Appendix 07 Baseline Environmental Investigation

Renascor Resources

Baseline Environmental Investigation

Robinson Road, Waterloo Corner

22 December 2022

63155-146,681_Rev1

JBS&G

www.jbsg.com.au

Renascor Resources

Baseline Environmental Investigation

Robinson Road, Waterloo Corner

22 December 2022

63155-146,681_Rev1

JBS&G

Table of Contents

List of Tables

Figures

Summary Results Tables (including QA/QC) – Soil

Summary Results Tables (including QA/QC) – Groundwater

Appendices

Appendix I – NATA Laboratory Documentation (SOIL)

Appendix J – Groundwater Logs

Appendix K – Groundwater Field Sampling Sheets

Appendix L – NATA Laboratory Documentation (Groundwater)

Abbreviations

Term	Definition
AHD	Australian Height Datum
ASC NEPM	National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended in 2013
BTEXN	Benzene, Toluene, Ethylbenzene, Toluene & Naphthalene
COC	Chain of Custody
COPC	Chemicals of Potential Concern
CSM	Conceptual Site Model
CT	Certificate of Title
DBYD	Dial Before You Dig
DEW	Department for Environment and Water
DIT	Department for Infrastructure and Transport
EIL	Ecological Investigation Levels
EPA	Environment Protection Authority (SA)
ESL	Ecological Screening Levels
HIL	Human Investigation Levels
HSL	Human Screening Levels
JBS&G	JBS&G Australia Pty Ltd
LOR	Limit of Reporting
LTO	Lands Title Office
m	Metre(s)
m bgl	Metre(s) Below Ground Level
µS/cm	Micro Siemens per Centimetre
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Litre
NATA	National Association of Testing Authorities
OCP	Organochlorine Pesticides
OPP	Organophosphorus Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PCA	Potentially Contaminating Activity(ies)
PD14	Practice Direction 14
PID	Photo-ionisation Detector
PSI	Preliminary Site Investigation
QA/QC	Quality Assurance / Quality Control
RPD	Relative Percentage Difference
SAPPA	South Australian Property Planning Atlas
SARIG	South Australian Resources Information Gateway
SB	Soil Borehole
TRH	Total Recoverable Hydrocarbons
USCS	Unified Soil Classification System

Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by Renascor Resources (the client) to undertake a Baseline Environmental Investigation comprising a site history and a limited soil and groundwater investigation for the site located on portions of Allotments 3 & 4 Robinson Road, Waterloo Corner.

It is understood the site is owned by SA Water. The client is looking to develop the site into an industrial graphite refinery and that due diligence works are required prior to entering into a long-term lease agreement with SA Water. The report forms a baseline for future comparison noting the limitations on this current investigation. In particular, groundwater was not assessed due to site access restrictions.

Site History

The available historical information indicates that the site has been used for agricultural purposes since at least the 1860s to present day, consisting mainly of broadacre cropping and grazing. More recently, broadacre grazing activities are minimal with only a small flock of sheep kept at the site.

The main potential sources of contamination associated with past and present site uses include:

- Historical use of fill from various unknown sources brought onto the site including unsealed tracks/driveways) and possible small mounds of fill material previously located in the north-western portion of the site.
- Cement sheet fragments containing asbestos across the ground surface in the western portion of the site (adjacent the western fence line). It is likely the fragments have been illegally dumped at the site, given there have been no sheds / structures at the site.
- Use of pesticides, herbicides and fertilisers during use of the site for agricultural purposes

The site is located adjacent to the Bolivar WWTP and during high winds, the wastewater from the adjacent Bolivar settling ponds is understood to aerosolise and reach across the subject site. Additionally, any potentially impacted groundwater underlying the WWTP site may be migrating under the subject site, although it is noted the treatment plant is located in the inferred down-hydraulic gradient direction of the site.

Soil investigation

A limited soil investigation was undertaken at the site comprising the drilling of 20 grid-based soil bores to a maximum depth of 0.5 m below ground level (bgl). It is noted that some areas of the site could not be accessed due to an indigenous exclusion zone and inaccessible flooded areas. Selected samples from each soil bore were analysed at the laboratory for a range of potential contaminants of interest identified in the site history and those relevant to form a baseline for future comparison. All laboratory results reported below the adopted ecological and health-based investigation / screening levels.

Recommendations

Based on the limited assessment works completed at the site, the field observations and the soil results documented herein, site contamination of soils has not been identified in the context of proposed industrial land use (graphite refinery). It is noted that groundwater was not assessed, noting that due to the wet conditions at the site, SA Water advised that vehicles could not be driven across the site (including a vehicle mounted auger/corer).

Asbestos cement sheet fragments in the western portion of the site should be removed prior to any development works and wastewater from the adjacent Bolivar settling ponds, known to aerosolise and reach the subject site, should be considered in terms of any future construction workers and future site users.

1. Introduction

JBS&G Australia Pty Ltd (JBS&G) was engaged by Renascor Resources (the client) to undertake a Baseline Environmental Investigation for the site located on portions of Allotments 3 & 4 Robinson Road, Waterloo Corner. The approximate location of the site is presented in **Figure 1**.

It is understood the site is owned by SA Water. The client is looking to develop the site into an industrial graphite refinery and that due diligence works are required prior to entering into a long-term lease agreement with SA Water. The report forms a baseline for future comparison noting the limitations on this current investigation. In particular, groundwater was not assessed due to access restrictions.

1.1 Scope of Work

The scope of the assessment works have comprised:

- Review of the history of ownership (all CTs pertaining to the site);
- Historical aerial photograph review;
- Interviews with people involved in historical site activities (if available) and sources of information which may relate to chemical storage, waste and wastewater disposal occurring onsite;
- Identification of potential issues associated with surrounding properties, including observation of the surrounding land uses and a search of the SA Environment Protection Authority (EPA) Public Register Directory, which lists all sites for which the SA EPA has knowledge of contamination;
- Review of historical uses of the site;
- Review of local geology, hydrology and hydrogeology;
- Review of other available relevant information detailing activities that have taken place on
- the site;
- Search of EPA records for the site (Section 7 Search);
- Council records and historical searches;
- Current and historical dangerous goods licences;
- Inspection of the site by a Senior Environmental Scientist consisting of a walkover of priority areas of the site identified during a desktop review; and
- Observation of land uses in the area immediately surrounding the site.

1.2 Methodology

This PSI and soil investigation have been undertaken in general accordance with the procedures outlined in the National Environment Protection (Assessment of Site Contamination) Measure[1] (ASC NEPM) with particular consideration given to Schedule B2 – *Site Characterisation*.

In addition to the ASC NEPM, local legislation and guidelines provided additional guidance for the PSI with respect to site contamination and potentially contaminating activities (PCA), including:

- *Environment Protection Act*[2] (the Act)*;*

[1] NEPC 2013, National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended in 2013
[2] SA Government 1993, Environment Protection Act 1993 (South Australia)

- *Guide to the investigation and sampling of potentially contaminated soil*[3];
- *Environment Protection Regulations*[4]*;* and
- *Guidelines for the Assessment and Remediation of Site Contamination*[5].

A summary of the PSI components considered in this PSI is included in **Table 1**:

Table 1: PSI Components

Component	Report Section
Development Zoning	**Section 2.3**
Site Inspection	**Section 2.4**
Ownership Records	**Section 3.2**
Aerial Photography	**Section 3.3**
South Australian Environment Protection Authority (EPA) Records	**Section 3.4.1**
SafeWork SA Dangerous Goods Records	**Section 3.5**
Heritage Records	**Section 3.6**
Data Integrity	**Section 3.7**
Environmental Settings	**Section 4**
Summary of PCAs On Site	**Section 5**
Preliminary Conceptual Site Model (CSM)	**Section 10**

[3] Australian Standard 'Guide to the investigation and sampling of potentially contaminated soil'; AS4482.1-2005.
[4] SA Government 2009, Environment Protection Regulations 2009 (South Australia)
[5] EPA 2018, Guidelines for the Assessment and Remediation of Site Contamination

2. Site Details

2.1 Site Identification

The site location is shown in **Figure 1**. The site details are presented in **Table 2** below:

Table 2: Site Details

Category	Description
Street Address	Robinson Road, Waterloo Corner, SA 5110
Certificate of Title (CT)	CT Volume 5723 Folio 299
Plan	Filed Plan 115108; Portions of Allotment 3 and Allotment 4
Site Area	Hundred of Port Adelaide
Local Government Area	City of Salisbury
Current Zoning	Rural Horticulture

A copy of the current certificate of title is included in **Appendix A**.

2.2 Site Description and Land Use

Site details including the land use and that of neighbouring properties are presented in **Table 3**.

The current site layout is included in **Figure 2**.

Table 3: Site Description

Item	Details
Historic Use(s)	Agricultural land use
Current Land Use	Vacant / broadacre gazing
Proposed Development	The site is proposed to be developed as an industrial graphite refinery (refer **Appendix B** for preliminary development plan)
Site Occupier	SA Water
Area	~21.5 hectares (Ha)
Topography	The site is essentially flat
Site Description	The site is an irregular shaped allotment and is situated on the western side of Robinson Road. The site is currently vacant with no structures located at the site. The site is unsealed and is covered with sparse vegetation.
Neighbouring Land Uses	North – Horticultural greenhouses, orchards, plantations, and residential properties East – Horticultural greenhouses, recreational use (shooting range, go-karts track), and the North-South Motorway South – Bolivar Wastewater Treatment Plant (WWTP) West – Bolivar WWTP

2.3 Development Zoning

In accordance with the South Australian Property and Planning Atlas (SAPPA), the site is zoned as a 'Rural Horticultural Zone'. The desired outcomes for this zone include:

- The establishment of agriculture or horticulture, as well as value adding processing, warehousing, and distributing activities, including developments such as sheds, dwellings, low-intensity animal husbandry, warehouses, small-scale solar, and distilleries; and
- The proliferation of other land uses that may be sensitive to these activities is avoided.

2.4 Site Inspection

A site inspection was conducted by an experienced JBS&G senior field scientist on 29 June 2022 to locate and identify obvious visual indicators of contamination.

As stated in **Table 3**, the site is vacant with no structures. The items of note during the inspection are as follows:

- The majority of the site is covered with dense grass and weeds with portions also vegetated with native flora. A small flock of sheep are also kept at the site.

- The north-east corner of the site was not able to be inspected due to an indigenous heritage exclusion zone (refer **Section 2.5**).
- Significant surface water was observed on the southern portion of the site due to recent rainfall events, and therefore could not be inspected in detail. It is understood this portion of the site experiences annual ephemeral flooding (refer **Section 2.5**).
- During JBS&G's site inspection, fragments of cement sheet were observed across the ground surface in the western portion of the site (adjacent the western fence line). The fragments were scatted across an area measuring approximately 50 m x 25 m. A sample of the cement sheet (ACM01) was collected from this area and tested as part of the soil investigation (refer **Section 6**).
- Illegal dumping of household inert waste was observed along the eastern site boundary (adjacent Robinson Road). The waste included clothing, blankets and plastic.

Relevant photos from the site inspection are included in **Appendix C** and a map of site inspection features is included in **Figure 2**.

2.5 Interviews

During the site inspection, JBS&G spoke to Dr Harry Roberts (Environmental Performance and Compliance for SA Water) to obtain relevant information relating to the site. The following is a summary of the information provided:

- Historically, the site has been used for sheep grazing and farmland before being purchased by the government as part of the Bolivar WWTP. Sheep are still present on the western side of the internal fence line.
- Dr. Roberts advised there is an indigenous heritage exclusion zone located in the north-eastern portion of the site, although the exact location of this area was not provided. He advised the area must not be disturbed without cultural heritage monitors being present.
- The site has been re-vegetated by SA water within the last 10 years.
- During high winds, wastewater from the adjacent Bolivar settling ponds can aerosolise and be deposited across the site.
- The southern portion of the site floods readily after rainfall events and the ground surface becomes very soft. This is said to occur on a regular basis and can prevent both vehicle and pedestrian access due to significant surface water.
- Illegal dumping of household waste regularly occurs on the fence line along Robinson Road.
- A cathodic protection cable belonging to SEAGas runs along the western fence line for a portion of the site.

3. Site History

3.1 Review of Land Ownership Records

JBS&G obtained land ownership records through the historical CT searches from the Lands Titles Office (LTO) in order to assess the potential for site contamination as a result of present or historical land uses. The historical CTs are included in **Appendix D.**

The sequence of ownership is summarised in **Table 4.**

Table 4: Historical CT Summary

Date Range	Owner(s) and Occupation
1860s to 1920s	Farmer
1924 to 1928	Sinclair Scott & Co. Limited
1928 to 1954	Various individuals (Dentist, Company Manager, married woman)
1954 to 1960s	Farmer and Wife
1960s to 2000	Minister for Works
2000 to current	South Australian Water Corporation

3.2 Review of Aerial Photographs

Aerial photographs of the site dating from 1949 have been reviewed by JBS&G. Copies of the aerial photographs were obtained from the Department for Environment and Water (DEW) Mapland with more recent images being used from NearMap or Google Earth. The aerial imagery is presented in **Appendix E**.

A summary of the observations made from the historical aerial photographs of the site and surrounds is provided in **Table 5**.

Table 5: Summary of Aerial Photograph Observations

Year	Description
1949	The 1949 aerial photograph is of poor quality and site details are difficult to determine. The site appears to be vacant and part of a larger parcel of broad acre farmland. The surrounding areas are of a similar landscape.
1959	The 1959 aerial photograph shows the ground surface in the north-western portion of the site appears to be disturbed, which extends off site to the north. There are no significant changes to the surrounding land with the exception of the construction of what appears to be some residential dwellings and sheds to the west of the site.
1969	The 1969 aerial photograph shows there are two unsealed tracks across the site; one extending along the northern end of the site and the other along the eastern boundary. The disturbed area in the north-western portion is no longer evident. The site use remains as cleared broadacre farmland. Large sludge ponds, associated with the Bolivar WWTP, are now evident to the immediate west, across an unsealed unnamed track. These remain as is until current day.
1979	The 1979 aerial photograph shows there is a small plantation / vegetation cover across a narrow portion of land in the north-western portion of the site. Some additional trees / vegetation are also evident in the eastern portion of the site adjacent the present day Robinson Road. The unsealed track in the northern end of the site is no longer present. The surrounding land use is relatively unchanged with only some additional livestock and associated sheds and feedlots to the northeast of the site, as well as some residential dwellings.
1989	The site and surrounding area remain largely unchanged from the previous aerial data. The site, excluding a strip along the eastern portion, appears to be actively involved in broadacre cropping. Three of the visible sludge ponds appear full, and two partially filled. The adjacent property to the southwest seems to have undergone some earth moving activities, potentially bringing in fill material.

Year	Description
1999	The 1999 aerial shows the site remains as cleared broadacre agricultural land. A number of greenhouses are present to the east of the site. Five of the six sludge ponds located to the south west are filled, and the property between the sludge ponds has new areas of bare earth.
2009	The site appears to be disused agricultural land and remains cleared. Additional greenhouses and orchards are present to the north of the site. Two of the sludge ponds located on the Bolivar WWTP have now been drained and approximately half of one of these has been processed. The other four are full.
2019	The site shows miscellaneous vegetation growth from disuse of the site. Some small stockpiles/mounds are evident in the north-western portion of the site which may be from recent excavation works on the adjacent site to the south. The greenhouses to the east appear in bad condition and have piled of associated debris. The major development of the Northern Connector Motorway and Waterloo Corner Rd lies nearby to the east. There appears to have been some level of flooding in the property between the site and the sludge ponds due to the appearance of surface water. Half (three) of the sludge pools have been drained for processing.

3.3 Review of SA EPA Records

JBS&G conducted a review of records held by the EPA in relation to the site including section 7 searches and the EPA Site Contamination Index[6], the results of which are described below.

3.3.1 Section 7 Searches

Section 7 of the Land and Business (Sale and Conveyancing) Act 1994 specifies that a statement of government interests (SA EPA in this case) be provided by the vendor or their agent to a prospective purchaser prior to settlement of the land or small business. SA EPA provide Section 7 information on charges and or encumbrances on the land, licences and exemptions both current and historical as well as various site contamination records.

A search of the SA EPA Section 7 information identified a 'yes' result for the following:

- Details of a current licence issued under Part 6 of the *Environment Protection Act 1993* to conduct any prescribed activity of environmental significance under Schedule 1 of that Act at the land.

JBS&G obtained a copy of the EPA licence (Licence No. 1534) which relates to the broader Bolivar Wastewater Treatment Plant. The current licence is held by South Australian Water Corporation who is authorised to undertake the following prescribed activities of environmental significance:

- wastewater treatment works, including discharge to surface water at designated locations; and
- fuel burning - not coal or wood.

This licence commenced on 1 December 2020 and will expire on 30 November 2025. The Section 7 information is included in **Appendix F**.

3.3.2 Site Contamination Index

JBS&G conducted a search of the EPA's online Site Contamination Index which provides a list of site contamination information received by the EPA and recorded in the public register under the provisions of the Act.

The suburbs of Waterloo Corner and Bolivar (the adjacent suburb) were searched which revealed a number of records listed on the EPA Site Contamination Index which are summarised in **Table 6**.

[6] https://www.epa.sa.gov.au/public_register/site_contamination_index?suburb=waterloo+corner&council=&type= accessed on 14 June 2022

Table 6: Summary of Site Contamination Index Information

Notification No.	Type	Address	PCA	Proximity to the Site?
17355	109 Notification	Lot BOLIVAR SA 5110	Acid sulphate soil generation; Landfill sites; Wastewater storage, treatment or disposal	Directly south-west of site.
60273	109 Notification	Various allotments BOLIVAR SA 5110	Wastewater storage, treatment or disposal	Directly south-west of site.
60475 - 01	S83A Notification	Lot 45 Roberts Lane WATERLOO CORNER SA 5110	Not recorded	~0.7km north-east of site.
60475 - 02	S83A Notification	Lot 45 Roberts Lane WATERLOO CORNER SA 5110	Fill or soil importation	~0.7km north-east of site.
11058	S83 Notification	1175-1187 Port Wakefield Road WATERLOO CORNER SA 5110	Not recorded	~1.1km east of site.
60277	Audit Notification	Port Wakefield Road WATERLOO CORNER SA 5110	Fill or soil importation	~1.2km east of site.
60568	Audit Notification	Pieces 10-11 Brown Road & Lots 12, 51-52 Port Wakefield WATERLOO CORNER SA 5110	Not recorded	~1.2km east of site.
60277 - 001	Audit Report	Port Wakefield Road WATERLOO CORNER SA 5110	Fill or soil importation	~1.2km east of site.
60568	Audit Termination	Pieces 10-11 Brown Road & Lots 12, 51-52 Port Wakefield WATERLOO CORNER SA 5110	Not recorded	~1.2km north-east of site.
60331 - 01	S83A Notification	Lots 51-52 Port Wakefield Road WATERLOO CORNER SA 5110	Agricultural activities	~1.2km east of site.
60331 - 02	S83A Notification	Lots 51-52 Port Wakefield Road WATERLOO CORNER SA 5110	Fill or soil importation	~1.2km east of site.
60566 - 02	S83A Notification	Lots 76 & 77 Port Wakefield Road WATERLOO CORNER SA 5110	Fill or soil importation	~1.2km east of site.
61112 - 01	S83A Notification	Lot 76 and 77 Port Wakefield Road WATERLOO CORNER SA 5110	Agricultural activities	~1.2km east of site.
62311	109 Notification	2-26 Mumford Road WATERLOO CORNER SA 5110	Asbestos disposal	~1.2km north-east of site.
62311	109 Notification	2-26 Mumford Road WATERLOO CORNER SA 5110	Asbestos disposal	~1.3km north of site
61522 - 01	S83A Notification	Allotments 2, 308 & 309 Coleman Road WATERLOO CORNER SA 5110	Landfill sites	~1.3km north of site.
61522 - 02	S83A Notification	Allotments 2, 308 & 309 Coleman Road WATERLOO CORNER SA 5110	Landfill sites	~1.5km north-west of site.

Notification No.	Type	Address	PCA	Proximity to the Site?
15435	109 Notification	Coleman Road WATERLOO CORNER SA 5110	Not recorded	~1.5km north-west of site.
11448	S83 Notification	SA Museum Maceration Complex BOLIVAR SA 5110	Not recorded	~1.5km north-west of site.
60848 - 01	S83A Notification	965-977 Port Wakefield Road BOLIVAR SA 5110	Listed Substances (storage)	~1.7km south of site.
62273 - 01	S83A Notification	21 Hodgson Road BOLIVAR SA 5110	Works depots	~1.7km south-east of site.
62369 - 01	S83A Notification	21 Hodgson Road BOLIVAR SA 5110	Fill or soil importation	~2.7km south of site.
60566 - 01	S83A Notification	Lot 76-77 Port Wakefield Road WATERLOO CORNER SA 5110	Not recorded	~2.7km south of site.
61338 - 01	S83A Notification	Lots 3, 94, 95, 202 & 303 Port Wakefield Road WATERLOO CORNER SA 5110	Fill or soil importation	Ranging between 3.8 & 5.1km east of site.
12066	SAHC	Now Globe Derby Park Lot 8 Whites Road BOLIVAR SA 5110	Not recorded	~5.0 km south-east of site.
61746	Audit Notification	WATERLOO CORNER SA 5110	Not recorded	No street address provided
61746 - 001	Audit Report	WATERLOO CORNER SA 5110	Not recorded	Unknown (no listed street address
61746	Audit Termination	WATERLOO CORNER SA 5110	Not recorded	Unknown (no listed street address)

It is noted there are several records relating to groundwater contamination reported for sites located in the close vicinity of the site, including to the north-east and east of the site in the inferred up-gradient groundwater flow direction of the site, which may be migrating under the subject site.

Additionally, the Bolivar WWTP is located directly south-west of the site in the inferred down-hydraulic gradient direction of the site, however given its close proximity and possible local variations in groundwater flow direction, groundwater underlying the WWTP site may be migrating under the subject site.

3.4 Review of SafeWork SA Dangerous Goods Records

SafeWork SA (under the Department for Premier and Cabinet) was contacted regarding its knowledge of current and historical dangerous goods storage at the site.

The search returned no records of dangerous substances as regulated by SafeWork SA at the site. The Freedom of Information search is included as **Appendix F**.

3.5 Review of State and National Heritage Records

A search of the South Australian Heritage Places Database [7] indicates that the site doesn't hold Federal, State or Local Government heritage status. There no heritage listed sites within the Waterloo Corner area.

[7] https://maps.sa.gov.au/heritagesearch/SearchResultPage.aspx?p_searchtype=LOCATION&p_suburb=ALL&p_lga=Salisbury&p_class=ALL accessed on 14 June 2022

3.6 Review of Data Integrity

The information obtained from the previous sections of this report are considered to be in general agreement. It is therefore concluded that the information provided in this historical assessment has an acceptable level of accuracy for the purposes of the PSI.

4. Environmental Setting

4.1 Regional Topography

A review of published regional topographic data accessed via Google Earth indicates that the site lies at an elevation of approximately 6 m Australian Height Datum (AHD). Regionally, the area around the slight slopes down to the west, towards the Gulf of St Vincent. The change is approximately 1-2 metres in elevation per kilometre.

4.2 Regional Hydrology

A review of aerial imagery has identified no major natural surface water bodies within 2 km of the site. Noting, the St. Kilda mangroves and surrounds are located approximately 2.5 km west of the site, which lead out to the ocean further west.

4.3 Geology

The site geology (from the South Australian Resource Information Gateway, SARIG[8]) indicates that the site overlays quaternary alluvial and fluvial sediments. These sediments contain undifferentiated sediments and quaternary rocks.

4.4 Hydrogeology

The expected groundwater flow direction is likely towards the nearby waterbodies (Barker Inlet to the west and St Kilda mangroves to the north-west) in a northerly to north westerly direction, however it is possible there are local variations.

A search of the Department for Environment and Water's (DEW) groundwater database (WaterConnect[9]) has identified 317 groundwater wells in the vicinity of the site (within a 2 km radius) with similar depths to groundwater.

The following types of bores were removed from the search due to providing no environmental value or human use;

- Bores with a listed drillhole class other than 'water well';
- Bores with a listed status of abandoned, backfilled, not located or dry, and;
- Bores installed to depths greater than 50 metres (deeper than the quaternary aquifer).

After the above exclusions, 82 wells remain, these include;

- 21 groundwater well do not have a listed purpose;
- 47 groundwater wells are listed for investigation / environmental / monitoring / observation purposes;
- Four groundwater wells are listed for domestic irrigation purposes;
- Nine groundwater wells are listed for irrigation / stock purposes; and
- One groundwater well is listed for industrial purposes.

The range for salinity from the WaterConnect data is 907 µS/cm (micro-Siemens per centimetre) to 152,941 µS/cm with the associated total dissolved solids (TDS) ranging between 499 milligrams per litre (mg/L) to 130,000 mg/L. The range of depths to groundwater is from 0.57 m to 24.38 m below ground level.

[8] South Australian Resource Information Gateway: https://map.sarig.sa.gov.au, accessed 9 June 2022

[9] Department of Environment and Water, WaterConnect Database: Groundwater Data Default (waterconnect.sa.gov.au), accessed 9 June 2022

In addition to the above, one groundwater well is also listed on site (unit no. 6628-3879) within the tertiary (T1) aquifer. The well has a maximum depth of 91.44m with a standing water level of 30.48m and a TDS of 715mg/L (last recorded in 1964). The purpose of the well is listed as domestic and the status is listed as unknown. The well was not observed during the site inspection and therefore it is not known if the well still exists. It is noted there is dense vegetation across portions of the site which may have been covering the well.

A number of wells were also located in the direct vicinity of the site, however these are either backfilled and/or targeting deeper aquifers and therefore are not considered significant to this investigation and not discussed further.

A summary of the relevant surrounding groundwater data is included in **Appendix G**.

4.5 Acid Sulphate Soils

A search of the Australian Soil Resource Information System (ASRIS)[10] was undertaken on 9 June 2022. The site lies within an area of 'extremely low probability' of acid sulphate soils, noting there is very low confidence in this assessment.

[10] http://www.asris.csiro.au/mapping/viewer.htm (accessed online 9 June 2022)

5. Potentially Contaminating Activities

The review of the site history has identified several potentially contaminating activities (PCAs). The details of each of the PCAs, contaminant persistence / mobility and commentary about the identified PCA are presented in **Table 7.**

Table 7: Details of Potentially Contaminating Activities

PCA and likely location	Contaminants, Persistence and mobility in soils	Comments regarding the PCAs	Potentially Affected Media (on-site)
On-site			
Historical use of fill from various unknown sources brought onto the site.	Heavy metals - Mobility = low, persistence = high OCP – Mobility = low to moderate, persistence = high PAHs - Mobility = low, persistence = high TRH - Mobility = moderate, persistence = moderate BTEX – Mobility = moderate, persistence = high	Imported fill material may have been used historically across the site (including unsealed tracks/driveways). A recent aerial image (2019) indicates there may be some small mounds of fill material located in the north-western portion of the site. This area was inspected on 29 June 2022 which did not identify any mounds with the ground surface appearing relatively flat. However, it is noted the area was covered with vegetation and ground surface features in the area were difficult to determine. A limited soil investigation was conducted across accessible areas of the site (refer **Sections 6** and **7**) which did not identify any fill material within any of the soil sample locations.	Soil, groundwater
Asbestos containing materials	Asbestos – Mobility = low to high depending on whether friable or not, persistence = high	During JBS&G's site inspection, fragments of cement sheet were observed across the ground surface in the western portion of the site (adjacent the western fence line). It is likely the fragments have been illegally dumped at the site, given there have been no sheds / structures at the site. A sample of the cement sheet (ACM01) was collected from this area and tested as part of the soil investigation, which confirmed the sample contained chrysotile asbestos (refer **Section 6**).	Soil & air
Use of pesticides, herbicides and fertilisers during use of the site for agricultural purposes	Heavy metals – Mobility = low, persistence = high OCP – Mobility = low to moderate, persistence = high OPP – Mobility = low to moderate, persistence = low Herbicides – Mobility = low to moderate, persistence = low TRH – Mobility = moderate, persistence = moderate	The site was historically owned by a farmer and various individuals who may have used the site for farming purposes (from the late 1860s to the 1960s. According to aerial photographs, the site was historically used for broadacre farming. No specific mixing areas were identified at the site during the inspection.	Soil & groundwater

PCA and likely location	Contaminants, Persistence and mobility in soils	Comments regarding the PCAs	Potentially Affected Media (on-site)
		Historically, fuel related compounds and heavy metals were known to be used to control weed or plant growth. Any impacts would likely be limited to near surface soils.	
Illegal dumping	Heavy metals - Mobility = low, persistence = high OCP – Mobility = low to moderate, persistence = high PAHs - Mobility = low, persistence = high TRH - Mobility = moderate, persistence = moderate BTEX – Mobility = moderate, persistence = high Asbestos – Mobility = low to high depending on whether friable or not, persistence = high	Illegal dumping of household inert waste was observed adjacent the eastern site boundary (along Robinson Road). The waste including clothing, blankets and plastic.	Soil, groundwater
Off-site			
Bolivar WWTP	Pathogenic Bacteria - Mobility = moderate, persistence = low Nutrients - Mobility = moderate, persistence = moderate Heavy metals - Mobility = low, persistence = high	The site is located adjacent to the Bolivar WWTP. It is understood that during high winds, wastewater from the adjacent Bolivar settling ponds can aerosolise and be deposited at the subject site. Potentially impacted groundwater underlying the WWTP site may be migrating under the subject site, although it is noted the treatment plant is located in the inferred down-hydraulic gradient direction of the site.	Soil & groundwater & air
Various agricultural land / farmland in the vicinity of the site.	Heavy metals – Mobility = low, persistence = high OCP – Mobility = low to moderate, persistence = high OPP – Mobility = low to moderate, persistence = low Herbicides – Mobility = low to moderate, persistence = low Nutrients - Mobility = moderate, persistence = moderate	The site was historically (and still) surrounded by agricultural properties which may have areas of intensive application of pesticides, herbicides and fertilisers.	Groundwater

6. Limited Soil Investigation

Prior to drilling, all soil sampling locations were cleared of underground services by a suitably qualified and experienced contractor prior to the commencement of drilling. Dial Before You Dig (DBYD) plans were reviewed as part of the service clearance process.

Due to the wet conditions at the site, SA Water advised that vehicles could not be driven across the site (including a vehicle mounted auger/corer), which limited the depth of drilling using hand equipment.

JBS&G was advised that an indigenous heritage exclusion zone is located in the north-eastern portion of the site. Given the area must not be disturbed without cultural heritage monitors being present, no soil investigation works were conducted within this area.

Additionally, significant surface water was present on the southern portion of the site due to recent rainfall events, and therefore no soil sample locations could be placed in this area. It is noted the area is proposed to be a site drainage swale drain with no infrastructure proposed on this portion (refer to **Appendix B** - preliminary development plan).

6.1 Soil Sampling Plan and Rationale

The soil investigation was undertaken on 29 and 30 June 2022 and comprised the drilling of 20 grid-based soil bores across accessible areas of the site to a maximum depth of 0.5 m bgl. As previously mentioned, some of these grid-based locations were moved to avoid heritage exclusion zone and inaccessible flooded areas.

Although this sampling density does not meet the requirements of the minimum sampling points recommended in the relevant Australian Standard (Table E1 in AS4482.1) for a site comprising a total area of 21 hectares, the number of locations is considered appropriate for preliminary due diligence purposes. The bores will be advanced to assess any potentially contaminating activities identified in the PSI, but also provide geographic coverage of the site to the extent practical.

6.2 Soil Sampling Methodology

All soil boreholes were drilled using hand auger equipment. All equipment that was re-used at multiple locations was decontaminated using phosphate free detergent (Decon-90) to minimise the potential for cross contamination between sampling locations.

Soil boreholes were logged by an experienced JBS&G field scientist in accordance with the Unified Soil Classification System (USCS) and soil samples were collected at the surface and at regular depth intervals through the soil profile (ensuring a sample was collected from every soil horizon encountered). The soil logs are included in **Appendix H**.

A fresh pair of disposable gloves was worn by the sampler when collecting each individual sample. Soil samples were placed into acid-rinsed and solvent-washed screw top glass jars supplied by the testing laboratory. Soil samples were stored in a chilled portable cooler immediately following sampling and delivered under similar conditions to the analytical laboratory with accompanying chain of custody documentation. Chain of custody documentation and the laboratory certificates of analysis are included in **Appendix I**.

A figure showing the soil sampling locations is included in **Figure 3**.

6.3 Soil Analytical Program

Selected samples from each soil bore were analysed at the laboratory for a range of potential contaminants of interest identified in the site history and those relevant to form a baseline for future comparison. The analytical program included the following:

- Thirteen samples (BH02_0.0-0.1; BH03_0.0-0.1; BH04_0.0-0.1; BH07_0.0-0.1; BH08_0.0-0.1; BH09_0.0-0.1; BH11_0.0-0.1; BH12_0.0-0.1; BH15_0.0-0.15; BH16_0.0-0.1; B18_0.0-0.1; BH19_0.0-0.1; and BH20_0.0-0.1) were tested for heavy metals.
- Eight samples (BH02_0.0-0.1; BH04_0.0-0.1; BH07_0.0-0.1; BH08_0.0-0.1; BH11_0.0-0.1; BH12_0.0-0.1; BH15_0.0-0.15; and BH16_0.0-0.1) were tested for organochlorine pesticides (OCPs) and organophosphorus pesticides (OPPs).
- Seven samples (BH01_0.0-0.1; BH06_0.0-0.1; BH08_0.0-0.1; BH11_0.0-0.1; BH18_0.0-0.1; BH19_0.0-0.1; and BH20_0.0-0.1) were tested for nutrients,
- Three samples (BH10_0.0-0.1; BH18_0.0-0.1; and BH19_0.0-0.1) were tested for total coliforms.
- Two samples (BH14_0.0-0.15 and BH19_0.1-0.2) were tested for SA waste screen (including heavy metals, OCPs, TRHs, BTEX, polychlorinated biphenyls (PCBs), PAHs, phenols, hexavalent chromium, trivalent chromium, cyanide and tetrachloroethene.
- Six samples (BH01_0.0-0.1; BH05_0.0-0.1; BH06_0.0-0.1; BH10_0.0-0.1; BH13_0.0-0.1; and BH17_0.0-0.1) were tested for metals, for total recoverable hydrocarbons (TRH), benzene, toluene, ethyl benzene, xylenes, and naphthalene (BTEXN) compounds, polycyclic aromatic hydrocarbons (PAHs) and OCPs.
- Four samples (BH03_0.0-0.1; BH09_0.0-0.1; BH18_0.0-0.1; and BH20_0.0-0.1) were tested for PAHs.
- Five samples (BH04_0.0-0.1; BH07_0.0-0.1; BH09_0.0-0.1; BH16_0.0-0.1; and B18_0.0-0.1) were tested for per- and polyfluoroalkyl substances (PFAS).
- One sample (BH05_0.0-0.1) were tested for a NEPM screen for EIL soil classification (including iron, cation exchange capacity, pH, total organic carbon and clay content).

In addition to the above, one cement sheet sample (ACM01) was collected from the western portion of the site which was tested for asbestos.

The laboratories used for the soil testing were Eurofins and Envirolab Services (Envirolab). The laboratories are approved by the National Association of Testing Authorities (NATA), and the analyses conducted are within the NATA registration of the laboratories. Duplicate soil samples were submitted to the primary laboratory (Eurofins) and the secondary laboratory (Envirolab) for quality assurance / quality control (QA / QC) purposes. Results of the QA/QC analyses are discussed in detail in **Section 9.1**.

A summary table of the soil analyses is presented at the end of this report and the results are discussed in **Section 8.2**.

6.4 Soil Criteria

It is understood the site is proposed to be redeveloped into an industrial graphite refinery. As such, the following investigation exposure settings are considered to be the most relevant and have been adopted for the purpose of this investigation (refer **Table 8**):

Table 8: Soil Screening Criteria

Receptor	Criteria	Reference / Source
Commercial	PFAS Health Industrial/Commercial ESLs: Commercial, Fine EILs: Commercial HILs: Commercial HSLs for Vapour Intrusion: Commercial, Clay (0-1m) Management Limits: Commercial, Fine	ASC NEPM

Receptor	Criteria	Reference / Source
Ecological	PFAS Interim Soil - Ecological Direct Exposure PFAS Interim Soil - Ecological Indirect Exposure	

The ecological and health screening levels were selected based on material type. As the predominant near surface soil types encountered were silty sands and clays (as discussed further in **Section 8.1**), investigation exposure settings for sand and fine soils were adopted (where applicable).

Site specific EILs were determined for some chemicals as outlined in the NEPM, based on the proposed residential land use. Site specific EILs were derived using the NEPM toolbox calculator and were based on the following:

- The application of any chemicals and / or importation of material was likely to have been more than two years ago.
- A measured pH of 7.7.
- A measured cation exchange capacity (CEC) of 22 meq/100g.
- A measured clay content of 7.4%.
- A measured electrical conductivity of 240 µS/cm.
- A measured iron content of 0.76%.
- A measured total organic carbon content of 0.6%.
- Ambient background concentrations of 0 mg/kg as a conservative assumption in the first instance.

An exceedance of soil screening criteria does not necessarily indicate that there is a risk to that receptor, but rather that additional work should be carried out to better characterise the contamination and assess the risks associated with the contamination.

A discussion of the results in the context of the screening criteria is included in **Section 8.2**.

6.5 Field Observations

Soil bore locations encountered predominately a fine layer of natural / reworked natural material comprising silty sand overlying natural orange-brown silty clays to 0.5m below ground level (bgl). No odorous or stained soils were noted during the drilling and sampling process. Due to recent rainfall and site topography, soils were moist to wet during drilling.

As previously stated, (refer **Section 2.4**), potential asbestos containing materials were noted on the ground surface, but were not noted at depth within the soil bores.

The soil logs are included in **Appendix H**.

