	Dharmsinh Rathod 0411 461 135 lab.reports@fmgen	gineering.com.au	FN	Project Title Site Address AG Job Number Results to: Direct Phone: Email:	Environmental Soil Asses Morphettville Racecours Road, MORPHETTVILLE, 281059 FMG Environmental 8132 6662 <u>lab.reports@fmgengi</u>	ssment e Morphel SA 5043 <u>neering.c</u>	tt <u>;om.a</u>		Prin Labo PO1 Seco Labo PO1	orationation 395 ondationationation 395	Lab ory 19 ary 1 ory 20	Que Bat Labe Bat	ote ch F orat	y: En Ref: Ref: Ref: Ref: Ref:	ALS	Lab	E	хре	S DAY	S (Stand EPORTI	ard) NG DA1	
		SAMPLE	DESCRIPTION						<u> </u>							\mathbf{T}	- T			<u> </u>	Г	
Date Sampled	Bore-hole	Depth /m	Sample Type	c	omments	Combination 3 (including metals 15)	Metals 15	Basic NEPM HIL	EIL	TRH / BTEX	OCP/OPP	Asbestos ID										
	OA03		Quality			┫─────							-			++						
	QA04		Quality			_−−	4						t –	1		\top					<u> </u>	
	0405		Quality					F	0.04/2	ard t	O A	is	<u> </u>			++						
	0406	13/7 Fu	Quality									T	<u>+</u> -		<u> </u>	11						
	R01	(An	Rinsate							+-		<u>+</u>	┝	1		++					T	1
	802		Rinsate					$\frac{1}{2}$		7	5	5	0	10		0	0			0	0	0
			SAMPLE H/	NDLING - STEP 2	Developed by:	13	L ~0	1_3	Sre	cial P	l Reau	irem	ents	۔۔۔۔ :			<u> </u>					
Relinguished by:		Relinguished by:			Received by.					South 5				-			Sa	mple	s Recei	ved in G	ood Con	dition
Dharmsinh Rathod					Date\time received:				1									Ð	ocumer	itation in	Proper	Order
Date\		Date\time relinquished	1:																San	nples Re	ceived (hilled
13/05/2022					Signature:				1					S	amples	Rece	ived wi	ithin l	Recom	nended l	Holding	Times
Signature:		Signature:	-i Number	<u>.</u>				<u>.</u>														
Courier & Consignme	nt Number:	Courier & Consignme	Ht Hunner.		n an	1970 - 20 			<u> </u>					la el P	4 4 1 1			19.112	an an a	<u> </u>		



Certificate of Titles

PORTION A – 86-88 Morphett Road: History of Site Ownership



CANCELLEI Allotment 4 c Filed Plan Nư 23.05.1973 10.10.1973 05.08.1980 05.08.1980	D:CT 3937/48 of Portion of Section 153, Hundred 9993) New title to Commissioner of H Transfer of Portion to Her Maj Cancelled as regards land in t the Crown for road purposes Transfer Lot 1 (Filed Plan 102 Cancelled as regards land in t the Crown for road purposes Transfer of Lot 2 (Filed Plan 1 Cancelled to new title CT 4166 Balance of CT to new title CT	ed of Ade Highways esty Que ransfer, 1 48) to He ransfer, 1 0248) to 6/255 4166/250	elaide, County of Adelaide (L.T.R.O seen Elizabeth the Second the said land having been acquired by er Majesty Queen Elizabeth the Second the said land having been acquired by South Australian Jockey Club Inc 6
		1	
CANCELLEI Portion of Se Adelaide and Adelaide 22.10.1968	D:CT 3587/86 ction 153, Hundred of Noarlunga, County of New title to The Honourable Stanley Charles Bevan as the Minister of Local Government. Transfer of Portion to Commissioner of Highways Cancelled to new title CT 3937/48 Balance of CT to new title CT 3937/47	CAN Port Ade 22.1 19.0	NCELLED: CT 3587/87 ion of Section 153, Hundred of laide, County of Adelaide 10.1968 New title to Commissioner of Highways 13.1973 Transfer of Portion to The Honourable Geoffrey Thomas Virgo as Minister of Local Government. Cancelled to new title CT 3937/47 Balance of CT to new title CT 3937/48
CANCELLEI Portion of Se 28.04.1967 26.01.1968	D:CT 3485/24 ction 153, Hundreds of Adelaide New title to Commissioner of F Transfer of Portion to The Hor of Local Government Cancelled to new title CT 358 Balance of CT to new title CT	e and Noa Highways nourable 7/86 3587/87	arlunga, County of Adelaide s Henley Charles Bevan as the Minister
CANCELLEI Portions of S Adelaide 08.05.1962 23.03.1967	D:CT 3065/66 ection 135, 136 and 153, Hundr New title to South Australian J Transfer of Portion of Section Cancelled to new title CT 348 Balance of CT to new title CT	eds of Ac ockey Cl 153 to C 5/24 3485/25	delaide and Noarlunga, County of ub Inc of Morphettville ommissioner of Highways
CANCELLEI Portion of Se Noarlunga, C 28.08.1956 24.11.1961 03.04.1962 03.04.1962	D:CT 2472/133 ction 153, Hundreds of Adelaide county of Adelaide New tille to Sylvia Gertrude Crozier of 10 Weedanda Stree Glenelg (Widow) Transfer of Portion to Minister Works of a Right of Way <i>Cancelled to new tille CT 306</i> Transfer of Portion to Irene Ma Williams <i>Cancelled to new tille CT 306</i> Transfer of balance of land to	and et, of 5/64 ay	CANCELLED: CT 2678/135 Portions of Section 135, 136 and 153, Hundred of Adelaide, County of Adelaide 09.07.1959 New title to South Australian Jockey Club Inc of Racecourse Morphettville Cancelled to new title CT 3065/66 CANCELLED: CT 2309/165 Portions of Section 135, 136 and 153, Hundred of Adelaide, County of Adelaide 16.02.1954 New title to South Australian Jockey Club Inc
L	South Australian Jockey Club Cancelled to new title CT 306	Inc 5/66	Cancelled to new title CT 2678/135

LANDS TITLES OFFICE ADELAIDE SOUTH AUSTRALIA DIAGRAM FOR CERTIFICATE OF TITLE VOLUME 5709 FOLIO 134 SEARCH DATE : 10/12/2014 TIME: 11:32:45



Page 2 of 2

PropertyAssist - Results





Government of South Australia Department of Planning, Transport and Infrastructure

HOME ABOUT CONTACT HELP LOGOFF

PropertyAssist - Results

Order No. **20141210313888** Please record this number for later use.

Customer reference: 530 - PO111149

PropertyAssist has found the following information based on your query data of : CT 5511/305

New Search)

PropertyAssist - Historical Search

Title Reference	CT 5511/305
Previous Title Reference	CT 5447/141
Other Previous Title References	NO
Title Status	TOTALLY CANCELLED
Date of Issue	6 MARCH 1998
Latest Duplicate	EDITION 1
Authority Document	RT 8410054
Other Authority Documents	NO

Produced	Completion Date	Document Number	Status	Details
30 OCTOBER 1998	15 NOVEMBER 1999	8578742	REGD	REQUEST FOR NEW TITLES - DEPOSITED PLAN D 51196

Search Date 11:40 AM, Wed 10th December, 2014

Total Cost for this Order is \$0.00

New Search)

PropertyAssist Disclaimer Privacy Statement Copyright Government of South Australia 11:40:49 AM - 10 Dec 2014 The PropertyAssist application is managed by the Land Services Group of the Department of Planning, Transport and Infrastructure. PropertyAssist - Results





Government of South Australia Department of Planning, Transport and Infrastructure

HOME ABOUT CONTACT HELP Logoff

PropertyAssist - Results

Order No. 20141210313901

Please record this number for later use.

Customer reference: 530 - PO111149

PropertyAssist has found the following information based on your query data of : CT 5447/141

New Search)

PropertyAssist - Historical Search

Title Reference	CT 5447/141
Previous Title Reference	CT 4298/869
Other Previous Title References	NO
Title Status	TOTALLY CANCELLED
Date of Issue	4 SEPTEMBER 1997
Latest Duplicate	EDITION 1
Authority Document	CD 6987000
Other Authority Documents	NO

Produced	Completion Date	Document Number	Status	Details
12 DECEMBER 1997	9 MARCH 1998	8410054	REGD	REQUEST FOR NEW TITLES

Search Date 11:41 AM, Wed 10th December, 2014

Total Cost for this Order is \$0.00

New Search)

PropertyAssist Disclaimer Privacy Statement Copyright Government of South Australia 11:41:43 AM - 10 Dec 2014 The PropertyAssist application is managed by the Land Services Group of the Department of Planning, Transport and Infrastructure.

ORIGINAL CERTIFICATE OF TITLE

South Australia

Register Book, Volume 4298 Folio 869



Pursuant to Transfer 6321939 Registered on Vol.4166 Folio 256

SOUTH AUSTRALIAN JOCKEY CLUB INCORPORATED of Racecourse Morphettville 5043 is the proprietor of an estate in fee simple subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in ALLOTMENT 2 of portion of Section 153 HUNDRED OF ADELAIDE in the area named <u>GLENGOWRIE</u> (L.T.R.O. DEPOSITED PLAN No.16277) and delineated on the plan hereon by bold black lines

In witness whereof I have signed my name and affixed my seal this 7th day of July 1987

Signed the *The* day of July 1987, in the presence of

J. H. Daylow Acting Deputy Registrar-General



The within land has been declared to be open

TH AUST



30

15 22·5

Metres

7.5

space within the meaning of Section 29 Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253

CANCELLED

CONVERTED TO A COMPUTERISED TITLE

$\mathsf{VOL}_{4298}\mathsf{_{|}FOL}_{869}$



76042932-RT 6049113 D.P.16277

TRANSFER 6042932 to STATE TRANSPORT AUTHORITY of the within land Produced 1.7.1985 at 14:30

-:76321939--



TRANSFER 6321939 to SOUTH AUSTRALIAN JOCKEY CLUB INCORPORATED of PORTION of the within land (Lot 2 D.P. 16277) Produced 4.3.1987 at 12:25