6.6 Laboratory Testing Results

All soil samples were transported to laboratories that were NATA accredited. The results of the soil analyses are summarised in tables at the end of this report and the laboratory certificates are included in **Appendix I**.

All laboratory results reported below the adopted ecological and health-based investigation / screening levels.

The ACM01 cement sheet sample reported the presence of chrysotile asbestos fibres.

Total coliforms were reported in all soil samples tested, ranging from 300 most probable number / gram (MPN/g) at BH19_0.0-0.1 to 17,000 MPN/g at BH10_0.0-0.1. Whilst it is noted that BH10 is located closest to the Bolivar sludge ponds and reported the highest total coliforms result, coliforms are expected to be present in natural, healthy soils and the site is also used for sheep grazing.

Based on the limited assessment works completed at the site, the field observations and the soil results documented herein, site contamination of soils has not been identified in the context of proposed industrial land use (graphite refinery). However, wastewater from the adjacent Bolivar settling ponds, known to aerosolise and reach across the subject site, should be considered in terms of future construction workers and future site users.

7. Groundwater Investigation

The groundwater investigation comprised the installation, sampling and testing of three groundwater wells across the site in November 2022. It is noted that groundwater investigations were conducted a number of months after soil investigation works, due to delays caused by wet weather and the requirement for cultural heritage monitors during groundwater drilling works.

Details of the groundwater investigation are provided in the following sections.

7.1 Groundwater Well Installation

Prior to groundwater installation works, a permit was obtained from the Department for Environment and Water (DEW) for the drilling of the groundwater well location. The installation was undertaken in accordance with the Minimum Construction Requirements for Water Bores in Australia[11] document.

Three groundwater wells were installed on 10 and 11 November 2022 under the supervision of an experienced JBS&G environmental field scientist as follows:

- GW01 was installed to a depth of 4 m bgl in the northern portion of the site in the expected up-hydraulic gradient direction of the site.
- GW02 was installed to a depth of 4 m bgl in the western portion of the site in the expected down-hydraulic gradient direction of the site and the proposed graphite activities.
- GW03 was installed to a depth of 3.8m bgl in the southern portion of the site for site coverage.

Groundwater was encountered during drilling at approximately 1 m bgl. The depth to groundwater is noted to be shallow due to the close proximity to the Gulf of St Vincent. The groundwater monitoring well was drilled using hollow flight auger techniques.

The soils were logged in accordance with the Unified Soil Classification System (USCS) by an experienced Environmental Scientist. The materials encountered were logged and photographed. A new pair of disposable nitrile gloves was worn at each location. The groundwater logs are included in **Appendix J.**

The groundwater wells were constructed using 50 mm, class 18 un-plasticised polyvinyl chloride (uPVC) and were installed with a 3 m screened section at the base. Graded filter sand was installed around the screened interval (to 0.2 m above the top of screen) to allow groundwater movement but minimise sand/silt ingress to the well.

Hydrated bentonite chips and grout were used to seal the well annulus to surface, and a steel gatic cover was installed at the ground surface (flush with ground level) to finish the well.

The groundwater wells were developed following installation to ensure adequate hydraulic connection with the aquifer using a stainless-steel bailer.

The groundwater well location is shown on **Figure 4**.

7.2 Groundwater Sampling

Groundwater sampling of the three wells at the site was undertaken on 18 November 2022 using low flow sampling techniques. All equipment was decontaminated using PFAS free detergent (Liquinox©) prior to the commencement of sampling and between each location to minimise the potential for cross contamination. Equipment rinsate samples were collected daily to demonstrate that decontamination procedures were adequate.

[11] National Uniform Drillers Licensing Committee 2020, Minimum Construction Requirements for Water Bores in Australia, Fourth Edition, dated 2020

All groundwater wells were gauged prior to sampling using an interface probe (IP) to measure the depth to water, the depth to non-aqueous phase liquid (NAPL), if present, and the total depth of the groundwater well.

JBS&G utilised a low-flow peristaltic pump with dedicated tubing to purge and sample the wells. The pump which was then lowered into the groundwater well so that the tubing inlet point was located approximately 0.5m above the base of the well (within the screened interval).

The pump was then used to purge the groundwater well at a rate to establish a stabilised pump rate with minimal drawdown (<100 mm).

After the establishment of the stable flow rate, water quality parameters (dissolved oxygen (DO), redox potential, electrical conductivity (EC), temperature and pH) were measured during groundwater purging using a calibrated water quality meter (WQM) until parameters had stabilised. Olfactory evidence of contamination (if present) was noted on the field sheets for each location (i.e. turbidity, colour, odour etc). Field sheets for sampling are included in **Appendix K**.

Following stabilisation of the parameters, groundwater water samples were collected into laboratory supplied, preserved containers for the chemicals of interest using the same flow rate established for the purging. Replicate samples were also collected at a rate consistent with the ASC NEPM.

Groundwater samples were transported to the NATA accredited laboratory in a chilled cooler under JBS&G chain of custody (COC) documentation.

7.3 Analytical Program

All groundwater samples were analysed for a range of potential contaminants including TDS, TRH, BTEXN, PAH, heavy metals (arsenic, cadmium, chromium, copper, nickel, lead, mercury and zinc), VOC, PFAS and nutrients.

7.4 Assessment Criteria

The groundwater environmental values have been established on the basis of the process outlined in the GAR which considers the salinity of the groundwater, surrounding surface water bodies and the surrounding uses of groundwater in the vicinity of the site. A summary of the relevant environmental values for the site are summarised in **Table 9** below:

Table 7: Relevant Groundwater Environmental Values

Environmental Value	Relevant Criteria	Rationale
Drinking Water & Primary Industries (irrigation & general)	No	It is noted that the groundwater wells reported TDS ranging between 16,000 mg/L (GW02) and 22,000mg/L (GW03). Based on these reported TDS values and the Environment Protection (Water Quality) Policy 2015 (WQEPP) salinity ranges (extract from Schedule 1, Table 3), the salinity of groundwater wells indicates that groundwater is not suitable for drinking and irrigation. A search of groundwater wells within a two-kilometre radius was conducted using the WaterConnect Database. The results of the search indicated the following: • 54 groundwater wells (classed as Water Wells in the data base) with depths ranging from 0m to 15m (considered to be the primary aquifer) were identified. • There are no domestic and irrigation wells present within a 2 km radius of the site. • Several wells had no listed purpose, however none of these are located on residential or farming properties, with the exception of one well located on an agricultural property to the north-east of the site. The well is located in the inferred upgradient hydraulic direction of the site and has a total depth of 0.3m which is unlikely to be a completed well given the shallow depth. Therefore, drinking water and irrigation are not considered appropriated environmental values to be protected.
Primary Industries (livestock)	Yes	Salinity of groundwater wells within a 2 km radius of the site identifies that groundwater is not suitable for livestock, however there are two wells within a 2 km radius of the site with a listed purpose of 'stock'.
Freshwater	No	There are no freshwater bodies within a 2 km radius of the site noting the closest freshwater body is the Little Para River located approximately 4 km south of the site. Therefore, freshwater ecosystems are not considered an appropriate environmental value to be protected.
Marine Water	No	There are no marine water bodies within a 2 km radius of the site. The St. Kilda mangroves and Gulf of St Vincent are located approximately 2.5 km and 2.8 km west of the site, respectively. Therefore, marine water ecosystems are not considered to be impacted.
Recreational	No	The salinity levels do not discount the fact that water may be used for recreational purposes by nearby users. Although it is unlikely that there are any recreational users of groundwater (for filling of swimming pool or water features), it is theoretically possible that groundwater could be extracted for these purposes.

7.5 Groundwater Conditions

No contamination indicators, such as fuel related odours or sheens were noted during sampling.

Field parameters were measured using a calibrated water quality meter prior to the collection of the sample to ensure that sufficient water had been purged to provide a representative sample from the aquifer.

As shown in **Table 10**, the stabilised measured parameters indicate the groundwater is brackish, has a neutral pH level and a positive oxidation-reduction potential (ORP) which correlates with the dissolved oxygen (DO) concentrations. The TDS measurements indicate highly saline groundwater consistent with the close proximity to the coast (approximately 2.8 km west of the site).

Table 8: Stabilised Groundwater Parameters

Well I.D.	Standing Water Level (mbgl)	pH	Temp (°C)	Total Dissolved Solids (mg/L)*	Oxidation-Reduction Potential (mV)	Dissolved Oxygen (mg/L)
GW01	0.565	7.00	17.1	18,009	99.8	0.15
GW02	0.731	7.09	17.2	18,287	75.4	0.60
GW03	0.15	7.12	18.5	23,311	40.9	0.13

NOTE: *Conversion factor of 0.67 used to convert field conductivity (µS/cm) to TDS (mg/L)

7.6 Groundwater Analytical Results

The groundwater samples and QA samples were transported to laboratories that were NATA accredited. The summary data tables for groundwater are attached to the end of this report and the laboratory certificates of analysis are included in **Appendix L**.

All groundwater results reported below the adopted criteria. JBS&G notes that some individual TRH concentrations reported marginally above the laboratory limits of reporting (LOR), however, this is not considered significant in terms of this investigation given the results reported below all adopted criteria.

8. Quality Assurance / Quality Control

8.1 Soil QA/QC

A summary of the soil quality assurance / quality control (QA/QC) measures are summarised in **Table 11.**

Table 11: Summary of Soil QAQC Measures

QA/QC Item	Detail
QA	
Field procedures	Field procedures were undertaken in accordance with the methodologies and guidelines referenced in **Section 7.2** as well as JBS&G's standard operating procedures.
NATA accredited laboratories	The primary laboratory used was Eurofins and the secondary laboratory used was ALS. Both laboratories are NATA accredited for the analyses undertaken.
Sample tracking	Chain of Custody (COC) documentation was used for the transport of all samples to the laboratory. COC documents are included in **Appendix I.**
Sample preservation & storage	Samples were collected in laboratory supplied, clean glass jars and samples were stored on ice in eskies during the field works and in transit to the laboratory.
Holding times	All samples were extracted and analysed within the recommended holding times.
Data transcription	Results are supplied by the laboratory as CSV files, which minimises the chance of transcription errors as the data is directly exported into files using ESdat.
Laboratory LORs	The LORs are presented in the results tables and NATA certificates in **Appendix I**. The LORs are appropriate for this assessment with all LORs being less than the adopted assessment.
QC – SOIL	
Intra and Inter laboratory duplicates	Intra-laboratory duplicate samples (DUP01; DUP02) and inter-laboratory duplicate samples (SPLIT01; SPLIT02) were collected from its parent samples (BH19_0.1-0.2 and BH15_0.0-0.15, respectively) and tested at the primary (Eurofins) and secondary (Envirolab) laboratories. Relative percentage difference (RPD) calculations were undertaken where concentrations were greater than the estimated quantitation limit (EQL). RPDs from the inter and intra laboratory duplicate soil analyses fell predominately within acceptable levels (<30%). Some elevated RPDs were reported for individual heavy metals (including arsenic, lead, nickel and zinc) and benzo(a)pyrene in both the inter and intra laboratory analyses (ranging between 41% to 89%). It is noted that the samples were collected from surface/shallow soils which may reworked natural, therefore the aforementioned RPDs are considered to be associated with the heterogeneity of soils at the sampling location rather than a product of field-based or laboratory QA/QC issues. The frequency of field duplicate analyses for heavy metals and OCP is acceptable when compared to the 1 per 20 analyses recommended in AS4482.1. Duplicates were tested for the main chemicals of concern (heavy metals, OCPs and OPPs).
Blank samples	One rinsate blank (RB01) and one trip blank sample (TB01) were collected and analysed for metals and BTEXN, respectively. All concentrations were reported as below LOR.
Laboratory QC	The results obtained from the laboratory internal QC samples (including blanks and internal duplicates) were predominately within acceptable limits of repeatability with RPD values reported for all duplicate pairs within the acceptable range and were noted as "Pass" by the laboratory. Chrysene (131%) TOC (32%) and Cobalt (36%) returned elevated RPDs, though this is not considered to impact the interpretation of results. All blank samples reported concentrations below the LORs.
QC – GROUNDWATER	
Laboratory duplicates	Field Duplicate samples were collected and submitted for analyses at the primary and secondary laboratories as follows: • **GW02** – DUP01 (Eurofins) & SPLIT01 (Envirolab) The majority of results reported less than the LOR and therefore the RPDs for the duplicate samples were 0%. Some individual metals and TRH (C10-C14) reported concentrations above the LOR, but the RPDs for these were 50% and below.
Blank samples	One rinsate sample (RB01) and one trip blank sample (TB01) was collected during groundwater sampling and analysed for metals and BTEX respectively. All concentrations were reported as below the laboratory LOR.

QA/QC Item	Detail
Laboratory QC	The results obtained from the laboratory internal QC samples (including blanks and internal duplicates) were within acceptable limits of repeatability, with RPD values reported for all duplicate pairs within the acceptable range and were noted as “Pass” by the laboratory. All blank samples reported concentrations below the LORs.

8.2 Data Quality Analysis

JBS&G has completed a detailed review of the QA/QC activities completed for the current stage of assessment works and considers that the data is of suitable quality for use in meeting the objectives of the assessment.

The soil dataset is considered to be representative of site conditions and of acceptable quality for use in the assessment of risk present at the site.

9. Conceptual Site Model

JBS&G has utilised the information summarised in this report to prepare a CSM for the site. The ASC NEPM identifies the CSM as a critical part of understanding the relationships between any contamination present and any receptors at a site, thereby assisting with the determination of any risks to human health or the environment associated with the contamination. A preliminary CSM has been developed to identify potential for sources and what receptors they may interact with.

The preliminary CSM for the site is summarised in **Table 12** below:

Table 12: Conceptual Site Model

Element of CSM	Discussion
Potential sources of contamination	The following PCAs were identified in the site history investigation: • Historical use of fill from various unknown sources brought onto the site including unsealed tracks/driveways) and possible small mounds of fill material previously located in the north-western portion of the site. • Cement sheet fragments containing asbestos across the ground surface in the western portion of the site (adjacent the western fence line). It is likely the fragments have been illegally dumped at the site. • Agricultural activities (including use of pesticides, herbicides and fertilisers during use of the site for agricultural purposes.
Contaminants of potential concern (COPCs) associated with the potential sources of contamination	The following COPCs are associated with PCAs outlined above: • OCPs • OPPs • Metals • Herbicides • Fertilisers • Asbestos
Potentially affected media	Soil is the most likely media to be affected by the identified PCAs, with groundwater and soil vapour unlikely to be a factor.
Land use and building design	As per **Section 2.2**, it is understood the site is proposed to be developed into an industrial graphite refinery.
Geology	The site geology (from the South Australian Resource Information Gateway, SARIG) indicates that the site overlays quaternary alluvial and fluvial sediments. These sediments contain undifferentiated sediments and quaternary rocks. The soil investigation indicates that soils were generally made up of a fine layer of natural / reworked natural material comprising silty sand overlying natural orange-brown silty clays to the maximum depth of investigation (0.5m bgl).
Hydrogeology	Groundwater was encountered during drilling at approximately 1 m bgl. The depth to groundwater is noted to be shallow due to the close proximity to the Gulf of St Vincent. The expected groundwater flow direction is to the west / north-west which is consistent with the general groundwater flow direction across the Adelaide Plains.
Human and ecological receptors	The following human receptors were identified for the proposed commercial / industrial land use: • Construction workers; and • Site occupants It is understood the majority of the site is proposed to be sealed as part of the proposed industrial graphite refinery (refer **Appendix B**), therefore ecological receptors are not considered likely.
Potential exposure pathways	The following potential exposure pathways have been identified: • **Ingestion / Dermal contact / dermal contact** – No impacted soils and groundwater were identified (exceeding adopted assessment criteria) at the site. • **Inhalation of dust and/or asbestos** – Friable asbestos containing material may be inhaled. Asbestos cement sheet was identified at the site during JBS&G's site inspection, however no friable asbestos was identified. • **Landscaped areas (flora & fauna)** - No impacted soils (exceeding adopted ecological assessment criteria) were identified at the site.
Data gaps	It is noted that this assessment was an environmental due diligence and not a detailed investigation of the site. Additionally, a limited soil investigation has been conducted with no testing conducted within a indigenous heritage exclusion zone located in the

Element of CSM	Discussion
	north-eastern portion of the site. The CSM should be updated following any additional assessment works at the site.

10. Conclusions

JBS&G Australia Pty Ltd (JBS&G) was engaged by Renascor Resources (the client) to undertake a Baseline Environmental Investigation comprising a site history and a limited soil and groundwater investigation for the site located on portions of Allotments 3 & 4 Robinson Road, Waterloo Corner.

The site is currently vacant and is located adjacent the Bolivar Wastewater Treatment Plant. It is understood that the client is looking to develop the site into an industrial graphite refinery and that due diligence works are required prior to entering into a long-term lease agreement with SA Water. The report forms a baseline for future comparison noting the limitations on this current investigation. In particular, groundwater was not assessed due to site access restrictions.

Site History

The available historical information indicates that the site has been used for agricultural purposes since at least the 1860s to present day, consisting mainly of broadacre cropping and grazing. More recently, broadacre grazing activities are minimal with only a small flock of sheep kept at the site.

The main potential sources of contamination associated with past and present site uses include:

- Historical use of fill from various unknown sources brought onto the site including unsealed tracks/driveways) and possible small mounds of fill material previously located in the north-western portion of the site.
- Cement sheet fragments containing asbestos across the ground surface in the western portion of the site (adjacent the western fence line). It is likely the fragments have been illegally dumped at the site, given there have been no sheds / structures at the site.
- Use of pesticides, herbicides and fertilisers during use of the site for agricultural purposes

The site is located adjacent to the Bolivar WWTP and during high winds, the wastewater from the adjacent Bolivar settling ponds is understood to aerosolise and reach across the subject site. Additionally, any potentially impacted groundwater underlying the WWTP site may be migrating under the subject site, although it is noted the treatment plant is located in the inferred down-hydraulic gradient direction of the site.

Soil investigation

A limited soil investigation was undertaken at the site comprising the drilling of 20 grid-based soil bores to a maximum depth of 0.5 m below ground level (bgl). It is noted that some areas of the site could not be accessed due to an indigenous exclusion zone and inaccessible flooded areas, and therefore some of the locations were moved to avoid these areas.

Soil bore locations encountered predominately a fine layer of natural / reworked natural material comprising silty sand overlying natural orange-brown silty clays to 0.5m below ground level (bgl). No odorous or stained soils were noted during the drilling and sampling process and no potential asbestos containing materials were noted at depth within any of the soil bores.

Selected samples from each soil bore were analysed at the laboratory for a range of potential contaminants of interest identified in the site history and those relevant to form a baseline for future comparison. All laboratory results reported below the adopted ecological and health-based investigation / screening levels.

Groundwater Investigation

The groundwater investigation comprised the installation and sampling of three monitoring wells across the site (GW01, GW02 and GW03) targeting the proposed graphite activities as well as coverage of the site. Groundwater was encountered at a shallow depth of approximately 1m bgl likely due to the close proximity to the Gulf of St Vincent.

The most appropriate environmental values of groundwater to be protected were determined to be livestock water and recreation primary contact / aesthetics (in the context of swimming pool filling or filling of water features). No elevated results above the adopted groundwater quality criteria were reported for any of the analytes tested.

Recommendations

Based on the assessment works completed at the site, the field observations and the soil and groundwater results documented herein, site contamination of soils has not been identified in the context of proposed industrial land use (graphite refinery).

Asbestos cement sheet fragments in the western portion of the site should be removed prior to any development works and wastewater from the adjacent Bolivar settling ponds, known to aerosolise and reach the subject site, should be considered in terms of any future construction workers and future site users.

11. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquires.

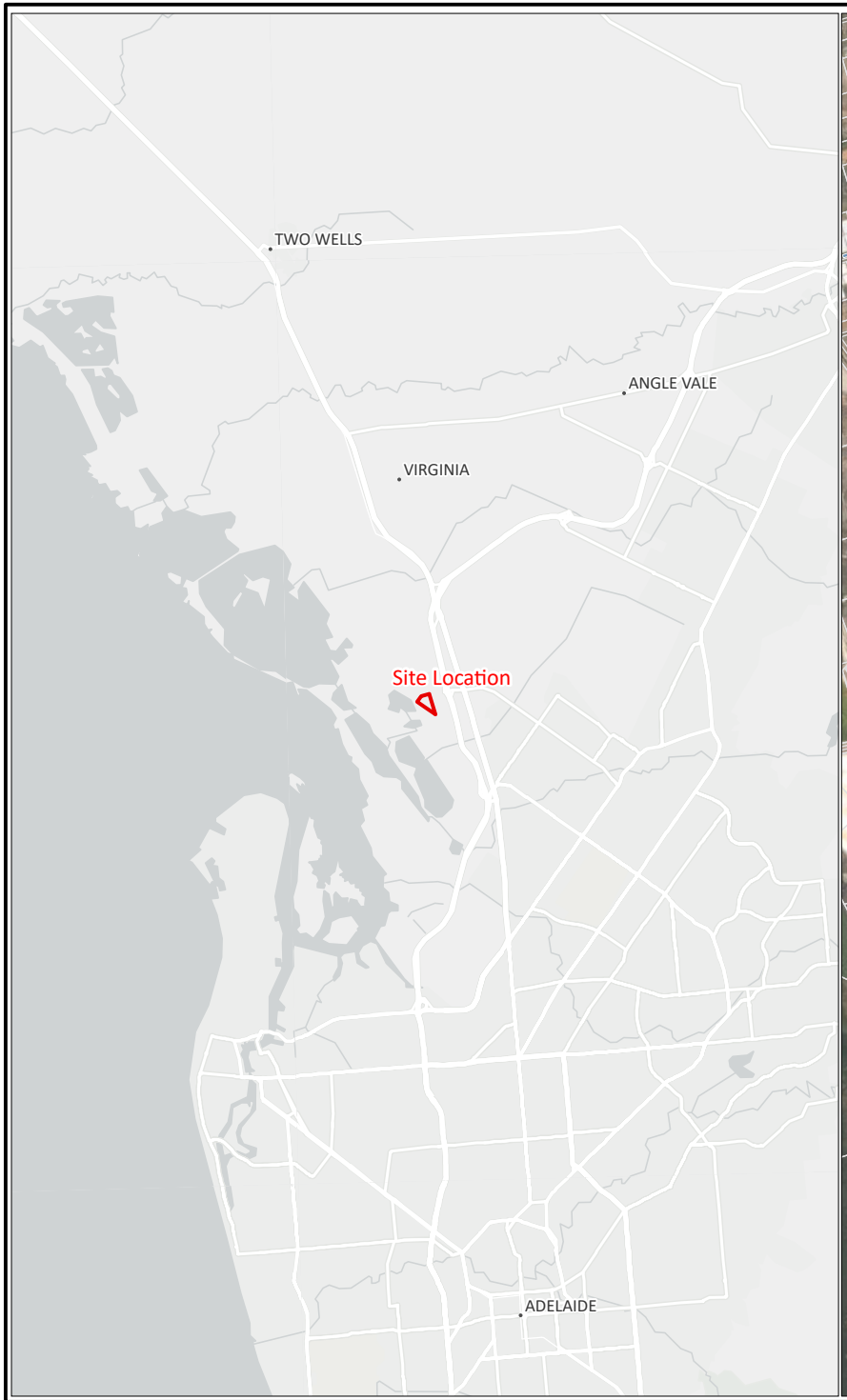
Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

Figures



Legend

- Cadastre
- Site Boundary
- Waterbody

JBS&G

Job No: 63155	
Client: Renascor	
Version: FINAL	Date: 27-Jul-2022
Author: twilliamson	Checked By: MS
Scale 1:45,000	

0 500 1,000
metres

Coord. Sys. GDA2020 MGA Zone 54

Robinson Road, Waterloo Corner, South Australia

SITE LOCATION

FIGURE 1

File Name: C:\Users\twilliamson\JBS&G Australia\JBS&G - DCS - Internal - Documents\Projects\Renascor\GIS\63155 PSI and Soil Investigation, Waterloo Corner\02_MapProjects\63155_Renascor_WaterlooCorner_PSI_v11.aprx/61355_001_SiteLocation
Reference: ESRI Topographic Basemap - Accessed Imagery: 27/07/2022

Legend

- Cadastre
- Site Boundary

Site Areas

- Flood Area
- Heritage Area
- Asbestos Containing Material

JBS&G

Job No: 63155	
Client: Renascor	
Version: FINAL	Date: 27-Jul-2022
Author: twilliamson	Checked By: MS

Scale 1:4,000

0 50 100

metres

Coord. Sys. GDA2020 MGA Zone 54

Robinson Road, Waterloo Corner, South Australia

SITE LAYOUT

FIGURE 2

File Name: C:\Users\twilliamson\JBS&G Australia\JBS&G - DCS - Internal - Documents\Projects\Renascor\GIS\63155 PSI and Soil Investigation, Waterloo Corner\02_MapProjects\63155_Renascor_WaterlooCorner_PSI_v11.aprx/61355_002_SiteLayout
Reference: Nearmap (22/05/2022)

Legend

- Soil Borehole (21)
- Cadastre
- Site Boundary

Site Areas

- Flood Area
- Heritage Area
- Asbestos Containing Material

JBS&G

Job No: 63155	
Client: Renascor	
Version: FINAL	Date: 27-Jul-2022
Author: twilliamson	Checked By: MS
Scale 1:4,000	

0 50 100
metres

Coord. Sys. GDA2020 MGA Zone 54

Robinson Road, Waterloo Corner, South Australia

SITE LAYOUT

FIGURE 3

File Name: C:\Users\twilliamson\JBS&G Australia\JBS&G - DCS - Internal - Documents\Projects\Renascor\GIS\63155 PSI and Soil Investigation, Waterloo Corner\02_MapProjects\63155_Renascor_WaterlooCorner_PSI_v11.aprx/61355_002_SiteLayoutBoreholes
Reference: Nearmap (22/05/2022)

Legend

- Site Boundary
- Cadastre
- Groundwater Well Location

JBS&G

Job No: 63155	
Client: Renascor	
Version: FINAL	Date: 30-Nov-2022
Author: jstrauss	Checked By: MS
Scale 1:4,000	

0 50 100
metres

Coord. Sys. GDA2020 MGA Zone 54

Robinson Road, Waterloo Corner, South Australia

GROUNDWATER WELL LOCATION

FIGURE 4

File Name: C:\Users\jstrauss\JBS&G Australia\JBS&G - DCS - Internal - Documents\Projects\Renascor\GIS\63155 PSI and Soil Investigation, Waterloo Corner\02_MapProjects\63155_Renascor_WaterlooCorner_PSI_v11.aprx/61355_004_Groundwater Well Locations
Reference: Nearmap (22/05/2022)

Summary Results Tables (including QA/QC) - SOIL

SOIL CHEMISTRY TABLE
Project Number: 63155
Project Name: Waterloo Corner Soils July 2022

				Metals & Metalloids																		TRHs (NEPC 2013)						
				Arsenic	Barium	Beryllium	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Chromium (Trivalent)	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	C6-C10	C10-C16	C16-C34	C34-C40	C10-C40 (Sum of total)	F1 (C6-C10 minus BTEX)	F2 (C10-C16 less Naphthalene)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				2	10	2	0.4	1	5	5	5	5	20	5	5	0.1	5	5	2	2	10	5	20	50	100	100	100	20	50
PFAS NEMP (HEPA 2018) - Interim Soil - Ecological Direct Exposure																												
PFAS NEMP (HEPA 2018) - Interim Soil - Ecological Indirect Exposure																												
PFAS NEMP 2020 Table 2 Health Industrial/Commercial																												
NEPC (2013) ESLs: Commercial, Fine																								2500	6600		215	170
NEPC (2013) EILs: Commercial (generic conservative)				160					310	600		310		1800				490			1200							
NEPC (2013) HILs: Commercial				3000		500	900	3600	3600		4000	240000		1500	60000	730		6000	10000		400000							
NEPC (2013) HSLs for Vapour Intrusion: Commercial, Clay																												
0-1m																											310	NL
NEPC (2013) Management Limits: Commercial, Fine																						800	1000	5000	10000			
Location Code	**Field ID**	**Sample Date**	**Lab Report Number**																										
ACM01	ACM01	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	BH01_0.0-0.1	29/06/2022	903019	<2	-	-	<0.4	-	24	-	-	11	-	9.4	-	<0.1	-	<5	-	-	-	22	<20	<50	<100	<100	<100	<20	<50
BH02	BH02_0.0-0.1	29/06/2022	903019	2.5	-	-	<0.4	-	25	-	-	13	-	11	-	<0.1	<5	<5	<2	<2	<10	28	-	-	-	-	-	-	-
BH03	BH03_0.0-0.1	29/06/2022	903019	<2	-	-	<0.4	-	24	-	-	9.4	-	10	-	<0.1	<5	<5	<2	<2	<10	25	-	-	-	-	-	-	-
BH04	BH04_0.0-0.1	29/06/2022	903019	2.3	-	-	<0.4	-	36	-	-	19	-	14	-	<0.1	<5	8	<2	<2	<10	32	-	-	-	-	-	-	-
BH05	BH05_0.0-0.1	29/06/2022	903019	<2	-	-	<0.4	-	11	-	-	<5	7600	11	-	<0.1	-	<5	-	-	-	17	<20	<50	<100	<100	<100	<20	<50
BH06	BH06_0.0-0.1	29/06/2022	903019	<2	-	-	<0.4	-	22	-	-	9.7	-	11	-	<0.1	-	<5	-	-	-	30	<20	<50	<100	<100	<100	<20	<50
BH07	BH07_0.0-0.1	29/06/2022	903019	<2	-	-	<0.4	-	16	-	-	9.7	-	9.2	-	<0.1	<5	<5	<2	<2	<10	17	-	-	-	-	-	-	-
BH08	BH08_0.0-0.1	29/06/2022	903019	<2	-	-	<0.4	-	17	-	-	9	-	9.5	-	<0.1	<5	<5	<2	<2	<10	19	-	-	-	-	-	-	-
BH09	BH09_0.0-0.1	29/06/2022	903019	2.6	-	-	<0.4	-	25	-	-	12	-	11	-	<0.1	<5	7.7	<2	<2	<10	22	-	-	-	-	-	-	-
BH10	BH10_0.0-0.1	30/06/2022	903019	3.3	-	-	<0.4	-	42	-	-	22	-	14	-	<0.1	-	9.7	-	-	-	31	<20	<50	<100	<100	<100	<20	<50
BH11	BH11_0.0-0.1	30/06/2022	903019	<2	-	-	<0.4	-	11	-	-	5.7	-	11	-	<0.1	<5	<5	<2	<2	<10	18	-	-	-	-	-	-	-
BH12	BH12_0.0-0.1	30/06/2022	903019	<2	-	-	<0.4	-	20	-	-	9.2	-	13	-	<0.1	<5	5.7	<2	<2	<10	30	-	-	-	-	-	-	-
BH13	BH13_0.0-0.1	30/06/2022	903019	3.4	-	-	<0.4	-	44	-	-	20	-	19	-	<0.1	-	9.4	-	-	-	45	<20	<50	<100	<100	<100	<20	<50
BH14	BH14_0.0-0.15	30/06/2022	903019	2.3	22	<2	<0.4	<1	24	24	<5	13	13,000	16	120	<0.1	-	<5	-	<2	-	39	<20	<50	<100	<100	<100	<20	<50
BH15	BH15_0.0-0.15	30/06/2022	903019	3.2	-	-	<0.4	-	42	-	-	19	-	20	-	<0.1	<5	6.8	<2	<2	<10	39	-	-	-	-	-	-	-
BH15	DUP02	30/06/2022	903019	<2	-	-	<0.4	-	34	-	-	14	-	21	-	<0.1	<5	5.2	<2	<2	<10	59	-	-	-	-	-	-	-
BH15	Split02	30/06/2022	32327	<4	-	-	<0.4	-	41	-	-	15	-	22	-	<0.1	-	6	-	-	-	44	-	-	-	-	-	-	-
BH16	BH16_0.0-0.1	30/06/2022	903019	<2	-	-	<0.4	-	25	-	-	10	-	14	-	<0.1	<5	<5	<2	<2	<10	30	-	-	-	-	-	-	-
BH17	BH17_0.0-0.1	30/06/2022	903019	<2	-	-	<0.4	-	15	-	-	7.5	-	18	-	<0.1	-	<5	-	-	-	31	<20	<50	<100	<100	<100	<20	<50
BH18	BH18_0.0-0.1	30/06/2022	903019	2.1	-	-	<0.4	-	21	-	-	9.6	-	21	-	<0.1	<5	<5	<2	<2	<10	28	-	-	-	-	-	-	-
BH19	BH19_0.0-0.1	29/06/2022	903019	3.9	-	-	<0.4	-	30	-	-	18	-	10	-	<0.1	<5	9.4	<2	<2	<10	31	-	-	-	-	-	-	-
BH19	BH19_0.1-0.2	29/06/2022	903019	2.6	48	<2	<0.4	<1	17	17	<5	35	14,000	24	180	<0.1	-	<5	-	<2	-	85	<20	<50	<100	<100	<100	<20	<50
BH19	DUP01	29/06/2022	903019	3.2	-	-	<0.4	-	20	-	-	34	-	23	-	<0.1	-	8	-	-	-	100	<20	<50	<100	<100	<100	<20	<50
BH19	Split01	29/06/2022	32327	<4	-	-	<0.4	-	23	-	-	26	-	14	-	<0.1	-	13	-	-	-	49	<25	<50	<100	<100	<50	<25	<50
BH20	BH20_0.0-0.1	29/06/2022	903019	<2	-	-	<0.4	-	15	-	-	5.3	-	14	-	<0.1	<5	<5	<2	<2	<10	22	-	-	-	-	-	-	-

Data Comments
#1: Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.
#2: Chrysotile asbestos detected.Organic fibres detected.
#3: 80 x 50 x 5

SOIL CHEMISTRY TABLE
Project Number: 63155
Project Name: Waterloo Corner Soils July 2022

				BTEXN							PAH																				
				Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	Total BTEX	Acenaphthene	Acenaphthylene	Anthracene	Benz[a]anthracene	Benzo[a]pyrene	Benzo[a]pyrene TEQ (LOR)	Benzo[a]pyrene TEQ calc (Half)	Benzo[a]pyrene TEQ calc (Zero)	Benzo[b+j]fluoranthene	Benzo[b+j+k]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.1	0.1	0.1	0.1	0.2	0.3	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PFAS NEMP (HEPA 2018) - Interim Soil - Ecological Direct Exposure																															
PFAS NEMP (HEPA 2018) - Interim Soil - Ecological Indirect Exposure																															
PFAS NEMP 2020 Table 2 Health Industrial/Commercial																															
NEPC (2013) ESLs: Commercial, Fine				95	135	185			95						1.4																
NEPC (2013) EILs: Commercial (generic conservative)																												370			
NEPC (2013) HILs: Commercial																40	40	40													4000
NEPC (2013) HSLs for Vapour Intrusion: Commercial, Clay																															
0-1m				4	NL	NL			NL																			NL			
NEPC (2013) Management Limits: Commercial, Fine																															
Location Code	**Field ID**	**Sample Date**	**Lab Report Number**																												
ACM01	ACM01	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	BH01_0.0-0.1	29/06/2022	903019	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH02	BH02_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	BH03_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH04	BH04_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_0.0-0.1	29/06/2022	903019	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH06	BH06_0.0-0.1	29/06/2022	903019	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH07	BH07_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	BH08_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	BH09_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH10	BH10_0.0-0.1	30/06/2022	903019	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH11	BH11_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	BH12_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	BH13_0.0-0.1	30/06/2022	903019	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH14	BH14_0.0-0.15	30/06/2022	903019	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH15	BH15_0.0-0.15	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	DUP02	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	Split02	30/06/2022	32327	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	BH16_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_0.0-0.1	30/06/2022	903019	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH18	BH18_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH19	BH19_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	BH19_0.1-0.2	29/06/2022	903019	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH19	DUP01	29/06/2022	903019	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH19	Split01	29/06/2022	32327	<0.2	<0.5	<1	<1	<2	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05
BH20	BH20_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Data Comments
#1: Quantification of linear and branched isomers has been conducted as a single tota
#2: Chrysotile asbestos detected.Organic fibres detected.
#3: 80 x 50 x 5

SOIL CHEMISTRY TABLE
Project Number: 63155
Project Name: Waterloo Corner Soils July 2022

				Organochlorine Pesticides																									
				Pentachlorophenol	4,4-DDE	a-BHC	b-BHC	d-BHC	g-BHC (Lindane)	Aldrin	Dieldrin	Aldrin + Dieldrin	Chlordane	Chlordane (cis)	Chlordane (trans)	DDT	DDD	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
PFAS NEMP (HEPA 2018) - Interim Soil - Ecological Direct Exposure																												
PFAS NEMP (HEPA 2018) - Interim Soil - Ecological Indirect Exposure																												
PFAS NEMP 2020 Table 2 Health Industrial/Commercial																												
NEPC (2013) ESLs: Commercial, Fine																												
NEPC (2013) EILs: Commercial (generic conservative)																640												
NEPC (2013) HILs: Commercial				660								45	530					3600				100			50		2500	160
NEPC (2013) HSLs for Vapour Intrusion: Commercial, Clay																												
0-1m																												
NEPC (2013) Management Limits: Commercial, Fine																												
Location Code	**Field ID**	**Sample Date**	**Lab Report Number**																									
ACM01	ACM01	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	BH01_0.0-0.1	29/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH02	BH02_0.0-0.1	29/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH03	BH03_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.0-0.1	29/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH05	BH05_0.0-0.1	29/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH06	BH06_0.0-0.1	29/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH07	BH07_0.0-0.1	29/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH08	BH08_0.0-0.1	29/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH09	BH09_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10	BH10_0.0-0.1	30/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH11	BH11_0.0-0.1	30/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH12	BH12_0.0-0.1	30/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH13	BH13_0.0-0.1	30/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH14	BH14_0.0-0.15	30/06/2022	903019	<1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH15	BH15_0.0-0.15	30/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH15	DUP02	30/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH15	Split02	30/06/2022	32327	-	<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	-
BH16	BH16_0.0-0.1	30/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH17	BH17_0.0-0.1	30/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH18	BH18_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	BH19_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	BH19_0.1-0.2	29/06/2022	903019	<1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH19	DUP01	29/06/2022	903019	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH19	Split01	29/06/2022	32327	-	<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	-
BH20	BH20_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1: Quantification of linear and branched isomers has been conducted as a single tota
#2: Chrysotile asbestos detected.Organic fibres detected.
#3: 80 x 50 x 5

SOIL CHEMISTRY TABLE
Project Number: 63155
Project Name: Waterloo Corner Soils July 2022

				Organophosphorus Pesticides																																	
				Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	EPN	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Tetrachlorvinphos	Tokuthion	Trichloronate	Parathion
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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
LOR				0.2	0.2	0.1	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
PFAS NEMP (HEPA 2018) - Interim Soil - Ecological Direct Exposure																																					
PFAS NEMP (HEPA 2018) - Interim Soil - Ecological Indirect Exposure																																					
PFAS NEMP 2020 Table 2 Health Industrial/Commercial																																					
NEPC (2013) ESLs: Commercial, Fine																																					
NEPC (2013) EILs: Commercial (generic conservative)																																					
NEPC (2013) HILs: Commercial								2000																													
NEPC (2013) HSLs for Vapour Intrusion: Commercial, Clay																																					
0-1m																																					
NEPC (2013) Management Limits: Commercial, Fine																																					
Location Code	**Field ID**	**Sample Date**	**Lab Report Number**																																		
ACM01	ACM01	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	BH01_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	BH02_0.0-0.1	29/06/2022	903019	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH03	BH03_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.0-0.1	29/06/2022	903019	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH05	BH05_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	BH06_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	BH07_0.0-0.1	29/06/2022	903019	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH08	BH08_0.0-0.1	29/06/2022	903019	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH09	BH09_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10	BH10_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	BH11_0.0-0.1	30/06/2022	903019	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH12	BH12_0.0-0.1	30/06/2022	903019	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH13	BH13_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	BH14_0.0-0.15	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.0-0.15	30/06/2022	903019	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH15	DUP02	30/06/2022	903019	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH15	Split02	30/06/2022	32327	<0.1	-	<0.1	-	<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	<0.1
BH16	BH16_0.0-0.1	30/06/2022	903019	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH17	BH17_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	BH19_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	BH19_0.1-0.2	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	DUP01	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	Split01	29/06/2022	32327	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	BH20_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1: Quantification of linear and branched isomers has been conducted as a single tota
#2: Chrysotile asbestos detected.Organic fibres detected.
#3: 80 x 50 x 5

SOIL CHEMISTRY TABLE
Project Number: 63155
Project Name: Waterloo Corner Soils July 2022

		Chlorinated Alkenes	Polychlorinated Biphenyls								Phenols																PFAS							Chlorinated Benzenes
		Tetrachloroethene	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	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	3&4-Methylphenol (m&p-cresol)	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Chloro-3-Methylphenol	4-nitrophenol	Cresol Total	Phenol	Tetrachlorophenols	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	Perfluorooctanoic acid (PFOA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorooctanesulfonic acid (PFOS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTSA)	Sum of PFHxS and PFOS	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Hexachlorobenzene
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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
LOR		0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	1	0.5	0.5	5	0.5	0.5	0.2	1	0.4	5	20	1	5	0.5	0.5	10	1	20	0.005	0.005	0.005	0.01	0.005	0.005	0.005	0.05
PFAS NEMP (HEPA 2018) - Interim Soil - Ecological Direct Exposure																														10				1			
PFAS NEMP (HEPA 2018) - Interim Soil - Ecological Indirect Exposure																																0.14					
PFAS NEMP 2020 Table 2 Health Industrial/Commercial																														50	20	20		20			
NEPC (2013) ESLs: Commercial, Fine																																					
NEPC (2013) EILs: Commercial (generic conservative)																																					
NEPC (2013) HILs: Commercial										7															25000	240000										80
NEPC (2013) HSLs for Vapour Intrusion: Commercial, Clay																																					
0-1m																																					
NEPC (2013) Management Limits: Commercial, Fine																																					

Location Code	Field ID	Sample Date	Lab Report Number																																		
ACM01	ACM01	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	BH01_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
BH02	BH02_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
BH03	BH03_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	0.0052	<0.01	0.0052	0.0052	0.0052	<0.05
BH05	BH05_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
BH06	BH06_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
BH07	BH07_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.05
BH08	BH08_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
BH09	BH09_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	-
BH10	BH10_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
BH11	BH11_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
BH12	BH12_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
BH13	BH13_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
BH14	BH14_0.0-0.15	30/06/2022	903019	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	<0.5	<10	<1	<20	-	-	-	-	-	-	-	<0.05
BH15	BH15_0.0-0.15	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
BH15	DUP02	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
BH15	Split02	30/06/2022	32327	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
BH16	BH16_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.05
BH17	BH17_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
BH18	BH18_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	-
BH19	BH19_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	BH19_0.1-0.2	29/06/2022	903019	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	<0.5	<10	<1	<20	-	-	-	-	-	-	-	<0.05
BH19	DUP01	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
BH19	Split01	29/06/2022	32327	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
BH20	BH20_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1: Quantification of linear and branched isomers has been conducted as a single tota
#2: Chrysotile asbestos detected.Organic fibres detected.
#3: 80 x 50 x 5

SOIL CHEMISTRY TABLE
Project Number: 63155
Project Name: Waterloo Corner Soils July 2022

	Herbicides & Fungicides	Microbiological	Non-Metallic Inorganics			Major Anions	Ionic Balance			EPA VIC - IWRG621		Inorganics	Particle Size	Asbestos - Eurofins											Moisture Content	Other		
	Dinoseb	Total Coliforms	Cyanide Total	Nitrogen (Total)	Kjeldahl Nitrogen Total	Phosphorus	CEC	Conductivity (1:5 aqueous extract)	pH (Lab)	Organochlorine Pesticides EPAVic	Other Organochlorine Pesticides EPAVic	Nitrite + Nitrate as N	% Clay*	Approximate Sample Mass	Asbestos Sample Dimensions	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in Soil	Mass FA	Mass Asbestos in FA	Mass AF	Mass asbestos in AF	Asbestos from FA & AF in Soil	Mass Asbestos in FA & AF	Asbestos Reported Result	Moisture Content	Moisture Content (dried @ 103°C)	TOC	Iron (%)
	mg/kg	MPN/g	mg/kg	mg/kg	mg/kg	mg/kg	MEQ/100G	US/CM	pH Units	mg/kg	mg/kg	mg/kg	%	g	Comment	g	g	% (w/w)	g	g	g	g	% (w/w)	g	Comment	%	%	%	%
LOR	20	1	5	10	10	5	0.05	10	0.1	0.1	0.1	5	1													0.1	1	0.1	0.01
PFAS NEMP (HEPA 2018) - Interim Soil - Ecological Direct Exposure																													
PFAS NEMP (HEPA 2018) - Interim Soil - Ecological Indirect Exposure																													
PFAS NEMP 2020 Table 2 Health Industrial/Commercial																													
NEPC (2013) ESLs: Commercial, Fine																													
NEPC (2013) EILs: Commercial (generic conservative)																													
NEPC (2013) HILs: Commercial																													
NEPC (2013) HSLs for Vapour Intrusion: Commercial, Clay																													
0-1m																													
NEPC (2013) Management Limits: Commercial, Fine																													

Location Code	Field ID	Sample Date	Lab Report Number																											
ACM01	ACM01	30/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	71	1[#3]	0	0	0	0	0	0	0	0	0	1[#2]	-	-	-	-
BH01	BH01_0.0-0.1	29/06/2022	903019	-	-	-	530	530	210	-	-	-	<0.1	<0.1	<5	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-
BH02	BH02_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	7.8	-	-
BH03	BH03_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-
BH04	BH04_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-
BH05	BH05_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	22	240	7.7	<0.1	<0.1	-	7.4	-	-	-	-	-	-	-	-	-	-	-	-	16	0.6	0.76
BH06	BH06_0.0-0.1	29/06/2022	903019	-	-	-	360	360	270	-	-	-	<0.1	<0.1	<5	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-
BH07	BH07_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	-
BH08	BH08_0.0-0.1	29/06/2022	903019	-	-	-	1200	1200	200	-	-	-	<0.1	<0.1	<5	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-
BH09	BH09_0.0-0.1	29/06/2022	903019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-
BH10	BH10_0.0-0.1	30/06/2022	903019	-	17000	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-
BH11	BH11_0.0-0.1	30/06/2022	903019	-	-	-	630	630	160	-	-	-	<0.1	<0.1	<5	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-
BH12	BH12_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-
BH13	BH13_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-
BH14	BH14_0.0-0.15	30/06/2022	903019	<20	-	<5	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-
BH15	BH15_0.0-0.15	30/06/2022	903019	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-
BH15	DUP02	30/06/2022	903019	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-
BH15	Split02	30/06/2022	32327	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-
BH16	BH16_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-
BH17	BH17_0.0-0.1	30/06/2022	903019	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	22	-	-
BH18	BH18_0.0-0.1	30/06/2022	903019	-	3100	-	390	390	270	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-
BH19	BH19_0.0-0.1	29/06/2022	903019	-	300	-	580	580	230	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	23	-	-
BH19	BH19_0.1-0.2	29/06/2022	903019	<20	-	<5	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	21	-	-
BH19	DUP01	29/06/2022	903019	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-
BH19	Split01	29/06/2022	32327	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	-	-	-
BH20	BH20_0.0-0.1	29/06/2022	903019	-	-	-	860	860	110	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-

Data Comments
#1: Quantification of linear and branched isomers has been conducted as a single tota
#2: Chrysotile asbestos detected.Organic fibres detected.
#3: 80 x 50 x 5

FIELD QAQC TABLE
Project Number: 63155
Project Name: Waterloo Corner Soils July 2022

Lab Report Number	903019	903019
Field ID	RB01	TB01
Sample Date	30/06/2022	29/06/2022
Sample Type	Rinsate	Trip Blank

Chemical Group	**Chemical Name**	**Units**	**LOR**		
BTEXN	Benzene	mg/L	0.001		<0.001
	Toluene	mg/L	0.001		<0.001
	Ethylbenzene	mg/L	0.001		<0.001
	Xylene (o)	mg/L	0.001		<0.001
	Xylene (m & p)	mg/L	0.002		<0.002
	Xylene Total	mg/L	0.003		<0.003
Metals & Metalloids	Arsenic	mg/L	0.001	<0.001	
	Cadmium	mg/L	0.0002	<0.0002	
	Chromium (III+VI)	mg/L	0.001	<0.001	
	Copper	mg/L	0.001	<0.001	
	Lead	mg/L	0.001	<0.001	
	Mercury	mg/L	0.0001	<0.0001	
	Nickel	mg/L	0.001	<0.001	
	Zinc	mg/L	0.005	<0.005	

SOIL QAQC TABLE
Project Number: 63155
Project Name: Waterloo Corner Soils July 2022

Lab Report Number	903019	903019		903019	32327		903019	903019		903019	32327	
Sample Type	Primary	Intra-Lab		Primary	Inter-Lab		Primary	Intra-Lab		Primary	Inter-Lab	
Field ID	BH19_0.1-0.2	DUP01	RPD	BH19_0.1-0.2	Split01	RPD	BH15_0.0-0.15	DUP02	RPD	BH15_0.0-0.15	Split02	RPD
Sample Date	29/06/2022	29/06/2022		29/06/2022	29/06/2022		30/06/2022	30/06/2022		30/06/2022	30/06/2022	

Chemical Group	Chemical Name	Units	LOR												
Metals & Metalloids	Arsenic	mg/kg	2 : 4 (Interlab)	2.6	3.2	21	2.6	<4	0	**3.2**	**<2**	**46**	3.2	<4	0
	Cadmium	mg/kg	0.4	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0
	Chromium (III+VI)	mg/kg	5 : 1 (Interlab)	17	20	16	**17**	**23**	**30**	42	34	21	42	41	2
	Copper	mg/kg	5 : 1 (Interlab)	35	34	3	**35**	**26**	**30**	**19**	**14**	**30**	19	15	24
	Lead	mg/kg	5 : 1 (Interlab)	24	23	4	**24**	**14**	**53**	20	21	5	20	22	10
	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	5							<5	<5	0	<5		
	Nickel	mg/kg	5 : 1 (Interlab)	**<5**	**8**	**46**	**<5**	**13**	**89**	6.8	5.2	27	6.8	6	13
	Selenium	mg/kg	2							<2	<2	0	<2		
	Silver	mg/kg	2							<2	<2	0	<2		
	Tin	mg/kg	10							<10	<10	0	<10		
	Zinc	mg/kg	5 : 1 (Interlab)	85	100	16	**85**	**49**	**54**	**39**	**59**	**41**	39	44	12
TRHs (NEPC 2013)	C6-C10	mg/kg	20 : 25 (Interlab)	<20	<20	0	<20	<25	0						
	C10-C16	mg/kg	50	<50	<50	0	<50	<50	0						
	C16-C34	mg/kg	100	<100	<100	0	<100	<100	0						
	C34-C40	mg/kg	100	<100	<100	0	<100	<100	0						
	C10-C40 (Sum of total)	mg/kg	100 : 50 (Interlab)	<100	<100	0	<100	<50	0						
	F1 (C6-C10 minus BTEX)	mg/kg	20 : 25 (Interlab)	<20	<20	0	<20	<25	0						
	F2 (C10-C16 less Naphthalene)	mg/kg	50	<50	<50	0	<50	<50	0						
BTEXN	Benzene	mg/kg	0.1 : 0.2 (Interlab)	<0.1	<0.1	0	<0.1	<0.2	0						
	Toluene	mg/kg	0.1 : 0.5 (Interlab)	<0.1	<0.1	0	<0.1	<0.5	0						
	Ethylbenzene	mg/kg	0.1 : 1 (Interlab)	<0.1	<0.1	0	<0.1	<1	0						
	Xylene (o)	mg/kg	0.1 : 1 (Interlab)	<0.1	<0.1	0	<0.1	<1	0						
	Xylene (m & p)	mg/kg	0.2 : 2 (Interlab)	<0.2	<0.2	0	<0.2	<2	0						
	Xylene Total	mg/kg	0.3 : 1 (Interlab)	<0.3	<0.3	0	<0.3	<1	0						
PAH	Acenaphthene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0						
	Acenaphthylene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0						
	Anthracene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0						
	Benz(a)anthracene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0						
	Benzo(a)pyrene	mg/kg	0.5 : 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.05	0						
	Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	1.2	1.2	0	**1.2**	**<0.5**	**82**						
	Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5	0.6	0.6	0	0.6	<0.5	18						
	Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0						
	Benzo(b+j)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5								
	Benzo(g,h,i)perylene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0						
	Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5								
	Chrysene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0						
	Dibenz(a,h)anthracene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0						
	Fluoranthene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0						
	Fluorene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0						
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0						
	Naphthalene	mg/kg	0.5 : 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0						
	Naphthalene	mg/kg	0.5 : 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0						
	Phenanthrene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0						
	Pyrene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0						
	PAHs (Sum of total)	mg/kg	0.5 : 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.05	0						
Organochlorine Pesticides	4,4-DDE	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	a-BHC	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	b-BHC	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	d-BHC	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	g-BHC (Lindane)	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	Aldrin	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	Dieldrin	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	Aldrin + Dieldrin	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	Chlordane	mg/kg	0.1	<0.1	<0.1	0	<0.1			<0.1	<0.1	0	<0.1		
	DDT	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	DDD	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	DDT+DDE+DDD	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	Endosulfan I	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	Endosulfan II	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	Endosulfan sulphate	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	Endrin	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	Endrin aldehyde	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	Endrin ketone	mg/kg	0.05	<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05		
	Heptachlor	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	Heptachlor Epoxide	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	Methoxychlor	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
	Toxaphene	mg/kg	0.5	<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5		
Organophosphorus Pesticides	Azinophos methyl	mg/kg	0.2 : 0.1 (Interlab)							<0.2	<0.2	0	<0.2	<0.1	0
	Bolstar (Sulprofos)	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Chlorfenvinphos	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Chlorpyrifos	mg/kg	0.2 : 0.1 (Interlab)							<0.2	<0.2	0	<0.2	<0.1	0
	Chlorpyrifos-methyl	mg/kg	0.2 : 0.1 (Interlab)							<0.2	<0.2	0	<0.2	<0.1	0
	Coumaphos	mg/kg	2							<2	<2	0	<2		
	Demeton-O	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Demeton-S	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Diazinon	mg/kg	0.2 : 0.1 (Interlab)							<0.2	<0.2	0	<0.2	<0.1	0
	Dichlorvos	mg/kg	0.2 : 0.1 (Interlab)							<0.2	<0.2	0	<0.2	<0.1	0
	Dimethoate	mg/kg	0.2 : 0.1 (Interlab)							<0.2	<0.2	0	<0.2	<0.1	0
	Disulfoton	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	EPN	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Ethion	mg/kg	0.2 : 0.1 (Interlab)							<0.2	<0.2	0	<0.2	<0.1	0
	Ethoprop	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Fenitrothion	mg/kg	0.2 : 0.1 (Interlab)							<0.2	<0.2	0	<0.2	<0.1	0
	Fensulfothion	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Fenthion	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Malathion	mg/kg	0.2 : 0.1 (Interlab)							<0.2	<0.2	0	<0.2	<0.1	0
	Merphos	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Methyl parathion	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Mevinphos (Phosdrin)	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Monocrotophos	mg/kg	2							<2	<2	0	<2		
	Naled (Dibrom)	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Omethoate	mg/kg	2							<2	<2	0	<2		
	Phorate	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Pirimiphos-methyl	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Pyrazophos	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Ronnel	mg/kg	0.2 : 0.1 (Interlab)							<0.2	<0.2	0	<0.2	<0.1	0
	Terbufos	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Tetrachlorvinphos	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Tokuthion	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Trichloronate	mg/kg	0.2							<0.2	<0.2	0	<0.2		
	Parathion	mg/kg	0.2 : 0.1 (Interlab)							<0.2	<0.2	0	<0.2	<0.1	0
Chlorinated Benzenes	Hexachlorobenzene	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
EPA VIC - IWRG621	Organochlorine Pesticides EPAVic	mg/kg	0.1	<0.1	<0.1	0	<0.1			<0.1	<0.1	0	<0.1		
	Other Organochlorine Pesticides EPAVic	mg/kg	0.1	<0.1	<0.1	0	<0.1			<0.1	<0.1	0	<0.1		
Other	Moisture Content (dried @ 103°C)	%	1	21	20	5	21			16	14	13	16		

*RPDs have only been considered where a concentration is greater than 1 times the LOR.
**High RPDs are in bold (Acceptable RPDs for each LOR multiplier range are: 30 (1-10 x LOR); 30 (10-30 x LOR); 30 (> 30 x LOR))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Summary Results Tables (including QA/QC) - GROUNDWATER

WATER SUMMARY TABLE
Project Number: 63155
Project Name: Renascor Groundwater Sampling

	Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)							BTEXN							
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum of Total)	C6-C10	C10-C16	C16-C34	C34-C40	C10-C40 (Sum of total)	F1 (C6-C10 minus BTEX)	F2 (C10-C16 less Naphthalene)	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	Total BTEX	Naphthalene_VOC
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	1	0.2	1	1	1	0.1	1	5	20	50	100	100	100	20	50	100	100	100	20	50	1	1	1	1	2	3	1	10
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand (2-4m)																			6000	NL	5000	NL	NL			NL		NL
2(a). Recreation / Aesthetics - NHMRC (2011 updated 2018) ADWG: Health x10	100	20		20000	100	10	200			900	900	900	900		900	900	900	900		900	10	8000	3000			6000		
4(a). Primary Industries - ANZECC (2000) Livestock	500	10	1000	400	100	2	1000	20000																				
Field ID	**Sample ID**	**Sample Date**	**Lab Report Number**																									
GW01	GW01	18-Nov-22	942724	1	<0.2	<1	3	<1	<0.1	2	7	<20	<50	<100	<100	<100	<20	<50	<100	<100	<100	<20	<50	<1	<1	<1	<1	<2	<3	-	<10
GW02	GW02	18-Nov-22	942724	1	<0.2	<1	6	<1	<0.1	2	5	<20	60	<100	<100	<100	<20	<50	<100	<100	<100	<20	<50	<1	<1	<1	<1	<2	<3	-	<10
	DUP01	18-Nov-22	942724	1	<0.2	<1	7	<1	<0.1	2	6	<20	<50	<100	<100	<100	<20	<50	<100	<100	<100	<20	<50	<1	<1	<1	<1	<2	<3	-	<10
	SPLIT01	18-Nov-22	34654	1	<0.1	2	7	<1	<0.05	3	9	<10	<50	<100	<100	<50	<10	<50	<100	<100	<50	<10	<50	<1	<1	<1	<1	<2	<1	<1	<1
GW03	GW03	18-Nov-22	942724	1	<0.2	<1	6	<1	<0.1	2	8	<20	50	<100	<100	<100	<20	<50	<100	<100	<100	<20	<50	<1	<1	<1	<1	<2	<3	-	<10

WATER SUMMARY TABLE
Project Number: 63155
Project Name: Renascor Groundwater Sampling

				PAH																		Chlorinated Alkanes																			
				Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ	Benzo(b+j)fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR				1	1	1	1	1	5	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	5	5	5	5
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand (2-4m)																			NL																							
2(a). Recreation / Aesthetics - NHMRC (2011 updated 2018) ADWG: Health x10								0.1																					30						30				40	
4(a). Primary Industries - ANZECC (2000) Livestock																																									
Field ID	**Sample ID**	**Sample Date**	**Lab Report Number**																																							
GW01	GW01	18-Nov-22	942724	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	-	<1	<1	<5	<5	<5	<5	<5
GW02	GW02	18-Nov-22	942724	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	-	<1	<1	<5	<5	<5	<5	<5
	DUP01	18-Nov-22	942724	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	-	<1	<1	<5	<5	<5	<5	<5
	SPLIT01	18-Nov-22	34654	<1	<1	<1	<1	<1	<5	-	<2	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10	<10	-	<10
GW03	GW03	18-Nov-22	942724	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	-	<1	<1	<5	<5	<5	<5	<5

WATER SUMMARY TABLE
Project Number: 63155
Project Name: Renascor Groundwater Sampling

	Chlorinated Alkenes												Solvents	PFAS																	
	1,1-dichloroethene	1,1-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	Acetone	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	1	1	1	1	1	1	1	1	1	1	1	5	5	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.05	0.05	0.05	0.05
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand (2-4m)																														
2(a). Recreation / Aesthetics - NHMRC (2011 updated 2018) ADWG: Health x10	300							500			200	3	140000					5.6												
4(a). Primary Industries - ANZECC (2000) Livestock																														

Field ID	Sample ID	Sample Date	Lab Report Number																													
GW01	GW01	18-Nov-22	942724	<1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
GW02	GW02	18-Nov-22	942724	<1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	DUP01	18-Nov-22	942724	<1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	SPLIT01	18-Nov-22	34654	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<10	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.1	<0.05	<0.1	<0.05	<0.5	<0.02
GW03	GW03	18-Nov-22	942724	<1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

WATER SUMMARY TABLE
Project Number: 63155
Project Name: Renascor Groundwater Sampling

	PFAS																		MAH										
	N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutanesulfonic acid (PFBS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecanesulfonic acid (PFDS)	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTSA)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTSA)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTSA)	1H,1H,2H,2H-perfluorododecanesulfonic acid (10:2 FTSA)	Sum of PFHxS and PFOS	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of WA DWER PFAS (n=10)*	Sum of PFAS	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	Styrene	tert-butylbenzene	Total MAH	Bromobenzene	Isopropylbenzene
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	UG/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.1	1	1	1	1	1	1	1	1	3	1	1
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand (2-4m)																													
2(a). Recreation / Aesthetics - NHMRC (2011 updated 2018) ADWG: Health x10					0.7		0.7							0.7											300				
4(a). Primary Industries - ANZECC (2000) Livestock																													
Field ID	**Sample ID**	**Sample Date**	**Lab Report Number**																											
GW01	GW01	18-Nov-22	942724	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.1	<1	<1	-	-	-	-	<1	-	<3	<1	<1
GW02	GW02	18-Nov-22	942724	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.1	<1	<1	-	-	-	-	<1	-	<3	<1	<1
	DUP01	18-Nov-22	942724	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.1	<1	<1	-	-	-	-	<1	-	<3	<1	<1
	SPLIT01	18-Nov-22	34654	<0.02	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.01	<0.01	<0.02	<0.02	<0.01	-	<0.01	-	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
GW03	GW03	18-Nov-22	942724	<0.05	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	0.01	0.01	<0.01	<0.05	<0.1	<1	<1	-	-	-	-	<1	-	<3	<1	<1

WATER SUMMARY TABLE
Project Number: 63155
Project Name: Renascor Groundwater Sampling

				Miscellaneous Hydrocarbons							Chlorinated Benzenes						Trihalomethanes				Organic Sulfur Compounds	Non-Metallic Inorganics		EPA VIC - IWRG621		Inorganics		Chlorinated Hydrocarbons	Other
				1,2-dibromoethane	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	4-Methyl-2-pentanone	Methyl Ethyl Ketone	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Dibromochloromethane	Chloroform	Tribromomethane	Bromodichloromethane	Carbon disulfide	Nitrogen (Total)	Kjeldahl Nitrogen Total	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	Nitrite + Nitrate as N	Phosphate (as P)	Hexachlorobutadiene	TDS
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
LOR				1	5	1	1	1	5	5	1	1	1	1	1	1	1	5	1	1	1	200	200	5	5	50	10	1	10
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand (2-4m)																													
2(a). Recreation / Aesthetics - NHMRC (2011 updated 2018) ADWG: Health x10				10	10								15000		400	3000												7	
4(a). Primary Industries - ANZECC (2000) Livestock																													
Field ID	**Sample ID**	**Sample Date**	**Lab Report Number**																										
GW01	GW01	18-Nov-22	942724	<1	<5	-	<1	<1	<5	<5	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	11,000	1000	<5	<5	10,000	20	-	17,000
GW02	GW02	18-Nov-22	942724	<1	<5	-	<1	<1	<5	<5	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	20,500	1500	<5	<5	19,000	10	-	16,000
	DUP01	18-Nov-22	942724	<1	<5	-	<1	<1	<5	<5	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	-	-	<5	<5	-	-	-	16,000
	SPLIT01	18-Nov-22	34654	<1	<10	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	<1	19,000
GW03	GW03	18-Nov-22	942724	<1	<5	-	<1	<1	<5	<5	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	18,500	500	<5	<5	18,000	10	-	22,000

WATER QAQC TABLE
Project Number: 63155
Project Name: Renascor Groundwater Sampling 2022

Lab Report Number	942724	Intra-Lab		942724	Inter-Lab	
Field ID	GW02	DUP01	**RPD**	GW02	SPLIT01	**RPD**
Sample Date	18/11/2022	18/11/2022		18/11/2022	18/11/2022	

Chemical Group	**Chemical Name**	**Units**	**LOR**						
Metals & Metalloids	Arsenic	µg/L	1	1	1	0	1		
	Cadmium	µg/L	0.2	<0.2	<0.2	0	<0.2		
	Chromium (III+VI)	µg/L	1	<1	<1	0	<1		
	Copper	µg/L	1	6	7	15	6		
	Lead	µg/L	1	<1	<1	0	<1		
	Mercury	µg/L	0.1	<0.1	<0.1	0	<0.1		
	Nickel	µg/L	1	2	2	0	2		
	Zinc	µg/L	5	5	6	18	5		
TPHs (NEPC 1999)	C6-C9 Fraction	µg/L	20 : 10 (Interlab)	<20	<20	0	<20	<10	0
	C10-C14 Fraction	µg/L	50	60	<50	18	60	<50	18
	C15-C28 Fraction	µg/L	100	<100	<100	0	<100	<100	0
	C29-C36 Fraction	µg/L	100	<100	<100	0	<100	<100	0
	C10-C36 Fraction (Sum of Total)	µg/L	100 : 50 (Interlab)	<100	<100	0	<100	<50	0
TRHs (NEPC 2013)	C6-C10	µg/L	20 : 10 (Interlab)	<20	<20	0	<20	<10	0
	C10-C16	µg/L	50	<50	<50	0	<50	<50	0
	C16-C34	µg/L	100	<100	<100	0	<100	<100	0
	C34-C40	µg/L	100	<100	<100	0	<100	<100	0
	C10-C40 (Sum of total)	µg/L	100 : 50 (Interlab)	<100	<100	0	<100	<50	0
	F1 (C6-C10 minus BTEX)	µg/L	20 : 10 (Interlab)	<20	<20	0	<20	<10	0
	F2 (C10-C16 less Naphthalene)	µg/L	50	<50	<50	0	<50	<50	0
BTEXN	Benzene	µg/L	1	<1	<1	0	<1	<1	0
	Toluene	µg/L	1	<1	<1	0	<1	<1	0
	Ethylbenzene	µg/L	1	<1	<1	0	<1	<1	0
	Xylene (o)	µg/L	1	<1	<1	0	<1	<1	0
	Xylene (m & p)	µg/L	2	<2	<2	0	<2	<2	0
	Xylene Total	µg/L	3 : 1 (Interlab)	<3	<3	0	<3	<1	0
	Naphthalene_VOC	µg/L	10 : 1 (Interlab)	<10	<10	0	<10	<1	0
PAH	Acenaphthene	µg/L	1	<1	<1	0	<1	<1	0
	Acenaphthylene	µg/L	1	<1	<1	0	<1	<1	0
	Anthracene	µg/L	1	<1	<1	0	<1	<1	0
	Benz(a)anthracene	µg/L	1	<1	<1	0	<1	<1	0
	Benzo(a)pyrene	µg/L	1	<1	<1	0	<1	<1	0
	Benzo(b+j)fluoranthene	µg/L	1	<1	<1	0	<1		
	Benzo(g,h,i)perylene	µg/L	1	<1	<1	0	<1	<1	0
	Benzo(k)fluoranthene	µg/L	1	<1	<1	0	<1		
	Chrysene	µg/L	1	<1	<1	0	<1	<1	0
	Dibenz(a,h)anthracene	µg/L	1	<1	<1	0	<1	<1	0
	Fluoranthene	µg/L	1	<1	<1	0	<1	<1	0
	Fluorene	µg/L	1	<1	<1	0	<1	<1	0
	Indeno(1,2,3-c,d)pyrene	µg/L	1	<1	<1	0	<1	<1	0
	Naphthalene	µg/L	1	<1	<1	0	<1	<1	0
	Phenanthrene	µg/L	1	<1	<1	0	<1	<1	0
	Pyrene	µg/L	1	<1	<1	0	<1	<1	0
	PAHs (Sum of total)	µg/L	1	<1	<1	0	<1	<1	0
Chlorinated Alkanes	1,1,1,2-tetrachloroethane	µg/L	1	<1	<1	0	<1	<1	0
	1,1,1-trichloroethane	µg/L	1	<1	<1	0	<1	<1	0
	1,1,2,2-tetrachloroethane	µg/L	1	<1	<1	0	<1	<1	0
	1,1,2-trichloroethane	µg/L	1	<1	<1	0	<1	<1	0
	1,1-dichloroethane	µg/L	1	<1	<1	0	<1	<1	0
	1,2,3-trichloropropane	µg/L	1	<1	<1	0	<1	<1	0
	1,2-dichloroethane	µg/L	1	<1	<1	0	<1	<1	0
	1,2-dichloropropane	µg/L	1	<1	<1	0	<1	<1	0
	1,3-dichloropropane	µg/L	1	<1	<1	0	<1	<1	0
	Bromochloromethane	µg/L	1	<1	<1	0	<1	<1	0
	Carbon tetrachloride	µg/L	1	<1	<1	0	<1	<1	0
	Chloroethane	µg/L	5 : 10 (Interlab)	<5	<5	0	<5	<10	0
	Chloromethane	µg/L	5 : 10 (Interlab)	<5	<5	0	<5	<10	0
	Dichlorodifluoromethane	µg/L	5 : 10 (Interlab)	<5	<5	0	<5	<10	0
	Dichloromethane	µg/L	5	<5	<5	0	<5		
	Trichlorofluoromethane	µg/L	5 : 10 (Interlab)	<5	<5	0	<5	<10	0
Chlorinated Alkenes	1,1-dichloroethene	µg/L	1	<1	<1	0	<1	<1	0
	3-chloropropene	µg/L	1	<1	<1	0	<1		
	4-chlorotoluene	µg/L	1	<1	<1	0	<1	<1	0
	cis-1,2-dichloroethene	µg/L	1	<1	<1	0	<1	<1	0
	cis-1,3-dichloropropene	µg/L	1	<1	<1	0	<1	<1	0
	Tetrachloroethene	µg/L	1	<1	<1	0	<1	<1	0
	trans-1,2-dichloroethene	µg/L	1	<1	<1	0	<1	<1	0
	trans-1,3-dichloropropene	µg/L	1	<1	<1	0	<1	<1	0
	Trichloroethene	µg/L	1	<1	<1	0	<1	<1	0
	Vinyl Chloride	µg/L	5 : 10 (Interlab)	<5	<5	0	<5	<10	0

WATER QAQC TABLE
Project Number: 63155
Project Name: Renascor Groundwater Sampling 2022

Lab Report Number				942724	Intra-Lab		942724	Inter-Lab	
Field ID				GW02	DUP01	**RPD**	GW02	SPLIT01	**RPD**
Sample Date				18/11/2022	18/11/2022		18/11/2022	18/11/2022	
Solvents	Acetone	µg/L	5	<5	<5	0	<5		
PFAS	Perfluorobutanoic acid (PFBA)	µg/L	0.05 : 0.02 (Interlab)	<0.05	<0.05	0	<0.05	<0.02	0
	Perfluoropentanoic acid (PFPeA)	µg/L	0.01 : 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.02	0
	Perfluorohexanoic acid (PFHxA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0
	Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0
	Perfluorooctanoic acid (PFOA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0
	Perfluorononanoic acid (PFNA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0
	Perfluorodecanoic acid (PFDA)	µg/L	0.01 : 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.02	0
	Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01 : 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.02	0
	Perfluorododecanoic acid (PFDoDA)	µg/L	0.01 : 0.05 (Interlab)	<0.01	<0.01	0	<0.01	<0.05	0
	Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01 : 0.1 (Interlab)	<0.01	<0.01	0	<0.01	<0.1	0
	Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01 : 0.5 (Interlab)	<0.01	<0.01	0	<0.01	<0.5	0
	Perfluorooctane sulfonamide (FOSA)	µg/L	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0
	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	µg/L	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
	N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0
	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	µg/L	0.05 : 0.5 (Interlab)	<0.05	<0.05	0	<0.05	<0.5	0
	N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)	µg/L	0.05 : 0.02 (Interlab)	<0.05	<0.05	0	<0.05	<0.02	0
	N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	µg/L	0.05 : 0.02 (Interlab)	<0.05	<0.05	0	<0.05	<0.02	0
	Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.01	<0.01	0	<0.01		
	Perfluorobutanesulfonic acid (PFBS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0
	Perfluoropentanesulfonic acid (PFPeS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0
	Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0
	Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0
	Perfluorooctanesulfonic acid (PFOS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0
	Perfluorononanesulfonic acid (PFNS)	µg/L	0.01	<0.01	<0.01	0	<0.01		
	Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01 : 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.02	0
	1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0
	1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	µg/L	0.05 : 0.01 (Interlab)	<0.05	<0.05	0	<0.05	<0.01	0
	1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	µg/L	0.01 : 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.02	0
	1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	µg/L	0.01 : 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.02	0
	Sum of PFHxS and PFOS	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0
	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.01	<0.01	<0.01	0	<0.01		
	Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0
	Sum of WA DWER PFAS (n=10)*	µg/L	0.05	<0.05	<0.05	0	<0.05		
	Sum of PFAS	µg/L	0.1 : 0.01 (Interlab)	<0.1	<0.1	0	<0.1	<0.01	0
MAH	1,2,4-trimethylbenzene	µg/L	1	<1	<1	0	<1	<1	0
	1,3,5-trimethylbenzene	µg/L	1	<1	<1	0	<1	<1	0
	Styrene	µg/L	1	<1	<1	0	<1	<1	0
	Total MAH	µg/L	3	<3	<3	0	<3		
	Bromobenzene	µg/L	1	<1	<1	0	<1	<1	0
	Isopropylbenzene	µg/L	1	<1	<1	0	<1	<1	0
Miscellaneous Hydrocarbons	1,2-dibromoethane	µg/L	1	<1	<1	0	<1	<1	0
	Bromomethane	µg/L	5 : 10 (Interlab)	<5	<5	0	<5	<10	0
	Dibromomethane	µg/L	1	<1	<1	0	<1	<1	0
	Iodomethane	µg/L	1	<1	<1	0	<1		
	4-Methyl-2-pentanone	µg/L	5	<5	<5	0	<5		
	Methyl Ethyl Ketone	µg/L	5	<5	<5	0	<5		
Chlorinated Benzenes	1,2-Dichlorobenzene	µg/L	1	<1	<1	0	<1	<1	0
	1,3-dichlorobenzene	µg/L	1	<1	<1	0	<1	<1	0
	1,4-dichlorobenzene	µg/L	1	<1	<1	0	<1	<1	0
	Chlorobenzene	µg/L	1	<1	<1	0	<1	<1	0
Trihalomethanes	Dibromochloromethane	µg/L	1	<1	<1	0	<1	<1	0
	Chloroform	µg/L	5 : 1 (Interlab)	<5	<5	0	<5	<1	0
	Tribromomethane	µg/L	1	<1	<1	0	<1	<1	0
	Bromodichloromethane	µg/L	1	<1	<1	0	<1	<1	0
Organic Sulfur Compounds	Carbon disulfide	µg/L	1	<1	<1	0	<1		
EPA VIC - IWRG621	Chlorinated hydrocarbons EPAVic	µg/L	5	<5	<5	0	<5		
	Other chlorinated hydrocarbons EPAVic	µg/L	5	<5	<5	0	<5		
Other	TDS	µg/L	10000 : 5000 (Interlab)	1.6E7	1.6E7	0	1.6E7	1.9E7	17

*RPDs have only been considered where a concentration is greater than 1 times the LOR.
**High RPDs are in bold (Acceptable RPDs for each LOR multiplier range are: 30 (1-10 x LOR); 30 (10-30 x LOR); 30 (> 30 x LOR))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

GROUNDWATER BLANKS TABLE NOV 2022

Project Number: 63155

Project Name: Waterloo Corner

Lab Report Number	942724	942724
Field ID	RB01	TB01
Sampled_Date/Time	18/11/2022	18/11/2022
Sample Type	Rinsate	Trip_B

Chem_Group	ChemName	Units	EQL		
BTEXN	Benzene	µg/l	0.001		<1
	Toluene	µg/l	0.001		<1
	Ethylbenzene	µg/l	0.001		<1
	Xylene (o)	µg/l	1		<1
	Xylene (m & p)	µg/l	0.002		<2
	Xylene Total	µg/l	0.003		<3
	Naphthalene_VOC	µg/l	0.01		
Metals & Metalloids	Arsenic	µg/l	0.001	<1	
	Cadmium	µg/l	0.0002	<0.2	
	Chromium (III+VI)	µg/l	0.001	<1	
	Copper	µg/l	0.001	<1	
	Lead	µg/l	0.001	<1	
	Mercury	µg/l	0.0001	<0.1	
	Nickel	µg/l	0.001	<1	
	Zinc	µg/l	0.005	<5	

Appendix A – Current Certificate of Title

REAL PROPERTY ACT, 1886
South Australia

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.