CANCELLED as regards...above land and new C.T. issued VOL. 4298 FOL. 869



THE WHOLE OF THE WITHIN LAND IS NOW COMPRISED IN DEPOSITED PLAN /6277 VIDE APPLICATION R.T. 6049113



CANCELLED

AND Balance CERTIFICATE OF TITLE ISSUED VIDE 6321939 DEPOSITED PLAN NO16277 VOL. 4298 FOL. 870

Sout	h Australia
	(CERTIFICATE OF TITLE)
¢.	Register Book.
D. C.	Vol. 3937 Folio 48
Pursuant to Memorandum of Transfe	r No.3432517 Registered on Vol.3587 Folio 86 and
Balance Certificat	e of Title from Vol.3587 Folio 87
COMMISSIONER OF HIGHWAYS	
is the proprietor	of an estate in fee simple
subject nevertheless to such encumbrances liens and inte	erests as are notified by memorial underwritten or endorsed hereon in
Generation of land situate in the HUNDRED of-	COUNTY of
being PORTION	
<u>THAT PIECE</u> of land containing seven acres three roods	and twenty one perches or thereabouts situated in the <u>HUNDRED</u> OF
appears in the plan in the margin hereof by bold black	lines
······································	
\	
(
<u>,</u>	
Which said Section is delineated in the public map	of the said Hundred deposited in the Land_Office-at Adelaide.
Which said Section is delineated in the public map Except such portion of the within land containing	of the said Hundred deposited in the Land Office-at Adelaide. - Ac 1 Rd 28 Per acquired by the Crown for road purper
Which said Section is delineated in the public map Except such portion of the within land containing	of the said Hundred deposited in the Land Office at Adelaide. - Ac 1 Rd 28 Per acquired by the Crown for road purper
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and	of the said Hundred deposited in the Land Office at Adelaide. - Ac 1 Rd 28 Per acquired by the Crown for road purper Maria Con for road purper Dep. Reg. Gen. affixed my seal this 2310 day of Mary R 1923
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and	of the said Hundred deposited in the Land Office at Adelaide. - Ac I Rd 28 Per acquired by the Crown for road purper Dep. Reg. Gen. affixed my seal this 23rd day of May RH 1923
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May	of the said Hundred deposited in the Land Office at Adelaide. - Ac 1 Rd 28 Per acquired by the Crown for road purper I Mahagen Dep. Reg. Gen. 1 affixed my seal this 23rd day of May RA 1923
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Mauthie	of the said Hundred deposited in the Land Office at Adelaide. - Ac 1 Rd 28 Per acquired by the Crown for road purper Dep. Reg. Gen. 1 affixed my seal this 23rd day of May Fr 1923 B.L. Wain
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Maubie	of the said Hundred deposited in the Land Office at Adelaide. - Ac 1 Rd 28 Per acquired by the Crown for road purper left acquired by the Crown for road purper Dep. Reg. Gen. 1 affixed my seal this 2340 day of May RH 1923 B. Mainer B. M
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Maubice The land in this Certificate is	of the said Hundred deposited in the Land Office at Adelaide. - Ac Rd 28 Fer acquired by the Crown for road purpose Dep. Reg. Gen. 1 affixed my seal this 23rd day of May Fill 1923 B. Naine Deputy Registrar-General
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23 -of day of May 1973, in the presence of Maurice The land in this Certificate is REDESIGNATED as ALLOTIMENTIS) 4	of the said Hundred deposited in the Land Office at Adelaide. - A 1 Rd 28 Per acquired by the Crown for road purper left affixed my seal this 23rd day of May FH 1923 B. Main Deputy Registrar-General
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Maubic The land in this Certificate is REDESIGNATED as ALLOTMENT(S) 4 In FILED PLAN 9993	of the said Hundred deposited in the Land Office at Adelaide. - A Rd 28 Per acquired by the Crown for road purper Dep. Reg. Gen. 1 affixed my seal this 23rd day of Mary AT 1923 B. Main Deputy Registrar-General
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Mautice The land in this Certificate is REDESIGNATED as ALLOTMENT(S) 4 in FILED PLAN 9993	of the said Hundred deposited in the Land Office at Adelaide. - A 1 Rd 28 Per acquired by the Crown for road purper affixed my seal this 23rd day of Mary FH 1923 B. Main Deputy Registrar-General The within land has been declared to be open space w
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Mautic The land in this Certificate is REDESIGNATED as ALLOTMENT(S) 4 in FILED PLAN 9993	of the said Hundred deposited in the Land Office at Adelaide. - A 1 Rd 28 Per acquired by the Crown for road purpose affixed my seal this 23rd day of Mary At 1923 B. Marine Deputy Registrar-General The within land has been declared to be open space w the meaning of Section 29 of the Town Planning Act 1929-1963 vide proclamation in Government Gazette
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Mautice The land in this Certificate is REDESIGNATED as ALLOTMENT(S) 4 in FILED PLAN 9993 F.P. 10248 APPROVED	of the said Hundred deposited in the Land Office at Adelaide. - A Rd 28 Per acquired by the Crown for road purpose affixed my seal this 23rd day of Mary PH 1923 B. Mary PH 1923 Deputy Registrar-General The within land has been declared to be open space w the meaning of Section 29 of the Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253
Which said Section is delineated in the public map Except such portion of the within land contraining In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Mautice The land in this Certificate is REDESIGNATED as ALLOTMENT(S) 4 In FILED PLAN 9993 F.P. 10248 APPROVED	of the said Hundred deposited in the Land Office at Adelaide. - A 1 Rd 28 Per acquired by the Crown for road purper affixed my seal this 23rd day of May Rd 1923 B. Main Market Stranger Stra
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Maubic The land in this Certificate is REDESIGNATED as ALLOTMENT(S) 4 in FILED PLAN 9993 F.P. 10248 APPROVED	of the said Hundred deposited in the Land Office. at Adelaide. - A Rd 28 Per acquired by the Crown for road purple Dep. Reg. Gen. affixed my seal this 23rd day of Mary At 1923 B. Main Deputy Registrar-General The within land has been declared to be open space with the meaning of Section 29 of the Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253 B. Main B. M
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Maudice Interiand in this Certificate is REDESIGNATED as ALLOTMENT(S) 4 in FILEO PLAN 9993 F.P. 10248 APPROVED	of the said Hundred deposited in the Land Office at Adelaide. - A 1 Rd 28 Per acquired by the Crown for road purpose I affixed my seal this 23rd day of May Dep. Reg. Gen. affixed my seal this 23rd day of May FA 1923 BD. Nain Deputy Registrar-General The within land has been declared to be open space with the meaning of Section 29 of the Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253 BD. Nain Family Reg. Genl. TRANSFER No 3527095 1
Which said Section is delineated in the public map Except such portion of the within land contraining In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Mautice The land in this Certificate is REDESIGNATED as ALLOTMENT(S) 4 in FILED PLAN 9293 F.P. 10248 APPROVED	of the said Hundred deposited in the Land Office at Adelaide. - A 1 Rd 28 Per acquired by the Crown for road purper affixed my seal this 23rd day of May At 1923 B. Main Deputy Registrar-General The within land has been declared to be open space with the meaning of Section 29 of the Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253 B. Main TRANSFER No. 3527095 La FER MARSTY QUEEN BITABETH THE SECTION OF LA
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Maubic The land in this Certificate is REDESIGNATED as ALLOTMENT(S) 4 in FILED PLAN 9993 F.P. 10248 APPROVED	of the said Hundred deposited in the Land Office at Adelaide. - A 1 Rd 28 Per acquired by the Crown for road purpose I affixed my seal this 23rd day of May Dep. Reg. Gen. affixed my seal this 23rd day of May At 1923 B. Naine Deputy Registrar-General The within land has been declared to be open space with the meaning of Section 29 of the Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253 B. Maine TRANSFER No. 3527095 & FER MAILSTY QUIEN BIZABETH THE SECORD of potion
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Maubec The land in this Certificate is REDESIGNATED as ALLOTMENT(S) 4 in FILED PLAN 9393 F.P. 10248 APPROVED	of the said Hundred deposited in the Land Office at Adelaide. - A Rd 28 Per acquired by the Countor road purpose affixed my seal this 23rd day of May Dep. Reg. Gen. affixed my seal this 23rd day of May A 1923 B. Main Deputy Registrar-General The within land has been declared to be open space w the meaning of Section 29 of the Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253 B. Main TRANSFER No. 3527095 & FER MAJESTY QUEEN BIZABETH THE SECON of portion OF THE WITHIN LAND. PRODUCED 10.10.1973 AT 11.25 and
Which said Section is delineated in the public map Except such portion of the within land contraining In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Maubie The land in this Certificate is REDESIGNATED as ALLOTMENT(S) 4 In FILED PLAN 9993 F.P. /0248 APPROVED	of the said Hundred deposited in the Land Office at Adelaide. - A Rd 28 Per acquired by the Countor road purpose affixed my seal this 23rd day of Mary PH 1923 B. Main Deputy Registrar-General The within land has been declared to be open space with the meaning of Section 29 of the Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253 B. Main FRANSFER No. 3527095 & FER MARESTY QUEEN BIZABETH THE SECON of portion OF THE WITHIN LAND. PRODUCED 10.10.1973 AT 11.25 and DEP. REG. GEN.
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Maubic The land in this Certificate is REDESIGNATED as ALLOTMENT(S) 4 in FILED PLAN 9993 F.P. 102 48 APPROVED	of the said Hundred deposited in the Land Office at Adelaide. - A Rd 28 Per acquired by the Crown for road purpose affixed my seal this 23rd day of May Pr 1923 B. Main Deputy Registrar-General The within land has been declared to be open space w the meaning of Section 29 of the Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253 B. Main Fransfer No. 3527095 & FER MARSTY QUIEN BIZABETH THE SECOND of portion OF THE WITHIN LAND. PRODUCED 10.10.1973 AT 11.25 and DEP. REG. GEN. CANCENTED AS REGARDS LAND IN TRANSFER
Which said Section is delineated in the public map Except such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Maudice The land in this Certificate is REDE SIGNATED as ALLOTMENT(S) 4 in FILEO PLAN 9993 F.P. 10248 APPROVED	of the said Hundred deposited in the Land Office at Adelaide. - & I Rd 28 Per acquired by the Countor road purpose affixed my seal this 23rd day of May Dep. Reg. Gen. Dep. Reg. Gen. B. Main Deputy Registrar-General The within land has been declared to be open space w the meaning of Section 29 of the Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253 B. Main Fastreage. TRANSFER No. 3527095 & FER MARSTY QUIEN BIZABETH THE SECOND of portion OF THE WITHIN LAND. PRODUCED 10.10.1973 AT 11.25 and A. Bordow DEP. REG. GEN. CANCELLED AS REGARDS LAND IN TRANSFER No. 3527095 THE SAID LAND HAVING BEEN
Which said Section is delineated in the public map Brcept such portion of the within land contraining In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Maubie The land in this Certificate is REDESIGNATED as ALLOTMENT(S) 4 in fileD PLAN 9993 F.P. 10248 APPROVED	of the said Hundred deposited in the Land Office at Adelaide. - A 1 Rd 28 Per acquired by the Crown for road purpose affixed my seal this 23rd day of May Dep. Reg. Gen. Deputy Registrar-General Deputy Registrar-General The within land has been declared to be open space with the meaning of Section 29 of the Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253 B. Main Dep. Reg. Genl. TRANSFER No. 3527095 & FER MARTSTY QUIEN BIZABETH THE SECOND of portion OF THE WITHIN LAND. PRODUCED 10-10-1973 AT 11-25 an DEP. REG. GEN CANCELLED AS REGARDS LAND IN TRANSFER No. 3527095 THE SAID LAND HAVING BEEN ACQUIRED BY THE CROWN FOR ROAD PURPOSES.
Which said Section is delineated in the public map Recept such portion of the within land containing In witness whereof I have hereunto signed my name and Signed the 23rd day of May 1973, in the presence of Maudic The land in this Certificate is REDESIGNATED as ALLOTMENT(S) 4 In FILED PLAN 9993 F.P. 10248 APPROVED	of the said Hundred deposited in the Land Office at Adelaide. - A 1 Rd 28 Per acquired by the Crown for road guidents I affixed my seal this 23rd day of May PH 1923 B. Main Deputy Registrar-General The within land has been declared to be open space with the meaning of Section 29 of the Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253 B. Main FRANSFER No. 3527095 & HER MARSTY QUEEN BIZABETH THE SECOR of portion OF THE WITHIN LAND. PRODUCED 10-10-1973 AT 11-25 and DEP. REG. GEN. CANCELLED AS REGARDS LAND IN TRANSFER No. 3527095 THE SAID LAND HAVING BEEN ACQUIRED BY THE CROWN FOR ROAD PURPOSES. M London



,





Pursuant to Memorandum of Transfer No.2886097 Registered on Vol.3485 Folio 24

THE HONOURABLE STANLEY CHARLES BEVAN AS THE MINISTER OF LOCAL GOVERNMENT

(CERTIFICATE OF TITLE)

Register Book,

Vol. 3587 Folio

86

1968

the proprietor of an estate in fee simple is subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT PIECE of land containing one acre one rood and thirteen perches or thereabouts situated in the HUNDREDS OF ADELATDE AND NOARLUNGA COUNTY OF ADELATDE being PORTION OF SECTION 153 more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green SUBJECT nevertheless to a right of way more particularly described and set forth in Memorandum of Transfer No.2319907 over portion of the said land as delineated in the said plan and therein marked Private Road Which said Section delineated in the public mapsof the said deposited in the Land is Hundreds Office at Adelaide. In witness whereof I have hereunto signed my name and affixed my seal this 22^{nd} October day of ned the 22nd day of October 1968, in the presence of M.A. Maddem 22 nd Signed the AR-GA **Registrar-General** AUSTRA The within land has been declared to be open space within the meaning of Section 29 of the Town Planning Act 1929-1963 Vide proclamation in Government Gazette dated 6.11.1958 Page 1253 Reg.Genl. MORPHETT ROAD 1412'7 MAXWELL

HUNDRED

Plan

4045

PRIV. RP

AL

OF ADELAIDE 153

OF NOARLUNGA

Closed Road

nen

HUNDRED

357°46

PRIV RD

T-7432517 - 1/1/ TRANSFER No. 3432 51) A Commissioner of Highways DE THE WITHIN Cand DE THE WITHIN Cand DE THE WITHIN Cand DE THE COMPANY AND AND THE CANCELLED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED VOL. 393 7 FOL 48 R. Condon DEP. REG. GEN. CANCELLED AND Balance CERTIFICATE OF TITLE ISSUED VIDE VOL. 3937 FOL. 4-7. K. Condon DEP. REG. GEN.


TRANSFER No. 3432 516 to The Honourable Grand Honourable OF THE WITHIN Carter Joce Soverment PRODUCED 9.3 19 33 AT 11.20 and CANCELLED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED VOL. 3937 FOL 47 CANCELLED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED VOL. 3937 FOL 47 DEP. REG. GEN. 2KH DEP. REG. GEN. CANCELLED AND Balance CERTIFICATE OF TITLE ISSUED VIDE VOL 3937 FOL 48. K. Condens DEP. REG. GEN. 1 1 5

South Australia (CERTIFICATE OF TITLE)

Register Book

24

Folio

Vol. 3485



Pursuant to Memorandum of Transfer No.2807634 Registered on Vol.3065 Folio 66

COMMISSIONER OF HIGHWAYS

is the proprietor of an estate in fee simple

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT piece of land situate in the HUNDREDS of ADELAIDE AND NOARLUNGA COUNTY of ADELAIDE being PORTION OF SECTION 153 containing nine acres and thirty perches or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green SUBJECT nevertheless to a right of way granted by and more particularly described and set forth in Memorandum of Transfer No.2319907 over portion of the said land as delineated in the said plan and therein marked Private Road

Which said Section is delineated in the public maps of the said Hundreds deposited in the Land Office at Adelaide.



1288604 1200647 TRANSFER No. 2886097 to the Admonable Manual Charles Beven as the Minute of Local government of porter OF THE WITHIN Call PRODUCED 26.1. 198 AT2 '10pm. PRODUCED 26.1. 198 AT2 '10pm. CANCELLED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED VOL 3557 FOL 86 Magnetic DEP. REG. GEN. CANCELLED CANCELLED CANCELLED Balance CERTIFICATE OF TITLE VOL 3587 FOL 87 Mahaon Maghan DEP. REG. GENL AND ISSUED VIDE

South Australia



(CERTIFICATE OF TITLE)

Register Book, Vol. 3065 Folio 66

Pursuant to Memorandum of Transfer No.2344846 Registered on Vol.2472 Folio 133 and New Certificate of Title for the whole of the Land in Vol.2678 Folio 135

SOUTH AUSTRALIAN JOCKEY CLUB INCORPORATED of Morphettville

is FIRSTLY the proprietor of an estate in fee simple

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THOSE pieces of land situate in the HUNDREDS ADELAIDE AND NOARLUNGA COUNTY of ADELAIDE being PORTION S OF SECTIONS 135.136 and 153 containing together one hundred and sixty eight acres two roods and twenty nine perches or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green SUBJECT nevertheless to the right of way and easement with conditions granted by Memorandum of Transfer No.1752042 to The Electricity Trust of South Australia in and over portion of the said land as delineated in the said plan and therein marked Easement <u>SUBJECT ALSO</u> to a right of way granted by and more particularly described and set forth in Memorandum of Transfer No.2319907 over other portion of the said land as delineated in the said plan and thereins and interests as are notified by memorial underwritten or endorsed hereon to full and free liberty license power and authority for the said proprietor its tenants servants agents workmen and visitors and all persons authorised by the Committee or its Secretary thereof and all persons from time to time using or visiting the Morphettville Racecourse at all times and at any time to use the Private Road as delineated in the said plan and therein colored brown and to go over the said Private Road as delineated in the said plan and therein colored brown and to go over the said Private Road as delineated in the said plan and therein colored brown and to go over the said Private Road as and return to pass and repass thereover with or without horses carts wagons and carriages of every description

Which said Section s are delineated in the public mapsof the said Hundredsdeposited in the Land Office at Adelaide.

In witness whereof I have hereunto signed n	ny name and affixed my seal this P ^K day of May 19 62
Signed the 3 ⁴ day of 19 62, in the presence of A Aufor. Resublivision Approval under See 11, T.P. Act 1945 of 1929 Visk 2.7.0. Docket No. 236 of 1958	by









(CERTIFICATE OF TITLE.)

Register Book,

Vol. 2472 Folio 133

Pursuant to Memorandum of Transfer No.1958226 Registered on Vol.2410 Folio 134 and New Certificate of Title for the whole of the Land in Vol.2410 Folio 133

SYLVIA GERTRUDE CROZIER of 10 Weewanda Street Glenelg Widow

is

the proprietor of an estate in fee simple

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT piece of land situate in the HUNDREDsof ADELAIDE AND NOARLUNGA COUNTY of ADELAIDE being PORTION OF SECTION 153 containing two acres and one rood or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green TOGETHER with a free and unrestricted right of way over that portion of Duggan Avenue as delineated in the said plan and therein colored brown and marked A

Which said Section is delineated in the public map of the said Hundred deposited in the Land Office at Adelaide.

In witness whereof I have hereunto signed my name and affixed my seal this twenty eightlday of Au 1956 28th day of August Signed the 1956, in the presence of Registrar-General. AUSTRA Resubdivision Approved under

Bec...15 ... T.P. Acr 1929-1957 Vide Lease No.1912215 from Sylvia Gertrude Crozier to Alfred Mexwell Williams of portion of the within land together with right of way Term 5 years from and including the 2 day of May 1955 Produced for registration the 27 day of September 1955 at 11.50 cm. L.T.O. DKt. 1032 of 1960 LT.O. PLAN 4045 Reg.Genl. 3/1 DELA TRANSFER No work 157 or 7 THE WITHI PRODUCED 1961 AT 115ah derson REGARDS ABOVE LAND AND NEW C.T. ISSUED CANCEL VOL 3065 FOL 64 DEP. REG. GEN. to

hey billiams TRANSFER No. 2344849 to, Frene CANCELLED AS REGARDS ABOVE LAND AND NEVY C.T. ISSUED VOL 2065 FOL 65 DEP. REG. GEN. Portio PRODU TRANSFER No. 234 Australian Incorporated to South La gock The balance est Right of Way las Lo 11.50 anderson ED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED CANCELI Herner SED. REG. GEN.



(CERTIFICATE OF TITLE.)

Register Book,

Vol. 2678 Folio 135

Balance Certificate of Title from Vol.2309 Folio 165

SOUTH AUSTRALIAN JOCKEY CLUB INCORPORATED whose registered office is situated at Racecourse Morphettville

is FIRSTLY the proprietor of an estate in fee simple

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THOSE piece s of land situate in the HUNDRED of ADELAIDE COUNTY of ADELAIDE being PORTION S OF SECTIONS 135.136 and 153 containing together one hundred and sixty eight acres two roods and twenty five perches or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green SUBJECT nevertheless to the right of way and easement with conditions granted by Memorandum of Transfer No.1752042 to The Electricity Trust of South Australia in and over other portion of the said land as delineated in the said plan and therein marked Easement and is SECONDLY entitled subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon to full and free liberty license power and authority for the said proprietor its tenants servants agents workmen and visitors and all persons authorised by it and all members of the South Australian Jockey Club and persons authorised by the said Club and by the Committee or its Secretary thereof and all persons from time to time using or visiting the Morphettville Racecourse at all times and at any time to use other portion of the said Section 136 more particularly delineated in the said plan and therein colored brown and marked Private Road and to go over the said Private Road and return and to pass and repass thereover with or without horses carts wagons and carriages of every description

Which said Section s are delineated in the public map of the said Hundred deposited in the Land Office at Adelaide.

In witness whereof I have hereunto signed my name and	Ad affixed my seal this Ninth. day of July 1950		
Signed the St day of July	Registrar-General.		
1955, in the presence of Section Approved under	BUBJECT TO DECLARATION UNDER SEC. 29 TOWN		
SecT.P. Act 1929-1957 Vide	PLANNING ACT 1955-1957 VIDE A.C.O. DKT. 273/1957.		
1955 SecIST.P. Act 1929-1957.	[wide Cont. Gagatte 6/11/58 p. 1253.]		
<u>Vide L' 1032 of 1960</u>	CANCELLED AND New CERTIFICATE OF TITLE ISSUED VIDE 2744 846 VOL. 366 5 FOL. 66 DEP. REG. GENL.		

1.14

• •







South Australia. (CERTIFICATE OF TITLE.)

Register Book,

Vol. 2309 Folio 165

New Certificate of Title for the whole of the Land in Vol.418 Folio 51 Vol.685 Folio 62 Vol.1197 Folios 33 and 34 Vol.1329 Folio 58 Vol.1382 Folio 161(Fol.1543 Folio 134 Vol.2018 Folios 103 and 105 Vol.2141 Folio 22 Vol.2167 Folio 118 Vol.2236 Folio 199 and Vol.2284 Folio 152

INCORPORATED whose registered SOUTH AUSTRALIAN JOCKEY GLUB office is situated at 108 Gawler Place Adelaide is the proprietor of an estate in fee simple subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THOSE PIECES of land situated in the HUNDRED OF ADELAIDE COUNTY OF ADELAIDE being FIRSTLY PORTIONS OF SECTIONS 135.136 and CLOSED ROAD containing together one hundred and sixty acres or thereabouts and PORTION OF SECTION 153 containing nine acres and twenty five perches or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green SUBJECT nevertheless to the right of way and easement granted by Memorandum of Transfer No.535907 to the South Australian Railways Commissioner in and over that portion of the said land as delineated in the said plan and therein marked Easement "A" SUBJECT ALSO to the right of way and easement with conditions granted by Memorandum of Transfer No.1752042 to The Electricity Trust of South Australia in and over other portion of the said land as delineated in the said plan and therein marked Easement B SECONDLY ALLOTMENTS 99.100.102.103.107.108.109.110.111.112.113.125.126.131.132.133.134 and 135 PORTION OF ALLOTMENTS 106.114.115.116.117.118.119.120.121.122.123.124.127 and 136 of the subdivision

of portions of Section 109 and other land laid out as MORPHETTVILLE and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green SUBJECT nevertheless to the free and unrestricted right of way granted over the said portion of Allotment 136 as delineated in the said plan and therein marked Private Road WHICH said Allotments are bounded as appears in the plan deposited in the Lands Titles Registration Office No. 1268 and THIRDLY is entitled subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon to full and free liberty license power and authority for the said proprietor its tenants servants agents workmen and visitors and all persons authorised by it and all members of the South Australian Jockey Club and persons authorised by the said Club and by the Committee or its Secretary thereof and all persons from time to time using or visiting the Morphettville Racecourse at all times and at any time to use other portion of the SAID SECTION 136 more particularly delineated in the said plan in the margin hereof and therein colored brown and marked Private Road and to go over the said Private Road and return and to pass and repass thereover with or without horses carts wagons and carriages of every description EXCEPT nevertheless as regards the said Closed Road the following reservation that is to say EXCEPT AND RESERVED unto Her Majesty Her heirs and successors all gold silver copper tin and other metals ore minerals and other substances containing metals and all gems and precious stones coal and mineral oil in and upon such land and all incidental powers as provided for in "The Crown Lands Act 1888" WHICH said Sections are delineated in the Public Map of the said Hundred deposited in the Land Office at Adelaide

In witness whereof I have hereunto signed my name and affixed my seal this surface the

day of telmany 1954

Signed the

day of Tebruary

AS TO CLOSED RPONLY

16 ch

1954, in the presence of

Registrar-General.

que

(C)

CANCELLED AS REGARDS PORTION OF THE WITHIN LAND (LAND NOW IN PLAN NO. 62 56) AND NEW CERTIFICATE OF TITLE ISSUED VIDE L.T.O. DOCKET 1978 OF 1938 VOL. 2.611 FOL. 11 Market Concerners, REG. GEN. CANCELLED AND Balance CERTIFICATE OF THE RECTED WIDE Letter 2885 VOL2678 FOL 135 explanation DEP. REG. GER











Title Register Search LANDS TITLES OFFICE, ADELAIDE

For a Certificate of Title issued pursuant to the Real Property Act 1886

REGISTER SEARCH OF CERTIFICATE OF TITLE * VOLUME 6051 FOLIO 410 *

: \$26.50 (GST exempt) COST **REGION : EMAIL** AGENT : KOK7P BOX NO : 000 SEARCHED ON : 12/11/2014 AT : 10:35:36 EDITION : 2 CLIENT REF 530-P0111149

PARENT TITLE : CT 5709/135 AUTHORITY : SC 11322160 DATE OF ISSUE : 13/01/2010

REGISTERED PROPRIETOR IN FEE SIMPLE _____

SOUTH AUSTRALIAN JOCKEY CLUB INC. OF MORPHETTVILLE RACECOURSE MORPHETTVILLE SA 5034

DESCRIPTION OF LAND _____

> ALLOTMENT 52 DEPOSITED PLAN 51196 IN THE AREA NAMED GLENGOWRIE HUNDRED OF ADELAIDE

EASEMENTS

SUBJECT TO THE EASEMENT OVER THE LAND MARKED A TO AYERS NET LTD. (RTD 8578742)

TOGETHER WITH EASEMENTS OVER THE LAND MARKED E AND G (T 6321940 AND RE 6870507 RESPECTIVELY)

SCHEDULE OF ENDORSEMENTS -------

> DECLARED OPEN SPACE VIDE PROCLAMATION IN GOVERNMENT GAZETTE DATED 6.11.1958 PAGE 1253 OVER PORTION

11334386 LEASE TO DAVID JOHN OLIVER COMMENCING ON 1.10.2009 AND EXPIRING ON 30.9.2039 OF PORTION (AREA B IN FP 53508)

NOTATIONS

DOCUMENTS AFFECTING THIS TITLE _____ NIL

REGISTRAR-GENERAL'S NOTES -------APPROVED PLAN FOR LEASE PURPOSES FX53508

END OF TEXT.

The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.



LANDS TITLES OFFICE ADELAIDE SOUTH AUSTRALIA DIAGRAM FOR CERTIFICATE OF TITLE VOLUME 6051 FOLIO 410 SEARCH DATE : 12/11/2014 TIME: 10:35:36



Page 2 of 2





PropertyAssist - Results

Order No. **20141112182111** Please record this number for later use.

Customer reference:

PropertyAssist has found the following information based on your query data of : CT 5709/135

New Search)

PropertyAssist - Historical Search

Title Reference	CT 5709/135	
Previous Title Reference	CT 5399/1	
Other Previous Title References NO		
Title Status	TOTALLY CANCELLED	
Date of Issue	10 NOVEMBER 1999	
Latest Duplicate	EDITION 1	
Authority Document	RTD 8578742	
Other Authority Documents	NO	

Produced	Completion Date	Document Number	Status	Details
6 JANUARY 2010	14 JANUARY 2010	11322160	REGD	SUBSTITUTE TITLE/CROWN LE

Search Date 10:44 AM, Wed 12th November, 2014

PropertyAssist Disclaimer Privacy Statement Copyright Government of South Australia 10:44:23 AM - 12 Nov 2014

The PropertyAssist application is managed by the Land Services Group of the Department of Planning, Transport and Infrastruc





PropertyAssist - Results

Order No. **20141112182178** Please record this number for later use.

Customer reference:

 $\ensuremath{\textbf{PropertyAssist}}$ has found the following information based on your query data of : CT 5399/1

New Search)

PropertyAssist - Historical Search

Title Reference	CT 5399/1
Previous Title Reference	CT 4359/316
Other Previous Title References	NO
Title Status	TOTALLY CANCELLED
Date of Issue	20 FEBRUARY 1997
Latest Duplicate	EDITION 1
Authority Document	CD 6987000
Other Authority Documents	NO

Produced	Completion Date	Document Number	Status	Details
30 OCTOBER 1998	15 NOVEMBER 1999	8578742	REGD	REQUEST FOR NEW TITLES D 51196

Search Date 10:49 AM, Wed 12th November, 2014

PropertyAssist Disclaimer Privacy Statement Copyright Government of South Australia 10:49:18 AM - 12 Nov 2014

The PropertyAssist application is managed by the Land Services Group of the Department of Planning, Transport and Infrastruc

South Australia

Register Book, Volume 4359 Folio 316

(Comprising 2 Sheets)



Pursuant to Application 6870507 Registered on Vol.4163 Folio 997 and New Certificate for the whole of the Land in Vol.4298 Folio 871

<u>SOUTH AUSTRALIAN JOCKEY CLUB INC.</u> of Racecourse Morphettville 5043 is the proprietor of an estate in fee simple subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in <u>ALLOTMENT 3</u> of portion of Section 153 <u>HUNDRED OF ADELAIDE</u> in the area named <u>GLENGOWRIE</u> (L.T.R.O. DEPOSITED PLAN No.16277) and delineated on the diagram hereon

TOGETHER with the easements over the land marked E and G (T 6321940 and RE 6870507 respectively)

V Judi his

Deputy Registrar-General

Dated 10 May 1990



The within land has been declared to be open space within the meaning of Section 29 Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253

ORIGINAL

CERTIFICATE OF TITLE





. .

.

· · · . .

. . .

•









VOL 4359 FOL 316

. .

5



In witness whereof I have signed my name and affixed my seal this 7th day of July 1987

Signed the the day of July 1987, in the presence of state

I. M. Jaylow Acting Deputy Registrar-General



لتربير فيشره

The within land has been declared to be open space within the meaning of Section 29 Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253



CANCELLED

AND New CERTIFICATE OF TITLE 188UED VIDE 6870507 VOL. 4359 FOL: 316









.

· ·

. .

Ť

·

r .

South Australia

ORIGINAL

CERTIFICATE OF TITLE

59.89

120

160 Metres

80

40

Register Book,

Volume 4166 Folio 255



Pursuant to Transfer 4595778 Registered on Vol.3937 Folio 48

SOUTH AUSTRALIAN JOCKEY CLUB INC. of care of Box 1695 General Post Office Adelaide 5001 is the proprietor of an estate in fee simple subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in ALLOTMENT 2 of portion of Section 153 HUNDRED OF ADELAIDE in the area named GLENGOWRIE (L.T.R.O. FILED PLAN No.10248) and delineated on the plan hereon by bold black lines In witness whereof I have signed my name and affixed my seal this 8th day of Ortalian 1980 81L day of Signed the Aughes 1980, in the presence of Deputy Registrar-General The within land has been declared to be open space within the meaning of Section 29 Town Planning Act 1929-1963 vide proclamation in Government Gazette dated 6.11.1958 Page 1253 MAXWELL AR - GEN Enlargement Vide 6199 Enlargement ROAD H? of 3 2 174°31 NOARLUNGA 340.00 287.22 174°20'30' FP 9993 F.P. 2 9993 2.121ha 174°22 HUXON 177°08'30"

22

1

VOL 4166 FOL 255

-X 5/5/702

REGISTRAR GENERAL'S CAVEAT 5151702 over the within land Entered 13.12.1983 at 2.20 p.m.

-RT-60491+3 D. P. 16277 -IG321940

Caveat 5151702 is withdrawn this 9.4.1987



TRANSFER 6321940 to STATE TRANSPORT AUTHORITY of PORTION of the within land Reserving an Easement Produced 4.3.1987 at 12:25



CANCELLED as regards above land and new States

VOL. 4298 FOL. 870



THE WHOLE OF THE WITHIN LAND IS NOW COMPRISED IN DEPOSITED PLAN 16277 VIDE APPLICATION R.T. 6049113

AUSTE

CANCELLED

AND Balance CERTIFICATE OF TITLE ISSUED VIDE 6321940 DEPOSITED PLAN NOL277 VOL. 4298 FOL. 871

CERTIFICATE OF TITLE

South Australia

Register Book, Volume 4163 Folio 997



(Comprising 2 Sheets)

Pursuant to Acquisition 4540507 Registered on Vol.2312 Folio 148 and Vol.2407 Folio 47 and New Certificate for the whole of the Land in Vol.2377 Folio 191 Vol.3065 Folio 64 Vol.3471 Folios 171 and 172 Vol.3548 Folio 88 Vol.3563 Folios 95 and 96 Vol.3590 Folio 78 Vol.3635 Folio 20 Vol.3647 Folio 48 Vol.3669 Folio 108 Vol.3670 Folio 134 Vol.3693 Folio 167 Vol.3719 Folio 79 Vol.3721 Folios 198 and 199 Vol.3763 Folio 46 Vol.3937 Folio 47 and Vol.4047 Folio 460

MINISTER OF WATER RESOURCES is the proprietor of an estate in fee simple subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in <u>ALLOTMENT 3</u> of portion of Section 153 and other land <u>HUNDREDS OF ADELAIDE and NOARLUNGA</u> in the area named <u>GLENGOWRIE</u> (L.T.R.O. FILED PLAN No.9993) and delineated on the plan hereon by <u>SUBJECT</u> to free and unrestricted rights of way over the land marked Chereon bold black lines, <u>IOGETHER</u> with the easements more particularly set forth in Transfers 3027151 and 3027152 in and over the land marked A and B respectively hereon appurtenant only to that portion marked X

In witness whereof I have signed my name and affixed my seal this 264

Signed the *264* day of 1980, in the presence of

¥

ų,

i

rengest

& J. Sharma

Deputy Registrar-General



1980

An Easement over PORTION of the within land is vested in SOUTH AUSTRALIAN JOCKEY CLUB INC. Produced 16.2.1990 at 15:40 vide Application 6870507

CANCELLED as regards above land and New C.T. issued

VOL. 4359 FOL. 316



TRANSFER 6870508 to STATE TRANSPORT AUTHORITY of PORTION of the within land Produced 16.2.1990 at 15:40

CANCELLED as regards above land and New C.T. issued VOL. 4359 FOL. 317



the balance Cancelled as regards that portion of the within land comprised in Deposited Plan 25193 (RT 6679700) and new Certificates issued

day of

Vol. 4359Folios 3/8



<u>.</u>




- 38 FOL - 55 /

.



(CERTIFICATE OF TITLE.)

Register Book;

Folio 47 2407

Balance Certificate of Title from Vol.2369 Folio 195

GARDINER of 2 Morphett Road Morphettville Wool Scourer THOMAS FREDERICK

of an estate in fee simple the proprietor is

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT PIECE of land situated in the COUNTY OF ADELAIDE being PORTION OF BLOCK A containing two acres and twenty three perches or thereabouts of the subdivision of portion of Block 1419 in the HUNDREDS OF ADELAIDE AND NOARLUNGA laid out as DUNLEATH GARDENS and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green TOGETHER with full free and unrestricted right liberty and licence for drainage purposes in and over Allotment 199 as delineated in the said plan and therein colored blue and marked Easement WHICH said full free and unrestricted right liberty and licence are more particularly described and set forth in Memorandum of Transfer No.1576748 WHICH said Block A is bounded as appears in the plan deposited in the Lands Titles Registration Office No.3840 -

EXCEPT AND RESERVED unto Her Majesty Her heirs and successors all gold silver copper tin and other metals ore minerals and other substances containing metals and all gems and precious stones coal and mineral oil-in and upon such land all incidental powers as provided for in "The Crown Lands Act 1915 to 1919"

delineated in the public mapsof the said deposited in the Land Hundreds Which said Block 1419 is Office at Adelaide.

In witness whereof I have hereunto signed my name and affixed my seal this Queuty the day of A

Signed the

Der

1955, in the presence of

Acting Registrar-General.

EXCEPT MINERALS

The land in this Certificate is REDESIGNATED ALLOTMENTIS 3

Mortgage No.1786896 from Frederick Thomas Gardiner to Elder Smith & Co. Limited Produced for registration the 30 day of June 1953 at 2.30 p.m. (Including other land)

Acting Reg.Genl.

Acting Reg.Genl.