Certificate of Title - Volume 5723 Folio 299

Parent Title(s) CT 5211/524

Creating Dealing(s) TG 8770112

Title Issued 07/01/2000 **Edition** 2 **Edition Issued** 14/03/2019

Estate Type

FEE SIMPLE

Registered Proprietor

SOUTH AUSTRALIAN WATER CORPORATION
OF ADELAIDE SA 5000

Description of Land

ALLOTMENTS 3 AND 4 FILED PLAN 115108
IN THE AREA NAMED WATERLOO CORNER
HUNDRED OF PORT ADELAIDE

Easements

SUBJECT TO EASEMENT(S) OVER THE LAND MARKED A TO ETSA UTILITIES PTY. LTD. (TG 8770112)

Schedule of Dealings

NIL

Notations

Dealings Affecting Title NIL

Priority Notices NIL

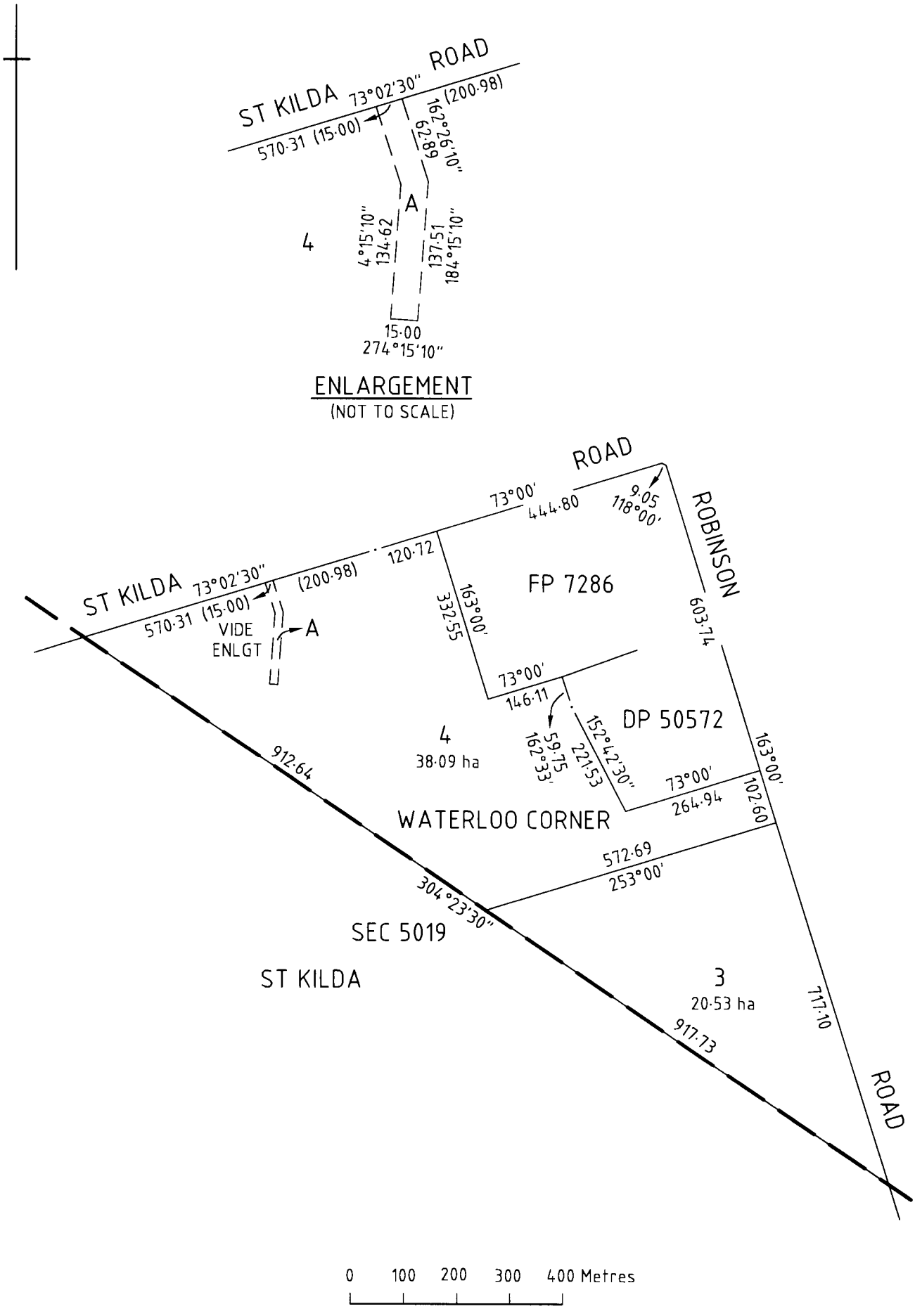
Notations on Plan NIL

Registrar-General's Notes

AREA NAME UPDATED VIDE GOVERNMENT GAZETTE DATED 02/06/2011

Administrative Interests NIL

Copyright: www.landservices.com.au/copyright | Privacy: www.landservices.com.au/privacy | Terms of Use: www.landservices.com.au/sailis-terms-of-use



Copyright: www.landservices.com.au/copyright | Privacy: www.landservices.com.au/privacy | Terms of Use: www.landservices.com.au/sailis-terms-of-use

Product	Historical Search
Date/Time	12/05/2022 02:57PM
Customer Reference	62455 KF
Order ID	20220512007405

Certificate of Title

Title Reference:	CT 5723/299
Status:	CURRENT
Parent Title(s):	CT 5211/524
Dealing(s) Creating Title:	TG 8770112
Title Issued:	07/01/2000
Edition:	2

Dealings

No lodged Dealings found.

Copyright: www.landservices.com.au/copyright | Privacy: www.landservices.com.au/privacy | Terms of Use: www.landservices.com.au/sailis-terms-of-use

Appendix B – Preliminary Development Plan

SITE PLAN

GENERAL NOTES

1-THIS DEVELOPMENT WILL INCLUDE A GREEN BUFFER ZONE 10m WIDE ON THE NORTH, NORTH-WEST & SOUTH-EAST BOUNDARIES.
NATIVE TREES AND VEGETATION WILL CREATE A SCREEN FOR PROCESS PLANT INFRASTRUCTURE.

APPROXIMATE AREA

AREA 1 - DRAIN 1.3 Ha
AREA 2 - PROCESS PLANT 8.8 Ha
AREA 3 - GREEN BUFFER ZONE 1.2 Ha
AREA 4 - PURIFICATION 3.0 Ha
AREA 5 - STORES / WATER TREATMENT- 1.1 Ha
AREA 6 - ADMIN. 0.9
AREA 7 - HV YARD 0.5 Ha

TOTAL AREA (1 TO 7) - 16.8 Ha

PROPOSED SITE DEVELOPMENT AREA -19.9 Ha

INFORMATION ONLY
PRELIMINARY / NOT FOR CONSTRUCTION

40 0 40 80 120 160 200m
SCALE 1:2000

REFERENCE DRAWINGS	DWG No	REV	DATE	REVISIONS	DRN	CHK	DSGN	TECH APP	PROJ APP
		A	11.05.22	PRELIMINARY - INFORMATIION ONLY	HB				

WHEN IN DOUBT-ASK
DO NOT SCALE

This drawing is confidential proprietary information and furnished for the sole use of the recipient. Acceptance of the same constitutes an agreement that it will not be copied or reproduced in any form, or given to any other party without written permission from GR ENGINEERING SERVICES.

GR ENGINEERING SERVICES LTD
ENGINEERING CONSULTANTS AND CONTRACTORS
179 Great Eastern Highway, Belmont ACN 121 542 738
Western Australia, 6104
Phone: (08) 6272 6000
Fax: (08) 6272 6001

DRAWN	HB 11.05.22
CHECKED	
DESIGNED	
TECH APP	
PROJ APP	
CLIENT APP	

RENASCOR RESOURCES LIMITED
BATTERY ANODE MATERIALS (BAM) PROJECT
GENERAL ARRANGEMENT SITE PLAN - STAGE 1 PLAN

A1	SCALE 1:2000	JOB No 12813	DRG No SKT-002	REV A

M:\1-PROJECT STUDIES\12813 - Siviour\DRG\SKT-003dwg.dwg - 11/05/2022 - 3:59pm - howard.baldock

Appendix C - Site Inspection Photographs

PHOTOGRAPH 1 – VIEW OF THE SITE - REVEGETATION

PHOTOGRAPH 2 – VIEW OF BURIED SEAGAS STRUCTURE

PHOTOGRAPH 3 – VIEW OF ILLEGAL DUMPING

PHOTOGRAPH 4 – VIEW OF ILLEGAL DUMPING

JBS&G

Job No: 63155	
Client: Renascor Resources	
Version: Rev A	Date: 20/07/22
Drawn By: AT	Checked By: MS
Not to Scale	
Coord. Sys n/a	

Robinson Road, Waterloo Corner

SITE PHOTOGRAPHS

APPENDIX B

PHOTOGRAPH 5 – VIEW FACING ROBINSON ROAD

PHOTOGRAPH 6 – VIEW OF FLOODED SOILS

PHOTOGRAPH 7 – VIEW FROM NORTHWEST INTERNAL GATE LOOKING EAST

PHOTOGRAPH 8 – VIEW FROM THE NORTHWEST LOOKING SOUTHEAST

JBS&G

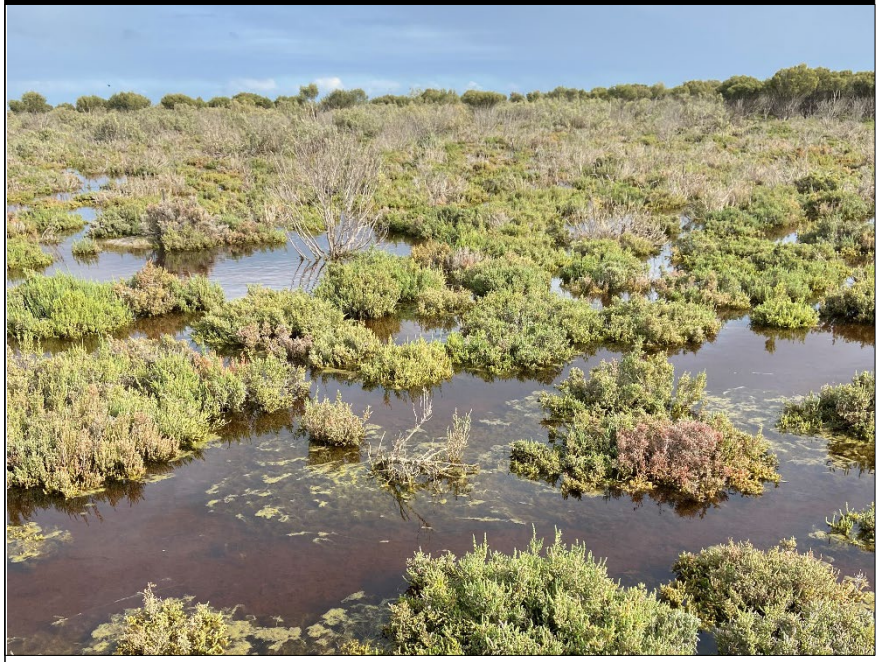
Job No: 63155	
Client: Renascor Resources	
Version: Rev A	Date: 20/07/22
Drawn By: AT	Checked By: MS
Not to Scale	
Coord. Sys n/a	

Robinson Road, Waterloo Corner

SITE PHOTOGRAPHS

APPENDIX B

PHOTOGRAPH 9 – VIEW OF FLOODING ON SITE



PHOTOGRAPH 10 – VIEW OF FLOODING ON SITE

PHOTOGRAPH 11 – VIEW OF FLOODING ON SITE

PHOTOGRAPH 12 – VIEW OF ASBESTOS CONTAINING MATERIAL AT SURFACE

JBS&G

Job No: 63155

Client: Renascor Resources

Version: Rev A	Date: 20/07/22
Drawn By: AT	Checked By: MS

Not to Scale

Coord. Sys n/a

Robinson Road, Waterloo Corner

SITE PHOTOGRAPHS

APPENDIX B

Appendix D – Historical Certificates of Title

Ownership History

Table 1: Section 5016 ownership history

Property Description	Certificate of Title	Parent Title	Date	Details
Section 5016 Hundred of Port Adelaide County of Adelaide	Volume 163 Folio 248		11 April 1872	New titled issued to David Duck (Farmer)
			14 December 1881	Transferred to James Gilbertson (Farmer)
Section 5016 Hundred of Port Adelaide County of Adelaide	Volume 1328 Folios 17	Volume 163 Folio 248	9 April 1924	New title issued to James Gilbertson (Farmer)
			22 May 1924	Transferred to Sinclair Scott & Co. Limited

Table 2: Section 5021 ownership history

Property Description	Certificate of Title	Parent Title	Date	Details
Section 5021 Hundred of Port Adelaide County of Adelaide	Volume 72 Folio 176		3 October 1865	New titled issued to David Duck (Farmer)
			14 December 1881	Transferred to James Gilbertson (Farmer)
Section 5021 Hundred of Port Adelaide County of Adelaide	Volume 1328 Folios 16	Volume 72 Folio 176	22 May 1924	New title issued to James Gilbertson (Farmer)
			9 April 1924	Transferred to Sinclair Scott & Co. Limited

Table 3: Section 5016-5021 (inclusive) ownership history

Property Description	Certificate of Title	Parent Title	Date	Details
Sections 5016, 5017, 5018, 5019, 5020 and 5021 Hundred of Port Adelaide County of Adelaide	Volume 1510 Folio 168	Volume 1328 Folios 16 and 17 & Volume 1092 Folio 151 & Volume 1407 Folio 196	30 May 1928	New title issued to Sinclair Scott & Co. Limited
			21 April 1928	Transferred to Frank Anthony Stevens (Dentist) and Lewis Pearce McArthur (Company Manager)
			17 March 1930	Transferred to Frank Anthony Stevens (Dentist) and Lewis Pearce McArthur (Company Manager)
			2 April 1931	Transferred to Theodora Ena McArthur (Married Woman)
Sections 5016, 5017, 5018, 5019, 5020 and 5021 Hundred of Port Adelaide County of Adelaide	Volume 2310 Folio 128	Volume 1510 Folio 168	19 February 1954	New title issued to John Omagh Robinson (Farmer) and Mavis Robinson (Wife)
			14 December 1953	Portion of Section 5021 transferred to Hubert England and Kathleen Marion May England
Sections 5016, 5017, 5018, 5019 and 5020 and Portion of Section 5021 Hundred of Port Adelaide County of Adelaide	Volume 2369 Folio 114	Volume 2310 Folio 128	28 January 1955	New title issued to John Omagh Robinson (Farmer) and Mavis Robinson (Wife)
Sections 5016 and 5020 and Portion of Section 5021 Hundred of Port Adelaide County of Adelaide	Volume 2443 Folio 151	Volume 2369 Folio 114	21 March 1956	New title issued to John Omagh Robinson (Farmer) and Mavis Robinson (Wife)
			28 September 1960	Transferred to Minister of Works
			11 November 1960	Undivided Third Parts in Portion of Section 5021 transferred to Giuseppe Reveruggi, Carmine Reveruggi, and Mario Reveruggi and Rosa Reveruggi
			1 December 1960	Portion of Section 5021 transferred to George Irotta and Bianca Irene Irotta
Portions of Section 5021 Hundred of Port Adelaide County of Adelaide	Volume 3219 Folio 195	Volume 2443 Folio 151	20 February 1964	New title issued to John Omagh Robinson (Farmer) and Mavis Robinson (Wife)
			18 May 1966	Transferred to Minister of Works

Sections 5016 and 5020 and Portion of Section 5021 Hundred of Port Adelaide County of Adelaide	Volume 2828 Folio 31	Volume 2443 Folio 151	2 December 1960	New title issued to Minister of Works
			18 May 1966	Portion of Section 5021 transferred to John Omagh Robinson (Farmer) and Mavis Robinson (Wife)
Sections 5016 and 5020 and Portion of Section 5021 Hundred of Port Adelaide County of Adelaide	Volume 3414 Folio 131	Volume 3219 Folio 195 & Volume 2828 Folio 31	15 June 1966	New title issued to Minister of Works
Electronic Title (not available for review)	Volume 5211 Folio 524	Volume 3414 Folio 131	31 August 1994	
Allotments 3 and 4 Filed Plan 115108 Waterloo Corner Hundred of Port Adelaide	Volume 5723 Folio 299	Volume 5211 Folio 524	7 January 2000	New title issued to South Australian Water Corporation

South Australia

(CERTIFICATE OF TITLE)

Register Book,

Vol. 3414 *Folio* 131

Pursuant to Memorandum of Transfer No.2725856 Registered on Vol.3219 Folio 195 and Balance Certificate of Title from Vol.2828 Folio 31

MINISTER OF WORKS

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 situated in the HUNDRED OF PORT ADELAIDE COUNTY OF ADELAIDE being the SECTIONS 5016 containing fifty acres and three roods or thereabouts and 5020 containing fifty acres and one rood or thereabouts and PORTION OF SECTION 5021 containing forty three acres three roods and twenty perches or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green

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

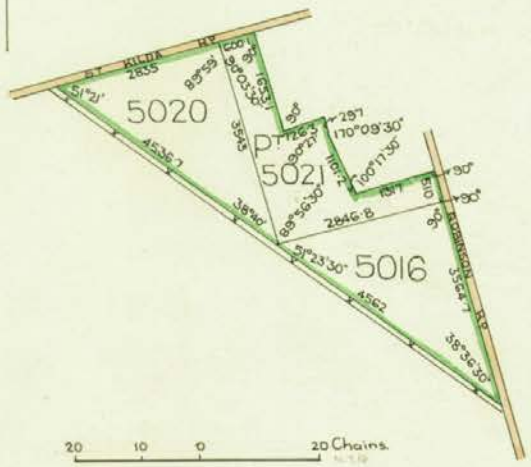
In witness whereof I have hereunto signed my name and affixed my seal this 15 day of June 1936

Signed the 15 day of June 1936, in the presence of Proctor

G.E. Rowell

Registrar-General

REGISTRAR-GENERAL SOUTH AUSTRALIA



CANCELLED
CONVERTED TO A COMPUTERISED TITLE

South Australia

(CERTIFICATE OF TITLE)

Register Book,
Vol. 3219 *Folio* 195

DIEU ET MON DROIT

Balance Certificate of Title from Vol.2443 Folio 151

JOHN OMAGH ROBINSON of Salisbury Farmer and MAVIS ROBINSON his wife

are the proprietor s 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 HUNDRED of PORT ADELAIDE COUNTY of ADELAIDE being PORTIONS OF SECTION 5021 containing together forty two acres and sixteen perches or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green

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

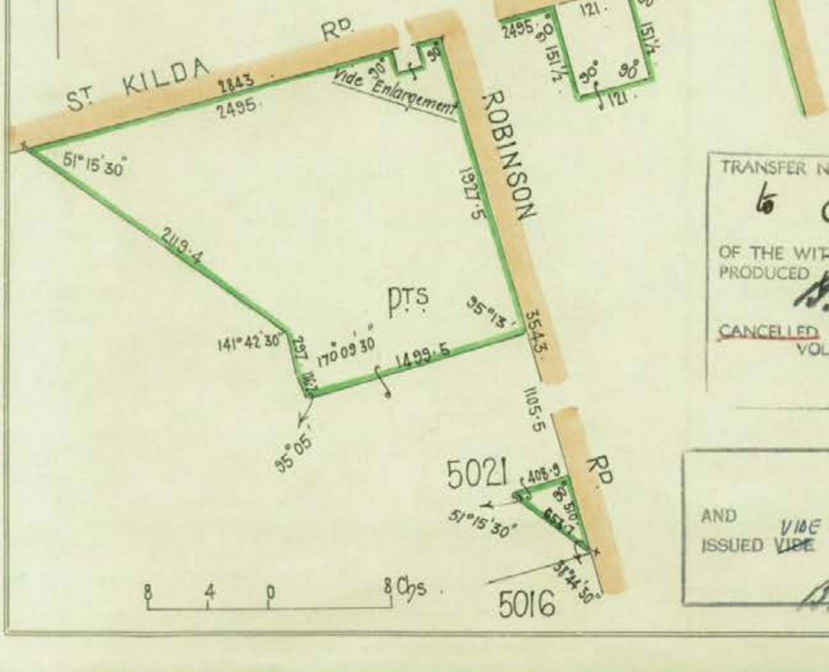
In witness whereof I have hereunto signed my name and affixed my seal this 20th day of February 1964

Signed the 20th day of February 1964, in the presence of J. Myers.

R. J. Collins

Registrar-General

REGISTRAR-GENERAL SOUTH AUSTRALIA



~~T2725856~~

TRANSFER No. 2725856 to Minister of Works of portion
OF THE WITHIN land
PRODUCED 18.5.66 AT 1120 a.m.
B. Nelson Hayter DEP. REG. GEN.
CANCELLED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED
VOL. 3414 FOL. 131
15 JUN 1966
B. Nelson Hayter DEP. REG. GEN.

CANCELLED
AND ISSUED VIDE Balance 2725855 CERTIFICATE OF TITLE VOL. 3414 FOL. 130
B. Nelson Hayter DEP. REG. GENL.

South Australia.

(CERTIFICATE OF TITLE.)

Register Book,

Vol. 2443 *Folio* 151

Balance Certificate of Title from Vol. 2369 Folio 114

JOHN OMAGH ROBINSON of Salisbury Farmer and MAVIS ROBINSON his wife

are the proprietors 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 situated in the HUNDRED OF PORT ADELAIDE COUNTY OF ADELAIDE being the SECTIONS 5016 containing fifty acres two roods and thirty two perches or thereabouts and 5020 containing fifty acres and thirty two perches or thereabouts and PORTION OF SECTION 5021 containing one hundred acres two roods and eighteen perches or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green

50 · 2 · 32
100 · 2 · 18
151 · 1 · 2

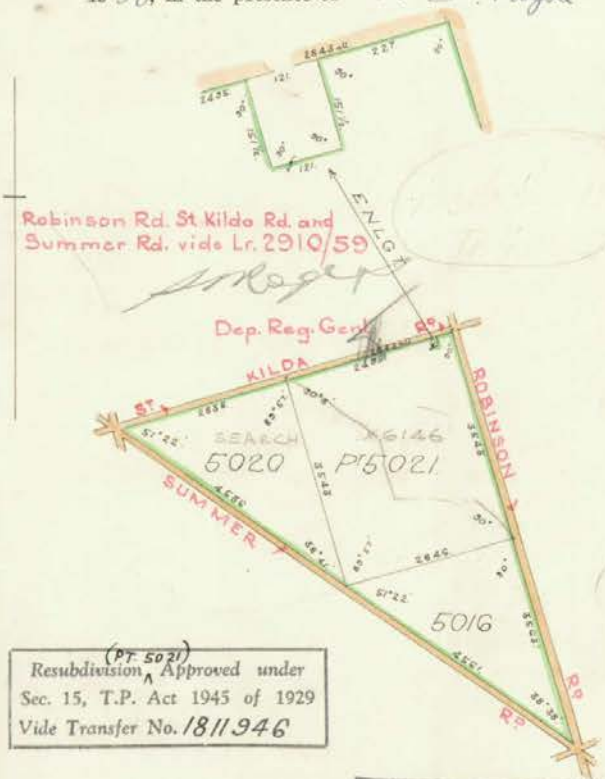
Which said Sections are delineated in the public map of the said Hundred deposited in the Land Office at Adelaide.

In witness whereof I have hereunto signed my name and affixed my seal this twenty first day of March 1956

Signed the 21st day of March 19 56, in the presence of R. B. Payne

Registrar-General.

REGISTRAR-GENERAL SOUTH AUSTRALIA



Resubdivision (PT. 5021) Approved under Sec. 15, T.P. Act 1945 of 1929 Vide Transfer No. 1811946

Resubdivision Approved under Sec. 11 T.P. Act 1929-1957 Vide Lr. 4003 of 1960

Mortgage No. 1613863 from John Omagh Robinson and Mavis Robinson to Commonwealth Bank of Australia Produced for registration the 22 day of March 1950 at 11.40 a.m.

Reg.Genl.

Mortgage No. 1648813 from John Omagh Robinson and Mavis Robinson to Commonwealth Bank of Australia Produced for registration the 3 day of November 1950 at 2.40 p.m.

Reg.Genl.

The within Mortgage No. 1648813 is vested in Commonwealth Trading Bank of Australia Vide No. 1934954 Produced for registration the 7 day of March 1956 at 11.30 a.m.

Reg.Genl.

Powers of Attorney Nod. 1437163. 1845116 and 1806998

Reg.Genl.

C/N. ~~220546~~ D. 1613863

THE WITHIN MORTGAGE No. 1613863 IS VESTED IN COMMONWEALTH TRADING BANK OF AUSTRALIA VIDE No. 2205467 PRODUCED FOR REGISTRATION THE 25 DAY OF May 1960 AT 11.25 a.m.

DEP. REG. GENL.

P/A. No 2178164

DISCHARGE OF MORTGAGE No. 1613863 BY ENDORSEMENT THEREON. PRODUCED 25/5/1960 AT 11.25 a.m.

DEP. REG. GEN.

D 1648813 T

P/A. A177746 Mbennett J.A.G

DISCHARGE OF MORTGAGE No. 164813. BY ENDORSEMENT THEREON. PRODUCED 28-9-1960 AT 11.15am.
Mbennett DEP. REG. GEN.

TRANSFER No. 223262.
to Minister of Works.
OF THE WITHIN Sections 5016. 5020 and pt of Sect. 5021.
PRODUCED 28-9-1960 AT 11.15am
Mbennett DEP. REG. GEN.
CANCELLED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED VOL. 2828 FOL. 31
A.R. Rogers DEP. REG. GEN.

~~T 225084~~

TRANSFER No. 224532 to Giuseppe Reverazzi of one undivided third part Carmine Reverazzi of one undivided third part and to Nano Reverazzi and Rosa Reverazzi of one undivided third part as to portion
OF THE WITHIN Part Sec. 5021
PRODUCED 11/11/1960 AT 11.30am
O.L. Nairn DEP. REG. GEN.
CANCELLED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED VOL. 2860 FOL. 73
G.E. Russell DEP. REG. GEN.

TRANSFER No. 225084 to George Trotta and Bianca Irene Trotta of portion
OF THE WITHIN Part Sec. 5021
PRODUCED 1/12/1960 AT 1.15pm
O.L. Nairn DEP. REG. GEN.
CANCELLED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED VOL. 2860 FOL. 74
G.E. Russell DEP. REG. GEN.

L.N.C.T. VIDE DKT. 2675/1964.

CANCELLED
AND Balance CERTIFICATE OF TITLE
ISSUED VIDE Lc 2675/1964 VOL. 3219 FOL. 195
O.L. Nairn DEP. REG. GENL.

South Australia.

(CERTIFICATE OF TITLE.)

Register Book,

Vol. 2369 *Folio* 114

Balance Certificate of Title from Vol.2310 Folio 128

JOHN OMAGH ROBINSON of Salisbury Farmer and MAVIS ROBINSON his wife

are the proprietor s 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 PORT ADELAIDE COUNTY OF ADELAIDE being the SECTIONS 5016 containing fifty acres two roods and thirty two perches or thereabouts 5017 containing forty eight acres one rood and eleven perches or thereabouts 5018 containing one hundred and two acres three roods and twenty perches or thereabouts 5019 containing forty five acres three roods and three perches or thereabouts and 5020 containing fifty acres and thirty two perches or thereabouts and PORTION OF SECTION 5021 containing one hundred acres two roods and eighteen perches or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green

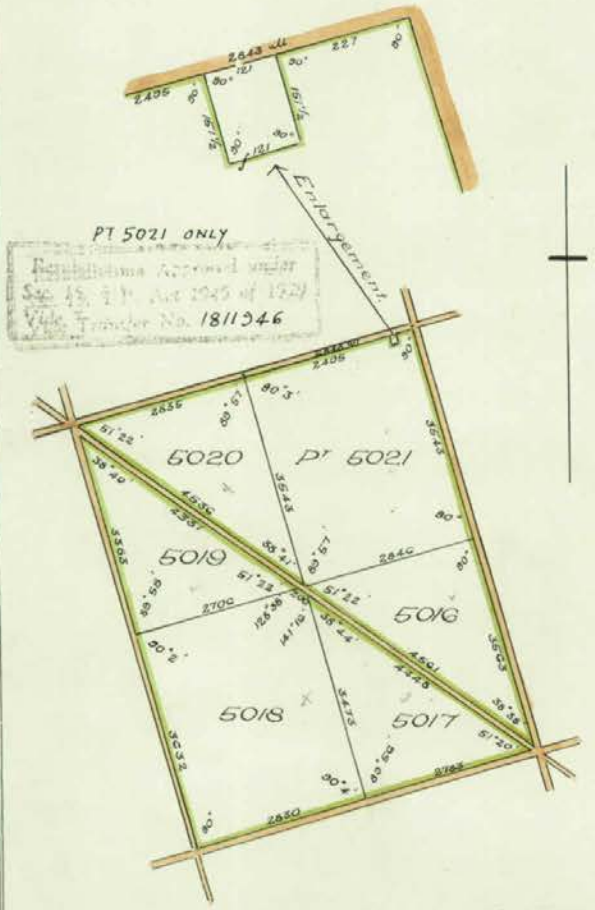
Which said Section s are delineated in the public map of the said Hundred deposited in the Land Office at Adelaide.

In witness whereof I have hereunto signed my name and affixed my seal this twenty-eighth day of January 1955

Signed the 28th day of January 1955, in the presence of A. Williams

Registrar-General.

REGISTRAR-GENERAL SOUTH AUSTRALIA



Mortgage No.1613863 from John Omagh Robinson and Mavis Robinson to Commonwealth Bank of Australia Produced for registration the 22 day of March 1950 at 11.40 a.m.

Reg.Genl.

Mortgage No.1648813 from John Omagh Robinson and Mavis Robinson to Commonwealth Bank of Australia Produced for registration the 3 day of November 1950 at 2.40 p.m.

Reg.Genl.

Power of Attorney No.1437463

Reg.Genl.

~~P D/M. 1934953. C/M. 1934954. P D/M. 1934955~~
~~T 1934956~~

SECTIONS 5017, 5018 AND 5019 ARE
THE WITHIN ~~LAND IS~~ DISCHARGED FROM THE WITHIN MORTGAGE NO. 1613863 AS APPEARS BY MEMORANDUM NO. 1934953. PRODUCED FOR REGISTRATION THE 7 DAY OF March 1956 AT 11-30am

DEP. REG. GENL.

P/A No. 1845116.

Over.

THE WITHIN MORTGAGE No. 1648813 IS VESTED IN
COMMONWEALTH TRADING BANK OF AUSTRALIA
VIDE No. 193495 4
PRODUCED FOR REGISTRATION THE 7 DAY
OF March 1956 AT 11-30am.
DEP. REG. GENL.

SECTIONS 5017, 5018 AND 5019 ARE
THE WITHIN ~~LAND IS~~ DISCHARGED FROM THE
WITHIN MORTGAGE NO. 1648813 AS APPEARS
BY MEMORANDUM No. 193495 5 PRODUCED FOR
REGISTRATION THE 7 DAY OF March
1956 AT 11-30am
DEP. REG. GENL.

P/A No. 1806 992. per DRG

TRANSFER No. 193495 6 FROM
John Omagh Robinson and
Mavis Robinson to
Kevin George Judd
OF THE WITHIN Secs. 5017, 5018 and 5019.
PRODUCED FOR REGISTRATION THE 7 DAY OF
March 1956 AT 11-30am.
DEP. REG. GENL.

CANCELLED AS REGARDS LAND IN TRANSFER
No. 193495 6 AND NEW CERTIFICATE
OF TITLE ISSUED VOL. 2443 FOL. 150
DEP. REG. GENL.

CANCELLED

AND Balance
CERTIFICATE OF TITLE ISSUED
VIDE
VOL. 2443 FOL. 151
DEP. REG. GENL.

South Australia.

(CERTIFICATE OF TITLE.)

Register Book,

Vol. 2310 *Folio* 128

New Certificate of Title for the whole of the Land in Vol.1510 Folio 168

JOHN OMAGH ROBINSON of Salisbury Farmer and MAVIS ROBINSON his wife

are **the proprietors** 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 **SECTIONS** of land situated in the HUNDRED OF PORT ADELAIDE **COUNTY of** ADELAIDE NOD.5016 containing fifty acres two roods and thirty two perches or thereabouts 5017 containing forty eight acres one rood and eleven perches or thereabouts 5018 containing one hundred and two acres three roods and twenty perches or thereabouts 5019 containing forty five acres three roods and three perches or thereabouts 5020 containing fifty acres and thirty two perches or thereabouts and 5021 containing one hundred acres three roods and seven perches or thereabouts

and bounded as appears in the plan in the margin hereof

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

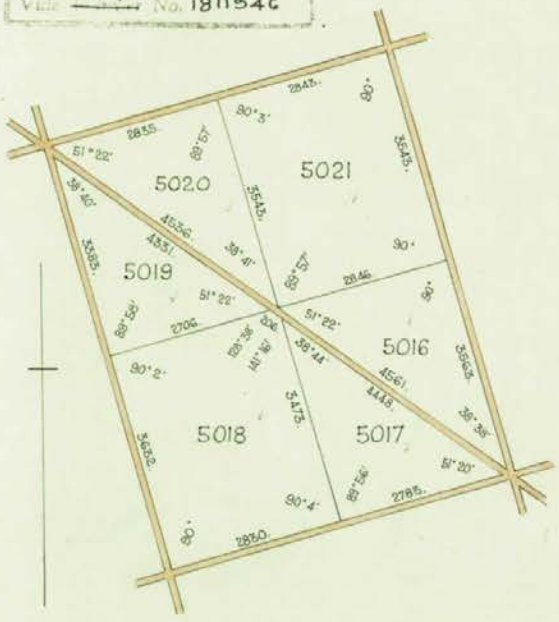
In witness whereof I have hereunto signed my name and affixed my seal this nineteenth day of February 1954

Signed the 19th day of February 1954 in the presence of R Potts

Registrar-General.

REGISTRAR-GENERAL * SOUTH AUSTRALIA *

Revaluation Approved under Sec 15, T. P. Act 1945 of 1929
Valn P.D. No. 1811946



Mortgage No.1613863 from John Omagh Robinson and Mavis Robinson to Commonwealth Bank of Australia of portion of the within land Produced for registration the 22 day of March 1950 at 11.40 a.m.

Reg.Genl.

Mortgage No.1648813 from John Omagh Robinson and Mavis Robinson to Commonwealth Bank of Australia of portion of the within land Produced for registration the 3 day of November 1950 at 2.40 p.m.

Reg.Genl.

Power of Attorney No.1437463

Reg.Genl.

15 11947

TRANSFER No. 1811947 FROM John Omagh Robinson and Mavis Robinson to Hubert England and Kathleen Marion Ebay England of Portion OF THE WITHIN See 5021.

PRODUCED FOR REGISTRATION THE 14 DAY OF December 1953 AT 11.30 am

DEP. REG. GENL.

CANCELLED AS REGARDS LAND IN TRANSFER No. 1811947. AND NEW CERTIFICATE OF TITLE ISSUED VOL. 2311 FOLIO 171

DEP. REG. GENL.

Bvet.

CANCELLED

AND Balance
CERTIFICATE OF TITLE ISSUED
VIDE Letter 82/1955.
VOL. 2369 FOL. 114.

DEP. REG. GENL.

CANCELLED

AND New
CERTIFICATE OF TITLE ISSUED
VIDE T 181947.
VOL. 2310 FOL. 128
DEP. REG. GENL.

South Australia. (CERTIFICATE OF TITLE.)