1955

Power of

P/A/917358A

THE WITHIN LAND IS DISCHARGED FROM THE WITHIN MORTGAGE NO. 786 896AS APPEARS BY MEMORANDUM NO. 1973751 PRODUCED FOR REGISTRATION THE 16 DAY OF COMMENDER 1956 AT 11-15am Bennetts

DEP. REG. GENI

TRANSFER No. 2089118 FROM Frederick Thomas Gardiner & Wingfield Wool Similed of 51 Elizabeth Street adelaide. OF THE WITHIN LAND. PRODUCED 22.10.1958 AT 2.55 DEP. REG. GEN. AQ 4540007 Caveat No. 4445559 10 withdrawn this 16 5 1950 at har - En MORTGAGE No. 2089 119 Wool Limited to FROM wingfield ACQUISITION No. 4540 507 Cecil Fewster Boynton Wyborn WHEREBY PRODUCED 22 10-1951 AT 2.55 pm Reserve in D.P. (580) THE WITHIN LATE IS VESTED IN Minister of water Resources Venete DEP. REG. GEN. PRODUCED M. H. 1980 at 2.10pm 162166022 72166038 STATE OF 5 20,8719 23/12/59 -. CANCELLED AS REGARDS LAND ALAUTER (110 216 6037 with draws, vide LTO 2006/1960 DRS ACQUISITION NO.4540507 AND NEW CERTIFICATE OF TITLE ISSUED VOL.4163 DISCHARGE OF MORTGAGE No. 2089/19 BY ENDORSEMENT THEREON. PRODUCED 28.12.1953 AT 12.40 from FOLIO 997 Naum 6 DEP. REG. GEN. TRANSFER No. 2166 028 FROM wingfield wool Limited to Portion of Minister of Works of a Right of War of THE WITHIN land PRODUCED 20 11.1959 AT12.15/m Cancelled as regards Allotments 550 (Public Road) in filed in deposited plan 8992 being CANCELLED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED VOL. 1728 POL. 66 DEP. REG. GEN. portion balance of the within land and new Certificates lesued VOL 4164 FOHO 3 7-187347 T2188656 C/F CANCELLED AS REGARDS PORTION OF THE WITHIN LAND (LAND NOW IN FLAN N. 6570) AND NEW CEMIFICATE OF TITLE ISSUED VIDE LTID. DOCKET 2530 OF 1959 VOL. 2742 FOL. 168 Linege DEP. REG. GEN. He Balance of THE WITHIN LAND Kersley ave 2 IN DEPOSITED PLAN NO. 6570 is VESTED IN THE Corporation of the City of marion BY VINTUR OF SEC. 14 SNE CEC LOP ACT 100 OF 1828 VIDE L.T.O. DOCKET No. 2530 OF 1859 DEP. REG. GENL: TRANSFER No. 2187347 FROM Singfield Wool Limited to John Colin Gordon and Marian Of The WITHIN Lot 4 PRODUCED 7/3/1960 AT 2: 50m. DEP. REG. GEN CANCELED AS REGARDS ABOVE LAND AND NEW C.F. ISSUED DEP. REG. GEN. PORTION OF THE WITHIN RESERVE HAS BEEN TAKEN FOR A NEW ROAD VIDE CONFIRMATION OF ROAD ORDER IN GAZETTE DATED 12 ** DAY OF NOVEMBER 1970 (TRACING No 6074) 6 p. Name DEP. REG. GEN XX 4445559 REGISTRAR-GENERAL'S CAVEAT No. 4445559 PORTION OF OVERATHE WITHIN LAND ENTERED 24.9.1979 AT 3.35 pm (INCLUDING OTHER LAND)





South Australia.	(CERTIFICATE OF TITLE.) Register Book, Vol. 2377 Folio 191
Balance Certificate of Title from Vol.	1803 Folio 138
Gowrie Avenue Glengowrie are the proprietors of an estate in fe subject nevertheless to such encumbrances liens and interests as are notified by THAT piece of land situate in the HUNDRED of NOARLUNGA being the ALLOTMENT 110 of the subdivision of portion of Secti	m A I SCOTT Clerk both of 45 ee simple y memorial underwritten or endorsed hereon in COUNTY of ADELAIDE on 153 laid out as GLENGOWRIE and
bounded as appears in the plan in the margin hereof and therein coloured green Registration Office, No. 4031 which said Section is delineated in the the Land Office at Adelaide. In witness whereof I have hereunto signed my name and affixed my seal this to Signed the 21 st day of March 1955, in the presence of $R. \mathcal{E}$. James Closed Road Vide Tracing No.6038 Markham Magdates Dep. Res. Collision	and in the plan deposited in the Lands Titles public map of the said Hundred deposited in wentyfirst day of March 1955 Registrar-General.
The land in this Certificate is P: REDESIGNATED as,ALLOTMENT(N) 3 In FILED PLAN 9993 Not Second MARNING M	LAGE No. 3209990 TAGE No. 3209990 This May Scott was married to
NON 109	Dn. 18:9:1959 Adelaide 23:6:1974 3pm Produced 7:6:1971 :40pm faguelly Dep. Reg. Gen. Terrobys
TRANSFER No. 3. The Honourse of Malacon Maghines Con 50 0 505.7 M OF THE WITHEN L	222653 TO ble Juffry Thomas Vigo of Local Government. AND. PRODUCED /6:7.1971 AT 2pm DEP. REG. GEN.



South Australia. (CERTIFICATE OF TITLE.) Register Book, 2312 Folio Vol. Balance Certificate of Title from Vol.2180 Folio 85

SOUTH AUSTRALIAN HOUSING TRUST of Adelaide

of an estate in fee simple the proprietor is

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in piece of land situate in the HUNDRED of ADELAIDE AND NOARLUNGA COUNTY of ADELAIDE THAT being PORTION OF SECTION 153 containing eighteen acres one rood and twenty eight perches or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green SUBJECT nevertheless to the free and unrestricted rights of way over portions of the said land as delineated in the said plan and therein marked Private Road -

Which said Section is delineated in the public map of the said Hundred deposited in the Land Office at Adelaide.

In witness whereof I have hereunto signed my name and affixed my seal this

Signed the

41=

march day of 1954, in the presence of urrow

THE LAND IN THIS CERTIFICATE IS REDESIGNATED AS ALLOTANENTIS 548 IN FILED PLAN 8992-NEW GERTIFICA FETOBE ISSUED WHEN DUPLICATE IS PRODUCED.

Portion of land in this Certificate is REDESIGNATED ASALLOTMENT (S) 3 9993

BANCELLED AS REGARDS PORTION OF THE WITHIN LAND (LAND NOW IN PLAN No 4787 AND A NEW GERTIFICATE OF TITLE ISSUED VIDE OF 1954 VOL 2345 LT.O. 1150

Registrar-General

day of

ourth

FOL 92 alleans DEP REG. GENE

STURT RES WIKER AV

1954

march

148

Becauce of THE WITHIN LAND BARCIAY AV IN DEPOSITED PLAN NO. 4787 THE Orporation of the dily of VESTED IN Marion BY VIRTUE OF SEC. 14 SUB SEC. 1 OF ACT 1845 TE 189 VIDE L.T.O. DOCKET No. 1150 OF 1954 DEP. REG. GENLE

Ol cours









Aerials









<image/>		
Approximate Site Boundary	The second second	
Source: DEWNR, Mapland	CLIENT South Australian Jockey Club Inc	DESIGNED TS TS
your success. I sydney	TITLE Preliminary Site Investigation - Environmental Site History	CHECKED D.G.
fmgengineering.com.au P 08 8132 6600 1 67 Greenhill Rd, Wayville SA 5034	site address 88 Morphett Road, GLENGOWRIE, SA 5044	SITE ID & JOB NO. REV. SO1895_281059 REV.
ABN 58 083 071 185 Quality Management Systems ISO 9001 Certified	DRAWING TITLE Aerial Photograph - 6 September 1989 RE LISED FOR ANY PURPOSE OR SITE OTHER THAN WHICH IT WAS PREPARED, NOR BY ANY THIRD DARTY, WITHOUT THE	

Legend Approximate Site Boundary		
Source: DEWNR, Mapland	CLIENT South Australian Jockey Club Inc	DESIGNED TS
Engineering your success.	TITLE Preliminary Site Investigation - Environmental Site History	CHECKED D.G. No. OF SHEETS
fmgengineering.com.au		SCALE NTS @ A4 DATE STARTED 19/07/2022
P US 8152 6600 167 Greenhill Rd, Wayville SA 5034	oo worpnet Noad, GLENGOVYRIE, SA 3044	S01895_281059
ABN 58 083 071 185 Quality Management Systems ISO 9001 Certified	Aerial Photograph - 26 September 1999	
CONTROL DRAWING TO CONTROL TO TWO ENGINEERING. NO PART OF THIS DRAWING, INCLUDING THE WHOLE OF SAME, SHALL	SE GOES FOR ANY FURFUGE OR SHE UTHER THAN WHIGHT WAS PREPARED, NUR BY ANY THIRD PARTY, WITHOUT THE	I MOR WRITTEN CONSENT OF FMG ENGINEERING.

<image/>	<image/> <image/>	
Engineering your success.	International South Australian Jockey Club Inc International Steen Investigation - Environmental Steen History	CHECKED D.G.
fmgengineering.com.au	SITE ADDRESS	SCALE NTS @ A4 DATE STARTED 19/07/2022
P 08 8132 6600 67 Greenhill Rd, Wayville SA 5034 ENGINEERING	88 Morphett Road, GLENGOWRIE, SA 5044	SITE ID & JOB No. S01895_281059
ABN 58 083 071 185 Quality Management Systems ISO 9001 Certified	DRAWING TITLE Aerial Photograph - 31 January 2005	FIGURE 1
(C) THIS DRAWING IS COPYRIGHT TO FMG ENGINEERING. NO PART OF THIS DRAWING, INCLUDING THE WHOLE OF SAME, SHALL	BE USED FOR ANY PURPOSE OR SITE OTHER THAN WHICH IT WAS PREPARED, NOR BY ANY THIRD PARTY, WITHOUT THE	PRIOR WRITTEN CONSENT OF FMG ENGINEERING.



South Australian Jockey Club Inc

Preliminary Site Investigation - Environmental Site History

88 Morphett Road, GLENGOWRIE, SA 5044

Source: Nearmap (Accessed 19 July 2022)

Engineering your success.

fmgengineering.com.au P 08 8132 6600 | 67 Greenhill Rd, Wayville SA 5034

ABN 58 083 071 185 Quality Management Systems ISO 9001 Certified

Quality Management Systems ISO 9001 Certified Aerial Photograph - 19 October 2009
This brawing is copyright to fwg engineering, no part of this brawing, including the whole of same, shall be used for any purpose or site other than which it was prepared, nor

ENGINEERING

TITLE

SITE ADDRESS

DRAWING TITLE

09 FIGURE 1

SITE ID & JOB No. S01895_281059 JRAWING No.

DRAWN TS No. OF SHEETS

DATE STARTED 19/07/2022

HECKED D.G.

CALENTS @ A4



Source: Nearmap (Accessed 19 July 2022) DRAWN TS No. OF SHEETS South Australian Jockey Club Inc Engineering your success. CHECKED D.G. TITLE Preliminary Site Investigation - Environmental Site History CALE NTS @ A4 DATE STARTED 19/07/2022 SITE ADDRESS fmgengineering.com.au 88 Morphett Road, GLENGOWRIE, SA 5044 SITE ID & JOB No. S01895_281059 DRAWING No. P 08 8132 6600 67 Greenhill Rd, Wayville SA 5034 ENGINEERING ABN 58 083 071 185 Quality Management Systems ISO 9001 Certified DRAWING TITLE FIGURE 1 Aerial Photograph - 17 October 2014

C THIS DRAWING IS COPYRIGHT TO FMG ENGINEERING. NO PART OF THIS DRAWING, INCLUDING THE WHOLE OF SAME, SHALL BE USED FOR ANY PURPOSE OR SITE OTHER THAN WHICH IT WAS PREPARED, NOR BY ANY THIRD PARTY, WITHOUT THE PRIOR WRITTEN CONSENT OF FMG EN



South Australian Jockey Club Inc

Preliminary Site Investigation - Environmental Site History

88 Morphett Road, GLENGOWRIE, SA 5044

Legend

Approximate Site Boundary

Source: Nearmap (Accessed 19 July 2022)

Engineering your success.

fmgengineering.com.au P 08 8132 6600 | 67 Greenhill Rd, Wayville SA 5034

ABN 58 083 071 185 Quality Management Systems ISO 9001 Certified

Quality Management Systems ISO 9001 Certified Aerial Photograph - 1 October 2019
This brawing is copyright to fing engineering, no part of this brawing, including the whole of same shall be used for any purpose or site other than which it was prepared, no

ENGINEERING

TITLE

SITE ADDRESS

DRAWING TITLE

19 FIGURE 1

SITE ID & JOB No. S01895_281059 JRAWING No.

CALE NTS @ A4 DATE STARTED

DRAWN TS No. OF SHEETS

HECKED D.G.



South Australian Jockey Club Inc

Preliminary Site Investigation - Environmental Site History

88 Morphett Road, GLENGOWRIE, SA 5044

- Approximate Site Boundary

Source: Nearmap (Accessed 19 July 2022)

Engineering your success.

fmgengineering.com.au

P 08 8132 6600 67 Greenhill Rd, Wayville SA 5034

ABN 58 083 071 185 Quality Management Systems ISO 9001 Certified

Aerial Photograph - 21 May 2022 AWING IS COPYRIGHT TO FMG ENGI ANY PURPOSE OR SITE C ER THAN WHICH IT WAS

ENGINEERING

TITLE

SITE ADDRESS

DRAWING TITLE

EPARED, NOR BY ANY THIRD PARTY, WITHOUT THE PRIOF

DRAWN TS No. OF SHEETS

DATE STARTED 19/07/2022

HECKED D.G.

CALENTS @ A4

FIGURE 1

SITE ID & JOB No. S01895_281059 JRAWING No.

Appendix H

Safework SA Search Results



Government of South Australia

SafeWork SA

Attorney-General's Department

Licensing Unit

Level 4, World Park A, 33 Richmond Road Keswick SA 5035

GPO Box 465 Adelaide SA 5001

DX 715 Adelaide

 Phone
 (08) 8303 0400

 Fax
 (08) 8303 9903

 Email
 licensing@safework.sa.gov.au

 ABN
 50-560-588-327

www.safework.sa.gov.au

Angie Johnson FMG Engineering Inc 42 Fullarton Road NORWOOD SA 5067

11 December 2014

Dear Ms Johnson

DANGEROUS SUBSTANCES LICENCE SEARCH

RE: 86 Morphett Road GLENGOWRIE SA 5044 (CT5709/134)

According to the records available to SafeWork SA, the site listed above has no licenced items.

Yours sincerely

SENIOR ADMINISTRATION OFFICER LICENSING AND AUTHORISATION UNIT SAFEWORK SA



Government of South Australia

SafeWork SA

Attorney-General's Department

Licensing Unit

Level 4, World Park A, 33 Richmond Road Keswick SA 5035

GPO Box 465 Adelaide SA 5001

DX 715 Adelaide

 Phone
 (08) 8303 0400

 Fax
 (08) 8303 9903

 Email
 licensing@safework.sa.gov.au

 ABN
 50-560-588-327

www.safework.sa.gov.au

Angie Johnson FMG Engineering 42 Fullarton Road NORWOOD SA 5067

8 December 2014

Dear Ms Johnson

DANGEROUS SUBSTANCES LICENCE SEARCH

RE: 88 Morphett Road, GLENGOWRIE SA 5044 (CT 6051/410)

According to the records available to SafeWork SA, please see listed below all current items located within the specified search criteria.

Class	Quantity	Storage Type
2	180KG (20 CYL)	Gas Cylinder Above Ground External
2	210KG (1 CYL)	Gas Cylinder Above Ground External

Yours sincerely

SENIOR ADMINISTRATION OFFICER LICENSING AND AUTHORISATION UNIT SAFEWORK SA

Appendix I

DEWNR WaterConnect Database Search Results



DHNO	Unit No	Unit Number	dh name	network Obs No	drillhole class	water point type code	Aquifer	Orig drilled depth	Orig drilled date	max drill denth m	nax drill date	late open depth l	ate open date	late nermit no	cased to	case min diam	nurnose	latest status lat	test status date d	itw	swl r	rswl v	vater level date	TDS	EC salinity date
62923	6628-15954	662815954			ww	F===	Onah	9	16/03/1992	9	16/03/1992	9	16/03/1992	26640	9	100	DOM	OPR		4.8	4.8	5.27	16/03/1992	2830	5061 16/03/1992
54841	6628-7872	662807872			ww		Onah	-		5.18	29/05/1951	5.18	29/05/1951							3.81	3.81	4.67	29/05/1951	2545	4563 29/05/1951
54844	6628-7875	662807875			M0M/		Tomw(T2)		1/01/1914	92.96	22/08/1914	92.96	22/08/1914							0	0.02	9.35	22/08/1914	1185	2145 17/08/1914
54044	6628 7015	662807015			1404/		Tomw(T1)+Tomw(T	2)	1/01/1514	95.24	2/12/1027	95.24	2/12/1027							0.01	0.01 1	11 42	2/12/1027	2170	2001 2/12/1027
54004 C499C	6628-7915	662807915			1404/		Tomw(T1)+Tomw(T2	70.24	1/01/1072	79.24	1/01/1977	70.24	7/11/1072		76.2	127				10.24	10.24	1.45	7/11/1077	2000	5200 17/05/1072
54005	6628-7910	662807910			1404/		Tomw(T1)	73.24	1/01/1072	75.24	10/07/1022	75.24	10/07/1022		70.2	127				1.52	1.52.1	11.34	10/07/1022	1200	3200 17/03/1372
54000	6628-7917	662807917	SA RESIMUNC CO A		ENC		Oneh	6.1	1/01/1955	63.55	19/07/1955	05.55	19/07/1955					LIKAL	18/10/1052	1.52	1.52 1	11.25	19/07/1955	1500	2351 19/07/1955
54007	6628-7918	662807918	AAODDUICTVILLE DADK DDIMADY		LING		Upan Termu(T2)	0.1	20/12/1002	0.1	18/10/1903	0.1	20/12/1003		71.02	137		UKIN	16/10/1905			-+		1069	25 40 26 /11 /1086
54805	6628-7920	663807920	CZ 100		1404/		Oneh	47.95	16/04/1071	47.95	16/04/1071	47.05	16/04/1071	26626	/1.55	140		DVC		10.67	10.67	2.22	16/04/1071	1903	3407 16/04/1071
54690	6628-7927	662807927	32 109		WW	600	upan	47.00	10/04/19/1	47.00	10/04/19/1	47.65	16/04/19/1	20020	41.1	140		DKF		10.67	10.67	2.55	10/04/19/1	2560	5407 10/04/19/1
54699	6628-7950	662807930			WP	SPR	O h			2.00	44/42/4057	2.66	44/42/4057							2.74	2.74		44/42/4057	3300	6557 6/02/1950
54900	6628-7931	662807931			ww		Qpah			3.66	11/12/1967	3.66	11/12/1967							2./4	2./4 1	10.54	11/12/196/	3/30	6632 11/12/196/
54901	6628-7932	662807932			ww		Qpah (= .)		/ /	18.29	5/10/1949	18.29	5/10/1949		18.29	152			/ /	6.1	6.1	6.57	5/10/1949	3460	6164 5/10/1949
55014	6628-8045	662808045	IMMANUEL COLLEGE 1	CENI_ADELADE148	WW, Strat		Iomw(I1)	106.68	22/09/1964	105.68	22/09/1964	106.68	22/09/1964		84.23	203	OBS	UKN	22/09/1964	8.26	1.27	-0.54	28/02/2022	1289	2330 21/02/2013
55027	6628-8058	662808058			ww		Qpah (===)		. /	12.19	6/05/1949	12.19	6/05/1949						- / /				- / /	4990	8801 6/05/1949
55028	6628-8059	662808059	EWS 2		ww		Tomw(T1)+Tomw(T2	2) 85.34	1/01/1914	111.86	7/08/1934	0	3/08/1955					DEC	3/08/1955	1.68	1.68	8.1	3/08/1955	1730	3118 21/04/1955
55030	6628-8061	662808061	OBS 3	CENT_ADEL ADE149	ww		Tomw(T1)	36.58	1/04/1945	36.58	1/04/1945	36.58	1/04/1945		35.36		MAROBS			1.69	1.69	8.96	25/09/1984	910	1650 22/08/2007
55031	6628-8062	662808062	OBS 2		ww		Tomw(T1)			42.67	28/02/1959	42.67	28/02/1959				MAROBS			7.01	7.01	4.29	28/02/1959	370	670 2/08/2004
55032	6628-8063	662808063			ww		Tomw(T2)	103.63	30/09/1914	103.63	30/09/1914	0	13/09/2004	100327				DEC	13/09/2004	1.07	1.07	3.93	30/09/1914	5698	10000 11/12/2001
55033	6628-8064	662808064			ww		Tomw(T1)		1/01/1915	96.01			1/01/1915							5.49	5.49	6.34			
55034	6628-8065	662808065			ww		Qpah		1/01/1949	7.62	29/04/1949	7.62	29/04/1949							6.1	6.1	5.9	29/04/1949	2630	4711 29/04/1949
55035	6628-8066	662808066			ww		Qpah			4.88	19/03/1951	4.88	19/03/1951							3.66	3.66	8.66	19/03/1951	2685	4807 19/03/1951
55036	6628-8067	662808067			WW		Qpah		1/01/1950	3.51	10/11/1967	3.51	10/11/1967							2.74	2.74 1	10.11	10/11/1967	3730	6632 10/11/1967
55037	6628-8068	662808068			WW		Qpah	23.77	1/01/1951	23.77	1/01/1951	23.77	11/05/1951		1.52	152				3.2	3.2	9.8	11/05/1951	1530	2761 6/10/1951
55038	6628-8069	662808069			ww		Qpah			6.4	4/11/1967	6.4	4/11/1967							5.79	5.79	6.76	4/11/1967	3245	5789 4/11/1967
55039	6628-8070	662808070			ww		Qpah		1/01/1967	7.01	18/12/1967	7.01	18/12/1967							2.74	2.74 1	10.26	18/12/1967	3385	6032 18/12/1967
55040	6628-8071	662808071			ww		Qpah			7	18/12/1967	7	18/12/1967							2.7	2.7	9.93	18/12/1967	3315	5911 18/12/1967
55060	6628-8091	662808091			ww		Qpah			11.43	22/02/1952	11.43	22/02/1952							2.36	2.36 1	11.88	22/02/1952	3945	7004 22/02/1952
58470	6628-11501	662811501	WEST TORRENS COUNCIL		ww		Tomw(T2)	109.73	25/08/1990	109.73	25/08/1990	0	26/05/2018	301464			RCL	DEC	26/05/2018 1	10.66	10.66 ·	-2.49	24/10/1990	1222	2210 31/08/1990
58662	6628-11693	662811693	OBS 4		ww		Tomw(T1)	52	15/11/1980	52	15/11/1980	52	15/11/1980	7961	41	150	MAROBS			2	2	8.6	15/11/1980	1158	2096 24/01/2005
58663	6628-11694	662811694	OBS 1		ww		Tomw(T1)	47.5	10/11/1980	47.5	10/11/1980	44.5	28/07/2003	62815	40	101	MARMON	RHB	28/07/2003	4.5	4.5	8.61	10/11/1980	970	1760 13/08/2009
58867	6628-11898	662811898			ww		Qpah	20.1	16/12/1981	20.1	16/12/1981	20.1	16/12/1981	9557	18.8	95				2.4	2.4	6.93	16/12/1981	2909	5200 16/12/1981
58907	6628-11938	662811938			ww		Qpah	26.2	5/02/1982	26.2	5/02/1982	26.2	5/02/1982		26.2	140				7.5	7.5	2.63	5/02/1982	1945	3500 5/02/1982
59266	6628-12297	662812297			ww		Qpah	22	11/02/1983	22	11/02/1983	22	11/02/1983	92562	20	100	DOM	OPR		10	10	1.66	11/02/1983	2125	3818 11/02/1983
59331	6628-12362	662812362			ww		Opah	13.7	5/06/1983	13.7	5/06/1983	13.7	5/06/1983	12888	13.7	95				4.2	4.2	6.36	5/06/1983	1748	3150 5/06/1983
59423	6628-12454	662812454			ww		Opah	48.77	25/09/1968	48.77	25/09/1968	0	28/07/2003	62814				ABD	28/07/2003	6	6	7.21	25/09/1968	1700	2980 1/07/2003
59957	6628-12988	662812988			ww		Onah	24	29/11/1983	24	29/11/1983	24	29/11/1983	93177	23	145	STK	OPR	1.1	3	3	7.2	29/11/1983	2036	3660 29/11/1983
60037	6628-13068	662813068			w/w/		Onah	12	16/10/1984	12	16/10/1984	12	16/10/1984	15343	12	150	DRN	OPR		6	6	4.03	16/10/1984	474	770 16/10/1984
60240	6628-13271	662813271			W/W/		Onah	20	1/03/1985	20	1/03/1985	20	1/03/1985	16352	20	100	Diat	0/ IX		3	3	6.3	1/03/1985	3714	6601 1/03/1985
60254	6629 12295	662013271			1404/		Opah	11	27/02/1095	11	27/02/1085	11	27/02/1085	16412	11	90	DPN	OPP		4 5	4 5	2.0	27/02/1085	2712	6600 27/02/1985
60456	6629 12497	662912497			1404/		Tomw(T1)	75.5	20/10/1095	75.5	20/10/1985	20	14/06/2016	0412		30	DINN	PUP	10/12/1097	7.75	7.75	2 72	1/12/2009	1564	2820 1/12/2009
60935	6628-13487	662813487			1404/		Oneh	73.5	2/12/1085	11	2/12/1085	11	2/12/1086	10110	11	05	DDN	KIID	10/12/1507	1.75	7.75	7.72	22/01/1097	1084	2620 1/12/2003
60835	6628-13866	662813866			WW		Qpan	11	3/12/1986	10	3/12/1986	11	3/12/1986	19118	10	95	DRN	000		5.5	5.5	7.26	22/01/198/	1984	35/0 22/01/198/
61253	6628-14284	662814284	611.2C		WW		upan	19	29/04/1988	19	29/04/1988	19	29/04/1988	19745	19	95	DOM	UPR	45 (43) (4004	9.7	9.7	- 0.1	19/10/1988	1/32	3120 19/10/1988
61507	6628-14538	662814538	GH 26		ENG			9.85	15/12/1981	9.85	15/12/1981	9.85	15/12/1981				INV	ABD	15/12/1981			-+	. / /		
62385	6628-15416	662815416			ww		Qpah	10.5	1/02/1988	10.5	1/02/1988	10.5	1/02/1988	20890	10.5	100				5	5		1/02/1988		
62468	6628-15499	662815499			ww		Opah	11.2	26/03/1991	11.2	26/03/1991	11.2	26/03/1991	25490	11.2	100	REC	OPR		5.8	5.8	3.2	3/04/1991	1/03	30/0 3/04/1991
62569	6628-15600	662815600			ww		Opah	10.5	17/08/1991	10.5	17/08/1991	10.5	17/08/1991	25499	10.5	100	DOM	OPR		5.7	5.7	4.07	22/08/1991	2567	4600 22/08/1991
63020	6628-16051	662816051			ww		Qpah	15	14/04/1992	15	14/04/1992	15	14/04/1992	27404				BKF		6	6	2.1	14/05/1992	5951	10425 14/05/1992
63055	6628-16086	662816086			ww		Qpah	18	20/02/1992	18	20/02/1992	18	20/02/1992	26812	18	100	DOM	OPR				\rightarrow		2614	4682 8/07/1992
142277	6628-16652	662816652			ww		Qpah	14	16/04/1994	14	16/04/1994	14	16/04/1994	31493	14	100	DOM			4	4	4.76	16/04/1994	1519	2740 16/04/1994
147121	6628-16862	662816862			ww		Qpah	4	21/10/1994	4	21/10/1994	4	21/10/1994	32780	4	50	INV								
147122	6628-16863	662816863			ww		Qpah	4	21/10/1994	4	21/10/1994	4	21/10/1994	32781	4	50	INV								
147123	6628-16864	662816864			ww		Qpah	4	21/10/1994	4	21/10/1994	4	21/10/1994	32782	4	50	INV								
148188	6628-17019	662817019	SZ 30		ENG			3.86		3.86		3.86						NOP	28/08/2012						
151241	6628-17364	662817364			ww		Qpah	22.5	17/06/1995	22.5	17/06/1995	22.5	17/06/1995	35133	22.5	100	DOM							2171	3900 17/06/1995
152969	6628-17461	662817461			ww		Qpah	18	24/11/1995	18	24/11/1995	18	24/11/1995	34616	18	100	DOM							2375	4260 24/11/1995
156088	6628-17808	662817808			ww		Qpah	30	30/10/1995	30	30/10/1995	30	30/10/1995	34814	30	100	DOM			4	4	4.11	30/10/1995	4205	7450 11/12/2001
156090	6628-17810	662817810			ww		Qpah	20	13/12/1995	20	13/12/1995	20	13/12/1995	36057	20	100	DOM							7190	12500 13/12/1995
156098	6628-17818	662817818			ww		Qpah	19	4/04/1996	19	4/04/1996	0	4/04/1996	37313	19	100	DOM	ABD	4/04/1996						
166239	6628-18567	662818567	MORPHETTVILLE RACECOURSE		ww		Tomw(T1)	82	6/04/1997	82	6/04/1997	82	6/04/1997	41135	37	200	IND	OPR	30/04/1997	8	8	2.31	6/04/1997	1110	2030 2/03/2005
176114	6628-19642	662819642			ww		Qpah	4	23/02/1999	4	23/02/1999	4	23/02/1999	48022	4	50	MON			2	2	4.93	23/02/1999		
176115	6628-19643	662819643			ww		Qpah	4	23/02/1999	4	23/02/1999	4	23/02/1999	48145	4	50	MON			2	2	4.92	23/02/1999		
176116	6628-19644	662819644			ww		Qpah	4	23/02/1999	4	23/02/1999	4	23/02/1999	48146	4	50	MON			2	2	4.98	23/02/1999		
176117	6628-19645	662819645			ww		Qpah	4	23/02/1999	4	23/02/1999	4	23/02/1999	48147	4	50	MON			2	2	5.18	23/02/1999		
176118	6628-19646	662819646			WW		Qpah	4	23/02/1999	4	23/02/1999	4	23/02/1999	48148	4	50	MON			2	2	5.3	23/02/1999		
176119	6628-19647	662819647			ww		Qpah	4	23/02/1999	4	23/02/1999	4	23/02/1999	48149	4	50	MON			2	2	5.22	23/02/1999		
176120	6628-19648	662819648			ww		Qpah	4	23/02/1999	4	23/02/1999	4	23/02/1999	48150	4	50	MON			2	2	5.34	23/02/1999		
182324	6628-20346	662820346			ww		Qpah	8	25/09/2000	8	25/09/2000	8	25/09/2000	53649	8	100	DRN			3.5	3.5	4.53	25/09/2000	1743	3140 25/09/2000
195126	6628-21045	662821045	MAR WELL		ww		Tomw(T1)	75	20/02/2002	75	20/02/2002	75	20/02/2002	57463	38.5	204	IRRMAR	OPR	1/09/2016	10	10	2.18	20/02/2002	1100	2000 18/03/2009
195127	6628-21046	662821046	SITE 2 MAR WELL		ww		Tomw(T1)	75.1	23/02/2002	75.1	23/02/2002	75.1	23/02/2002	57462	39	204	IRRMAR	OPR	1/09/2016	10	10	3.27	23/02/2002	940	1702 9/09/2008
197136	6628-21329	662821329			ww		Qpah	18	5/06/2003	18	5/06/2003	18	5/06/2003	62215	15	100	DOMSTK			5.8	5.8	4.44	5/06/2003	3731	6630 5/06/2003
198090	6628-21486	662821486	GMW		WW		Qpah	5.5	26/05/2003	5.5	26/05/2003	5.5	26/05/2003	62344	5.5	50	INV			2.5	2.5	6.92	26/05/2003		
198091	6628-21487	662821487			ww		Qpah	5	26/05/2003	5	26/05/2003	5	26/05/2003	62345	2	50	INV			2.5	2.5	6.93	26/05/2003		
198092	6628-21488	662821488			ww		Qpah	4.5	26/05/2003	4.5	26/05/2003	4.5	26/05/2003	62346	1.5	50	INV	1 1		2.5	2.5	6.87	26/05/2003		
209626	6628-22325	662822325			ww	1	Qpah	4	27/01/2005	4	27/01/2005	4	27/01/2005	104476	2	600				3.5	3.5	5.94	27/01/2005		
219168	6628-22630	662822630	GMW 1		ww		Qpah		, , ,	6	9/11/2005	6	9/11/2005	111021	3	50	MON	NOP	28/08/2012	5.2	5.2	3.05	9/11/2005		
230024	6628-22889	662877889			ww	1		1		۵	1/01/1997		19/06/2007	131780		1		BKF	19/06/2007				.,, -505		
230025	6628-22890	662877890			ww					4	1/01/1997	1	19/06/2007	131779				BKF	19/06/2007	-	-+	+			
230026	6628-22891	662822891			ww	1				4	1/01/1997	0	19/06/2007	131778				BKF	19/06/2007	-		-+			
230027	6628-22802	662877807			ww	1				4	1/01/1997		19/07/2007	131777				BKE	19/07/2007	-	-	-+			
230027	6628-22032	662872802			ww	1				4	1/01/1997		19/06/2007	131776				BKF	19/06/2007	-	-+	+			
230032	6678,22093	667977004			www.					4	1/01/1007		19/06/2007	121770				BKE	19/06/2007		-	\rightarrow		+ +	
220033	6629.22894	662922005		<u> </u>	1404/					4	1/01/1997	-	10/06/2007	121774				DVC	19/06/2007	-+		-+			
220034	6628.22895	662822895		<u>├</u>	***					4	1/01/1997	0	19/06/2007	131//4				DVC	19/06/2007			\rightarrow		+ +	
230035	6629.22765	662022705			1404/	+	Onah		24/02/2000	4	7/02/2000	1	24/02/2007	131//3	-	400			13/00/200/	6.0	5.6	0.84	24/02/2000		
241497	0028-23/65	002823/65			VV VV		Qual	12	24/02/2008	12	24/02/2008	10	24/02/2008	135995	12.1	100		+		5.0	5.0	0.84	24/02/2008	405 1	8720 17/10/2007
245309	0020-24540	662624540	CD /ADM EA	<u> </u>	***		Opah	12.1	12/11/2007	12.1	17/10/2007	12.1	12/11/2007	123216	12.1	100	IND	+		3.0	3.0	4.4	17/10/2007	4951	0/30/1//10/200/
258593	6628-25336	002825336	50/WW 54		VV VV		Qual	4.5	12/11/2009	4.5	12/11/2009	4.5	12/11/2009	184888	1.5	50	INV INV	DVC	11/12/2012	2.8	2.8	\rightarrow	12/11/2009		
226594	6628.25222	662825337	SD/WW40	<u>├</u>	***		Opah	4.5	21/11/2009	4.5	21/11/2009	0	11/12/2012	218214			INV	DVC	11/12/2012	4.2	4.2	\rightarrow	21/11/2009		
206595	0020-25338	662625338	50/1010049	<u> </u>	***		Opah	4.5	11/11/2009	4.5	11/11/2009	0	11/12/2012	218207			INV	DKF	11/12/2012	2.2	2.2	\rightarrow	11/11/2009		
236596	6628 25240	662825339	50/10/00	<u> </u>	****		Opah	4.5	11/11/2009	4.5	11/11/2009	0	11/12/2012	218206		-	INV INV	DKF	11/12/2012	2.2	2.2	\rightarrow	11/11/2009		
258597	0028-25340	062825340	50/WW 51		VV VV		upan	4.5	11/11/2009	4.5	11/11/2009	0	11/12/2012	218221			IINV	DNF	11/12/2012	2.1	2.1	-+	11/11/2009		
258598	0628-25341	662825341	SB/MW 52	├ ──	ww		upah	4.5	11/11/2009	4.5	11/11/2009		11/12/2012	218222			INV	BKF	11/12/2012	2.2	2.2	\rightarrow	11/11/2009		
1258599	16628-25342	662825342	12R/MM 23	1 1	WW	1	rupah	4.5	12/11/2009	4.5	12/11/2009	1 0	11/12/2012	218218		1	INV	BKF	11/12/2012	2.2	2.2		12/11/2009	u I	1