Register Book,
Vol. 1510 Folio 168

New Certificate of Title for the whole of the land in Pcl 1328 Folios 16 and 17 and portion of the land in Pcl 1092 Folio 151 and Pcl 1107 Folio 196

Sinclair Scott & Co Limited whose registered office is situated at Currie Street 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 SECTION 1 of land situated in the Hundred of Port Adelaide COUNTY of Adelaide Pcl 5016 containing fifty acres two roods and thirty two perches or thereabouts 5017 containing forty eight acres one rood and eleven perches or thereabouts 5018 containing one hundred and two acres three roods and twenty perches or thereabouts 5019 containing fifty two acres three roods and three perches or thereabouts 5020 containing fifty acres and thirty two perches or thereabouts and 5021 containing one hundred acres three roods and seven perches or thereabouts

and bounded as appears in the plan in the margin hereof

which said Section 1 &c delineated in the public map of the said Hundred deposited in the Lands and Survey Office at Adelaide.

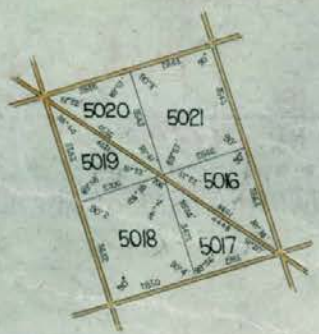
In witness whereof I have hereunto signed my name and affixed my seal this Thirtieth day of May 1928

Signed the 30th day of May 1928, in the presence of McGlashan

A W Gale
Registrar-General.

REGISTRAR GENERAL SOUTH AUSTRALIA

Resubdivision Approved under Sec. 15. T.P. Act 1945 of 1929 Vide T.P. Book 41 Page 152.



40 20 0 40 Chs

MORTGAGE No. 1035304 FROM
Sinclair Scott & Co. Limited
TO
The National Mutual Life Association of Australasia Limited
PRODUCED FOR REGISTRATION THE 27 DAY OF April 1928 AT 12.30 pm
DEP. REG GENL.

TRANSFER No. 1035310 FROM
Sinclair Scott & Co. Limited
TO Frank Anthony Stevens of Adelaide Dentist and Lewis Pearce McArthur of Port Victoria Company Manager
OF AN ESTATE IN FEE SIMPLE IN THE WITHIN LAND
PRODUCED FOR REGISTRATION THE 27 DAY OF April 1928 AT 12.30 pm
DEP REG. GENL

MORTGAGE No. 1037590 FROM
Frank Anthony Stevens and Lewis Pearce McArthur
TO John Sinclair
PRODUCED FOR REGISTRATION THE 19 DAY OF May 1928 AT 11.15 am (Including other lands)
DEP. REG GENL.

TRANSFER No. 1092682 FROM
Frank Anthony Stevens and Lewis Pearce McArthur
TO the said Frank Anthony Stevens and Lewis Pearce McArthur
OF AN ESTATE IN FEE SIMPLE IN THE WITHIN LAND.
as tenants in common
PRODUCED FOR REGISTRATION THE 17 DAY OF March 1930 AT 2.16pm
[signature] DEP. REG. GENL.

MORTGAGE No. 1092683 FROM
Frank Anthony Stevens and Lewis Pearce McArthur
TO Carl Heinrich [illegible]
PRODUCED FOR REGISTRATION THE 17 DAY OF March 1930 AT 2.15pm (Including other lands)
[signature] DEP. REG. GENL.

PD1037590 [illegible]
[illegible] 1117 [illegible]
DH17997

TRANSFER No. 1117193 FROM
Frank ~~Anthony~~ Anthony Stevens
TO Theodora Ena McArthur of Adelaide Married Woman
one undivided moiety in
OF AN ESTATE IN FEE SIMPLE IN THE WITHIN LAND.
PRODUCED FOR REGISTRATION THE 2 DAY OF April 1931 AT 3pm
E.J. Jessup DEP. REG. GENL.

TRANSMISSION APPLICATION No. 1117765
THE within Mortgage NO. 1037590 WAS TRANSMITTED TO Stanley Bruce Sinclair of Glen Osmond pastoralist and Arthur Don Jewell of Mount Pleasant Bank Manager
AS THE EXECUTORS NAMED IN THE WILL DATED THE 12 DAY OF January 1929 OF THE within NAMED John Sinclair
WHO DIED ON THE 30 DAY OF August 1929 AS APPEARS BY PROBATE DATED THE 9 DAY OF December 1929 PRODUCED FOR REGISTRATION THE 16 DAY OF April 1931 AT 2.40pm
E.J. Jessup DEP. REG. GENL.

DISCHARGE OF THE within MORTGAGE
No. 1037590
BY ENDORSEMENT THEREON
PRODUCED FOR REGISTRATION THE 16 DAY OF April 1931 AT 2.40pm
E.J. Jessup DEP. REG. GENL.

MORTGAGE No. 1117766 FROM
Lewis Pearce McArthur and Theodora Ena McArthur
TO May Rebecca Grace Allchurch
PRODUCED FOR REGISTRATION THE 16 DAY OF April 1931 AT 2.40pm (Including other land)
E.J. Jessup DEP. REG. GENL.

DISCHARGE OF THE within MORTGAGE
No. 1092683
BY MEMORANDUM No. 1117997
PRODUCED FOR REGISTRATION THE 21 DAY OF April 1931 AT 2pm (Including other lands)
E.J. Jessup DEP. REG. GENL.

~~1590386~~

Caveat No. 1590386 lodged by John Ross Dunstan and dated the 3 day of October 1949 over the within land. Produced for registration the 3 day of October 1949 at 11.40am (Including other land)
[signature] Dep Reg. Genl.

~~[illegible] 1613863~~
P/A No. 1348476 for mortg.

TRANSFER No. 1613862 FROM
The National Mutual Life Association of Australasia Limited as Mortgagee to John Omagh Robinson of 3 Kyt[illegible] Street Parkside Farmer and Mavis Robinson his wife
OF AN ESTATE IN FEE SIMPLE IN THE WITHIN LAND
PRODUCED FOR REGISTRATION THE 22 DAY OF March 1950 AT 11.40am
[signature] DEP. REG. GENL.

MORTGAGE No. 1613863. FROM
John Omagh Robinson and Mavis Robinson
TO COMMONWEALTH BANK OF AUSTRALIA.
PRODUCED FOR REGISTRATION THE 22 DAY OF March 1950 AT 11.40 am
[signature] DEP. REG. GENL.

The within Caveat No. 1590386 was withdrawn on the 26 day of May 1950 as appears by Memorandum No. 1626774 Produced for registration the 16 day of June 1950 at 11.40am
[signature] Dep Reg Genl

M 1648813
MORTGAGE No. 1648813 FROM
John Omagh Robinson and Mavis Robinson
TO COMMONWEALTH BANK OF AUSTRALIA
PRODUCED FOR REGISTRATION THE 3 DAY OF November 1950 AT 2.40pm
[signature] DEP. REG. GENL.

~~[illegible]~~
P/A No. 1437463. for CBA.
PORTION OF SECTION 5021
THE WITHIN ~~LAND~~ IS DISCHARGED FROM THE WITHIN MORTGAGES NO. 1648813 / 1613863 AS APPEARS BY MEMORANDUM No. 1811946 PRODUCED FOR REGISTRATION THE 14 DAY OF December 1953 AT 11.30 am
[signature] DEP. REG. GENL.

See face CT.

South Australia. (CERTIFICATE OF TITLE.)

Register Book, Vol. 1328 Folio 16

— New Certificate of Title for the whole of the land in Vol. 72 Folio 176 —

James Gilbertson of Waterloo Farm near Virginia Farmer

is the proprietor of an estate in fee simple

subject nevertheless to such incumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in That SECTION of land situated in the Hundred of Port Adelaide COUNTY of Adelaide Nod. 5021 containing one hundred and one acres, three roods and seven perches or thereabouts —

and bounded as appears in the plan in the margin hereof which said Section is delineated in the public map of the said Hundred deposited in the Lands and Survey Office at Adelaide.

In witness whereof I have hereunto signed my name and affixed my seal this twentysecond day of May 1924.

Signed the 22nd day of May 1924, in the presence of Hobshaw.

Blackwell Registrar-General.

For Corrections in Red vide Letter 357 of 1925 Blackwell Reg Gen^l

Transfer No. 885799 from James Gilbertson to Sinclair Scott & Co Limited whose registered office is situated at Currie Street Adelaide of an estate in fee simple in the within land Produced for registration the 9 day of April 1924 at 3 pm

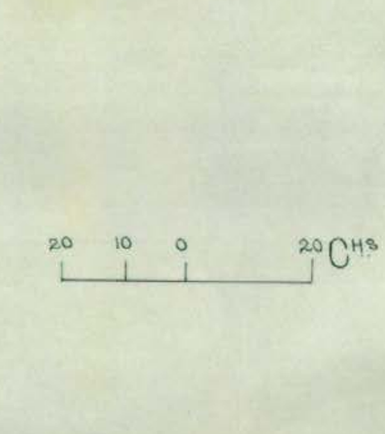
Hobshawood Dep Reg Gen

Mortgage No. 885800 from Sinclair Scott & Co Limited to James Gilbertson Produced for registration the 9 day of April 1924 at 3pm (Including other land)

Hobshawood Dep Reg Gen

Mortgage No. 885801 from Sinclair Scott & Co Limited to James Gilbertson Produced for registration the 9 day of April 1924 at 3pm (Including other land)

Hobshawood Dep Reg Gen



DISCHARGE OF THE above MORTGAGE NO. 885801 BY RECEIPT ENDORSED THEREON PRODUCED FOR REGISTRATION THE 8 DAY OF April 1926 AT 11:15 AM

DEP. REG. GENL.

over

Mortgage No. 95865 from Sinclair Scott & Co Limited to Allan Sinclair Percy Vemings Scott and Stanley Bruce Sinclair as Tenants in Common Produced for registration the 8 day of April 1926 at 11.15 pm (Including other land.)

Caveat No. 1019854 dated the 5 day of November 1927 over the within land Produced for registration the 5 day of November 1927 at 11.25 am (Including other land)

The within Caveat No. 1019854 was withdrawn on the 26 day of April 1928 as appears by Memorandum No. 1035302. Produced for registration the 27 day of April 1928 at 12.30 pm

DISCHARGE OF THE within MORTGAGE
No. 885800
BY ENDORSEMENT THEREON
PRODUCED FOR REGISTRATION THE 27 DAY OF
April 1928 AT 12.30 pm
DEP. REG. GENL.

DISCHARGE OF THE within MORTGAGE
No. 958658
BY MEMORANDUM No. 1035303
PRODUCED FOR REGISTRATION THE 27 DAY OF
April 1928 AT 12.30 pm
DEP. REG. GENL.

CANCELLED

AND New
CERTIFICATE OF TITLE ISSUED
VIDE Letter No. 677 of 1928
VOL. 1510 FOL. 168

DEP. REG. GENL.

(C)

6318

South Australia

CERTIFICATE OF TITLE

Register Book.
Vol. LXXII Folio. 176

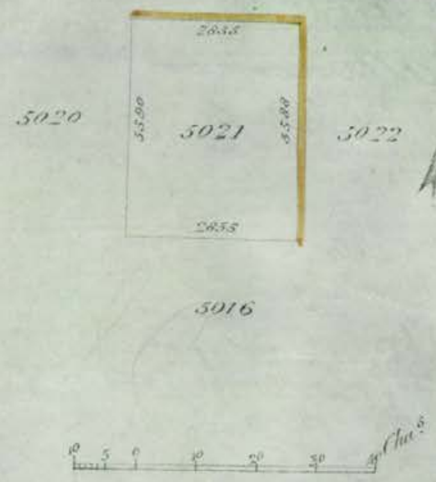
David Duck of near Salisbury Farmer is now seised of an estate in fee simple subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in — That Section of land situated in the Hundred of Port Adelaide County of Adelaide numbered 5021 containing one hundred and one acres or thereabouts and bounded as appears in the plan in the margin hereof — Which said section is delineated in the Public Map of the said Hundred deposited in the Office of the Surveyor General and was originally granted the fourteenth day of January 1853 under the hand and seal of Sir Henry Edward Fox Young Lieutenant Governor of the said Province to Edward Wright

In witness whereof, I have hereunto signed my name and affixed my seal this third day of October one thousand eight hundred and sixty five

W R Fraser [?]
Registrar-General

Signed the 3rd day of Octr
1865, in presence of
Wm. Geo. Hoyner [?]

CANCELLED AND New CERTIFICATE OF TITLE ISSUED vide Letter No 695 of 1924 VOL. 1328 FOL. 16
W H Shee [?]
DEP. REG. GENL
3026



DISCHARGE OF THE above MORTGAGE NO.s 649455 and 689864 BY RECEIPT ENDORSED THEREON PRODUCED FOR REGISTRATION THE 9 DAY OF April 1940 AT 3 PM
DEP. REG. GENL

Mortgage No. 17395 from David Duck to William Diment. Produced 9 day March 1867 at Ten o'clock am.
[signature] Registrar General.

Discharge of the above Mortgage No 17395 by receipt endorsed thereon for the total of the money thereby secured dated the 13th day February. Entered the 29th day February 1868 at 3 pm.
[signature] Dep Registrar Genl

Transfer No 135640 from David Duck to James Gilbertson of Waterloo Farm near Virginia Farmer of the above land. Produced the 14 day December 1881 at 11 am
[signature] Dep Reg Genl

Mortgage No 135641 from James Gilbertson to David Duck. Produced the 14 day December 1881 at 11 am (Including also other property)
[signature] Dep Reg Genl

Mortgage No 135642 from James Gilbertson to Alexander George Downer and John William Downer. Produced the 14 day December 1881 at 11 am (Including also other property)
[signature] Dep Reg Genl

The time for payment of the within Mortgage No 135641 is extended as regards the sum of £2000 (till the 1st day of December 1897) as appears by endorsement thereon dated the 13th day of December 1896. Produced for registration the 16th day of December 1896 at 2.25 pm [illegible] Dep Reg Genl

~~The time for the payment of the within Mortgage No 135641~~

The within Mortgage No 135641 has been transmitted to George Lambert of Compton Gentleman and Alice Vernall (formerly Duck) of Salisbury the executors named in the will dated the 1 day March 1887 of the within named David Duck who died on the 28 day March 1890 as appears by Probate dated the 17 day May 1890 Produced for registration the 9 day February 1893 at noon (No [illegible]) E J Heath Dep Reg Genl

The time for the payment of the within Mortgage No 135641 as regards the sum of £2000 was extended to the 9 day February 1896 as appears by memorandum dated the 8 day February 1893 Produced for registration the 9 day February 1893 at noon E J Heath Dep Reg Genl

Order of Supreme Court No 30[illegible] dated the 13 day July 1903 vesting the within Mortgage No 135641 in George Lambert of Hermitage near Houghton farmer upon trust of the will of the within named David Duck Produced for registration the 4 day August 1903 at 11.50 am E J Heath Dep Reg Genl

DISCHARGE OF THE WITHIN MORTGAGE No. 135641 BY MEMORANDUM No. 401226 PRODUCED FOR REGISTRATION THE 29 DAY OF October 1903 AT 2.30 pm E J Heath DEP. REG. GENL

DISCHARGE OF THE WITHIN MORTGAGE No. 135642 BY RECEIPT ENDORSED THEREON PRODUCED FOR REGISTRATION THE 29 DAY OF October 1903 at 2.30 pm E J Heath DEP. REG. GENL

See face of CT

Mortgage No 401227 from James Gilbertson to Walter Reynell Alexander George Downer and Peter Waite Produced for registration the 29 day October 1903 at 2.30 pm Including other lands E J Heath Dep Reg Genl

Mortgage No 401228 Including other land, from James Gilbertson to Alexander George Downer and Sir John William Downer K.C.M.G. Produced for registration the 29 day October 1903 at 2.30 pm E J Heath Dep Reg Genl

The within named John William Downer died on the 2 day of August 1915 as appears by Office Copy of Certificate of Death No 478184 Produced for registration the 26 day of July 1917 at 2.30 pm Robt Atterwood Dep Reg Genl

The within Mortgage No 401228 was transmitted to Frank Hagger Downer of Adelaide Solicitor and Elders Trustee and Executor Company Limited whose registered office is at Currie Street Adelaide (the lawful attorney of James Frederick Downer of [illegible] for the use and benefit of the said James Frederick Downer and until he shall duly apply for and obtain probate) surviving AS THE EXECUTORS NAMED IN THE WILL DATED THE 26 DAY OF July 1909 OF THE within NAMED Alexander George Downer WHO DIED ON THE 17 DAY OF August 1916 AS APPEARS BY PROBATE DATED THE 12 DAY OF December 1916 PRODUCED FOR REGISTRATION THE 26 DAY OF July 1917 AT 2.30 pm No 478184 Robt Atterwood DEP. REG. GENL

[illegible] 664767 DISCHARGE OF THE within MORTGAGE No 401227 and 401228 by RECEIPT ENDORSED THEREON PRODUCED FOR REGISTRATION THE 12 DAY OF March 1918 AT 12.15 pm L H Salter DEP. REG. GENL

Mortgage No 689455 (Including other land) from James Gilbertson to The Savings Bank of South Australia produced for registration the 12 day of March 1918 at 2.15 pm L H Salter Dep Reg Genl

Mortgage No 689864 (Including other land) from James Gilbertson to Frank Hagger Downer Elders Trustee and Executor Company Limited, Una Stella Downer and James Frederick Downer Produced for registration the 18 day of March 1918 at 2.45 pm [illegible] Dep Reg Genl

South Australia.

(CERTIFICATE OF TITLE.)

Register Book,
Vol. 1328 Folio 17

— New Certificate of Title for the whole of the land in Vol. 163. Folio 248 —

James Gilbertson of Waterloo Farm near Virginia Farmer

is the proprietor of an estate in fee simple

subject nevertheless to such incumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in That SECTION of land situated in the Hundred of Port Adelaide COUNTY of Adelaide

No. 5016 containing ~~forty nine~~ acres or thereabouts

and bounded as appears in the plan in the margin hereof which said Section is delineated in the public map of the said Hundred deposited in the Lands and Survey Office at Adelaide.

In witness whereof I have hereunto signed my name and affixed my seal this twenty second day of May 1914

Signed the 22nd day of May 1914, in the presence of W. Oshaw.

Registrar-General.

FOR CORRECTIONS IN RED VIDE LETTER 357 of 1925 Rec. Cert.

5021

20 10 0 20 CHS

Transfer No. 885799 from James Gilbertson to Sinclair Scott & Co Limited whose registered office is situated at Currie Street Adelaide of an estate in fee simple in the within land Produced for registration the 9 day of April 1924 at 3 pm

Mortgage No. 885800 from Sinclair Scott & Co Limited to James Gilbertson Produced for registration the 9 day of April 1924 at 3 pm (Including other land)

Dep Reg Gen

Mortgage No. 885801 from Sinclair Scott & Co Limited to James Gilbertson Produced for registration the 9 day of April 1924 at 3 pm (Including other land)

Dep Reg Gen

DISCHARGE OF THE above MORTGAGE NO. 885801 BY RECEIPT ENDORSED THEREON PRODUCED FOR REGISTRATION THE 8 DAY OF April 1926 AT 11.15 a.m.

DEP. REG. GENL.

over

Mortgage No 958688 from Sinclair Scott & Co Limited to Allan Sinclair Percy Venning Scott and Stanley Bruce Sinclair as Tenants in Common Produced for registration the 8 day of April 1926 at 11.15 am (including other land) [illegible] Dep Reg Gen

Caveat No 1019854 dated the 5 day of November 1927 over the within land Produced for registration the 2 day of November 1927 at 11.25 am (including other land)
[illegible] Dep Reg Gen

The within Caveat No. 1019854 was withdrawn on the 26 day of April 1928 as appears by Memorandum No. 1035302. Produced for registration the 27 day of April 1928 at 12.30 pm.
H H Cornish Dep Reg Genl

DISCHARGE OF THE within MORTGAGE
No. 885800
BY ENDORSEMENT THEREON
PRODUCED FOR REGISTRATION THE 27 DAY OF April 1928 AT 12.30 p.m.
H H Cornish
DEP. REG. GENL.

DISCHARGE OF THE within MORTGAGE
No. 458658
BY MEMORANDUM No. 1035303
PRODUCED FOR REGISTRATION THE 27 DAY OF April 1928 AT 12.30 p.m.
H H Cornish
DEP. REG. GENL.

CANCELLED
.....
AND New
CERTIFICATE OF TITLE ISSUED
VIDE Letter No 677 of 1928
VOL 1510 FOL 168
[illegible] DEP. REG. GENL.

1881

(C)

South Australia

CERTIFICATE OF TITLE.

Register Book.

Vol. CLXIII Folio. 208

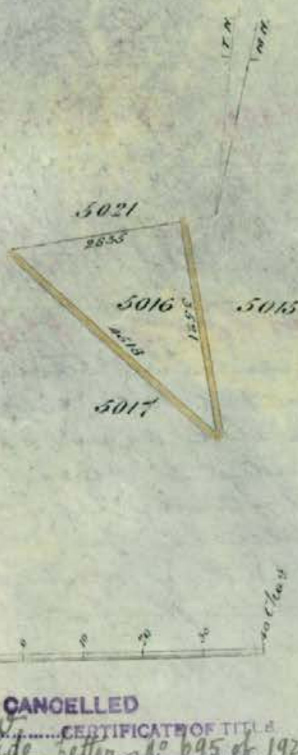
David Duck of Salisbury Farmer is now seised of an estate in fee simple, subject, nevertheless, to such incumbrances, liens, and interests as are notified by memorial underwritten or endorsed hereon in That Section of land situated in the Hundred of Port Adelaide County of Adelaide No 5016 containing forty nine acres or thereabouts and bounded as appears in the plan in the margin hereof

which said Section is delineated in the public map of the said Hundred, deposited in the office of the Surveyor-General, and was originally granted the 14th day of December 1852 under the hand and seal of Sir Henry Edward Fox Young Lieutenant Governor of the said province to George Mayphett

In witness whereof, I have hereunto signed my name and affixed my seal this eleventh day of April one thousand eight hundred and twenty two

J M C Andrews
Registrar-General.

Signed, the 11th day of April 18 ?, in presence of [illegible signature]



Transfer No 135640 from David Duck to James Gilbertson of Waterloo Farm near Virginia Farmer of the above land. Produced the 14 day December 1881 at 11 am
[signature] Dep Reg Gen

Mortgage No 135641 from James Gilbertson to David Duck. Produced the 14 day December 1881 at 11 am (Including also other property)
[signature] Dep Reg Gen

Mortgage No 135642 from James Gilbertson to Alexander George Downer and John William Downer. Produced the 14 day December 1881 at 11 am (Including also other property)
[signature] Dep Reg Gen

The time for payment of the above Mortgage No 135641 is Extended as regards the sum of £400 till the 9th day of December 1888 as appears by Endorsement thereon dated the 13th day of December 1886 Produced for registration the 16th day of December 1886 at 25 [illegible]
[signature] Deputy Reg Genl

Over

CANCELLED AND New CERTIFICATE OF TITLE ISSUED vide Letter No 695 of 1924 VOL. 1328 FOL. 17
M H Sager
DEP. REG. GEN.

The within Mortgage No 135641 has been transmitted to George Lambert of Prospect Gentleman and Alice Verrall (formerly Duck) of Salisbury the executors named in the will dated the 1 day March 1887 of the within named David Duck who died on the 28 day March 1890 as appears by Probate dated the 17 day May 1890 Produced for registration the 9 day February 1893 at noon (No 207541)

E J Heath Dep Regr

The time for the payment of the within Mortgage No 135641 has been extended to the 9 day February 1896 as appears by endorsement thereon dated the 8 day February 1893 Produced for registration the 9 day February 1891 at noon

E J Heath Dep Regr

Order of Supreme Court No 307436 dated the 13 day July 1903 vesting the within Mortgage No 135641 in George Lambert of Hermitage near Houghton Farmer upon trust of the will of the within named David Duck Produced for registration the 4 day August 1903 at 11.50 am

E J Heath Dep Reg Genl

DISCHARGE OF THE WITHIN MORTGAGE No. 135641 BY MEMORANDUM No. 401226 PRODUCED FOR REGISTRATION THE 29 DAY OF October 1903 AT 2.30 pm

E J Heath DEP. REG. GENL.

DISCHARGE OF THE WITHIN MORTGAGE No. 135642 BY RECEIPT ENDORSED THEREON PRODUCED FOR REGISTRATION THE 29 DAY OF October 1903 AT 2.30 pm.

E J Heath DEP. REG. GENL.

Mortgage No 401227 including other land, from James Gilbertson to Walter Reynell Alexander George Downer and Peter Waite Produced for registration the 29 day October 1903 at 2.30 pm

E J Heath Dep Reg Genl

Mortgage No 401228 Including other land, from James Gilbertson to Alexander George Downer and Sir John William Downer K.C.M.G. Produced for registration the 29 day October 1903 at 2.30 pm

E J Heath Dep Reg Genl

The within named John William Downer died on the 2 day of August 1915 as appears by office copy of Certificate of Death No 189159 Produced for registration the 26 day of July 1917 at 12.30 am

Robt A Norwood Dep Reg

The within Mortgage No 401229 was transmitted to Frank Hagger Downer of Adelaide Solicitor and Elders Trustee and Executor Company Limited whose registered office is at King William Street Adelaide (the lawful attorney of James Frederick Downer of London) for the use and benefit of the said James Frederick Downer and until he shall duly apply for and obtain probate)

Surviving

AS THE EXECUT ors NAMED IN THE WILL DATED THE 26 DAY OF July 1909 OF THE within NAMED Alexander George Downer WHO DIED ON THE 17 DAY OF August 1916 AS APPEARS BY PROBATE DATED THE 15 DAY OF December 1916 PRODUCED FOR REGISTRATION THE 26 DAY OF July 1917 AT 2.30 pm NO. 541444

Robt A Norwood DEP. REG. GENL.

Roff 1649679 with Roff

DISCHARGE OF THE within MORTGAGE NO. 401227 and 401228 PRODUCED 12 March 1918 12.15

W H Salter DEP. REG. GENL.

Mortgage No 689455 from James Gilbertson to the Savings Bank of South Australia Produced for registration the 12 day of March 1918 at 12.15 pm including other land

W H Salter Dep Reg Genl

Mortgage No 689864 from James Gilbertson to Frank Hagger Downer Elders Trustee and Executor Company Limited Una Stella Downer and James Frederick Downer Produced for registration the 18 day of March 1918 at 2.45 pm (including other land)

J B Blackburn Dep Reg Genl

DISCHARGE OF THE above MORTGAGE NO. 689455 and 689864 BY RECEIPT ENDORSED THEREON PRODUCED FOR REGISTRATION THE 9 DAY OF June 1920 AT 3 pm

Robt A Norwood DEP. REG. GENL.

(See Face of C.T.)

South Australia.

(CERTIFICATE OF TITLE.)

Register Book,

Vol. 1092 *Folio* 151

New Certificate of Title from Vol 1018 Folio 38

James Gilbertson of Virginia Farmer is the proprietor of an estate in fee simple subject nevertheless to such incumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in those SECTIONS of land situated in the Hundred of Port Adelaide COUNTY of Adelaide Sec 185, 186 and 5010 each containing one hundred and two acres or thereabouts and 5017 containing forty seven acres or thereabouts

Rec Gen 4/28 [red corrections: "and" 185 and 186 "each containing one hundred and two acres or thereabouts" and 5010 ~~each~~ containing one hundred and "three" ~~two~~ acres "and one rood" or thereabouts and 5017 containing forty "eight" ~~seven~~ acres "one rood and thirty perches" or thereabouts]

and bounded as appears in the plan in the margin hereof which said Sections are delineated in the public map of the said Hundred deposited in the office of the Surveyor-General.

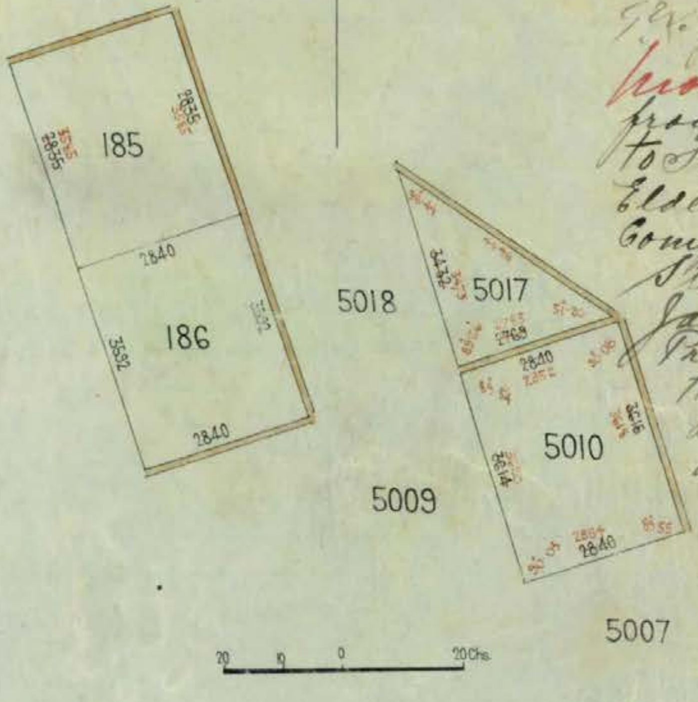
In witness whereof I have hereunto signed my name and affixed my seal this Third day of May 1918

Signed the 3rd day of May 1918, in the presence of Muriel Boykett

G. Alfred Anthony

Registrar-General.

For Corrections in red vide Letter 357 of 1925
[signature] Reg Gen 4/28



Mortgage No 689455 from James Gilbertson to The Savings Bank of South Australia Produced for registration the 12 day of March 1918 at 12.15 p.m. (Including other land)

G. Alfred Anthony Reg Genl

Mortgage No 689864 from James Gilbertson to Frank Hagger Downer Elder's Trustee and Executor Company Limited Una Stella Downer and James Frederick Downer Produced for registration the 18 day of March 1918 at 2.45 p.m. (including other land)

[signature] Dep Reg Genl

DISCHARGE OF THE above MORTGAGES NO. 689455 and 689864 BY RECEIPT ENDORSED THEREON PRODUCED FOR REGISTRATION THE 9 DAY OF April 1924 AT 3 p.m.

[signature] DEP. REG. GENL.

Transfer No 885799 from James Gilbertson to Sinclair Scott & Co. Limited whose registered office is situated at Currie Street Adelaide of an estate in fee simple in the within land. Produced for registration the 9 day of April 1920 at 3pm
[signature] Dep Reg Genl.

Mortgage No. 885800 (Including other land) from Sinclair Scott & Co Limited to James Gilbertson. Produced for registration the 9 day of April 1920 at 3pm
[signature] Dep Reg Genl

Mortgage No. 885801 (Including other land) from Sinclair Scott & Co Limited to James Gilbertson. Produced for registration the 9 day of April 1920 at 3pm
[signature] Dep Reg Genl

DISCHARGE OF THE above MORTGAGE
No. 885801
BY RECEIPT ENDORSED THEREON PRODUCED FOR REGISTRATION THE 8 DAY OF April 1926 AT 11.15 am
[signature] DEP. REG. GENL.

Mortgage No 958658 from Sinclair Scott & Co Limited to Allan Sinclair Percy Venning Scott and Stanley Bruce Sinclair as Tenants in Common Produced for registration the 8 day of April 1926 at 11.15 am (Including other land)
[signature] Dep Reg Gen

Caveat No. 1019854 dated the 5 day of November 1927 over the within land Produced for registration the 5 day of November 1927 at 11.15 am (Including other land)
[signature] Dep Reg Genl

The within Caveat No. 1019854 was withdrawn on the 26 day of April 1928 as appears by Memorandum No. 1035302. Produced for registration the 27 day of April 1928 at 12.30 pm
[signature] Dep Reg Genl

DISCHARGE OF THE within MORTGAGE
No. 885800
BY ENDORSEMENT THEREON
PRODUCED FOR REGISTRATION THE 27 DAY OF April 1928 AT 12.30 pm
[signature]
DEP. REG. GENL.

DISCHARGE OF THE within MORTGAGE
No. 958658
BY MEMORANDUM No. 1035303
PRODUCED FOR REGISTRATION THE 27 DAY OF April 1928 AT 12.30 pm
[signature] DEP. REG. GENL.

CANCELLED
as regards the within Sections 185 and 186
AND New
CERTIFICATE OF TITLE ISSUED
VIDE Letter No 675 of 1928
VOL. 1510 FOL. 167
[signature] DEP. REG. GENL.

CANCELLED
as regards the within Section 5017
AND New
CERTIFICATE OF TITLE ISSUED
VIDE Letter No 677 of 1928
VOL. 1510 FOL. 168
[signature] DEP. REG. GENL.

CANCELLED
Sec 5010
AND Balance
CERTIFICATE OF TITLE ISSUED
VIDE Letter No 676 of 1928
VOL. 1510 FOL. 170
[signature] DEP. REG. GENL.

Mortgage N° 689455 from James Gilbertson to the Savings Bank of South Australia produced for registration the 12 day of March 1918 at 12.15 pm Including other land
W H Salter [illegible]

(C) South Australia. (CERTIFICATE OF TITLE.)

Register Book, Vol. CCCCXLVI Folio 38

Pursuant to Memorandum of Transfer N° 172786.

James Gilbertson of Waterloo Farmer is now seized of an estate in fee simple

subject nevertheless to such incumbrances, liens, and interests, as are notified by memorial underwritten or endorsed hereon, in those Sections of land situated in the Hundred of ~~Alummo Para~~ Port Adelaide County of Adelaide N^os^ 185. 186. 5010 each containing one hundred and two acres or thereabouts and 5017 containing forty seven acres or thereabouts and bounded as appears in the plan in the margin hereof

P^t Ad 11574 23/7/189[?]

which said Sections are delineated in the public map of the said Hundred, deposited in the office of the Surveyor-General.

Wm. Cotter [?]
Dy Registrar-General.

In witness whereof, I have hereunto signed my name and affixed my seal this twenty eighth day of March one thousand eight hundred and eighty-four in presence of

R Earl

CANCELLED AND New CERTIFICATE OF TITLE ISSUED Vide L.T. Letter 342 of 1918 VOL. 1092. FOL. 151
[signature]
DEP. REG. GENL.

Mortgage N° 172482 (including also other property) from William Gilbertson James Gilbertson and Joseph Gilbertson to Charles Stewart Produced the 10 day March 1884 at 1 p.m
[signature] Dep Reg Genl

Mortgage N° 172483 (including also other property) from William Gilbertson James Gilbertson and Joseph Gilbertson to Alexander George Downer and John William Downer Produced the 10 day March 1884 at 1 p.m.
[signature] Dep Reg Genl

The within Mortgage N° 172482 has been transmitted to Mary Ann Stewart of Payneham widow the executrix named in the will dated the 10 day March 1880 of the within named Charles Stewart who died on the 15 day January 1885 as appears by Probate dated the 21 day March 1885 produced for registration the 15 day March 1889 at noon (N° 228259) [signature] Dep Reg Genl

The time for the payment of the within Mortgage No 172482 has been extended to the 21 day February 1892 with interest at the rate of £5 per centum per annum as appears by endorsement thereon Produced for registration the 26 day March 1889 at 2.05 pm
[signature] Dep Reg Genl

Lease No. 250017. from James Gilbertson to Thomas Curnow of the above Section 5010. Term five years from the 2nd day of March 1891. Produced for registration the 31st day of July 1891 at 11.35 a.m.
J. E. Heath Depty Genl

The within Mortgage No. 172482 is discharged from the sum of £3000 as appears by Memorandum No. 256694. produced for registration the 29 day February 1892 at 11.15 a.m.
J. E. Heath Dep. Reg. Genl

Mortgage No. 305799. (including also other property) from James Gilbertson to Alfred Stephen Chapman Walter Reynell and Alexander George Downer produced for registration the 11 day July 1896 at 11.10 a.m.
J. E. Heath Dep. Reg. Genl

Mortgage No. 305802. (including also other property) from James Gilbertson to Alexander George Downer and Sir John William Downer produced for registration the 11 day July 1896 at 11.10 a.m.
J. E. Heath Dep. Reg. Genl

Lease No. 381207 from James Gilbertson to John George Burdett the younger of the within Sec. 5010 Term three years from the 3 day March 1902 Produced for registration the 2 day June 1902 at noon
J. E. Heath Dep. R. Genl

The Time for payment of the above Mortgage No. 305799 is extended until the 3 day of May 1907 with Interest at the rate of £4/10/- per centum per annum as appears by Memorandum No. 417702 Produced for registration the 22 day of December 1904 2. 55 p.m.
Verrnott Edwards Dep. Reg. Genl

No. 584068 Memorandum of Appointment whereby the above Mortgage No. 305799 is now vested in Walter Reynell of Reynella Gentleman Alexander George Downer of Adelaide Solicitor and Elder's Trustee & Executor Co. Limited of Currie Street, Adelaide pursuant to the Trustee Act 1893 Produced for registration the 27 day of March 1913 at 11 am.
Vernott Edwards Dep. Reg. Genl.

Discharge of the within Mortgages No. 172482 and 172483 by receipts endorsed thereon produced for registration the 11 day July 1896 at 11.10 am
J. E. Heath Dep. Reg. Genl

No. 644358 Memorandum of Appointment whereby the within Mortgage No. 305799 is now vested in Walter Reynell of Reynella Gentleman Elders Trustee and Executor Company Limited of Currie Street Adelaide and James Frederick Downer of Adelaide Solicitor Pursuant to The Trustee ~~and~~ Act 1893 Produced for registration the 19 day of August 1915 at 2.40 p.m.
M. H. Salter Dep. Reg. Genl

The within named John William Downer died on the 2 day of August 1915 as appears by Office Copy of Certificate of Death No. 670190 Produced for registration the 26 day of July 1917 at 2.30 p.m.
Hob. Atherwood Dep. R. G.

The within Mortgage No. 305802 was transmitted to Frank Hagger Downer of Adelaide Solicitor and Elders Trustee and Executor Company Limited whose registered office is at Currie Street Adelaide (the lawful attorney of James Frederick Downer of London for the use and benefit of the said James Frederick Downer until he shall duly apply for and obtain probate) surviving AS THE EXECUTOR NAMED IN THE WILL DATED THE 26th DAY OF July 1897 OF THE within NAMED Alexander George Downer WHO DIED ON THE 17 DAY OF August 1916 AS APPEARS BY PROBATE DATED THE 12 DAY OF December 1916 PRODUCED FOR REGISTRATION THE 26 DAY OF July 1917 AT 2.30 pm
No. 678184
Hob. Atherwood DEP. REG. GENL

Off. No. 749679 N. M. Dep. R. G.

DISCHARGE OF THE within MORTGAGE NO. 305802 BY MEMORANDUM NO. 689452 PRODUCED FOR REGISTRATION THE 12 DAY OF March 1918 AT 12.15 pm
M. H. Salter
DEP. REG. GENERAL

DISCHARGE OF THE within MORTGAGE NO. 305799 BY MEMORANDUM NO. 689453 PRODUCED FOR REGISTRATION THE 12 DAY OF March 1918 AT 12.15 pm
M. H. Salter
DEP. REG. GENERAL

See 3410 707.

South Australia. (CERTIFICATE OF TITLE.)

Register Book, Vol. 1407 Folio 196

Pursuant to Application No 27242.

Sinclair Scott & Co Limited whose registered office is situated at Currie Street 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 SECTIONS of land situated in the Hundred of Port Adelaide COUNTY of Adelaide Nos 5008 containing sixty two acres three roods and twenty five perches or thereabouts 5018 containing one hundred and two acres three roods and twenty perches or thereabouts 5019 containing forty five acres three roods and three perches or thereabouts 5020 containing fifty acres and thirty two perches or thereabouts 5022 containing one hundred and two acres and ten perches or thereabouts and 5023 containing one hundred and two acres and twelve perches or thereabouts

and bounded as appears in the plan in the margin hereof which said Sections are delineated in the public map of the said Hundred deposited in the Lands and Survey Office at Adelaide.

In witness whereof I have hereunto signed my name and affixed my seal this fifteenth day of February 1916

Signed the 15th day of February 1916, in the presence of H Shaw. W H Salter

Registrar-General.

Mortgage No 958657 from Sinclair Scott & Co Limited to James Gilbertson Produced for registration the 8 day of April 1926 at 11.15 am

Dep Reg Gen

Mortgage No 958658 from Sinclair Scott & Co Limited to Allan Sinclair Percy Venning Scott and Stanley Bruce Sinclair as Tenants in Common Produced for registration the 8 day of April 1926 at 11.15 am (Including other land)

Moore Dep Reg Gen

Caveat No 1019854 dated the 5 day of November 1927 over the within land Produced for registration the 5 day of November 1927 at 11-25 am (Including other land)

Wallerwood Dep Reg Gen

The within Caveat No. 1019854 was withdrawn on the 26 day of April 1928 as appears by Memorandum No. 1035302. Produced for registration the 27 day of April 1928 at 12.30 pm

H Urauch Dep Reg Genl

(over)

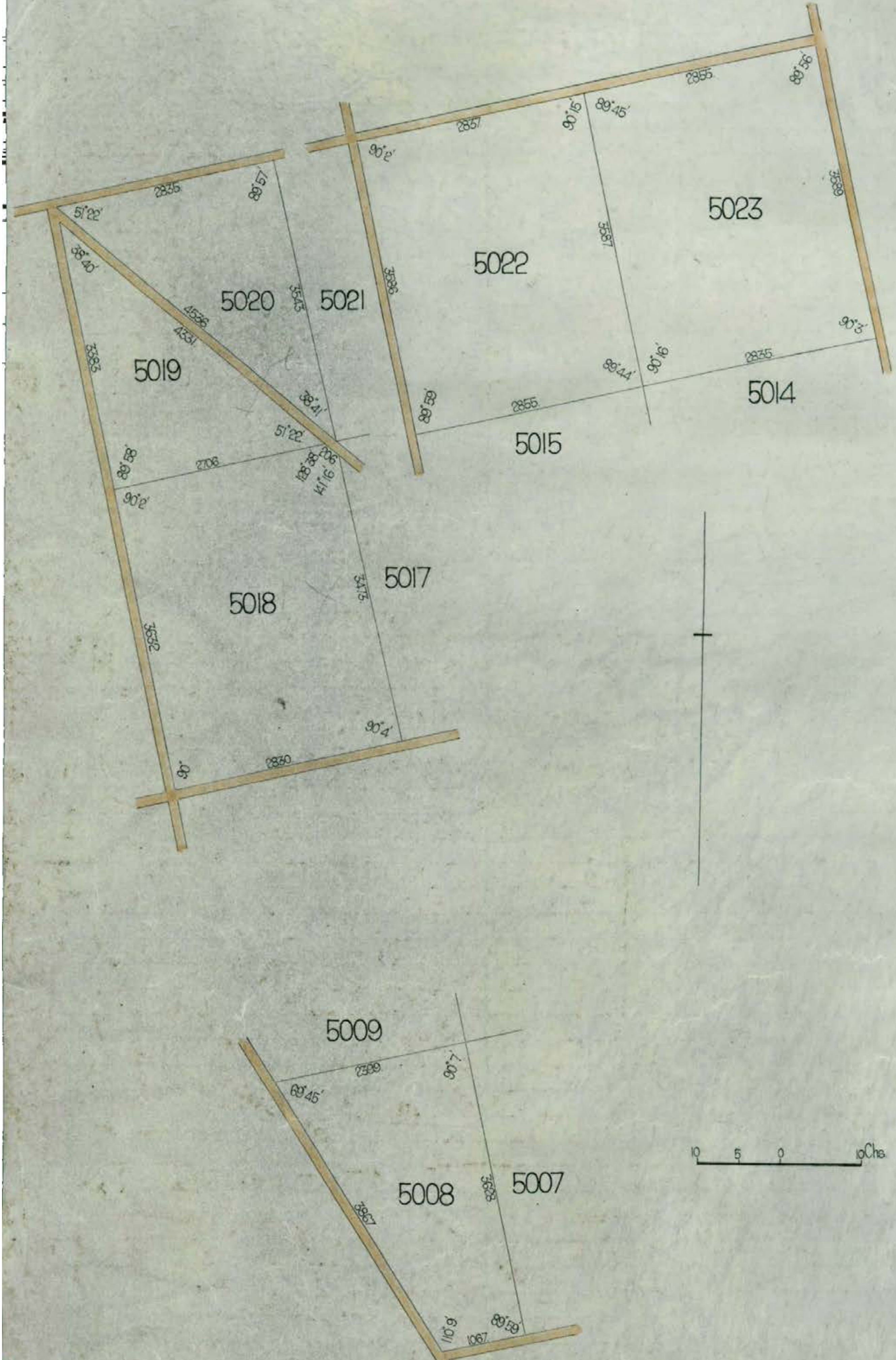
DISCHARGE OF THE within MORTGAGE
No. 958654
BY ENDORSEMENT THEREON
PRODUCED FOR REGISTRATION THE 27 DAY OF
April 1928 AT 12:30 p.m.
H. A. Carmichael
DEP. REG. GENL.

DISCHARGE OF THE within MORTGAGE
No. 958658
BY MEMORANDUM No. 1035303
PRODUCED FOR REGISTRATION THE 27 DAY OF
April 1928 AT 12:30 p.m.
H. A. Carmichael
DEP. REG. GENL.

CANCELLED
as regards the within Sections 5018. 5019. 5020
AND New
CERTIFICATE OF TITLE ISSUED
VIDE Letter N° 677 of 1928
VOL. 1510 FOL. 168
Burnes DEP. REG. GENL.

CANCELLED
as regards the within Sections 5022. 5023
AND New
CERTIFICATE OF TITLE ISSUED
VIDE Letter N° 678 of 1928
VOL. 1510 FOL. 169
Burnes DEP. REG. GENL.

CANCELLED
as regards the within
AND Balance
CERTIFICATE OF TITLE ISSUED
VIDE Letter N° 676 of 1928
VOL. 1510 FOL. 170
Burnes DEP. REG. GENL.


5023
5022
5021
5020
5019
5018
5017
5015
5014
5009
5008
5007
2855
2857
2835
3589
3587
3536
3543
4536
4331
3383
2706
2855
2835
3173
3632
2830
2399
3628
3867
1067
10 5 0 10 Chs.

South Australia

(CERTIFICATE OF TITLE)

Register Book,

Vol. 2828 *Folio* 31

Pursuant to Memorandum of Transfer No.2234262 Registered on Vol.2443 Folio 151

MINISTER OF WORKS

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 situated in the HUNDRED OF PORT ADELAIDE COUNTY OF ADELAIDE being the SECTIONS 5016 containing fifty acres and three roods or thereabouts and 5020 containing fifty acres and one rood or thereabouts and PORTION OF SECTION 5021 containing forty three acres three roods and twenty perches or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green

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 affixed my seal this second day of December 1960

Signed the 2nd day of December 1960, in the presence of W. Knobler

Registrar-General.

REGISTRAR-GENERAL SOUTH AUSTRALIA

B/225855

Closed Road. Vide Tracing No. 5214

Dep. Reg. Genl.

TRANSFER No. 2725855 to John Omagh Robinson and Mavis Robinson of portion Part Section 5021

OF THE WITHIN PRODUCED 18 5 1966 AT 11.2 a.m.

DEP. REG. GEN.

CANCELLED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED VOL. 3414 FOL. 130

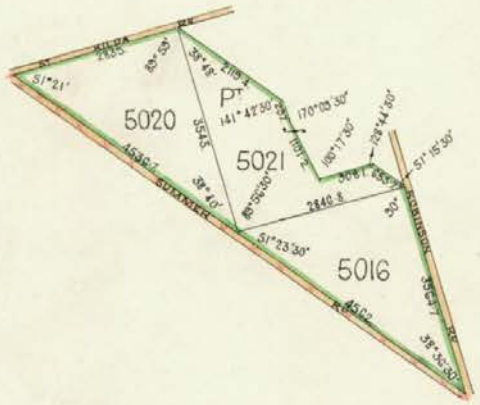
15 JUN 1966

DEP. REG. GEN.

CANCELLED

AND ISSUED VIDE Balance 2725856 CERTIFICATE OF TITLE VOL. 3414 FOL. 131

DEP. REG. GENL.



South Australia.

(CERTIFICATE OF TITLE.)

Register Book,

Vol. 2443 *Folio* 151

Balance Certificate of Title from Vol. 2369 Folio 114

JOHN OMAGH ROBINSON of Salisbury Farmer and MAVIS ROBINSON his wife

are the proprietors 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 situated in the HUNDRED OF PORT ADELAIDE COUNTY OF ADELAIDE being the SECTIONS 5016 containing fifty acres two roods and thirty two perches or thereabouts and 5020 containing fifty acres and thirty two perches or thereabouts and PORTION OF SECTION 5021 containing one hundred acres two roods and eighteen perches or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green

50 · 2 · 32
100 · 2 · 18
151 · 1 · 2

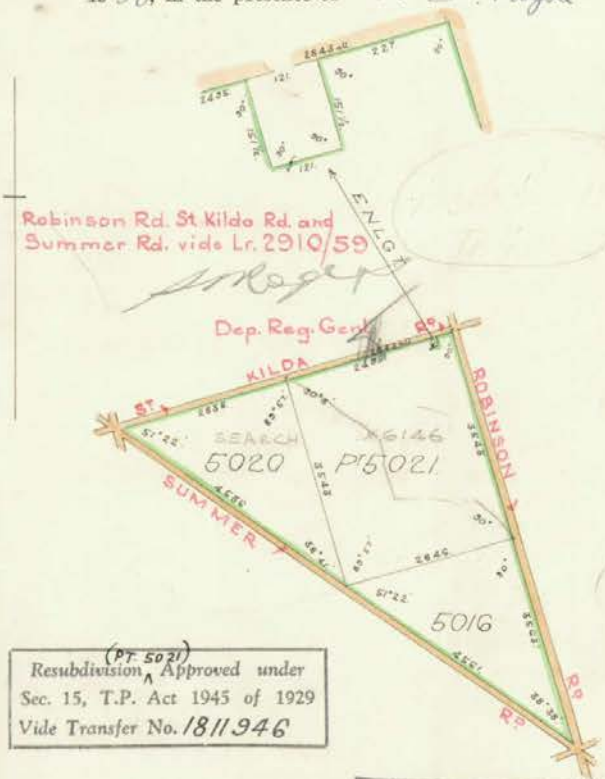
Which said Sections are delineated in the public map of the said Hundred deposited in the Land Office at Adelaide.

In witness whereof I have hereunto signed my name and affixed my seal this twenty first day of March 1956

Signed the 21st day of March 19 56, in the presence of R. B. Payne

Registrar-General.

REGISTRAR-GENERAL SOUTH AUSTRALIA



Resubdivision (PT. 5021) Approved under Sec. 15, T.P. Act 1945 of 1929 Vide Transfer No. 1811946

Resubdivision Approved under Sec. 11 T.P. Act 1929-1957 Vide Lr. 4003 of 1960

Mortgage No. 1613863 from John Omagh Robinson and Mavis Robinson to Commonwealth Bank of Australia Produced for registration the 22 day of March 1950 at 11.40 a.m.

Reg.Genl.

Mortgage No. 1648813 from John Omagh Robinson and Mavis Robinson to Commonwealth Bank of Australia Produced for registration the 3 day of November 1950 at 2.40 p.m.

Reg.Genl.

The within Mortgage No. 1648813 is vested in Commonwealth Trading Bank of Australia Vide No. 1934954 Produced for registration the 7 day of March 1956 at 11.30 a.m.

Reg.Genl.

Powers of Attorney Nod. 1437163. 1845116 and 1806998

Reg.Genl.

C/N. ~~220546~~ D. 1613863

THE WITHIN MORTGAGE No. 1613863 IS VESTED IN COMMONWEALTH TRADING BANK OF AUSTRALIA VIDE No. 2205467 PRODUCED FOR REGISTRATION THE 25 DAY OF May 1960 AT 11.25 a.m.

DEP. REG. GENL.

P/A. No 2178164

DISCHARGE OF MORTGAGE No. 1613863 BY ENDORSEMENT THEREON. PRODUCED 25/5/1960 AT 11.25 a.m.

DEP. REG. GEN.

D 1648813 T

P/A. A177746 Mbennett J.A.G

DISCHARGE OF MORTGAGE No. 164813. BY ENDORSEMENT THEREON. PRODUCED 28-9-1960 AT 11.15am.
Mbennett DEP. REG. GEN.

TRANSFER No. 223262.
to Minister of Works.
OF THE WITHIN Sections 5016. 5020 and pt of Sect. 5021.
PRODUCED 28-9-1960 AT 11.15am
Mbennett DEP. REG. GEN.
CANCELLED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED VOL. 2828 FOL. 31
A.R. Rogers DEP. REG. GEN.

~~T 225084~~

TRANSFER No. 224532 to Giuseppe Reverazzi of one undivided third part Carmine Reverazzi of one undivided third part and to Nano Reverazzi and Rosa Reverazzi of one undivided third part as to portion
OF THE WITHIN Part Sec. 5021
PRODUCED 11/11/1960 AT 11.30am
O.L. Nairn DEP. REG. GEN.
CANCELLED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED VOL. 2860 FOL. 73
G.E. Russell DEP. REG. GEN.

TRANSFER No. 225084 to George Trotta and Bianca Irene Trotta of portion
OF THE WITHIN Part Sec. 5021
PRODUCED 1/12/1960 AT 1.15pm
O.L. Nairn DEP. REG. GEN.
CANCELLED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED VOL. 2860 FOL. 74
G.E. Russell DEP. REG. GEN.

L.N.C.T. VIDE DKT. 2675/1964.

CANCELLED
AND Balance CERTIFICATE OF TITLE
ISSUED VIDE Lc 2675/1964 VOL. 3219 FOL. 195
O.L. Nairn DEP. REG. GENL.

Product	Child Parent Title Search
Date/Time	14/06/2022 10:56AM
Customer Reference	63155 MS
Order ID	20220614003055

Certificate of Title

Title Reference:	CT 5211/524
Status:	CANCELLED
Parent Title(s):	CT 3414/131
Dealing(s) Creating Title:	CONVERTED TITLE
Title Issued:	31/08/1994
Title Cancelled:	07/01/2000
Edition:	2

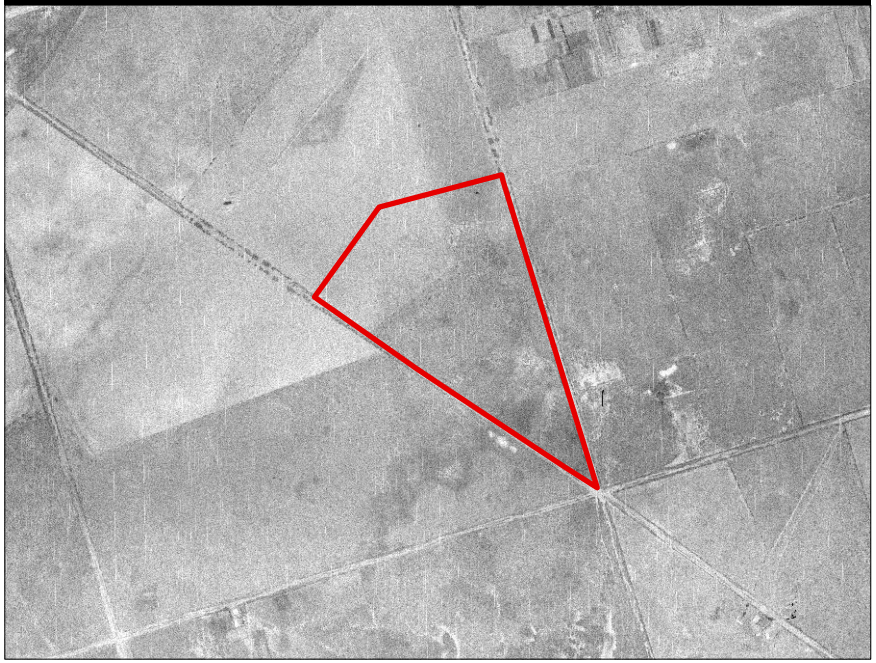
Child Titles

Title Reference	Status	Estate Type	Plan / Parcel	Proprietors/Lessees/ Custodians at time of issue
CT 5723/298	CURRENT	EASEMENT ONLY	F115108 ALLOTMENT 4	ETSA UTILITIES PTY. LTD.
CT 5723/299	CURRENT	FEE SIMPLE	F115108 ALLOTMENT 3 F115108 ALLOTMENT 4	SOUTH AUSTRALIAN WATER CORPORATION

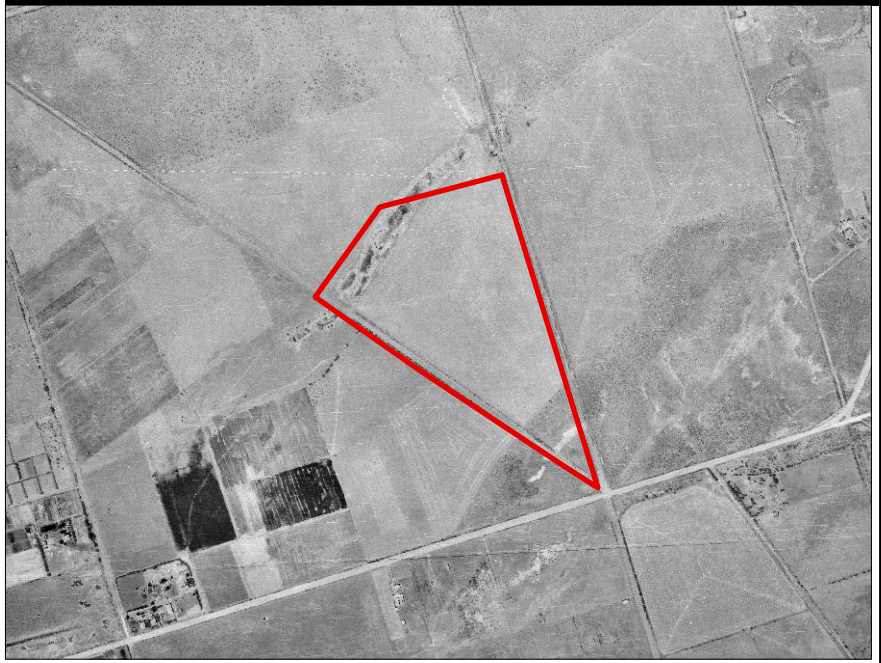
Copyright: www.landservices.com.au/copyright | Privacy: www.landservices.com.au/privacy | Terms of Use: www.landservices.com.au/sailis-terms-of-use

Appendix E – Historical Aerial Photographs

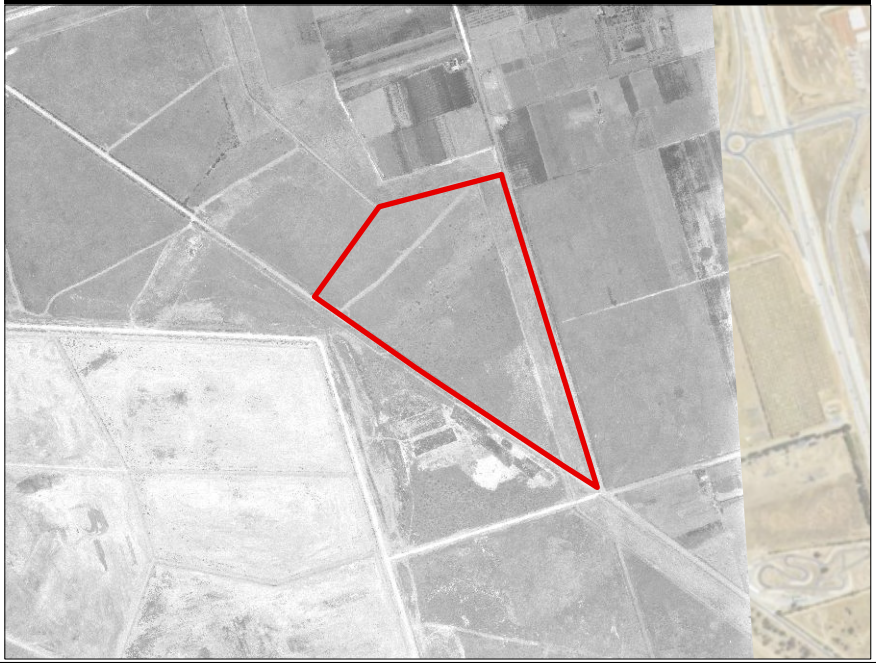
HISTORICAL AERIAL 1949



HISTORICAL AERIAL 1959



HISTORICAL AERIAL 1969



HISTORICAL AERIAL 1979

Legend

Site Boundary

JBS&G

Job No: 63155	
Client: Renascor	
Version: FINAL	Date: 06-Jul-2022
Author: twilliamson	Checked By: MS
Scale 1:17,500	

0 25 50

metres

Coord. Sys. GDA2020 MGA Zone 54

Robinson Road, Waterloo Corner, South Australia

HISTORICAL AERIALS (1949 - 1979)

APPENDIX E

File Name: C:\Users\twilliamson\JBS&G Australia\JBS&G - DCS - Internal - Documents\Projects\Renascor\GIS\63155 PSI and Soil Investigation, Waterloo Corner\02_MapProjects\63155_Renascor_WaterlooCorner_PSI_v6.aprx/61355_003a_HistoricalAerial
Reference: ESRI Topographic Basemap - Accessed Imagery: 06/07/2022

HISTORICAL AERIAL 1989

HISTORICAL AERIAL 1999

HISTORICAL AERIAL 2009

HISTORICAL AERIAL 2019

Legend

Site Boundary

JBS&G

Job No: 63155	
Client: Renascor	
Version: FINAL	Date: 27-Jul-2022
Author: twilliamson	Checked By: MS
Scale 1:17,500	

0 250 500

metres

Coord. Sys. GDA2020 MGA Zone 54

Robinson Road, Waterloo Corner, South Australia

HISTORICAL AERIALS (1989 - 2019)

APPENDIX E

File Name: C:\Users\twilliamson\JBS&G Australia\JBS&G - DCS - Internal - Documents\Projects\Renascor\GIS\63155 PSI and Soil Investigation, Waterloo Corner\02_MapProjects\63155_Renascor_WaterlooCorner_PSI_v11.aprx/61355_003b_HistoricalAerial
Reference: ESRI Topographic Basemap - Accessed Imagery: 27/07/2022

Appendix F - Government Records

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 : 16879 (72805)

JBS&G
100 Hutt Street
ADELAIDE SA 5000

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

06 June, 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 5723 Folio 299
Address	Bolivar WWTP, Allotments 3 & 4 (FP 115108), Bolivar Interchange Connector Road, BOLIVAR SA 5110

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

8.8	Section 103N - Notice of declaration of special management area in relation to the land (due to possible existence of site contamination).	NO
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

Schedule – Division 2 – *Land and Business (Sale and Conveyancing) Regulations 2010*

PARTICULARS RELATING TO ENVIRONMENT PROTECTION

3-Licences and exemptions recorded by EPA in public register

Does the EPA hold any of the following details in the public register:

a)	details of a current licence issued under Part 6 of the *Environment Protection Act 1993* to conduct any prescribed activity of environmental significance under Schedule 1 of that Act at the land?	**YES**
b)	details of a licence no longer in force issued under Part 6 of the *Environment Protection Act 1993* 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 *Environment Protection Act 1993* 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 *Environment Protection Act 1993* 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 *South Australian Waste Management Commission Act 1979* to operate a waste depot at the land?	NO
f)	details of a licence issued under the repealed *Waste Management Act 1987* to operate a waste depot at the land?	NO
g)	details of a licence issued under the repealed *South Australian Waste Management Commission Act 1979* 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 *Waste Management Act 1987* to produce prescribed waste (within the meaning of that Act) at the land?	NO

4-Pollution and site contamination on the land - details recorded by the EPA in public register

Does the EPA hold any of the following details in the public register in relation to the land or part of the land:

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

b)	details of site contamination notified to the EPA under section 83A of the *Environment Protection Act 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 *Environment Protection Act 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 *Environment Protection Act 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 *Environment Protection Act 1993?*	NO
h)	details of a notification under section 103Z(1) of the *Environment Protection Act 1993* relating to the commencement of a site contamination audit?	NO
i)	details of a notification under section 103Z(2) of the *Environment Protection Act 1993* relating to the termination before completion of a site contamination audit?	NO
j)	details of records, held by the former *South Australian Waste Management Commission* under the repealed *Waste Management Act 1987*, of waste (within the meaning of that Act) having been deposited on the land between 1 January 1983 and 30 April 1995?	NO

5-Pollution and site contamination on the land - other details held by EPA

Does the 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 *South Australian Health Commission* (under the repealed *South Australian Health Commission Act 1976*)?	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 *Environment Protection Act 1993?*	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 *Environment Protection Act 1993*?	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

Records identified in this EPA Statement to Form 1: **EPA/1534**

The above records have been identified with a YES response in this EPA Statement to Form 1 and can be obtained by contacting the Public Register on (08) 8204 9128 or email epa.publicregister@sa.gov.au

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.

Licence No. 1534

ISSUED:
01 Dec 2020

EXPIRY:
30 Nov 2025

ACN:

SOUTH AUSTRALIAN WATER CORPORATION

Bolivar WWTP, Port Wakefield Road, BOLIVAR SA 5110

Environmental Authorisation under Part 6 of the *Environment Protection Act 1993*

South Australian Environment Protection Authority
GPO Box 2607
Adelaide SA 5001
Tel: 08 8204 2004

Environment Protection Authority

LICENCE NUMBER 1534

LICENSEE DETAILS

Licence Holder: SOUTH AUSTRALIAN WATER CORPORATION

Premises Address(es): Bolivar WWTP, Port Wakefield Road, BOLIVAR SA 5110

LICENSED ACTIVITIES

The Licensee is authorised to undertake, at the location(s) shown above, the following prescribed activities of environmental significance under Schedule 1 Part A of the Act, subject to the conditions in this Licence.

3(4)(b)	Wastewater treatment works (outside MLR WPA)
8(2)(a)	Fuel burning not coal or wood

TERMS OF LICENCE

Commencement Date:	01 Dec 2020
Expiry Date:	30 Nov 2025
Amended Date:	11 Feb 2021

Table of Contents

Licence Explanatory Notes – Do Not Form Part of the Licence

Compliance with this licence

The EPA seeks to ensure that all reasonable and practicable measures are taken to protect, restore and enhance the quality of the environment according to the principles of ecologically sustainable development. To achieve this objective, the EPA uses a number of regulatory decision making principles and actions outlined in the 'Compliance and enforcement regulatory options and tools' document available on the EPA website.

Notification – serious or material environmental harm caused or threatened

If serious or material environmental harm from pollution is caused or threatened in the course of an activity, the licence holder must, as soon as reasonably practicable after becoming aware of the harm or threatened harm, notify the EPA (preferably on EPA emergency phone number 1800 100 833) of the harm or threatened harm, its nature, the circumstances in which it occurred and the action taken to deal with it in accordance with section 83 of the *Environment Protection Act 1993* (the Act). In the event that the primary emergency phone number is out of order, the licence holder should phone (08) 8204 2004.

Variations, transfers and surrender of a licence

The EPA may impose or vary the conditions of a licence by notice in writing to the licence holder in accordance with sections 45 and 46 of the Act. Public notice may be required where the variation of licence conditions results in a relaxation of the requirements imposed for the protection or restoration of the environment and results in an adverse effect on any adjoining land or its amenity.

If a licence holder wishes to vary the conditions of a licence, transfer a licence to another entity, or surrender a licence, the licence holder must submit an application to the EPA in accordance with the applicable provisions of the Act (sections 45, 49 and 56, respectively). A licence remains in effect and in its original form until such time as any proposed variation, application for surrender, or transfer has been made and approved in writing by the EPA.

Suspension or cancellation of a licence

The EPA may suspend or cancel a licence by notice in writing to the licence holder in accordance with section 55 of the Act if satisfied the licence holder has either obtained the licence improperly, contravened a requirement under the Act or if the holder is a body corporate, a director of the body corporate has been guilty of misconduct of a prescribed kind (whether in this State or elsewhere).

Responsibilities under Environment Protection legislation

In addition to the conditions of any licence, a licence holder must comply with their obligations under all State and Federal legislation (as amended from time to time) including: the *Environment Protection Act 1993;* the *Environment Protection Regulations 2009;* all Environment Protection Policies made under the *Environment Protection Act 1993;* and any National Environment Protection Measures not operating as an Environment Protection Policy under the *Environment Protection Act 1993*

Public Register Information

The EPA maintains and makes available a Public Register of details related to its determinations and other information it considers appropriate (i.e. excluding trade processes or financial information) in accordance with section 109 of the Act. These details include, but are not limited to:

- licensing and beverage container applications and approvals
- enforcement actions
- site contamination
- serious or material environmental harm caused or threatened in the course of an activity
- environment improvement programmes and environment performance agreements
- environment assessment reports; results of testing, monitoring or evaluation required by a licence
- EPA advice or direction regarding development approvals referred to the EPA by a planning authority

Definitions

Unless the contrary intention appears, terms used in this licence that are defined in the Act (including any regulations or environment protection policies made pursuant to the Act) have the respective meanings assigned to those terms by the Act.

THE ACT: The *Environment Protection Act 1993*

PREMISES: The whole of the land comprised in Titles Register - Certificate of Title, Crown Lease and Crown Record.

CT5922/939
CR5757/813
CT5718/706
CT5928/454
CT5928/455
CT5667/516
CT5907/186
CT5667/518
CT5907/185
CT5832/390
CT5820/659
CT5820/658
CT5832/974
CT5746/665
CT5750/784
CT5550/653
CT5907/184
CT5723/299
CT5789/601
CT5803/934
CR5757/821
CR5757/814
CT5881/409
CT5593/239
CR5757/815
CT5561/623
CT5278/129
CT5907/179
CT6135/951
CT6142/472
CT6142/472
CT6142/473
CT6181/33
CT6181/34
CT6181/33
CT6181/35
CT6181/33
CT6209/435
CT6209/436
CT6209/437
CT6209/438

AUTHORISATION FEE PAYMENT DATE: means the anniversary of the grant or renewal of this authorisation.

ENVIRONMENTAL HARM: means the same as is defined in section 5 of the Environment Protection Act 1993.

KEY STAKEHOLDERS: Any person, business or group who has an interest in or is affected by an organisation's activities. It includes but is not limited to local landholders, businesses, residents, special interest groups, councils, the media, and parliamentary representatives.

WASTE: means -

1. As defined under the Environment Protection Act 1993,

1(a) any discarded, dumped, rejected, abandoned, unwanted or surplus matter, whether or not intended for sale or for purification or resource recovery by a separate operation from that which produced the matter; or

1(b) any matter declared by regulation to be waste for the purposes of this Act (following consultation by the Minister on the regulation with prescribed bodies in accordance with the regulations); or

1(c) any matter declared by an environment protection policy to be waste for the purposes of this Act,

whether or not of value.

2. However, waste does not include—

2(a) an approved recovered resource whilst it is being dealt with in accordance with the declaration of that resource—see section 4A; or

2(b) anything declared by regulation or an environment protection policy not to be waste for the purposes of this Act,

even though the resource or the thing so declared might otherwise, but for the declaration, fall within the definition of waste in subsection (1).

WASTEWATER: as defined in the Environment Protection (Water Quality) Policy 2015.

Acronyms

EPA: means Environment Protection Authority

ISO: means International Organisation for Standardization.

NATA: means National Association of Testing Authorities.

WIMP: means Wastewater Irrigation Management Plan

WWTP: means Wastewater Treatment Plant.

Conditions of Licence

The Licensee is authorised to conduct the prescribed activities as described in this Licence at the Premises nominated, subject to the following conditions:

---

1 CONTROL OF EMISSIONS

1.1 DISCHARGE LOCATIONS (S - 162)

The Licensee must:

1.1.1 only discharge treated wastewater to surface waters at the locations set out in Attachment 1 of this Licence.

1.2 ODOUR PREVENTION (S - 10)

The Licensee must take all reasonable and practicable measures to prevent odour from leaving the Premises.

1.3 PREMISES STORMWATER MANAGEMENT (S - 160)

The Licensee must:

1.3.1 take all reasonable and practicable measures to prevent contamination of stormwater resulting from prescribed activities undertaken at the Premises; and

1.3.2 implement appropriate contingency measures to contain the contaminated stormwater at the Premises unless and until the contaminated stormwater is treated to remove the contamination, or is disposed of at an appropriately licensed facility.

1.4 RECYCLED WATER IRRIGATION (S - 161)

The Licensee must, when irrigating recycled water to land at the Premises:

1.4.1 prevent pooling of recycled water; and

1.4.2 prevent runoff of recycled water from the Premises.

---

2 OPERATIONAL MANAGEMENT

2.1 AIR POLLUTION CONTROL EQUIPMENT REGISTER (U - 262)

The licensee must:

2.1.1 maintain all air pollution control equipment to ensure that pollution is minimised: and

2.1.2 ensure the register includes:

a the name of the recording officer;

b the date of each inspection of the equipment;

c details of the equipment that was inspected;

d an assessment of whether the equipment was working effectively; and

e the action taken (if required) to rectify and faults or failures.

2.2 BUNDING (S - 5)

The licensee must ensure that all chemicals or chemical products are stored, loaded or unloaded in an appropriately bunded area.

NOTES

The EPA will assess the appropriateness of any bund against the EPA's 'Bunding and Spill Management Guidelines'.

2.3 COMMUNITY ENGAGEMENT PLAN (U - 1239)

The Licensee must:

2.3.1 develop and implement a Community Engagement Plan in consultation with key stakeholders by the compliance date listed below;

2.3.2 provide public access to the Community Engagement Plan (and any subsequent amended version) once developed; and

2.3.3 ensure that the Community Engagement plan includes a methodology for the public access to reporting requirements of licence conditions including, but not limited to:

a Trigger and Action Response Plan;

b Monitoring Plan;

c Wastewater Irrigation Management Plan; and

d Pre-Trial Plan.

Compliance Date: 30-Sep-2021

2.4 COMPLAINTS REGISTER (S - 1)

The Licensee must:

2.4.1 prepare and maintain a register of all complaints concerning environmental issues.

2.4.2 ensure the register includes:

a the date and time that the complaint was made;

b details of the complaint including the likely cause of events giving rise to the complaint;

c the contact details of the complainant (if permitted by the complainant); and

d details of any action taken in response to the complaint by the Licensee.

2.5 DEVELOP AND IMPLEMENT VERMIN MANAGEMENT PLAN (S - 297)

The Licensee must take all reasonable and practicable measures, including development of an appropriate Vermin Management Plan, to minimise the presence of vermin at the Premises.

2.6 ENVIRONMENT IMPROVEMENT PROGRAMME (T - 1027)

The Licensee must:

2.6.1 develop and submit to the EPA by 31 July 2017, an EIP to the satisfaction of the EPA;

2.6.2 ensure the EIP includes, but not be limited to;

a details of actions to be undertaken at the Bolivar Wastewater Treatment Plant to meet annual loads of total nitrogen and suspended solids discharged to waters as per the Adelaide Coastal Waters Quality Improvement Plan (the Plan) targets applicable to SA Water assets of:

i 300 tonnes per year of total nitrogen;

ii 760 tonnes of suspended solids

b clear timeframes for actions to be taken by the Licensee as set out in the EIP; and

c a reporting method to the EPA, including frequency, that demonstrates progress and completion of compliance actions;

2.6.3 implement the EIP (or any revised EIP approved in writing by the EPA) upon approval in writing by the EPA.

Compliance Date: 31-Jul-2017

2.7 GENERIC CONTINGENCY PLAN (S - 120)

The Licensee must prepare an appropriate contingency plan for the Premises to address any spillages, equipment or plant failure that has the potential to increase the risk of harm to the environment.

2.8 IMPLEMENT PRE-TRIAL PLAN (U - 1243)

The Licensee must only implement a Pre-Trial Plan (developed in accordance with condition U-1242) in accordance with its requirements when the Pre-Trial Plan (or any revised Pre-Trial Plan approved in writing by the EPA) has been approved in writing by the EPA.