DHNO Unit_No	Unit_Number dh_name n	network O	bs_No	drillhole_class	water_point_type_code	Aquifer	Orig_drilled_depth	Orig_drilled_date	max_drill_depth	max_drill_date	late_open_depth	late_open_date	late_permit_no	cased_to	case_min_diam purpose	latest_	status latest_status_date	itw s	wl rswl	water_level_d	ate TDS	EC	salinity_date
258787 6628-25362	662825362 MW 55			ww		Qpah	5.6	1/04/2010	5.6	1/04/2010	5.6	1/04/2010	188356	3	50 INV								
258788 6628-25363	662825363 MW 56			ww		Qpah	5.5	1/04/2010	5.5	1/04/2010	5.5	1/04/2010	188357	3	50 INV								
258819 6628-25383	662825383 MW 58			ww		Qpah	4	9/09/2010	4	9/09/2010	0	11/12/2012	218220		INV	BKF	11/12/2012	1.5	1.5	9/09/20	10		
258820 6628-25384	662825384 MW 59			ww		Qpah	4	9/09/2010	4	9/09/2010	0	11/12/2012	218219		INV	BKF	11/12/2012						
270204 6628-26395	662826395 IMMANUEL COLLEGE 2			ww		Tomw(T1)	124	27/09/2008	124	27/09/2008	110	27/09/2008	141144	78	177 IRR	CFL	16/03/2022	1.94	1.94	18/08/20	10 127	9 231	1 11/12/2018
274715 6628-26762	662826762 MW 40			ww						11/12/2012	0	11/12/2012	218223			BKF	11/12/2012						
274716 6628-26763	662826763 BH 22			ww						11/12/2012	0	11/12/2012	218224			BKF	11/12/2012						
274717 6628-26764	662826764 BH 415			ww						11/12/2012	0	11/12/2012	218203			BKF	11/12/2012						
274718 6628-26765	662826765 MW 10			ww						11/12/2012	0	11/12/2012	218204			BKF	11/12/2012						
274719 6628-26766	662826766 BH 20			ww						11/12/2012	0	11/12/2012	218205			BKF	11/12/2012						
274720 6628-26767	662826767 BH 12			ww						11/12/2012	0	11/12/2012	218208			BKF	11/12/2012						
274721 6628-26768	662826768 BH 3			ww						11/12/2012	0	11/12/2012	218209			BKF	11/12/2012						
274722 6628-26769	662826769 BH 5			ww						11/12/2012	0	11/12/2012	218210			BKF	11/12/2012						
274723 6628-26770	662826770 BH 6			ww						11/12/2012	0	11/12/2012	218211			BKF	11/12/2012						
274724 6628-26771	662826771 BH 2			ww						11/12/2012	0	11/12/2012	218212			BKF	11/12/2012						
274725 6628-26772	662826772 BH 19			ww						11/12/2012	0	11/12/2012	218213			BKF	11/12/2012						
274726 6628-26773	662826773 BH 18			ww						11/12/2012	0	11/12/2012	218215			BKF	11/12/2012						
276015 6628-27008	662827008 IMMANUEL COLLEGE 3			ww		Tomw(T1)			124	15/08/2013	124	15/08/2013	222001	93	200 IRR	CFL	16/03/2022	4	4	15/08/20	13 115	4 209	0 15/07/2019
307002 6628-29437	662829437			ww		Tomw(T2)	107.5	9/04/2018	107.5	9/04/2018	107.5	9/04/2018	301464	94.5				10	10	9/04/20	18		
316803 6628-30249	662830249			ww																			
325654 6628-30399	662830399			ww			6.5	23/09/2019	6.5	23/09/2019	6.5	23/09/2019	350934	1.3	50 INV								
325655 6628-30400	662830400			ww			5	23/09/2019	5	23/09/2019	5	23/09/2019	350935	2	50 INV								
357170 6628-31353	662831353 METRO SOILS BORE GH 26			WW, MW					43	6/09/1982	43	6/09/1982										T	

DHNO pH pH_date	yield yield_date	mga_easting	mga_northing mga_zon	ne long_degree	s long_minutes	long_seconds	lat_degrees lat_minut	es lat_second	s decimal_long	decimal_lat ne	g_decimal_lat hundred	plan	parcel	Title map_250k	map_100k map_5	0k map_10k	map_2_5k	map_1k water_inf	o salinity	water_chemistry	geophys_log d	Irill_log	lith_log
62923 7.7 16/03/1992	0.75 16/03/1992	275223.38	6126430.83 5	4 138	32	15.386	34 5	58 47.156	138.5376073	34.9797655	-34.9797655 ADELAID	D51196	A52	CT 6051 410 SI5409	6628	3 50	k	2 Y	Y	N	N N		N
54841	2 53 22/08/1914	274511.38	6126173.82 5	4 138	31	47.079	34 5	58 54.921	138.5297443	34.9819225	-34.9819225 NOARLUN	IGA F8978	A503	CT 5799 326 515409	6628	3 50	k k	6 Y	Y N	N	N N		N
54884	2.33 22/00/1914	275268.4	6125942.76 5	4 138	32	16.686	34 5	59 3.021	138.5379683	34.9841725	-34.9841725 NOARLUN	GA F8991	A248	CT 5701 134 SI5409	6628	3 50	k	5 Y	N	Y	N N		N
54885 6.5 17/05/1972	7.58 7/11/1972	275483.33	6125950.83 5	4 138	32	25.164	34 5	59 2.931	138.5403232	34.9841475	-34.9841475 NOARLUN	IGA 54040		SI5409	6628	3 50	k	5 Y	Y	N	N N	1	N
54886	2.53 19/07/1933	275283.33	6125844.79 5	4 138	32	17.179	34 5	59 6.211	138.5381053	34.9850585	-34.9850585 NOARLUN	IGA F8991	A241	CT 5199 134 SI5409	6628	3 50	k	5 Y	Y	Y	N N	1	N
54887		275550 38	6125708.84 5	4 138	32	27.669	34 34	59 10.635 59 7.561	138.5382//2	34.9862875	-34.9862875 NOARLUI	GA 52996	421	CT 5371 493 SI5409	6628	3 50	k k	5 N	V	N V	N N		N
54896 7.5 14/04/1971	7.58 16/04/1971	275625.39	6125753.76 5	4 138	32	30.571	34 34	59 9.436	138.5418252	34.9859545	-34.9859545 NOARLUI	GA D50271	A51	CT 5725 181 SI5409	6628	3 50	k	4 Y	Y	Y	N N		N
54899		275592.38	6125910.79 5	4 138	32	29.422	34 5	59 4.317	138.5415062	34.9845325	-34.9845325 NOARLUN	IGA F9790	A503	CT 5484 922 SI5409	6628	3 50	k	5 N	Y	N	N N	1	N
54900 6.7 11/12/1967		275725.36	6125952.8 5	4 138	32	34.704	34 5	59 3.061	138.5429732	34.9841835	-34.9841835 ADELAID	D3814	A157	CT 5332 481 SI5409	6628	3 50	k	4 Y	Y	N	N N		N
54901	15 16 22/00/1064	275822.37	6126127.79 5	4 138	32	38.696	34 9	58 57.463	138.5440822	34.9826285	-34.9826285 ADELAID	D3363	A43	CT 5850 816 515409	6628	3 50	k a	4 Y	Y	N	N N		N
55027	0.25 1/01/1949	275251.36	6127508.76 5	4 138	32	17.535	34 34	58 12.218	138.5382043	34.9700605	-34.9700605 ADELAID	C23888	A1/5	SI5409	6628	3 50	g	5 N	Y	Y	N N		N
55028	15.16 1/01/1949	275799.34	6127495.82 5	4 138	32	39.114	34 5	58 13.075	138.5441982	34.9702985	-34.9702985 ADELAID	54474		SI5409	6628	3 50	g	4 Y	Y	Y	N N	1	N
55030	10.1 1/05/1949	275480.34	6126439.82 5	4 138	32	25.52	34 5	68 47.069	138.5404223	34.9797415	-34.9797415 ADELAID	D58693	A1101	CT 6105 575 SI5409	6628	3 50	k	2 Y	Y	Y	N N		N
55031	12.63 28/02/1959	275622.34	6126831.81 5	4 138	32	31.496	34 9	34.469	138.5420822	34.9762415	-34.9762415 ADELAID	D58693	A1101	CT 6105 575 515409	6628	3 50	k a	3 Y	Y	Y	Y N		N
55032	10.1 1/01/1949	275482.32	6126143.73 5	4 138	32	25.311	34 34	58 56.674	138.5403642	34.9824095	-34.9824095 ADELAID	D9935	A4	CT 5142 80 515409	6628	3 50	s k	5 Y	N	N	N N		N
55034	1.89 29/04/1949	275591.37	6126148.74 5	4 138	32	29.613	34 5	58 56.599	138.5415592	34.9823885	-34.9823885 ADELAIDI	D124645	A102	CT 6242 772 SI5409	6628	3 50	k	5 Y	Y	Y	N N	1	N
55035		275653.36	6126120.74 5	4 138	32	32.029	34 5	58 57.556	138.5422302	34.9826545	-34.9826545 ADELAID	D3657	A95	CT 5868 504 SI5409	6628	3 50	k	4 Y	Y	N	N N		N
55036 6.7 10/11/1967	1 90 11/05/1051	275918.32	6126286.76 5	4 138	32	42.631	34 9	58 52.383	138.5451752	34.9812175	-34.9812175 ADELAID	D90151	A101	CT 6116 970 SI5409	6628	3 50	k k	3 Y	Y	N	N N		N
55038 7 4/11/1967	1.89 11/03/1951	275859.39	6126260.78 5	4 138	32	40.284	34 34	58 53.179	138.5445232	34.9814385	-34.9814385 ADELAID	D3363	A53	CT 5198 842 515409	6628	3 50	k	4 Y	Y	N	N N		N
55039 6.7 18/12/1967	0.57 18/12/1967	275840.35	6126202.82 5	4 138	32	39.477	34 5	58 55.043	138.5442992	34.9819565	-34.9819565 ADELAIDI			SI5409	6628	3 50	k	4 Y	Y	N	N N	1	N
55040 6.7 18/12/1967		275870.37	6126200.78 5	4 138	32	40.658	34 5	55.133	138.5446272	34.9819815	-34.9819815 ADELAID	F10403	A305	CT 5650 331 SI5409	6628	3 50	k	4 Y	Y	N	N N		N
55060	25 26 22/10/1000	276215.38	6126220.8 5	4 138	32	54.273	34 9	54.759	138.5484092	34.9818775	-34.9818775 ADELAID	D3430	A29	CT 5203 102 SI5409	6628	3 50	k k	4 Y	Y	N	N N		N
58662 7.2 27/11/1986	23.20 22/10/1990	275459.36	6126716.8 5	4 138	31	24.967	34 5	38.069	138.5402673	34.9772415	-34.9772415 ADELAID	D58693	A1101	CT 6105 575 SI5409	6628	3 50	k	2 Y	Y	Y	· Υ Υ Ν		N
58663 7.6 13/08/2009		275972.43	6126344.81 5	4 138	32	44.82	34	58 50.543	138.5457832	34.9807065	-34.9807065 ADELAID	D58693	A1101	CT 6105 575 SI5409	6628	3 50	k	3 Y	Y	Y	Y N	1	N
58867 7.6 16/12/1981	0.75 16/12/1981	275614.36	6127434.78 5	4 138	32	31.766	34 5	58 14.907	138.5421573	34.9708075	-34.9708075 ADELAID	D64492	A2	CT 5921 466 SI5409	6628	3 50	g	4 Y	Y	N	N N		N
58907 7.3 5/02/1982	1.75 5/02/1982	275222.36	6126368.75 5	4 138	32	15.285	34 9	49.168	138.5375793	34.9803245	-34.9803245 ADELAID	D62216	A101	CT 5199 256 SI5409	6628	3 50	k k	2 Y	Y	N	N N		N
59331	0.6 5/06/1983	274876.38	6126109.8 5	4 138	32	1.46	34 5	58 57.29	138.5337273	34.9825805	-34.9825805 NOARI II	IGA D3349	A74	CT 5225 923 515409	6628	3 50	k	5 Y	Y	N	N Y		N
59423 7.4 1/07/2003	6 25/09/1968	275993.33	6126334.78 5	4 138	32	45.633	34	58 50.885	138.5460092	34.9808015	-34.9808015 ADELAID	D58693	A1101	CT 6105 575 SI5409	6628	3 50	k	3 Y	Y	Y	N N	1	N
59957 7 29/11/1983	2.4 29/11/1983	275205.33	6126284.75 5	4 138	32	14.533	34 9	58 51.879	138.5373703	34.9810775	-34.9810775 ADELAID	F9993	A6	CT 5318 243 5I5409	6628	3 50	k	2 Y	Y	N	N N		N
60037 7.3 16/10/1984	1 1/02/1095	274739.31	6125948.8 5	4 138	31	55.842	34 5	59 2.402	138.5321783	34.9840005	-34.9840005 NOARLUN	IGA D2921	A46	CT 5502 925 SI5409	6628	3 50	k	6 Y	Y	N	N N	4	N
60354 7.6 27/02/1985	1 1/05/1965	275253.38	6127400.8 5	4 138	32	17.51	34 34	58 15.721	138 5381973	34.9710335	-34.9729915 ADELAID	D91930	A20	CT 5269 795 515409	6628	3 50	g	5 Y	Y	N	N N		N
60456 7.7 10/12/1987	3 10/12/1987	276087.75	6127173.47 5	4 138	32	50.166	34	58 23.759	138.5472682	34.9732665	-34.9732665 ADELAID	D3493	A398	CT 5542 610 SI5409	6628	3 50	g	4 Y	Y	Y	Y N	1	N
60835 6.9 3/12/1986	1.25 3/12/1986	275231.32	6125693.77 5	4 138	32	14.983	34 9	59 11.067	138.5374953	34.9864075	-34.9864075 NOARLUI	IGA F9172	A699	CT 5139 325 SI5409	6628	3 50	k	5 Y	Y	N	N N		N
61253 7.9 31/08/1988	0.63 29/04/1988	275105.34	6126697.75 5	4 138	32	10.994	34 9	58 38.404	138.5363873	34.9773345	-34.9773345 NOARLUN	IGA D4031	A109	CT 5675 205 SI5409	6628	3 50	k a	2 Y	Y	N	N N		N
62385	0.4 1/02/1988	275657.33	6127236.82 5	4 138	32	33.267	34 34	58 21.362	138.5425743	34.9726005	-34.9726005 ADELAID	S13450	Q2	SI5409	6628	3 50	g	4 Y	N	N	N N		N
62468 7.8 26/03/1991	1 26/03/1991	274696.38	6126273.74 5	4 138	31	54.467	34 5	58 51.829	138.5317963	34.9810635	-34.9810635 NOARLUN	IGA D3934	A62	CT 5274 505 SI5409	6628	3 50	k	1 Y	Y	N	N N	1	N
62569 7.6 17/08/1991	1 17/08/1991	274792.36	6126378.79 5	4 138	31	58.351	34 5	68 48.499	138.5328753	34.9801385	-34.9801385 NOARLUN	IGA D4787	A201	CT 5672 674 SI5409	6628	3 50	k	1 Y	Y	N	N N		N
63020 7.6 14/04/1992	2 14/04/1992	275356.38	6127577.83 5	4 138	32	21.74	34 9	58 10.061	138.5393723	34.9694615	-34.9694615 ADELAID	D1901	A52	CT 5804 354 SI5409	6628	3 50	g v	5 Y	Y	N	N N		N
142277 7.4 16/04/1994		275107.38	6126859.75 5	4 138	32	11.323	34 34	58 33.152	138.5364533	34.9758755	-34.9758755 ADELAID	53412		515409	6628	3 50	k	2 Y	Y	N	N Y		N
147121		274562.49	6126829.98 5	4 138	31	49.733	34 5	33.681	138.5304813	34.9760225	-34.9760225 NOARLUN	IGA 514453		SI5409	6628	3 50	k	1 N	N	N	N Y	·	N
147122		274562.31	6126844.74 5	4 138	31	49.74	34 5	58 33.202	138.5304833	34.9758895	-34.9758895 NOARLUN	IGA		SI5409	6628	3 50	k	1 N	N	N	N Y		N
14/123		274567.31	6126819.89 5	4 138	31	49.913	34 34	58 34.012 58 19.421	138.5305313	34.9/61145	-34.9761145 NOARLUP	GA 514453	A179	CT 6190 785 SI5409	6628	3 50	k g	1 N 5 N	N	N	N Y		N
151241 7.4 17/06/1995	1.5 17/06/1995	275322.47	6126224.59 5	4 138	32	19.091	34 34	58 53.924	138.5386363	34.9816455	-34.9816455 ADELAID	D22012	A1/5	CT 5442 666 515409	6628	3 50	s k	5 N	Y	N	N Y		N
152969 7.4 24/11/1995	0.5 24/11/1995	274672.48	6126434.88 5	4 138	31	53.682	34 5	6.583	138.5315783	34.9796065	-34.9796065 NOARLUN	IGA D77348	A1	CT 6010 325 5I5409	6628	3 50	k	1 N	Y	N	N Y	'	N
156088 7.2 30/10/1995		274772.51	6126834.83 5	4 138	31	58.013	34 5	58 33.692	138.5327813	34.9760255	-34.9760255 NOARLUN	IGA D2255	A82	CT 5683 591 SI5409	6628	3 50	k	1 Y	Y	N	N Y		N
156090 7.4 13/12/1995	0.5 13/12/1995	275862.54	612/429.89 5	4 138	32	24 192	34 34	8 15.263	138.5448/22	34.9709065	-34.9709065 ADELAID	F7186	A28 491	CT 5402 280 SI5409	6628	3 50	g	4 N 5 N	Y N	N	N Y		N
166239 7.6 2/03/2005	40 30/04/1997	275622.56	6127034.83 5	4 138	32	31.701	34	58 27.885	138.5421393	34.9744125	-34.9744125 ADELAIDI	D58693	A1101	CT 6105 575 515409	6628	3 50	g	4 Y	Y	Y	N Y	.	N
176114	0.01 23/02/1999	274447.51	6126794.83 5	4 138	31	45.168	34	34.729	138.5292133	34.9763135	-34.9763135 NOARLUN	IGA 54260		\$15409	6628	3 50	k	1 Y	Ν	N	N Y		N
176115	0.01 23/02/1999	274442.46	6126784.83 5	4 138	31	44.959	34 9	35.049	138.5291553	34.9764025	-34.9764025 NOARLUN	IGA 54260		SI5409	6628	3 50	k k	1 Y	N	N	N Y		N
176117	0.01 23/02/1999	274447.49	6126774.84 5	4 138	31	45.143	34 54	58 35.409	138.5296453	34.9765025	-34.9765025 NOARLUN	GA F7187	A6	CT 5704 6 515409	6628	3 50	k	1 Y	N	N	N Y	_	N
176118	0.01 23/02/1999	274517.53	6126789.79 5	4 138	31	47.922	34	34.948	138.5299783	34.9763745	-34.9763745 NOARLUM	IGA F7187	A13	CT 5170 636 SI5409	6628	3 50	k	1 Y	N	N	N Y		N
176119	0.01 23/02/1999	274512.47	6126809.76 5	4 138	31	47.742	34 5	34.297	138.5299283	34.9761935	-34.9761935 NOARLUN	IGA		\$15409	6628	3 50	k	1 Y	N	N	N Y		N
1/6120	0.01 23/02/1999	274502.48	6126729.82 5	4 138	31	47.27	34 9	36.881	138.5297973	34.9769115	-34.9769115 NOARLUN	IGA F14537	A63	CT 5427 925 SI5409	6628	3 50	k k	1 Y	N	N	N Y		N
195126 7.6 18/03/2009	40 20/02/2002	275788.81	6126712.47 5	4 138	31	37.94	34 5	58 38.473	138.5438722	34.9773535	-34.9773535 ADELAIDI	D58693	A1101	CT 6105 575 SI5409	6628	3 50	 k	3 Y	Y	Y	N Y	-	N
195127 7.7 31/08/2006	40 23/02/2002	276006.73	6126339.55 5	4 138	32	46.166	34 5	50.741	138.5461572	34.9807615	-34.9807615 ADELAID	D58693	A1101	CT 6105 575 515409	6628	3 50	k	3 Y	Y	Y	N Y	·	N
197136	0.5 5/06/2003	275244.34	6126370.18 5	4 138	32	16.153	34 5	49.139	138.5378203	34.9803165	-34.9803165 ADELAID	D62216	A101	CT 5899 256 SI5409	6628	3 50	k	2 Y	Y	N	N Y		N
198090		2/5545.84	6127252.88 5	4 138	32	28.908	34 34	58 20.159 58 20.746	138.5413633	34.9722665	-34.9/22665 ADELAID	D2683	A10 A9	CT 5142 643 515409	6628	3 50	g g	5 Y	N	N	N Y		N
198092		275530.03	6127260.43 5	4 138	32	28.274	34 5	58 20.494	138.5411873	34.9723595	-34.9723595 ADELAID	D2683	A9	CT 5142 643 515409	6628	3 50	g	5 Y	N	N	N Y	-	N
209626	4 27/01/2005	274698.59	6126372.7 5	4 138	31	54.65	34 5	48.621	138.5318473	34.9801725	-34.9801725 NOARLUN	IGA 56581		\$15409	6628	3 50	k	1 Y	N	N	N Y	· 1	N
219168		274914.66	6127331.18 5	4 138	32	4.097	34 9	8 17.708	138.5344713	34.9715855	-34.9715855 ADELAIDI	F6208	A179	CT 6190 785 SI5409	6628	3 50	g	5 Y	N	N	N Y		N
230024		275324.31	6125898.1 5	4 138	32	18.842	34 34	59 4.637	138.5385673	34,9845885	-34.9846215 NOARLU	GA D76141	AZ A2	CT 6006 551 515409	6628	3 50	ĸ.	5 N	N	N	N N		N
230026		275337.72	6125898.52 5	4 138	32	19.375	34	59 4.511	138.5387152	34.9845865	-34.9845865 NOARLUN	IGA D76141	A2	CT 6006 551 SI5409	6628	3 50	k	5 N	N	N	N N		N
230027		275328.88	6125882.76 5	4 138	32	19.011	34	59 5.015	138.5386142	34.9847265	-34.9847265 NOARLUI	GA D76141	A2	CT 6006 551 SI5409	6628	3 50	k	5 N	N	N	N N		N
230032		275330.04	6125869.14 5	4 138	32	19.044	34 5	5.458	138.5386232	34.9848495	-34.9848495 NOARLUN	IGA D76141	A2	CT 6006 551 SI5409	6628	3 50	k k	5 N	N	N	N N		N
230033		275354.32	6125881.06 5	4 138	32	20.012	34 54	5.091	138.5388932	34.9847475	-34.9847475 NOARLUI	GA D76141	A2	CT 6006 551 515409	6628	3 50	k	5 N	N	N	N N		N
230035		275358.39	6125871.61 5	4 138	32	20.163	34	59 5.401	138.5389342	34.9848335	-34.9848335 NOARLUN	IGA D76141	A2	CT 6006 551 SI5409	6628	3 50	k	5 N	N	N	N N		N
241497	0.3 24/02/2008	274752.06	6127355.8 5	4 138	31	57.714	34	58 16.779	138.5326983	34.9713275	-34.9713275 ADELAID	D7580	A21	CT 5601 212 SI5409	6628	3 50	g	6 Y	N	N	N Y		N
245309	0.75 17/10/2007	274694.61	6126770.64 5	4 138	31	54.881	34 5	35.711	138.5319113	34.9765865	-34.9765865 NOARLUN	IGA D2255	A74	CI 5781 783 SI5409	6628	3 50	k k	1 Y	Y	N	N Y		N
258594		274450.8/	6126824.64 5	4 138	31	45.553	34 34	58 33.789	138.5295973	34.9760525	-34.9760525 NOARI II	GA C40189		515409	6628	3 50	k	1 Y	N	N	N N		Y
258595		274470.76	6126822.6 5	4 138	31	46.111	34	33.847	138.5294753	34.9760685	-34.9760685 NOARLUN	IGA C40189		SI5409	6628	3 50	k	1 Y	N	N	N N	· _ !	Y
258596		274470.78	6126814.61 5	4 138	31	46.104	34	34.106	138.5294733	34.9761405	-34.9761405 NOARLUI	GA C40189		SI5409	6628	3 50	k	1 Y	N	N	N N	1	Y
258597		274466.21	6126807.17 5	4 138	31	45.917	34 5	34.343	138.5294213	34.9762065	-34.9762065 NOARLUN	IGA C40189		SI5409	6628	3 50	k k	1 Y	N	N	N N		Y
258599		274489.61	6126803.2 5	4 138	31	46.363	34 9	58 34.1/4	138 5296763	34.9762475	-34.9762475 NOARLUI	GA C40189		515409	6628	3 50	k	1 1	N	N	N N		<u>'</u>

DHNO	pН	pH_date	yield	yield_date	mga_easting	mga_northing mga	zone	long_degrees	long_minutes	long_seconds	lat_degrees	lat_minutes	lat_seconds	decimal_long	decimal_lat	neg_decimal_lat	hundred	plan	parcel	Title	map_250k	map_100k map_50k	map_10k	map_2_5k	map_1k	water_info	salinity	water_chemistry	geophys_lo	g drill_log	lith_log
258787	7				274456.68	6126811.93	54	138	31	45.546	34	58	34.181	138.5293183	34.9761615	-34.9761615	NOARLUNGA	S4260			SI5409	6628 3	50	k	1	N	N	N	N	Y	N
258788	3				274497.85	6126772.77	54	138	31	47.13	34	58	35.485	138.5297583	34.9765235	-34.9765235	NOARLUNGA	F7187	A6	CT 5704 6	SI5409	6628 3	50	k	1	N	N	N	N	Y	N
258819	9				274466.46	6126804.52	54	138	31	45.924	34	58	34.43	138.5294233	34.9762305	-34.9762305	NOARLUNGA	C40189			SI5409	6628 3	50	k	1	Y	N	N	N	Y	N
258820)				274478.57	6126802.37	54	138	31	46.399	34	58	34.509	138.5295553	34.9762525	-34.9762525	NOARLUNGA	C40189			SI5409	6628 3	50	k	1	N	N	N	N	Y	N
270204	1 7.33	11/12/2018	10.1	27/09/2008	274881.38	6127398.73	54	138	32	2.851	34	58	15.49	138.5341253	34.9709695	-34.9709695	ADELAIDE	F6208	A179	CT 6190 785	SI5409	6628 3	50	g	5	Y	Y	N	N	Y	N
274715	5				274489.03	6126811.51	54	138	31	46.82	34	58	34.221	138.5296723	34.9761725	-34.9761725	NOARLUNGA	C40189			SI5409	6628 3	50	k	1	N	N	N	N	N	N
274716	5				274499.12	6126802.55	54	138	31	47.209	34	58	34.52	138.5297803	34.9762555	-34.9762555	NOARLUNGA	C40189			SI5409	6628 3	50	k	1	N	N	N	N	N	N
274717	7				274497.35	6126815.16	54	138	31	47.151	34	58	34.109	138.5297643	34.9761415	-34.9761415	NOARLUNGA	C40189			SI5409	6628 3	50	k	1	N	N	N	N	N	N
274718	3				274497.2	6126817.6	54	138	31	47.148	34	58	34.03	138.5297633	34.9761195	-34.9761195	NOARLUNGA	C40189			SI5409	6628 3	50	k	1	N	N	N	N	N	N
274719	9				274496.97	6126826.8	54	138	31	47.148	34	58	33.731	138.5297633	34.9760365	-34.9760365	NOARLUNGA	C40189			SI5409	6628 3	50	k	1	N	N	N	N	N	N
274720					274458.52	6126814.98	54	138	31	45.621	34	58	34.084	138.5293393	34.9761345	-34.9761345	NOARLUNGA	C40189			SI5409	6628 3	50	k	1	N	N	N	N	N	N
274721	L				274458	6126821.4	54	138	31	45.607	34	58	33.875	138.5293353	34.9760765	-34.9760765	NOARLUNGA	C40189			SI5409	6628 3	50	k	1	N	N	N	N	N	N
274722	2				274457.88	6126822.51	54	138	31	45.603	34	58	33.839	138.5293343	34.9760665	-34.9760665	NOARLUNGA	C40189			SI5409	6628 3	50	k	1	N	N	N	N	N	N
274723	3				274458.41	6126827.07	54	138	31	45.629	34	58	33.692	138.5293413	34.9760255	-34.9760255	NOARLUNGA	C40189			SI5409	6628 3	50	k	1	N	N	N	N	N	N
274724	1				274459.41	6126827.21	54	138	31	45.668	34	58	33.688	138.5293523	34.9760245	-34.9760245	NOARLUNGA	C40189			SI5409	6628 3	50	k	1	N	N	N	N	N	N
274725	5				274464.81	6126827.01	54	138	31	45.881	34	58	33.699	138.5294113	34.9760275	-34.9760275	NOARLUNGA	C40189			SI5409	6628 3	50	k	1	N	N	N	N	N	N
274726	5				274481.57	6126828.87	54	138	31	46.543	34	58	33.652	138.5295953	34.9760145	-34.9760145	NOARLUNGA	C40189			SI5409	6628 3	50	k	1	N	N	N	N	N	N
276015	5 7.24	15/07/2019	20	30/07/2013	274834.67	6127414.23	54	138	32	1.026	34	58	14.95	138.5336183	34.9708195	-34.9708195	ADELAIDE	F6208	A179	CT 6190 785	SI5409	6628 3	50	g	5	Y	Y	N	N	Y	N
307002	2		20	9/04/2018	274772.74	6126936.52	54	138	31	58.121	34	58	30.394	138.5328113	34.9751095	-34.9751095	NOARLUNGA	F34937	Q1	CT 5203 102	SI5409	6628 3	50	k	1	Y	N	N	N	Y	N
316803	3				275138.77	6126336.52	54	138	32	11.96	34	58	50.147	138.5366557	34.9805963	-34.9805963	NOARLUNGA	D25168	A21	CT 5432 477	SI5409	6628 3	50	k	2	N	N	N	N	N	N
325654	1				275662.76	6126536.52	54	138	32	32.802	34	58	44.079	138.5424451	34.9789108	-34.9789108	ADELAIDE	D58693	A1101	CT 6105 575	SI5409	6628 3	50	k	3	N	N	N	N	Y	N
325655	5				275419.77	6126990.52	54	138	32	23.668	34	58	29.16	138.5399078	34.9747667	-34.9747667	ADELAIDE	D65796	A500	CT 5937 888	SI5409	6628 3	50	g	5	N	N	N	N	Y	N
357170					275000.5	6127222.79	54	138	32	7.373	34	58	21.292	138.5353815	34.9725811	-34.9725811	ADELAIDE	F6208	A179	CT 6190 785	SI5409	6628 3	50	g	5	N	N	N	N	N	N