2.9 POST-TRIAL REPORT (U - 1244)

The Licensee must:

2.9.1 within 90 days of completion of any trial undertaken in accordance with conditions U-1242 and U-1243, provide a Post-Trial report to the satisfaction of the EPA that includes, but is not limited to:

- a whether the objective(s) and anticipated outcomes of the trial were met;
- b the date(s) of the trial;
- c a gap analysis comparing actual performance with the approved Pre-Trial plan;
- d an assessment of the suitability and performance of the processes, facilities and the equipment during the Trial;
- e an outline of the measure(s) implemented to mitigate any environmental impacts of the trial and the reason(s) for those measures; and
- f the details of the outcome of any community engagement during the trial.

2.10 PRE-TRIAL PLAN (U - 1242)

The Licensee must:

2.10.1 develop a Pre-Trial Plan prior to undertaking a trial for a change of a kind contemplated by conditions A5 or A6 of this Licence;

2.10.2 ensure any Pre-Trial Plan includes but is not limited to:

a the objective(s) and anticipated outcomes of the trial;

b the details of the site plan for the trial at the Premises;

c a summary of the trial;

d the proposed duration of the trial, including the start and end date(s);

e an assessment of the processes, facilities and equipment to be included in the trial to demonstrate their suitability for the trial;

f details of the monitoring and modelling to be undertaken during the trial;

g an assessment of the potential environmental risks of the trial;

h an assessment of any potential additional waste treatment required, any by-products generated by the trial and applicable disposal pathways of waste and by-products;

i mitigation measures to minimise the risk of any environmental impacts, including triggers for when the trial would cease; and

j the details of the community engagement process to be undertaken to address public concerns about the trial.

2.11 RECYCLED WASTEWATER MANAGEMENT (S - 144)

The Licensee must ensure that any recycled wastewater used for the purpose of irrigation or reuse is of a quality that is fit for the intended use (i.e. fit for purpose).

NOTES

The EPA will assess 'fitness for purpose' against the 'Australian Guidelines for Water Recycling: Managing Health & Environmental Risks' (Phase 1), 2006.

2.12 TRIGGER AND ACTION RESPONSE PLAN (U - 1240)

The Licensee must:

2.12.1 develop and submit to the satisfaction of the EPA by the compliance date listed below, a Trigger and Action Response Plan (TAR Plan);

2.12.2 ensure that the TAR Plan includes, but is not limited to:

a the identification of thresholds at which potential or actual environmental harm may occur due to the activity being undertaken at the Premises in identifying the thresholds required by this condition regard should be had to the following:

i environmental pollutants (effluent, solid waste, odour, noise, dust);

ii incidents that may cause potential or actual environmental harm;

iii existing monitoring data;

iv meteorological conditions; and

v visual observations;

b detailed action and response strategies that will be implemented in the event that the thresholds identified are reached or exceeded;

c a methodology and framework for quarterly reporting to the EPA, which includes, but is not limited to:

i the date and time one or more threshold is reached or exceeded;

ii action and response strategies implemented to address the exceedance(s); and

iii a summary of events notified and reported to the public under condition U-1239;

d a methodology and framework for the provision of an annual report to the EPA which includes, but is not limited to:

i a review of all thresholds identified in subclause 2 of this condition;

ii a review of the effectiveness of all action and response strategies identified in subclause 2 of this condition;

iii a trend analysis of data collected;

iv a review and analysis of community complaints recorded in compliance with condition S-1 with the exceedance of thresholds reported under subclause 2 of this condition; and

v identified opportunities for improvement in environment management at the Premises;

vi recommendations for updates to be included in the TAR Plan based on any of the above; and

2.12.3 Implement the TAR Plan (or any revised TAR Plan) approved in writing by the EPA in accordance with the requirements of that plan.

Compliance Date: 30-Nov-2021

---

3 MONITORING AND REPORTING

3.1 Monitoring Implementation and Report: WIMP (U - 265)

The licensee must:

3.1.1 implement the approved South Australian Water Corporation document entitled 'Bolivar Wastewater Treatment Plant, Plant Irrigation Management Plan', dated September 1998 (the WIMP') or any revised WIMP approved in writing by the EPA;

3.1.2 submit a WIMP Report to the EPA by 31 October each year for the reporting period 1 July to 30 June, a Report to the satisfaction of the EPA.

NOTES

The EPA will assess the Report against the EPA Guideline 'Regulatory monitoring and testing Monitoring Plan requirements'.

3.2 MONITORING PLAN (U - 264)

The Licensee must:

3.2.1 develop and submit to the EPA by 29 February 2016, an updated plant performance monitoring plan for the Bolivar WWTP, to the satisfaction of the EPA;

3.2.2 ensure that the revised monitoring plan includes, but not be limited to, the following:

a the incorporation of the approved 'Bolivar Wastewater Treatment Plant plant discharge monitoring program' dated January 2015

b the incorporation of the approved 'Bolivar High Salinity WWTP Sampling Program' dated January 2015

c an assessment of trends in concentration and load of key effluent quality parameters;

d how reviews and amendments to the monitoring plan will be undertaken and reported to the EPA;

e the criteria against which monitoring results will be assessed;

f the method and frequency of reporting to the EPA; and

3.2.3 implement the Monitoring Plan (or any revised Monitoring Plan approved in writing by the EPA) upon approval by the EPA.

NOTES

The EPA will assess the Monitoring Plan against the EPA Guideline 'Regulatory monitoring and testing monitoring plan requirements'.

Compliance Date: 29-Feb-2016

3.3 SAMPLING AND ANALYSIS REQUIREMENTS FOR MONITORING (S - 73)

The Licensee must ensure that:

3.3.1 sampling of water, wastewater and soil is undertaken by a suitably qualified person.

3.3.2 sampling is carried out in accordance with Australian Standard/New Zealand Standard AS/NZS 5667 (parts 1-12) and Australian Standard AS 4482.1-2005 (from 1 June 2013) where applicable.

3.3.3 analysis of samples is carried out by either;

a a laboratory registered by NATA for the analytical procedures being undertaken; or

b a laboratory with ISO 9000 series (Quality System) certification.

NOTES

Guidance on sampling in accordance with EPA requirements can be found in the EPA Guidelines document entitled 'Regulatory monitoring and testing water and wastewater sampling'.

---

4 ADMINISTRATION

4.1 ANNUAL RETURN AND PAYMENT OF ANNUAL FEES (A - 4)

For the purposes of section 48(2)(a) of the Act, the date in each year for the lodgement of the Annual Return is no later than 90 days before the anniversary of the grant or renewal of the Licence; and

4.1.1 For the purposes of section 48(2)(b) of the Act, the date in each year for the payment of Annual Authorisation Fee is the anniversary of the grant of the Licence.

4.2 APPROVAL OF OPERATING PROCESSES (A - 6)

The Licensee must not undertake changes to operating processes conducted pursuant to the Licence at the Premises without written approval from the EPA, where such changes:

4.2.1 have the potential to increase emissions or alter the nature of pollutants or waste currently generated by, or from the licensed activity; or

4.2.2 have the potential to increase the risk of environmental harm; or

4.2.3 would relocate the point of discharge of pollution or waste at the Premises.

4.3 APPROVAL OF WORKS (A - 5)

The Licensee must not construct or alter a building or structure, or install or alter any plant or equipment, for use of an activity undertaken pursuant to the Licence at the Premises without written approval from the EPA, where such changes:

4.3.1 have the potential to increase the emissions or alter the nature of pollutants or waste currently generated by, or from the licensed activity; or

4.3.2 have the potential to increase the risk of environmental harm; or

4.3.3 would relocate the point of discharge of pollution or waste at the Premises.

4.4 CHANGE OF LICENSEE DETAILS (A - 3)

If the Licensee's name or postal address (or both) changes, the Licensee must inform the EPA within 28 days of the change occurring.

4.5 LICENCE RENEWAL (A - 2)

For the purposes of section 43(3) of the Act, an application for Renewal of the Licence must be made no later than 90 days before the expiry date of the Licence.

4.6 OBLIGATIONS TO EMPLOYEES, AGENTS AND CONTRACTORS (A - 1)

The Licensee must ensure that every employee, agent or contractor responsible for undertaking any activity regulated by the Licence, is informed as to the conditions of the Licence.

4.7 VARIATION OF CONDITIONS OF LICENCE (pursuant to section 45(3) of the Environment Protection Act, 1993) (U - 1241)

The EPA may:

4.7.1 impose conditions or vary conditions of this licence at any time by notice in writing to the Licensee in the following circumstances:

a in relation to:

i odour and noise emissions;

ii discharges of wastewater;

iii revision of the EIP where the progress or implementation of the EIP Is not meeting the necessary environmental outcomes;

iv the efluent discharge monitoring data and information; and

v Trigger and Action Response Plan reports.

Attachments

ATTACHMENT 1 discharge location-1534.pdf"

DISCHARGE LOCATIONS

LICENCE1534 - ATTACHMENT 1

SOUTH AUSTRALIAN WATER CORPORATION

– BOLIVAR WASTEWATER TREATMENT PLANT – EPA LICENCE 1534

Location Name	Description	Latitude	Longitude
Buckland Park Outfall	**Marine discharge**	-34.696877	138.481981

Government of South Australia
Department of Treasury and Finance

State Administration Centre
200 Victoria Square
Adelaide SA 5000
GPO Box 1045
Adelaide SA 5001
DX56205
Tel 08 8226 9500
Fax 08 8226 3819
http://www.treasury.sa.gov.au
ABN 19 040 349 865

File: T&F22/0717
A2470551

12 July 2022

Ms Alma Cimirotic
JBS&G
Suite 1, 100 Hutt Street
ADELAIDE SA 5000

Sent via email: acimirotic@jbsg.com.au

Dear Ms Cimirotic

Freedom of Information – Dangerous Substances licence

I refer to your application under the *Freedom of Information Act 1991* (FOI Act), received by the Department of Treasury and Finance (DTF) on 24 June 2022.

Your application specifically requested:

'JBS&G are requesting a dangerous goods search for CT 5723/299 (Allotment 3, Robinson Road, Waterloo Corner, SA) to assist with environmental investigations.'

Pursuant to section 23(1)(b) of the FOI Act I advise that, following extensive searches conducted throughout the agency, I have been unable to locate any results recorded for:

Allotment 3, Robinson Road, Waterloo Corner, SA

SafeWork SA regulates licensable quantities of dangerous substances as prescribed by the *Dangerous Substances (General) Regulations 2017*, specifically:

- Regulation 39 (Class 6 or 8 substances),
- Regulation 11 (Class 2 substances), and
- Regulation 22 (Class 3 substances).

All other dangerous substances are not regulated by SafeWork SA, as a result, the information provided only relates to the classes of substances as prescribed in *Dangerous Substances (General) Regulations 2017.*

Appeal Rights

If you are dissatisfied with the outcome of your FOI application, you have the right to make a complaint to the Ombudsman SA. Please contact the Ombudsman directly on (08) 8226 8699.

If you require any further information, please phone Inthira Stocker on (08) 8429 3497.

Yours sincerely

Maria Ross
ACCREDITED FREEDOM OF INFORMATION OFFICER

Appendix G – Groundwater Database Information (Water Connect)


662827126 RSWL = n/a
662804033 RSWL = n/a
662825989
662804029 RSWL = n/a
662804042 RSWL = n/a
662819894 RSWL=-4.43(m-AHD)
662804030 RSWL = n/a
662816930 RSWL = n/a
662812652 RSWL = n/a
662822818 RSWL = n/a
662812849 RSWL = n/a
662830403 RSWL = n/a
662830402 RSWL = n/a
662828832 RSWL = n/a
662826797 RSWL = n/a
662803944 RSWL = n/a
662822820 RSWL = n/a
662803968 RSWL = n/a
662803954 RSWL = n/a
662822819
662818647 RSWL = n/a
662814343 RSWL=-9.8(m-AHD)
662804048 RSWL = n/a
662830158 RSWL = n/a
662830159 RSWL = n/a
662803965 RSWL = n/a
662813840 RSWL = n/a
662804107 RSWL=5(m-AHD)
662830157 RSWL = n/a
662803964 RSWL = n/a
662813576 RSWL = n/a
662804092 RSWL = n/a
662819447 662819446
662804108 RSWL=0.95(m-AHD)
662830161 RSWL = n/a
662819449 662819448
662804109 =3(m-AHD)
662804118 RSWL=5(m-AHD)
662831239 RSWL = n/a
662804121 RSWL=4(m-AHD)
662803881 RSWL = n/a
662804098
662804110 RSWL = n/a
662804117 RSWL=-2.1(m-AHD)
662830812 RSWL = n/a
662804123 RSWL = n/a
662803880 RSWL = n/a
662830667 RSWL = n/a
662830665 RSWL = n/a
662831337
662830668 RSWL = n/a
662827669 662827668 RSWL = n/a
662831247 RSWL = n/a
662831105 RSWL = n/a
662827672 RSWL = n/a
662803841 RSWL=4(m-AHD)
662827658 662827657 RSWL = n/a
662827654
662827656 RSWL = n/a
662804099 RSWL=2(m-AHD)
662803842 RSWL = n/a
662803843 RSWL=4(m-AHD)
662827678 662827677 RSWL = n/a
662827676 662827675 RSWL = n/a
662803327 RSWL = n/a
662827661 662827660
662803987 RSWL = n/a
662803988
662803793 RSWL = n/a
662829652 RSWL = n/a
662822306 RSWL = n/a
662816791 RSWL = n/a
662814237 RSWL = n/a
662803787 RSWL = n/a
662829653 RSWL = n/a
662812946 RSWL = n/a
662803788 RSWL = n/a
662803934 RSWL = n/a
662803782 RSWL = n/a
662803907 RSWL = n/a
662803781 RSWL = n/a
662808987 RSWL = n/a
662821459 RSWL = n/a
662828076 RSWL = n/a
662830051 RSWL = n/a
662830673 RSWL = n/a
662813059 RSWL = n/a
662830047 RSWL = n/a
662828161 RSWL = n/a
662829713 RSWL = n/a
662829714 RSWL = n/a
662803878 RSWL = n/a
662827788 RSWL = n/a
662815376 RSWL = n/a
662803849 RSWL = n/a
662803855 RSWL=-9(m-AHD)
662803844 RSWL = n/a
662803857 RSWL = n/a
662803848 RSWL = n/a
662803854 RSWL = n/a
662829706 RSWL = n/a
662803839 RSWL = n/a
662816469 RSWL = n/a
662816692 RSWL = n/a
662803321 RSWL = n/a
662829610 RSWL = n/a
662826419 RSWL = n/a
662803267 RSWL = n/a
662826365 RSWL = n/a
662803319 RSWL = n/a
662803339 RSWL = n/a
662829620 RSWL = n/a
662829592 RSWL = n/a
662829904 662829980 RSWL = n/a
662803276 RSWL = n/a
662830040 662830042
662815531 RSWL = n/a
662829806 RSWL = n/a
662803773 RSWL = n/a
662831036 RSWL = n/a
662826821 RSWL = n/a
662829715 RSWL = n/a
662803765 RSWL = n/a
662803269 RSWL=2(m-AHD)

DHNO	Unit No	Class	Aquifer	Depth	Permit	Purpose	Status	SWL	RSWL	TDS	EC	pH	Easting	Northing	MGA Zone	Plan	Parcel	Title
50736	6628-3767	WW	Qpah(Q3)	28.96		IND				2925	5229	7.4	279101.4	6152739.85	54	F114373	A12	CT 6108 355
50749	6628-3780	WW	Qpah(Q3)	36.58		DOMIRR, STK	OPR			700	1271	6.5	278505.33	6154833.79	54	F114776	A62	CT 5752 923
50750	6628-3781	WW	Qpah(Q1)	12.19		STK	UKN			4700	8302	7	278893.41	6154532.79	54	F114777	A63	CT 5752 911
50808	6628-3839	WW					UKN						279022.44	6152441.84	54	F114643	A82	CT 5744 792
50817	6628-3848	WW	Qpah(Q4)	45.72		STK	UKN			499	907		278300.77	6152754.56	54	D113211	A553	CT 6177 611
50827	6628-3858	WW	Qpah(Q3)	27.43			UKN			2394	4297		278904.47	6152695.83	54	D113220	A558	CT 6177 742
50832	6628-3863	WW					UKN						278666.45	6152912.87	54	D121805	A11	CT 6232 824
50833	6628-3864	WW	Qpah(Q3)	27.89		IRRSTK	OPR			2323	4170		278666.43	6152913.86	54	D121805	A11	CT 6232 824
50834	6628-3865	WW	Qpah(Q4)	42.67			UKN			2024	3641		278666.43	6152913.86	54	D121805	A11	CT 6232 824
50836	6628-3867	WW	Qpah(Q4)	45.72		DOMIRR, STK	UKN						278666.47	6152915.86	54	D121805	A11	CT 6232 824
50840	6628-3871	WW	Qpah(Q4)	47.55		IRR	UKN	7.62	1.38	1015	1838	6.5	278421.33	6153903.77	54	D24232	A1	CT 5346 293
50855	6628-3886	WW	Qpah(Q1)				UKN	0.76	6.24	2795	5000		277160.4	6153998.85	54	D62589	A1	CT 6161 442
50857	6628-3888	WW	Qpah(Q4)	48.77		DOMIRR	OPR	0	8	890	1615		277943.81	6154220.57	54	F114706	A45	CT 5710 80
50865	6628-3896	WW				IRRSTK	UKN	0	9	2152	3868		277723.45	6154348.89	54	F114700	A39	CT 5755 245
50867	6628-3898	WW					UKN	3.05	5.95	2152	3868		277723.45	6154348.89	54	F114700	A39	CT 5755 245
50868	6628-3899	WW	Qpah(Q4)	48.77		IRRSTK		1.83	7.17	955	1731	6.8	277981.36	6154281.86	54			
50877	6628-3908	WW	Qpah(Q4)	43.28		DOMIRR	OPR	24.38	-14.38	641	1165		278171.36	6154675.79	54	F114710	A49	CT 5339 15
50893	6628-3924	WW	Qpah(Q4)	45.72			UKN	0.91	9.09	685	1244		278230.39	6154480.88	54	F114713	A52	CT 6160 834
50896	6628-3927	WW	Qpah(Q3)	24.38		IRR	OPR			626	1138		278041.24	6155009.74	54	D113208	A515	CT 6181 97
50908	6628-3939	WW	Qpah	0.3			UKN						278041.33	6155009.85	54	D113208	A515	CT 6181 97
51061	6628-4092	WW					UKN						275581.37	6153969.8	54	F103650	A15	CT 6129 150
51062	6628-4093	WW	Qpah(Q3)	27.43		STK	UKN	6.1	-1.1				275888.42	6154060.75	54	F40178	A4	CT 6129 150
51094	6628-4125	WW					UKN						275801.41	6152543.8	54	H105800	S320	CR 5766 822
59615	6628-12646	WW	Qpah(Q1)	21.3	13984	INV	UKN			9464	16213	7.2	276327.43	6154746.82	54			
59616	6628-12647	WW	Qpah(Q1)	10	13985	INV	UKN			12100	20431	7.4	276055.39	6154654.86	54	D80872	A309	CT 6043 356
59617	6628-12648	WW	Qpah(Q1)	12	13986	INV	UKN			15857	26215	7.2	275977.41	6154876.83	54	D4994	A1	CT 5657 584
59618	6628-12649	WW	Qpah(Q1)	10	13987	INV	UKN			9094	15607	7.4	276947.33	6155300.84	54	F101575	A7	CT 5115 218
59619	6628-12650	WW	Qpah(Q1)	10	13988	INV	UKN						276564.44	6155164.8	54	F213323	A96	CT 5594 574
60028	6628-13059	WW	Qpah(Q4)	45	10754	IRR	OPR			1317	2380	7.2	278054.38	6154297.83	54	F114708	A47	CT 5544 626
61463	6628-14494	WW	Qpah(Q1)	8	95279	OBS	OPR			11824	20000	7.1	276327.43	6154746.82	54			
61464	6628-14495	WW	Qpah(Q1)	8	95280	OBS	OPR			14351	23934	7.3	276066.43	6154502.73	54			
61925	6628-14956	WW	Qpah(Q1)	12	23276	INVOBS	OPR	4.55	2.06	7794	13500	7.1	276128.41	6154877.84	54	D4994	A2	CT 5660 33
61927	6628-14958	WW	Qpah(Q1)	11	23278	INVOBS	OPR	5.17	1.8	11192	19000	7	276256.43	6154915.8	54	D4994	A2	CT 5660 33
62816	6628-15847	WW	Qpah(Q3)	38	95877	OBS	OPR	8.57	-2.38	14862	24700		276981.38	6154406.07	54	D5852	A15	CT 5301 134
132753	6628-16281	WW	Qpah(Q1)	14.5	29546	OBS	UKN	2.55	4.85	16359	27000	7.2	276857.39	6153699.82	54	F115108	A4	CT 5723 299
181998	6628-20296	WW	Qpah	20	52798	INV		5.7	0.52				275996.75	6154846.56	54	D4994	A2	CT 5660 33
197982	6628-21453	WW	Qpah(Perched)	6		INVMON		3.47	2.47				276032.12	6154616.88	54			
197983	6628-21454	WW	Qpah(Perched)	6		INVMON	OPQ						276981.47	6154402.19	54	D5852	A15	CT 5301 134
197988	6628-21459	WW	Qpah(Perched)	6		INVMON							279143.27	6154293.06	54			
198900	6628-21595	WW	Qpah(Q1)	15		INV		1.19	5.18				276978.66	6154412.56	54	D5852	A15	CT 5301 134
198901	6628-21596	WW	Qpah(Q1)	15		INV		1.24	5.15				276981.04	6154405.07	54	D5852	A15	CT 5301 134
199570	6628-21652	WW	Qpah(Q2)	24				1.22	5.16				276980.05	6154408.15	54	D5852	A15	CT 5301 134
228834	6628-22817	WW	Qpah	21.5	122233								276287.84	6155078.95	54	D80872	A308	CT 6043 355
228835	6628-22818	WW	Qpah	9	122234								276467.65	6155263.46	54	D80872	A308	CT 6043 355
228836	6628-22819	WW	Qpah	9	122235								276036	6154743.84	54	D4994	A2	CT 5660 33
228837	6628-22820	WW	Qpah	12	122237								276028.12	6154811.36	54	D4994	A2	CT 5660 33
253573	6628-25058	WW	Qpah	19.45	151884	INV							277930.8	6153734.56	54	D24232	A18	CT 5111 400
274916	6628-26818	WW	Qpah	8.5	219705	INV							279212.43	6153625.89	54	D122429	A11	CT 6241 45
274919	6628-26821	WW	Qpah	8	219708	INV							279246.06	6153408.05	54	F114394	A33	CT 6241 46

284536	6628-27668	WW	Qhck	2.7				0.98					275602.39	6152683.46	54	H105800	S320	CR 5766 822
284537	6628-27669	WW	Qhck	1.2									275601.89	6152685.45	54	H105800	S320	CR 5766 822
284540	6628-27672	WW	Qhck	2.7				0.58					275779.25	6152667.24	54	H105800	S320	CR 5766 822
284542	6628-27674	WW	Qhck	1.1				0.57					275777.32	6152667.41	54	H105800	S320	CR 5766 822
294219	6628-28832	WW		6	281965	INV							276072.37	6155011.55	54	D4994	A1	CT 5657 584
294220	6628-28833	WW		18.5	281964	INV							276142.92	6154831.35	54	D4994	A2	CT 5660 33
294221	6628-28834	WW		6	281962	INV							276013.75	6154701.79	54			
294222	6628-28835	WW		6.5	281963	INV							276097.17	6154515.8	54	D80872	A309	CT 6043 356
294223	6628-28836	WW		6.5	281966	INV							276352.08	6154814.79	54	D80872	A308	CT 6043 355
310740	6628-29610	WW		9	324670	MON							278225.77	6152061.49	54	F114627	A66	CT 5550 653
312743	6628-29706	WW		8	326626	INV							278310.76	6152659.45	54			
312751	6628-29712	WW		6	326531	ENV							279085.72	6153873.46	54	D16044	A10	CT 5923 366
312752	6628-29713	WW		9	326533	ENV							279019.75	6153896.52	54	D16044	A10	CT 5923 366
312753	6628-29714	WW		8	326532	ENV							279042.76	6153926.48	54	D16044	A10	CT 5923 366
312938	6628-29736	WW		8.5	326626	INV							278791.73	6153997.48	54			
313705	6628-29814	WW		8	304475	INV							279067.72	6152902.53	54			
313706	6628-29815	WW		5.5	304477	INV							278462.94	6154775.16	54			
315406	6628-30047	WW		18	338977	INV							278759.26	6153915.14	54			
315996	6628-30156	WW		5	338612	INV							275903.16	6154606.12	54	F40178	A4	CT 6129 150
315997	6628-30157	WW		5	338611	INV							275969.27	6154355.22	54	F40178	A4	CT 6129 150
315998	6628-30158	WW		4	338610	INV							275715.07	6154478.63	54	F40178	A4	CT 6129 150
315999	6628-30159	WW		4.5	338614	INV							275848.27	6154354.43	54	F40178	A4	CT 6129 150
316000	6628-30160	WW		4	338609	INV							275648.57	6154286.42	54	F40178	A4	CT 6129 150
316001	6628-30161	WW		4	338608	INV							275702.56	6154083.62	54	F40178	A4	CT 6129 150
352396	6628-30986	WW											277946.76	6154886.52	54	F114491	A30	CT 6056 11
353883	6628-31091	WW		2.7		MON		1	1.46	130000	152941	7.2	275779.77	6152667.53	54	H105800	S320	CR 5766 822
353884	6628-31092	WW		1.1				0.98	1.5	109650	129000	7.1	275777.77	6152667.53	54	H105800	S320	CR 5766 822
353892	6628-31100	WW		1.22		MON		-0.05	1.06	75600	108000		275683.77	6152557.51	54	H105800	S320	CR 5766 822
355076	6628-31239	WW		5.5	384998	MON							275794.34	6153570.79	54	H105800	S185	CT 5922 939
355112	6628-31247	WW		5	384999	MON							276068.86	6152749.66	54	H105800	S186	CT 5922 939
355489	6628-31337	WW		9	385697	MON							277613.76	6153131.51	54	H105800	S5017	CT 5922 939
369174	6628-31817	WW		6	416150	MON		2.85					276214.77	6154933.52	54	D4994	A1	CT 5657 584
369175	6628-31818	WW		5.5	416151	MON		2.95					276065.77	6154887.53	54	D4994	A1	CT 5657 584

Appendix H – Soil Logs

SOIL BOREHOLE BH01

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,291.22
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 29-Jun-22	**NORTHING** 6,153,741.61
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** AT

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15 0.2		SM	Silty SAND, brown, with trace organics	SM	BH01_0.0-0.1 BH01_0.1-0.2
	0.25 0.3 0.35 0.4 0.45 0.5		CH	CLAY, orange-brown, with gravels		BH01_0.3-0.5
	0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

Disclaimer This log is intended for environmental not geotechnical purposes.
produced by ESlog.ESdat.net on 14 Jul 2022

SOIL BOREHOLE BH02

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,220
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 29-Jun-22	**NORTHING** 6,153,682
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** JA

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15 0.2		SM	Silty SAND, brown, fine to medium grained, low plasticity fines, with trace organics	D	BH02_0.0-0.1 BH02_0.1-0.2
	0.25 0.3 0.35 0.4 0.45 0.5		CH-MH	Silty CLAY, orange-brown, high plasticity, with fine gravels	SM	BH02_0.2-0.5
	0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

SOIL BOREHOLE BH03

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,291.96
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 29-Jun-22	**NORTHING** 6,153,710.8
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** AT

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15		SM	Silty SAND, brown, with trace organics	SM	BH03_0.0-0.1 BH03_0.1-0.2
	0.2 0.25 0.3 0.35		CL	CLAY, orange-brown, with fine grained sand and trace gravels	SM	BH03_0.3-0.5
	0.4 0.45 0.5		CL-SC	Sandy CLAY, brown, low plasticity, fine to medium grained sand	SM	
	0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

Disclaimer This log is intended for environmental not geotechnical purposes.
produced by ESlog.ESdat.net on 14 Jul 2022

SOIL BOREHOLE BH04

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,352
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 29-Jun-22	**NORTHING** 6,153,669
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** JA

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15 0.2		SM	Silty SAND, dark brown, fine to medium grained, low plasticity fines, with trace organics	SM	BH04_0.0-0.1 BH04_0.1-0.2
	0.25 0.3 0.35 0.4 0.45 0.5		CL-SC	Sandy CLAY, orange-brown, medium plasticity, trace fine gravels	SM	BH04_0.2-0.5
	0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

SOIL BOREHOLE BH05

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,552.3
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 29-Jun-22	**NORTHING** 6,153,470.45
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** AT

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15		SM	Silty SAND, dark brown, fine to medium grained, low plasticity fines, with trace organics	M	BH05_0.0-0.1 BH05_0.1-0.3
	0.2 0.25 0.3 0.35 0.4 0.45		CH	CLAY, orange-brown, high plasticity, trace fine gravels and medium grained sand	W	BH05_0.3-0.5
	0.5 0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

SOIL BOREHOLE BH06

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,218.63
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 29-Jun-22	**NORTHING** 6,153,585.7
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** AT

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15 0.2		SM	Silty SAND, red-brown, fine to medium grained, low plasticity fines, with trace organics	SM	BH06_0.0-0.1 BH06_0.1-0.2
	0.25 0.3 0.35 0.4		CL-SC	Sandy CLAY, red-brown, low plasticity, fine to medium grained sand, trace organics	SM	BH06_0.3-0.5
	0.45 0.5		CH	CLAY, orange-brown, high plasticity, with fine gravels	M	
	0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

SOIL BOREHOLE BH07

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,294.2
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 29-Jun-22	**NORTHING** 6,153,618.36
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** AT

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15		SM	Silty SAND, brown, fine to medium grained, low plasticity fines, with trace organics	SM	BH07_0.0-0.1 BH07_0.1-0.2
	0.2 0.25 0.3 0.35 0.4 0.45		CH	Sandy CLAY, dark brown, medium plasticity, with trace fine gravel	SM	BH07_0.2-0.5
	0.5 0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

SOIL BOREHOLE BH08

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,378
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 29-Jun-22	**NORTHING** 6,153,603
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** JA

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15 0.2 0.25 0.3		SM	Silty SAND, dark brown, fine to medium grained, low plasticity fines, with organics	SM	BH08_0.0-0.1 BH08_0.1-0.2
	0.35 0.4 0.45 0.5		CH	CLAY, orange-brown, high plasticity, with fine gravels	SM	BH08_0.3-0.5
	0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

SOIL BOREHOLE BH09

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,550.81
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 29-Jun-22	**NORTHING** 6,153,532.08
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** AT

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15		SM	Silty SAND, brown, fine grained, low plasticity fines, with trace organics	M	BH09_0.0-0.1 BH09_0.1-0.2
	0.2 0.25		CL-ML	Silty CLAY, orange-brown, low plasticity, fine to medium grained sand	M	
	0.3 0.35 0.4 0.45 0.5		CH	CLAY, orange-brown, high plasticity	W	BH09_0.3-0.5
	0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

SOIL BOREHOLE BH10

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,195.44
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 30-Jun-22	**NORTHING** 6,153,492.65
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** AT

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05		SM	Silty SAND, brown, fine to medium grained, low plasticity fines, with trace organics	SM	BH10_0.0-0.1
	0.1		CL-SC	Sandy CLAY, orange-brown, medium plasticity, fine to medium grained sand, with fine gravels	SM	BH10_0.1-0.2
	0.15					
	0.2		CH	CLAY, orange-brown, high plasticity, with fine grained sand and gravels	SM	
	0.25					
	0.3					BH10_0.3-0.5
	0.35					
	0.4					
	0.45					
	0.5			Termination Depth at: 0.50 m.		
	0.55					
	0.6					
	0.65					
	0.7					
	0.75					
	0.8					
	0.85					
	0.9					
	0.95					

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 14 Jul 2022

SOIL BOREHOLE BH11

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,297.18
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 30-Jun-22	**NORTHING** 6,153,495.11
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** AT

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15		SM	Silty SAND, brown, fine to medium grained, low plasticity fines, with trace organics		BH11_0.0-0.1
	0.2 0.25 0.3 0.35		CL-SC	Sandy CLAY, red-brown, low plasticity, fine to medium grained sand		BH11_0.2-0.4
	0.4 0.45 0.5		CH	CLAY, orange-brown, high plasticity, with fine gravels		BH11_0.4-0.5
	0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

Disclaimer This log is intended for environmental not geotechnical purposes.
produced by ESlog.ESdat.net on 14 Jul 2022

SOIL BOREHOLE BH12

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,373.49
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 30-Jun-22	**NORTHING** 6,153,496.96
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** AT

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15 0.2 0.25		SM	Silty SAND, brown, fine to medium grained, low plasticity fines, with trace organics	SM	BH12_0.0-0.1 BH12_0.1-0.25
	0.3 0.35 0.4 0.45 0.5		SM	Silty SAND, red-brown, fine to medium grained, medium plasticity fines		BH12_0.25-0.5
	0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

SOIL BOREHOLE BH13

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,501.42
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 30-Jun-22	**NORTHING** 6,153,469.22
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** AT

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05		SM	Silty SAND, brown, fine to medium grained, low plasticity fines, with trace organics	SM	BH13_0.0-0.1
	0.1					
	0.15					
	0.2		CL-SC	Sandy CLAY, brown with orange mottling, medium plasticity, fine to medium grained sand	M	BH13_0.2-0.3
	0.25					
	0.3		CH	CLAY, orange-brown, high plasticity, with fine gravels	W	
	0.35					
	0.4					
	0.45					
	0.5					BH13_0.5-0.5
	0.55			Termination Depth at: 0.50 m.		
	0.6					
	0.65					
	0.7					
	0.75					
	0.8					
	0.85					
	0.9					
	0.95					

Disclaimer This log is intended for environmental not geotechnical purposes.
produced by ESlog.ESdat.net on 14 Jul 2022

SOIL BOREHOLE BH14

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,222.37
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 30-Jun-22	**NORTHING** 6,153,431.64
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** AT

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15		SM	Silty SAND, brown, fine to medium grained, low plasticity fines, with trace organics	SM	BH14_0.0-0.15
	0.2 0.25 0.3		CL-SC	Sandy CLAY, brown, low plasticity, fine to medium grained sand	SM	BH14_0.15-0.35
	0.35 0.4 0.45		CH	CLAY, orange-brown, high plasticity, with fine gravels and trace sand	W	BH14_0.35-0.5
	0.5 0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

SOIL BOREHOLE BH15

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,426
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 30-Jun-22	**NORTHING** 6,153,410
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** JA

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15		SM	Silty SAND, brown, fine to medium grained, low plasticity fines, with trace organics	SM	BH15_0.0-0.15
	0.2 0.25 0.3 0.35 0.4 0.45 0.5		CH	CLAY, orange-brown, high plasticity, with trace fine gravels	M	BH15_0.15-0.3 BH15_0.3-0.5
	0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 14 Jul 2022

SOIL BOREHOLE BH16

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,502.91
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 30-Jun-22	**NORTHING** 6,153,467.59
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** AT

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15		SM	Silty SAND, brown, fine to medium grained, low plasticity fines, with trace organics	W	BH16_0.0-0.1
	0.2 0.25 0.3 0.35		CL-SC	Sandy CLAY, mottled orange-brown, medium plasticity, fine to medium grained sand	W	BH16_0.2-0.3 BH16_0.3-0.5
	0.4 0.45 0.5		CH	CLAY, orange-brown, high plasticity, with fine gravels	W	
	0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

SOIL BOREHOLE BH17

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,533.79
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 29-Jun-22	**NORTHING** 6,153,408.82
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** AT

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5		SM	Silty SAND, dark brown, fine to medium grained, low plasticity fines, with trace organics	M	BH17_0.0-0.1 BH17_0.1-0.2
			SM	Silty SAND, orange-brown, fine to medium grained, low plasticity fines, with trace fine gravels	W	BH17_0.2-0.5
			CH	CLAY, orange-brown, high plasticity		
	0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

SOIL BOREHOLE BH18

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,455.77
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 30-Jun-22	**NORTHING** 6,153,252.3
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** AT

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05		SM	Silty SAND, brown, fine to medium grained, low plasticity fines, with trace organics	W	BH18_0.0-0.1
	0.1					
	0.15					
	0.2		CL-SC	CLAY, red-brown to orange-brown, high plasticity, with sand	W	BH18_0.2-0.3
	0.25					
	0.3		CH	CLAY, orange-brown, high plasticity, with fine gravels	W	BH18_0.3-0.5
	0.35					
	0.4					
	0.45					
	0.5			Termination Depth at: 0.50 m.		
	0.55					
	0.6					
	0.65					
	0.7					
	0.75					
	0.8					
	0.85					
	0.9					
	0.95					

Disclaimer This log is intended for environmental not geotechnical purposes.
produced by ESlog.ESdat.net on 14 Jul 2022

SOIL BOREHOLE BH19

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,574
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 29-Jun-22	**NORTHING** 6,153,327
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** JA

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05		SM	Silty SAND, brown, fine to medium grained, low plasticity fines, with trace slag	W	BH19_0.0-0.1
	0.1		ML-SM	Sandy SILT, red-brown, low plasticity, with red brick, slag and gravels	W	BH19_0.1-0.2
	0.15					
	0.2					
	0.25					
	0.3		CH	CLAY, orange-brown, high plasticity, with trace fine to medium gravels and medium grained sand	W	BH19_0.3-0.5
	0.35					
	0.4					
	0.45					
	0.5			Termination Depth at: 0.50 m.		
	0.55					
	0.6					
	0.65					
	0.7					
	0.75					
	0.8					
	0.85					
	0.9					
	0.95					

Disclaimer This log is intended for environmental not geotechnical purposes.
produced by ESlog.ESdat.net on 14 Jul 2022

SOIL BOREHOLE BH20

PROJECT NUMBER 63155	**DRILLING COMPANY** JBS&G	**EASTING** 277,673
PROJECT NAME Waterloo Corner Soils July 2022	**DRILLING DATE** 29-Jun-22	**NORTHING** 6,153,158
CLIENT Renascor	**DRILL RIG** N/A	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**DRILLING METHOD** Hand Auger	**COORD SOURCE** GPS
	DIAMETER 75 mm	**LOGGED BY** JA

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples
HA	0.05 0.1 0.15 0.2		SM	Silty SAND, brown, fine grained, low plasticity fines, with trace organics	M	BH20_0.0-0.1 BH20_0.1-0.2
	0.25 0.3		CH-MH	Silty CLAY, red-brown, high plasticity, with gravel	SM	
	0.35 0.4 0.45 0.5		CH	CLAY, orange-brown with some brown mottling, high plasticity	W	BH20_0.3-0.5
	0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95			Termination Depth at: 0.50 m.		