Appendix J

SA EPA Section 7 searches results



Environment Protection Authority GPO Box 2607 Adelaide SA 5001 211 Victoria Square Adelaide SA 5000 T (08) 8204 2004

Country areas 1800 623 445

Receipt No : Admin No : 64466 (73645)

FMG Engineering 67 Greenhill Road WAYVILLE SA 5034 Contact: Section 7 Telephone: (08) 8204 2026 Email: epasection7@sa.gov.au

Contact: Public Register Telephone: (08) 8204 9128 Email: epa.publicregister@sa.gov.au

19 July, 2022

EPA STATEMENT TO FORM 1 - CONTRACTS FOR SALE OF LAND OR BUSINESS

The EPA provides this statement to assist the vendor meet its obligations under section 7(1)(b) of the *Land and Business (Sale and Conveyancing) Act 1994.* A response to the questions prescribed in Schedule 1-Contracts for sale of land or business-forms (Divisions 1 and 2) of the *Land and Business (Sale and Conveyancing) Act 1994* is provided in relation to the land.

I refer to your enquiry concerning the parcel of land comprised in

Title Reference	CT Volume 6051 Folio 410
Address	88 Morphett Road, GLENGOWRIE SA 5044

Schedule – Division 1 – Land and Business (Sale and Conveyancing) Regulations 2010

PARTICULARS OF MORTGAGES, CHARGES AND PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

8. Environment Protection Act 1993

Does the EPA hold any of the following details relating to the *Environment Protection Act 1993*:

8.1	Section 59 - Environment performance agreement that is registered in relation to the land.	NO
8.2	Section 93 - Environment protection order that is registered in relation to the land.	NO
8.3	Section 93A - Environment protection order relating to cessation of activity that is registered in relation to the land.	NO
8.4	Section 99 - Clean-up order that is registered in relation to the land.	NO
8.5	Section 100 - Clean-up authorisation that is registered in relation to the land.	NO
8.6	Section 103H - Site contamination assessment order that is registered in relation to the land.	NO
8.7	Section 103J - Site remediation order that is registered in relation to the land.	NO

CT Volume 6051 Folio 410

	possible existence of site contamination).	
8.9	Section 103P - Notation of site contamination audit report in relation to the land.	NO
8.10	Section 103S - Notice of prohibition or restriction on taking water affected by site contamination in relation to the land.	NO
Sched	ule – Division 2 – Land and Business (Sale and Conveyancing) Regulations 2010	
PARTI	CULARS RELATING TO ENVIRONMENT PROTECTION	
3-Lice	nces and exemptions recorded by EPA in public register	
Does t	he EPA hold any of the following details in the public register:	
a)	details of a current licence issued under Part 6 of the <i>Environment Protection Act 1993</i> to conduct any prescribed activity of environmental significance under Schedule 1 of that Act at the land?	NO
b)	details of a licence no longer in force issued under Part 6 of the <i>Environment Protection Act 1993</i> to conduct any prescribed activity of environmental significance under Schedule 1 of that Act at the land?	NO
c)	details of a current exemption issued under Part 6 of the <i>Environment Protection Act 1993</i> from the application of a specified provision of that Act in relation to an activity carried on at the land?	NO
d)	details of an exemption no longer in force issued under Part 6 of the <i>Environment Protection Act 1993</i> from the application of a specified provision of that Act in relation to an activity carried on at the land?	NO
e)	details of a licence issued under the repealed <i>South Australian Waste Management</i> <i>Commission Act 1</i> 979 to operate a waste depot at the land?	NO
f)	details of a licence issued under the repealed <i>Waste Management Act 1987</i> to operate a waste depot at the land?	NO
g)	details of a licence issued under the repealed <i>South Australian Waste Management</i> <i>Commission Act 1979</i> to produce waste of a prescribed kind (within the meaning of that Act) at the land?	NO
h)	details of a licence issued under the repealed <i>Waste Management Act 1987</i> to produce prescribed waste (within the meaning of that Act) at the land?	NO
4-Polli	ution and site contamination on the land - details recorded by the EPA in public register	
Does t land:	he EPA hold any of the following details in the public register in relation to the land or part of the	

Section 103N - Notice of declaration of special management area in relation to the land (due to

a) details of serious or material environmental harm caused or threatened in the course of an NO activity (whether or not notified under section 83 of the *Environment Protection Act 1993*)?

8.8

NO

b)	details of site contamination notified to the EPA under section 83A of the <i>Environment Protection Act</i> 1993?	NO
c)	a copy of a report of an environmental assessment (whether prepared by the EPA or some other person or body and whether or not required under legislation) that forms part of the information required to be recorded in the public register?	NO
d)	a copy of a site contamination audit report?	NO
e)	details of an agreement for the exclusion or limitation of liability for site contamination to which section 103E of the <i>Environment Protection Act</i> 1993 applies?	NO
f)	details of an agreement entered into with the EPA relating to an approved voluntary site contamination assessment proposal under section 103I of the <i>Environment Protection Act</i> 1993?	NO
g)	details of an agreement entered into with the EPA relating to an approved voluntary site remediation proposal under section 103K of the <i>Environment Protection Act</i> 1993?	NO
h)	details of a notification under section 103Z(1) of the <i>Environment Protection Act</i> 1993 relating to the commencement of a site contamination audit?	NO
i)	details of a notification under section 103Z(2) of the <i>Environment Protection Act</i> 1993 relating to the termination before completion of a site contamination audit?	NO
j)	details of records, held by the former <i>South Australian Waste Management Commission</i> under the repealed <i>Waste Management Act 1987</i> , of waste (within the meaning of that Act) having been deposited on the land between 1 January 1983 and 30 April 1995?	NO
5-Poll	ution and site contamination on the land - other details held by EPA	
Does t	he EPA hold any of the following details in relation to the land or part of the land:	
a)	a copy of a report known as a "Health Commission Report" prepared by or on behalf of the <i>South Australian Health Commission</i> (under the repealed <i>South Australian Health Commission Act 1976</i>)?	NO
b)	details (which may include a report of an environmental assessment) relevant to an agreement entered into with the EPA relating to an approved voluntary site contamination assessment proposal under section 103I of the <i>Environment Protection Act 1993?</i>	NO
c)	details (which may include a report of an environmental assessment) relevant to an agreement entered into with the EPA relating to an approved voluntary site remediation proposal under section 103K of the <i>Environment Protection Act 1993</i> ?	NO
d)	a copy of a pre-1 July 2009 site audit report?	NO
e)	details relating to the termination before completion of a pre-1 July 2009 site audit?	NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete.

Appendix K

Site Inspection Checklist


1.0 Job details

Client	South Australian Jockey Club Inc.
Job number	281059
Site name	Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043
Site address	Morphettville Racecourse Morphett Road, MORPHETTVILLE, SA 5043

2.0 Pre-visit checklist

Element	√ х	Comment (optional)
Site plan obtained?	\checkmark	
Aerial photographs reviewed and copies on hand?	\checkmark	
Topographic map checked for any sensitive receiving	\checkmark	
Dangerous goods licensing reviewed?	v	
CT history reviewed?	\checkmark	
WaterConnect groundwater bore data reviewed?	\checkmark	
Council records reviewed?	\checkmark	
EPA Section 7 search results reviewed?	\checkmark	
Site access OK?	√	
Person with knowledge of site history available?	x	Not available

3.0 Site inspection

Ref	Element	Site inspection observations
1	Inspection conducted by	Dharmsinh Rathod
2	Date of site inspection	01/08/2022
3	Meteorological conditions	Sunny, Clear 14 ⁰ C
4	Presence of stockpiles	None
5	Evidence of cut and fill activity	 Importation and placement of fill – road base gravels in carpark and vehicle storage area next to the pet shop Placement of fill underneath the carpark area in pet shop and in front of horse stable shed
6	Topography	Levelled
7	Overland flow	 Include presence of standing water and direction of water run-off. Stagnant water (rainwater) in puddles at carpark area and patched car entrance area at horse stable
8	Surface water courses	Direction of water courses and rate of flow, water levels, flood levels, tidal fluctuations, quality of surface water eg sheens noted etc None, No sheen observed on stagnant rainwater puddle.
9	Receiving environment	Include creeks, rivers, oceans etc.



	-	None on the site. However, a Sturt drain with concrete
		base is running offsite along the western boundary of the
		site.
10 Groundwa	ter bores Co. -	ndition, number, measurement of groundwater table. One GW inside horse stable (WaterConnect data-ID 6628-15954), Approximate GW table – 4.8m bgl couldn't find during the site inspection
11 Any contai	minant Co	ning during the site inspection.
11 Any contai preferentia identified?	minant <u>Cc</u> al pathways - , , , , , , , , , , , , , , , , , , ,	Importation and placement of fill (road base) underneath the carpark area and unsealed vehicle storage area next to pet shop Asphalt layer on top of the surface was not in good condition in some areas at car park area and vehicle storage Motor vehicle storage including cars, trucks and horse carrying vehicles in area next to the pet shop Stabling of horses Commercial activities of pet and garden related products Storage of compost/fertilizers in garden shed Stockpiling of wooden pallets, metal rods/materials, pavers in area next to the pet shop and pet shop car park area. Gardening activities in front of pet shop and horse stable sheds Difirmed (offsite): Tram depot with tram lines along the western boundary
	_	of the site Ambulance station in southern boundary of the site
12 Vegetation	n Inc	lude any evidence of disturbed, discoloured, distressed veaetation.
	-	Healthy, green vegetation on top in car park area and garden area in front of pet shop and horse stable shed Healthy trees in car park area and eastern boundary of the site along Morphett Rd
13 Obstructio	ons Eg etc - - -	transmission lines, trees subject to preservation orders, gas and water pipes Powerline running through the eastern boundary of site along Morphett Rd Tram lines and power lines in western boundary of the site Electrical distribution board at the entrance area in horse stable area Electrical transformer (green cover) in garden area in front of horse stable shed area
14 Surface co	ver Inc ear -	lude evidence of fill, asphalt paving and condition, surface staining, thworks, demolition activities, percentage of each surface cover etc. Asphalt and road base gravels in carpark area and vehicle storage area



15	Soil type	 Asphalt in some locations are patched and not in good condition Stagnant rainwater in puddles in carpark areas and in patched area front of horse stable shed No surface staining or odour observed in carpark, vehicle storage or horse stable sheds
15	Son type	Road base, Gravelly Sand and Sandy CLAY
16	Adjacent land uses	Include names and types of businesses, distance from site, apparent condition of properties etc. North – Office buildings for Tram depot, medical centre, and Anzac Hwy beyond East – Morphett Rd and racecourse beyond South – Ambulance station and residential dwellings beyond West – Tram depot with tram lines and residential dwellings beyond
17	Complaints from neighbours	None – Not available
18	Odours	None - noted at the time of inspection
19	Asbestos	None - noted at the time of inspection
20	Obvious evidence of contamination	 Comment about staining, odours, wastes, spills etc. Fill material importation and placement throughout the site Patched bitumen layers Stockpiles of wooden pallets, metal materials and pavers
21	Aboveground storage tanks:	Quantity: None Volume: Content: Condition: Bunded:
22	Underground storage tanks:	Quantity: None Volume: Content: Condition:



		Bunded:
23	Pipelines	None observed – Stormwater pipe in carpark area near to the
		pet shop and in front of horse stable shed area
24	Waste treatment, storage and disposal	Include details on liquid waste and solid waste. Area bunded? Describe condition None observed in carpark area and vehicle storage area
25	Means of heating and cooling in buildings	Include fuel type AC condition inside the pet shop building
26	Warehouses, sheds and buildings	 Include information on quantity, conditions, location, size, construction materials eg concrete slab, timber floor etc. Pet shop/garden shop and two horse stables shed in southern portion of the site Concrete flooring inside the pet shop/garden shop Pavers – in good condition within the horse stables shed.
27	Plant and equipment	 Vehicles including cars, trucks and horse carrying trailers in vehicle storage area. Three silos in vehicle storage area and one silo in horse stable area Forklift in carpark area at pet shop.
28	Transformers or substations	 One green covered transformer in garden area in front of horse stable shed
29	Pits or sumps:	None observed.
30	Septic system	None observed
31	Incinerators	None observed
32	No. of employees: Operating hours/days:	No information available
33	Hazardous material storage and use	 List type, volume, container type, location, storage conditions (bunded?), use etc. MSDSs available on site? Cleaning products inside the horse stable shed area Compost / garden mulch on wooden pallets inside the pet/garden shop shed area Pet products on shelf with concrete floor inside the pet/garden shop



4.0 Site plan sketch

Include north direction, approximate scale and photograph orientation and number (or attach client-supplied site plan).

- Please refer the site plan



5.0 Site photographs

Ensure that all relevant features detailed above have been photographed. Indicate the Photograph ID in the table below with a description and indicate the photograph location on a site plan.

Photograph ID	Description
	Please refer the photo appendix



Site Photographs



Photograph 1 – View of the site looking south



Photograph 2 – Car parking area in the northern portion of the site



Photograph 3 – Road base gravel cover in northern car parking area



Photograph 4 – Tram depot west of the site



Photograph 4 – Central portion of the site, looking south



Photograph 5 – Storage area containing trucks, boats and horse trailers, looking south



Photograph 6 – Storage area, looking east



Photograph 7 – Miscellaneous material in storage area, looking south



Photograph 8 – Oliver's Plants and Pets in the southern portion of the site, looking south



Photograph 9 - Front (eastern side) of the horse stables, looking south



Photograph 10 – Outside the horse stables



Photograph 11 – Outside the horse stables



Photograph 12 – Inside one of the horse stables



Photograph 13 – Sawdust stockpile used for horse stables



ADELAIDE

67 Greenhill Road Wayville SA 5034 Ph: 1300 975 878

MELBOURNE

2 Domville Ave Hawthorn VIC 3122 Ph: 1300 975 878

SYDNEY

Suite 28, 38 Ricketty S¹ Mascot NSW 2020 Ph: 1300 975 878

ABN: 58 083 071 18