Appendix I – NATA Laboratory Documentation (SOIL)

CHAIN OF CUSTODY DOCUMENTATION

JBS&G (Australia) Pty Ltd

Adelaide
100 Hutt Street ADELAIDE SA 5000
T: +61 8 8431 7113 · F: +61 8 8431 7115
ACN 100 220 479 · ABN 62 100 220 479

JBS&G

CLIENT: JBS&G	LABORATORY: Eurofins	LABORATORY BATCH NO.:	
SITE/PROJECT NAME: Renascor Waterloo Cnr Rd	COC Reference #: 5641	SAMPLERS: JA AT	
SEND REPORT TO: JBS&G Australia Pty Ltd	SEND INVOICE TO: JBS&G Australia Pty Ltd	PHONE: 08 8431 7113 FAX: 08 8431 7115	
DATA NEEDED BY: **Standard TAT**	REPORT NEEDED BY: **Standard TAT**	REPORT FORMAT: HARD: NO FAX: NO E-MAIL: YES	
SITE/PROJECT NUMBER: 63155	**QUOTE #:**	JBS&G OFFICE TO SEND RESULTS: South Australia	
RELINQUISHED BY:		**RECEIVED BY**	METHOD OF SHIPMENT: Overnight
NAME : Jack Ayers	DATE: 30/06/2022	NAME: DATE:	CONSIGNMENT NOTE NO.
OF: JBS&G (Australia) Pty Ltd	TIME:	OF: TIME:	
NAME:	DATE:	NAME : DATE:	TRANSPORT CO. NAME.
OF:	TIME:	OF: TIME:	
P.O. NO.:	COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:	ANALYSIS REQUIRED	
FOR LAB USE ONLY COOLER SEAL Yes ..... No ..... Broken ..... Intact .... COOLER TEMP: deg.C	**Please forward results and invoice to:** **labresults@jbsg.com.au** msarunic@jbsg.com.au jayers@jbsg.com.au atschirn@jbsg.com.au		***Container Type and Preservative Codes:** P = Neutral Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Jar; S = Solvent Washed Glass Bottle; VC = HCL Preserved Vial; PC = HCL Preserved Plastic; PS = Sulfuric Acid Preserved Plastic; BS = Sulfuric Acid Preserved Glass Bottle; Z = Zinc Acetate Preserved Bottle; ST =Sodium Thiosulphate Preserved Plastic, E = EDTA Preserved Bottles; ST = Sterile Bottle; O = Other.

SAMPLE DATA				CONTAINER DATA			M12: Heavy Metals Suite	B14: OCP & OPP	B9: Metals, TRH, BTEX, PAH & OCP	PFAS: Short Suite	B19A: Nutrients	R7: SA Waste Screen	R21: NEPM Screen for Soil Classification	M8: Metals	BTEX	Asbestos	Coliforms (total)	PAH					'NOTES
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	NO.	pH field																	
BH01_0.0-0.1	SOIL	29/06/2022		1 Jar					X		X												Some Jars may be labelled "**SB**XX_depths". This is a field error and all soils samples should be reported with the prefix "**BH**XX_depths"
BH01_0.1-0.2	SOIL	29/06/2022		1 Jar																			
BH01_0.3-0.5	SOIL	29/06/2022		1 Jar																			
BH02_0.0-0.1	SOIL	29/06/2022		1 Jar			X	X															
BH02_0.1-0.2	SOIL	29/06/2022		1 Jar																			
BH02_0.2-0.5	SOIL	29/06/2022		1 Jar																			
BH03_0.0-0.1	SOIL	29/06/2022		1 Jar			X											X					
BH03_0.1-0.2	SOIL	29/06/2022		1 Jar																			
BH03_0.3-0.5	SOIL	29/06/2022		1 Jar																			
BH04_0.0-0.1	SOIL	29/06/2022		1 Jar			X	X		X													
BH04_0.1-0.2	SOIL	29/06/2022		1 Jar																			# 903014
BH04_0.2-0.5	SOIL	29/06/2022		1 Jar																			Matthew 4/7/22
BH05_0.0-0.1	SOIL	29/06/2022		1 Jar					X				X										
BH05_0.1-0.3	SOIL	29/06/2022		1 Jar																			
BH05_0.3-0.5	SOIL	29/06/2022		1 Jar																			
BH06_0.0-0.1	SOIL	29/06/2022		1 Jar					X		X												
BH06_0.1-0.2	SOIL	29/06/2022		1 Jar																			
BH06_0.3-0.5	SOIL	29/06/2022		1 Jar																			
BH07_0.0-0.1	SOIL	29/06/2022		1 Jar			X	X		X													
BH07_0.1-0.2	SOIL	29/06/2022		1 Jar																			
BH07_0.2-0.5	SOIL	29/06/2022		1 Jar																			
BH08_0.0-0.1	SOIL	29/06/2022		1 Jar			X	X			X												
BH08_0.1-0.2	SOIL	29/06/2022		1 Jar																			
BH08_0.3-0.5	SOIL	29/06/2022		1 Jar																			
BH09_0.0-0.1	SOIL	29/06/2022		1 Jar			X			X								X					
BH09_0.1-0.2	SOIL	29/06/2022		1 Jar																			
BH09_0.3-0.5	SOIL	29/06/2022		1 Jar																			
BH10_0.0-0.1	SOIL	30/06/2022		1 Jar					X								X						

CHAIN OF CUSTODY DOCUMENTATION

JBS&G (Australia) Pty Ltd

Adelaide
100 Hutt Street ADELAIDE SA 5000
T: +61 8 8431 7113 · F: +61 8 8431 7115
ACN 100 220 479 · ABN 62 100 220 479

JBS&G

CLIENT: JBS&G	LABORATORY: Eurofins	LABORATORY BATCH NO.:	
SITE/PROJECT NAME: Renascor Waterloo Cnr Rd	COC Reference #: 5641	SAMPLERS: JA AT	
SEND REPORT TO: JBS&G Australia Pty Ltd	SEND INVOICE TO: JBS&G Australia Pty Ltd	PHONE: 08 8431 7113 FAX: 08 8431 7115	
DATA NEEDED BY: **Standard TAT**	REPORT NEEDED BY: **Standard TAT**	REPORT FORMAT: HARD: NO FAX: NO E-MAIL: YES	
SITE/PROJECT NUMBER: 63155	**QUOTE #:**	JBS&G OFFICE TO SEND RESULTS: South Australia	
RELINQUISHED BY:		**RECEIVED BY**	METHOD OF SHIPMENT: Overnight
NAME : Jack Ayers	DATE: 30/06/2022	NAME: DATE:	CONSIGNMENT NOTE NO.
OF: JBS&G (Australia) Pty Ltd	TIME:	OF: TIME:	
NAME:	DATE:	NAME: DATE:	TRANSPORT CO. NAME.
OF:	TIME:	OF: TIME:	
P.O. NO.:	COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:	ANALYSIS REQUIRED	
FOR LAB USE ONLY COOLER SEAL Yes ..... No ..... Broken ..... Intact .... COOLER TEMP: deg.C	**Please forward results and invoice to:** **labresults@jbsg.com.au** msarunic@jbsg.com.au jayers@jbsg.com.au atschirn@jbsg.com.au		***Container Type and Preservative Codes:** P = Neutral Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Jar; S = Solvent Washed Glass Bottle; VC = HCL Preserved Vial; PC = HCL Preserved Plastic; PS = Sulfuric Acid Preserved Plastic; BS = Sulfuric Acid Preserved Glass Bottle; Z = Zinc Acetate Preserved Bottle; ST =Sodium Thiosuplhate Preserved Plastic, E = EDTA Preserved Bottles; ST = Sterile Bottle; O = Other.

SAMPLE DATA				CONTAINER DATA			M12: Heavy Metals Suite	B14: OCP & OPP	B9: Metals, TRH, BTEX, PAH & OCP	PFAS: Short Suite	B19A: Nutrients	R7: SA Waste Screen	R21: NEPM Screen for Soil Classification	M8: Metals	BTEX	Asbestos	Coliforms (total)	PAH					'NOTES
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	NO.	pH field																	
BH10_0.1-0.2	SOIL	30/06/2022		1 Jar																			
BH10_0.3-0.5	SOIL	30/06/2022		1 Jar																			
BH11_0.0-0.1	SOIL	30/06/2022		1 Jar			X	X			X												
BH11_0.2-0.4	SOIL	30/06/2022		1 Jar																			
BH11_0.4-0.5	SOIL	30/06/2022		1 Jar																			
BH12_0.0-0.1	SOIL	30/06/2022		1 Jar			X	X															
BH12_0.1-0.25	SOIL	30/06/2022		1 Jar																			
BH12_0.25-0.5	SOIL	30/06/2022		1 Jar																			#903014
BH13_0.0-0.1	SOIL	30/06/2022		1 Jar					X														Matthew 4/7/22
BH13_0.2-0.3	SOIL	30/06/2022		1 Jar																			
BH13_0.5-0.5	SOIL	30/06/2022		1 Jar																			
BH14_0.0-0.15	SOIL	30/06/2022		1 Jar								X											
BH14_0.15-0.35	SOIL	30/06/2022		1 Jar																			
BH14_0.35-0.5	SOIL	30/06/2022		1 Jar																			
BH15_0.0-0.15	SOIL	30/06/2022		1 Jar			X	X															
BH15_0.15-0.3	SOIL	30/06/2022		1 Jar																			
BH15_0.3-0.5	SOIL	30/06/2022		1 Jar																			
BH16_0.0-0.1	SOIL	30/06/2022		1 Jar			X	X		X													
BH16_0.2-0.3	SOIL	30/06/2022		1 Jar																			
BH16_0.3-0.5	SOIL	30/06/2022		1 Jar																			
BH17_0.0-0.1	SOIL	29/06/2022		1 Jar					X														
BH17_0.1-0.2	SOIL	29/06/2022		1 Jar																			
BH17_0.2-0.5	SOIL	29/06/2022		1 Jar																			
BH18_0.0-0.1	SOIL	30/06/2022		1 Jar			X			X	X						X	X					
BH18_0.2-0.3	SOIL	30/06/2022		1 Jar																			
BH18_0.3-0.5	SOIL	30/06/2022		1 Jar																			
BH19_0.0-0.1	SOIL	29/06/2022		1 Jar			X				X						X						
BH19_0.1-0.2	SOIL	29/06/2022		1 Jar								X											

CHAIN OF CUSTODY DOCUMENTATION

JBS&G (Australia) Pty Ltd

Adelaide
100 Hutt Street ADELAIDE SA 5000
T: +61 8 8431 7113 · F: +61 8 8431 7115
ACN 100 220 479 · ABN 62 100 220 479

JBS&G

CLIENT: JBS&G	LABORATORY: Eurofins	LABORATORY BATCH NO.:	
SITE/PROJECT NAME: Renascor Waterloo Cnr Rd	COC Reference #: 5641	SAMPLERS: JA AT	
SEND REPORT TO: JBS&G Australia Pty Ltd	SEND INVOICE TO: JBS&G Australia Pty Ltd	PHONE: 08 8431 7113 FAX: 08 8431 7115	
DATA NEEDED BY: **Standard TAT**	REPORT NEEDED BY: **Standard TAT**	REPORT FORMAT: HARD: NO FAX: NO E-MAIL: YES	
SITE/PROJECT NUMBER: 63155	**QUOTE #:**	JBS&G OFFICE TO SEND RESULTS: South Australia	
RELINQUISHED BY:		**RECEIVED BY**	METHOD OF SHIPMENT: Overnight
NAME : Jack Ayers	DATE: 30/06/2022	NAME : DATE:	CONSIGNMENT NOTE NO.
OF: JBS&G (Australia) Pty Ltd	TIME:	OF: TIME:	
NAME:	DATE:	NAME : DATE:	TRANSPORT CO. NAME.
OF:	TIME:	OF: TIME:	
P.O. NO.:	COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:	ANALYSIS REQUIRED	
FOR LAB USE ONLY COOLER SEAL Yes ..... No ..... Broken ..... Intact .... COOLER TEMP: deg.C	**Please forward results and invoice to:** **labresults@jbsg.com.au** msarunic@jbsg.com.au jayers@jbsg.com.au atschirn@jbsg.com.au		***Container Type and Preservative Codes:** P = Neutral Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Jar; S = Solvent Washed Glass Bottle; VC = HCL Preserved Vial; PC = HCL Preserved Plastic; PS = Sulfuric Acid Preserved Plastic; BS = Sulfuric Acid Preserved Glass Bottle; Z = Zinc Acetate Preserved Bottle; ST =Sodium Thiosuplhate Preserved Plastic, E = EDTA Preserved Bottles; ST = Sterile Bottle; O = Other.

SAMPLE DATA				CONTAINER DATA			M12: Heavy Metals Suite	B14: OCP & OPP	B9: Metals, TRH, BTEX, PAH & OCP	PFAS: Short Suite	B19A: Nutrients	R7: SA Waste Screen	R21: NEPM Screen for Soil Classification	M8: Metals	BTEX	Asbestos	Coliforms (total)	PAH					'NOTES
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	NO.	pH field																	
BH19_0.3-0.5	SOIL	29/06/2022		1 Jar																			
BH20_0.0-0.1	SOIL	29/06/2022		1 Jar			X				X							X					
BH20_0.1-0.2	SOIL	29/06/2022		1 Jar																			
BH20_0.3-0.5	SOIL	29/06/2022		1 Jar																			
ACM01	CEMENT SHEET	29/06/2022														X							
DUP01	SOIL	29/06/2022		1 Jar																			
DUP02	SOIL	30/06/2022		1 Jar																			
SPLIT01	SOIL	29/06/2022		1 Jar																			
SPLIT02	SOIL	30/06/2022		1 Jar																			PLEASE FORWARD TO ENVIROLAB
TB01	WATER	29/06/2022		2 V											X								
RB01	WATER	30/06/2022		1 Metals										X									
						TOTAL	13	8	6	5	7	2	1	1	1	1	3	4	0	0	0	0	

#903014
Matthew 4/7/22

CHAIN OF CUSTODY DOCUMENTATION

JBS&G (Australia) Pty Ltd

Adelaide
100 Hutt Street ADELAIDE SA 5000
T: +61 8 8431 7113 · F: +61 8 8431 7115
ACN 100 220 479 · ABN 62 100 220 479

JBS&G

CLIENT: JBS&G	LABORATORY: Eurofins	LABORATORY BATCH NO.:
SITE/PROJECT NAME: Renascor Waterloo Cnr Rd	COC Reference #: 5641	SAMPLERS: JA AT
SEND REPORT TO: JBS&G Australia Pty Ltd	SEND INVOICE TO: JBS&G Australia Pty Ltd	PHONE: 08 8431 7113 FAX: 08 8431 7115
DATA NEEDED BY: **Standard TAT**	REPORT NEEDED BY: **Standard TAT**	REPORT FORMAT: HARD: NO FAX: NO E-MAIL: YES
SITE/PROJECT NUMBER: 63155	**QUOTE #:**	JBS&G OFFICE TO SEND RESULTS: South Australia
RELINQUISHED BY:		**RECEIVED BY**
NAME : Jack Ayers	DATE: 30/06/2022	NAME : DATE:
OF: JBS&G (Australia) Pty Ltd	TIME:	OF: TIME:
NAME:	DATE:	NAME : DATE:
OF:	TIME:	OF: TIME:

P.O. NO.:	COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:	METHOD OF SHIPMENT: Overnight
FOR LAB USE ONLY COOLER SEAL Yes ..... No ..... Broken ..... Intact .... COOLER TEMP: deg.C	**Please forward results and invoice to:** **labresults@jbsg.com.au** msarunic@jbsg.com.au jayers@jbsg.com.au atschirn@jbsg.com.au	CONSIGNMENT NOTE NO. TRANSPORT CO. NAME.

SAMPLE DATA				CONTAINER DATA			ANALYSIS REQUIRED																	
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	NO.	pH field	M12: Heavy Metals Suite	B14: OCP & OPP	B9: Metals, TRH, BTEX, PAH & OCP	PFAS: Short Suite	B19A: Nutrients	R7: SA Waste Screen	R21: NEPM Screen for Soil Classification	M8: Metals	BTEX	Asbestos	Coliforms (total)	PAH						
BH19_0.3-0.5	SOIL	29/06/2022		1 Jar																				
BH20_0.0-0.1	SOIL	29/06/2022		1 Jar			X				X							X						
BH20_0.1-0.2	SOIL	29/06/2022		1 Jar																				
BH20_0.3-0.5	SOIL	29/06/2022		1 Jar																				
ACM01	CEMENT SHEET	29/06/2022														X								
DUP01	SOIL	29/06/2022		1 Jar																				
DUP02	SOIL	30/06/2022		1 Jar																				
SPLIT01	SOIL	29/06/2022		1 Jar																				
SPLIT02	SOIL	30/06/2022		1 Jar																				
TB01	WATER	29/06/2022		2 V											X									
RB01	WATER	30/06/2022		1 Metals										X										
					TOTAL		13	8	6	5	7	2	1	1	1	1	3	4	0	0	0	0		

***Container Type and Preservative Codes:**
P = Neutral Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Jar; S = Solvent Washed Glass Bottle; VC = HCL Preserved Vial; PC = HCL Preserved Plastic; PS = Sulfuric Acid Preserved Plastic; BS = Sulfuric Acid Preserved Glass Bottle; Z = Zinc Acetate Preserved Bottle; ST =Sodium Thiosuplhate Preserved Plastic, E = EDTA Preserved Bottles; ST = Sterile Bottle; O = Other.

'NOTES

PLEASE FORWARD TO ENVIROLAB

#490301a
Matthew 4/7/22

COPY 9

eurofins | Environment Testing

PROJECT INFORMATION

Date Received: 30/6/22

Company: JBS&G

Contact person: Jack Ayers

Contact Number: 0459534775

Contact E-mail: jayers@jbsg.com.au

Project Name/site: Renascor Waterloo Cnr Road

Project Number: 61355

#403014
Matthew 4/7/22

COC: Attached ☐
E-mailed ☑
Not received ☐

5.8°C
−1.2°C
4.6°C
on ice

2 x Esky's.

Last modified on: 16 October 2019	Approved on: 16 October 2019	Version: QS1039_R2
Last modified by: H. Le	Approver: M. Makarios	Page 1 of 1
Editorial Committee: T. Lakeland, F. Sanjaya, H. Le, M. Makarios		Next required review date: 16 October 2022

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	4/52 Industrial Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield East NSW 2304
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	PO Box 60 Wickham 2293
Tel: +61 3 8564 5000	Tel: +61 3 8564 5000	Tel: +61 2 9900 8400	Tel: +61 2 6113 8091	Tel: +61 7 3902 4600	Tel: +61 2 4968 8448
NATA# 1261 Site# 1254	NATA# 1261 Site# 1254	NATA# 1261 Site# 18217		NATA# 1261 Site# 20794	NATA# 1261 Site# 25079

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Christchurch
35 O'Rorke Road	43 Detroit Drive
Penrose,	Rolleston,
Auckland 1061	Christchurch 7675
Tel: +64 9 526 45 51	Tel: 0800 856 450
IANZ# 1327	IANZ# 1290

Sample Receipt Advice

Company name:	JBS & G Australia (SA) P/L
Contact name:	Jack Ayers
Project name:	RENASCOR WATERLOO CNR RD
Project ID:	63155
Turnaround time:	5 Day
Date/Time received	Jul 4, 2022 6:13 PM
Eurofins reference	903019

Sample Information

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

Notes

Samples received by the laboratory after 5.30pm are deemed to have been received the following working day.

Contact

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

Michael Cassidy on phone : +61 3 8564 5000 or by email: MichaelCassidy@eurofins.com

Results will be delivered electronically via email to Jack Ayers - jayers@jbsg.com.au.

Global Leader - Results you can trust

JBS & G Australia (SA) P/L
100 Hutt St
Adelaide
SA 5000

NATA Accredited
Accreditation Number 1261
Site Number 1254

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

Attention: **Jack Ayers**

Report **903019-S**
Project name RENASCOR WATERLOO CNR RD
Project ID 63155
Received Date Jul 04, 2022

Client Sample ID			**BH01_0.0-0.1**	**BH02_0.0-0.1**	**BH03_0.0-0.1**	**BH04_0.0-0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M22-JI0006698**	**M22-JI0006699**	**M22-JI0006700**	**M22-JI0006701**
Date Sampled			**Jun 29, 2022**	**Jun 29, 2022**	**Jun 29, 2022**	**Jun 29, 2022**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	< 50	-	-	-
TRH C29-C36	50	mg/kg	< 50	-	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	-	-	-
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	-	-
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	< 100	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	91	-	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-

Client Sample ID			BH01_0.0-0.1	BH02_0.0-0.1	BH03_0.0-0.1	BH04_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006698	M22-JI0006699	M22-JI0006700	M22-JI0006701
Date Sampled			Jun 29, 2022	Jun 29, 2022	Jun 29, 2022	Jun 29, 2022
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	119	-	129	-
p-Terphenyl-d14 (surr.)	1	%	84	-	97	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Dibutylchlorendate (surr.)	1	%	74	100	-	71
Tetrachloro-m-xylene (surr.)	1	%	89	93	-	87
Nitrate & Nitrite (as N)	5	mg/kg	< 5	-	-	-
Total Kjeldahl Nitrogen (as N)	10	mg/kg	530	-	-	-
Total Nitrogen (as N)*	10	mg/kg	530	-	-	-
Phosphorus	5	mg/kg	210	-	-	-
% Moisture	1	%	14	7.8	10	17
Heavy Metals						
Arsenic	2	mg/kg	< 2	2.5	< 2	2.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	24	25	24	36
Copper	5	mg/kg	11	13	9.4	19
Lead	5	mg/kg	9.4	11	10	14

Client Sample ID			BH01_0.0-0.1	BH02_0.0-0.1	BH03_0.0-0.1	BH04_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006698	M22-JI0006699	M22-JI0006700	M22-JI0006701
Date Sampled			Jun 29, 2022	Jun 29, 2022	Jun 29, 2022	Jun 29, 2022
Test/Reference	LOR	Unit				
Heavy Metals						
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	-	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	< 5	< 5	8.0
Selenium	2	mg/kg	-	< 2	< 2	< 2
Silver	2	mg/kg	-	< 2	< 2	< 2
Tin	10	mg/kg	-	< 10	< 10	< 10
Zinc	5	mg/kg	22	28	25	32
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	-	< 0.2
Bolstar	0.2	mg/kg	-	< 0.2	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	-	< 0.2
Chlorpyrifos	0.2	mg/kg	-	< 0.2	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	-	< 0.2
Coumaphos	2	mg/kg	-	< 2	-	< 2
Demeton-S	0.2	mg/kg	-	< 0.2	-	< 0.2
Demeton-O	0.2	mg/kg	-	< 0.2	-	< 0.2
Diazinon	0.2	mg/kg	-	< 0.2	-	< 0.2
Dichlorvos	0.2	mg/kg	-	< 0.2	-	< 0.2
Dimethoate	0.2	mg/kg	-	< 0.2	-	< 0.2
Disulfoton	0.2	mg/kg	-	< 0.2	-	< 0.2
EPN	0.2	mg/kg	-	< 0.2	-	< 0.2
Ethion	0.2	mg/kg	-	< 0.2	-	< 0.2
Ethoprop	0.2	mg/kg	-	< 0.2	-	< 0.2
Ethyl parathion	0.2	mg/kg	-	< 0.2	-	< 0.2
Fenitrothion	0.2	mg/kg	-	< 0.2	-	< 0.2
Fensulfothion	0.2	mg/kg	-	< 0.2	-	< 0.2
Fenthion	0.2	mg/kg	-	< 0.2	-	< 0.2
Malathion	0.2	mg/kg	-	< 0.2	-	< 0.2
Merphos	0.2	mg/kg	-	< 0.2	-	< 0.2
Methyl parathion	0.2	mg/kg	-	< 0.2	-	< 0.2
Mevinphos	0.2	mg/kg	-	< 0.2	-	< 0.2
Monocrotophos	2	mg/kg	-	< 2	-	< 2
Naled	0.2	mg/kg	-	< 0.2	-	< 0.2
Omethoate	2	mg/kg	-	< 2	-	< 2
Phorate	0.2	mg/kg	-	< 0.2	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	-	< 0.2
Pyrazophos	0.2	mg/kg	-	< 0.2	-	< 0.2
Ronnel	0.2	mg/kg	-	< 0.2	-	< 0.2
Terbufos	0.2	mg/kg	-	< 0.2	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	-	< 0.2
Tokuthion	0.2	mg/kg	-	< 0.2	-	< 0.2
Trichloronate	0.2	mg/kg	-	< 0.2	-	< 0.2
Triphenylphosphate (surr.)	1	%	-	98	-	53
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	-	-	-	< 10
13C2-6:2 FTSA (surr.)	1	%	-	-	-	79
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	-	-	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	-	-	[N09]5.2

Client Sample ID			BH01_0.0-0.1	BH02_0.0-0.1	BH03_0.0-0.1	BH04_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006698	M22-JI0006699	M22-JI0006700	M22-JI0006701
Date Sampled			Jun 29, 2022	Jun 29, 2022	Jun 29, 2022	Jun 29, 2022
Test/Reference	LOR	Unit				
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
18O2-PFHxS (surr.)	1	%	-	-	-	82
13C8-PFOS (surr.)	1	%	-	-	-	79
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	-	-	< 5
13C8-PFOA (surr.)	1	%	-	-	-	79
Sum (PFHxS + PFOS)*	5	ug/kg	-	-	-	5.2
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	-	-	5.2
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	-	-	5.2

Client Sample ID			BH05_0.0-0.1	BH06_0.0-0.1	BH07_0.0-0.1	BH08_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006702	M22-JI0006703	M22-JI0006704	M22-JI0006705
Date Sampled			Jun 29, 2022	Jun 29, 2022	Jun 29, 2022	Jun 29, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	< 20	< 20	-	-
TRH C15-C28	50	mg/kg	< 50	< 50	-	-
TRH C29-C36	50	mg/kg	< 50	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	-
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	-
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	< 100	< 100	-	-
TRH >C34-C40	100	mg/kg	< 100	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	95	142	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	-

Client Sample ID			BH05_0.0-0.1	BH06_0.0-0.1	BH07_0.0-0.1	BH08_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006702	M22-JI0006703	M22-JI0006704	M22-JI0006705
Date Sampled			Jun 29, 2022	Jun 29, 2022	Jun 29, 2022	Jun 29, 2022
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	133	52	-	-
p-Terphenyl-d14 (surr.)	1	%	146	144	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	74	69	76	73
Tetrachloro-m-xylene (surr.)	1	%	74	51	88	121
Nitrate & Nitrite (as N)	5	mg/kg	-	< 5	-	< 5
Total Kjeldahl Nitrogen (as N)	10	mg/kg	-	360	-	1200
Total Nitrogen (as N)*	10	mg/kg	-	360	-	1200
Phosphorus	5	mg/kg	-	270	-	200
% Moisture	1	%	16	17	11	13
% Clay	1	%	7.4	-	-	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	240	-	-	-
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	7.7	-	-	-
Total Organic Carbon	0.1	%	0.6	-	-	-

Client Sample ID			BH05_0.0-0.1	BH06_0.0-0.1	BH07_0.0-0.1	BH08_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006702	M22-JI0006703	M22-JI0006704	M22-JI0006705
Date Sampled			Jun 29, 2022	Jun 29, 2022	Jun 29, 2022	Jun 29, 2022
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	11	22	16	17
Copper	5	mg/kg	< 5	9.7	9.7	9.0
Iron	20	mg/kg	7600	-	-	-
Lead	5	mg/kg	11	11	9.2	9.5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	-	-	< 5	< 5
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Selenium	2	mg/kg	-	-	< 2	< 2
Silver	2	mg/kg	-	-	< 2	< 2
Tin	10	mg/kg	-	-	< 10	< 10
Zinc	5	mg/kg	17	30	17	19
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	-	< 2	< 2
Demeton-S	0.2	mg/kg	-	-	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	-	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	-	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	-	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	-	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	-	< 0.2	< 0.2
EPN	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	-	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	-	< 2	< 2
Naled	0.2	mg/kg	-	-	< 0.2	< 0.2
Omethoate	2	mg/kg	-	-	< 2	< 2
Phorate	0.2	mg/kg	-	-	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	-	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	-	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	-	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	-	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	-	-	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	-	84	87

Client Sample ID			BH05_0.0-0.1	BH06_0.0-0.1	BH07_0.0-0.1	BH08_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006702	M22-JI0006703	M22-JI0006704	M22-JI0006705
Date Sampled			Jun 29, 2022	Jun 29, 2022	Jun 29, 2022	Jun 29, 2022
Test/Reference	LOR	Unit				
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	-	-	< 10	-
13C2-6:2 FTSA (surr.)	1	%	-	-	86	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	-	< 5	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	-	< 5	-
18O2-PFHxS (surr.)	1	%	-	-	77	-
13C8-PFOS (surr.)	1	%	-	-	82	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	-	< 5	-
13C8-PFOA (surr.)	1	%	-	-	82	-
Sum (PFHxS + PFOS)*	5	ug/kg	-	-	< 5	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	-	< 5	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	-	< 5	-
Heavy Metals						
Iron (%)	0.01	%	0.76	-	-	-
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	22	-	-	-

Client Sample ID			BH09_0.0-0.1	BH10_0.0-0.1	BH11_0.0-0.1	BH12_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006706	M22-JI0006707	M22-JI0006708	M22-JI0006709
Date Sampled			Jun 29, 2022	Jun 30, 2022	Jun 30, 2022	Jun 30, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	< 20	-	-
TRH C15-C28	50	mg/kg	-	< 50	-	-
TRH C29-C36	50	mg/kg	-	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	-	< 50	-	-
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	< 100	-	-
TRH >C34-C40	100	mg/kg	-	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	-	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	-	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	-	91	-	-

Client Sample ID			BH09_0.0-0.1	BH10_0.0-0.1	BH11_0.0-0.1	BH12_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006706	M22-JI0006707	M22-JI0006708	M22-JI0006709
Date Sampled			Jun 29, 2022	Jun 30, 2022	Jun 30, 2022	Jun 30, 2022
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	112	92	-	-
p-Terphenyl-d14 (surr.)	1	%	76	114	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	65	63	107
Tetrachloro-m-xylene (surr.)	1	%	-	101	114	147

Client Sample ID			BH09_0.0-0.1	BH10_0.0-0.1	BH11_0.0-0.1	BH12_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006706	M22-JI0006707	M22-JI0006708	M22-JI0006709
Date Sampled			Jun 29, 2022	Jun 30, 2022	Jun 30, 2022	Jun 30, 2022
Test/Reference	LOR	Unit				
Nitrate & Nitrite (as N)	5	mg/kg	-	-	< 5	-
Total Kjeldahl Nitrogen (as N)	10	mg/kg	-	-	630	-
Total Nitrogen (as N)*	10	mg/kg	-	-	630	-
Phosphorus	5	mg/kg	-	-	160	-
% Moisture	1	%	20	14	12	14
Heavy Metals						
Arsenic	2	mg/kg	2.6	3.3	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	25	42	11	20
Copper	5	mg/kg	12	22	5.7	9.2
Lead	5	mg/kg	11	14	11	13
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	-	< 5	< 5
Nickel	5	mg/kg	7.7	9.7	< 5	5.7
Selenium	2	mg/kg	< 2	-	< 2	< 2
Silver	2	mg/kg	< 2	-	< 2	< 2
Tin	10	mg/kg	< 10	-	< 10	< 10
Zinc	5	mg/kg	22	31	18	30
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	-	< 2	< 2
Demeton-S	0.2	mg/kg	-	-	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	-	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	-	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	-	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	-	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	-	< 0.2	< 0.2
EPN	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	-	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	-	< 2	< 2
Naled	0.2	mg/kg	-	-	< 0.2	< 0.2
Omethoate	2	mg/kg	-	-	< 2	< 2
Phorate	0.2	mg/kg	-	-	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	-	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	-	< 0.2	< 0.2

Client Sample ID			BH09_0.0-0.1	BH10_0.0-0.1	BH11_0.0-0.1	BH12_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006706	M22-JI0006707	M22-JI0006708	M22-JI0006709
Date Sampled			Jun 29, 2022	Jun 30, 2022	Jun 30, 2022	Jun 30, 2022
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Terbufos	0.2	mg/kg	-	-	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	-	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	-	-	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	-	67	144
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	-	-	-
13C2-6:2 FTSA (surr.)	1	%	52	-	-	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	-	-	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	-	-	-
18O2-PFHxS (surr.)	1	%	69	-	-	-
13C8-PFOS (surr.)	1	%	62	-	-	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	-	-	-
13C8-PFOA (surr.)	1	%	62	-	-	-
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	-	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	-	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	-	-	-
Pathogens						
Total Coliforms (MPN)	1	MPN/g	-	See attached	-	-

Client Sample ID			BH13_0.0-0.1	BH14_0.0-0.15	BH15_0.0-0.15	BH16_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006710	M22-JI0006711	M22-JI0006712	M22-JI0006713
Date Sampled			Jun 30, 2022	Jun 30, 2022	Jun 30, 2022	Jun 30, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	< 20	< 20	-	-
TRH C15-C28	50	mg/kg	< 50	< 50	-	-
TRH C29-C36	50	mg/kg	< 50	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	-
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	-
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	< 100	< 100	-	-
TRH >C34-C40	100	mg/kg	< 100	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	81	115	-	-

Client Sample ID			BH13_0.0-0.1	BH14_0.0-0.15	BH15_0.0-0.15	BH16_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006710	M22-JI0006711	M22-JI0006712	M22-JI0006713
Date Sampled			Jun 30, 2022	Jun 30, 2022	Jun 30, 2022	Jun 30, 2022
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	92	97	-	-
p-Terphenyl-d14 (surr.)	1	%	125	120	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	68	68	67	68
Tetrachloro-m-xylene (surr.)	1	%	103	98	103	97

Client Sample ID			BH13_0.0-0.1	BH14_0.0-0.15	BH15_0.0-0.15	BH16_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006710	M22-JI0006711	M22-JI0006712	M22-JI0006713
Date Sampled			Jun 30, 2022	Jun 30, 2022	Jun 30, 2022	Jun 30, 2022
Test/Reference	LOR	Unit				
% Moisture	1	%	18	15	16	19
Chromium (hexavalent)	1	mg/kg	-	< 1	-	-
Chromium (trivalent)	5	mg/kg	-	24	-	-
Cyanide (total)	5	mg/kg	-	< 5	-	-
Heavy Metals						
Arsenic	2	mg/kg	3.4	2.3	3.2	< 2
Barium	10	mg/kg	-	22	-	-
Beryllium	2	mg/kg	-	< 2	-	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	44	24	42	25
Cobalt	5	mg/kg	-	< 5	-	-
Copper	5	mg/kg	20	13	19	10
Iron	20	mg/kg	-	13000	-	-
Lead	5	mg/kg	19	16	20	14
Manganese	5	mg/kg	-	120	-	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	-	-	< 5	< 5
Nickel	5	mg/kg	9.4	< 5	6.8	< 5
Selenium	2	mg/kg	-	-	< 2	< 2
Silver	2	mg/kg	-	< 2	< 2	< 2
Tin	10	mg/kg	-	-	< 10	< 10
Zinc	5	mg/kg	45	39	39	30
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	-	< 2	< 2
Demeton-S	0.2	mg/kg	-	-	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	-	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	-	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	-	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	-	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	-	< 0.2	< 0.2
EPN	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	-	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	-	< 2	< 2
Naled	0.2	mg/kg	-	-	< 0.2	< 0.2
Omethoate	2	mg/kg	-	-	< 2	< 2

Client Sample ID			BH13_0.0-0.1	BH14_0.0-0.15	BH15_0.0-0.15	BH16_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006710	M22-JI0006711	M22-JI0006712	M22-JI0006713
Date Sampled			Jun 30, 2022	Jun 30, 2022	Jun 30, 2022	Jun 30, 2022
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Phorate	0.2	mg/kg	-	-	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	-	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	-	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	-	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	-	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	-	-	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	-	92	98
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	-	-	-	< 10
13C2-6:2 FTSA (surr.)	1	%	-	-	-	81
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	-	-	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	-	-	< 5
18O2-PFHxS (surr.)	1	%	-	-	-	78
13C8-PFOS (surr.)	1	%	-	-	-	87
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	-	-	< 5
13C8-PFOA (surr.)	1	%	-	-	-	77
Sum (PFHxS + PFOS)*	5	ug/kg	-	-	-	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	-	-	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	-	-	< 5
Volatile Organics						
Tetrachloroethene	0.5	mg/kg	-	< 0.5	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1232	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1242	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1248	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1254	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1260	0.1	mg/kg	-	< 0.1	-	-
Total PCB*	0.1	mg/kg	-	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	-	68	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	98	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	-	-
Pentachlorophenol	1	mg/kg	-	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	-	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	-	< 1	-	-

Client Sample ID			BH13_0.0-0.1	BH14_0.0-0.15	BH15_0.0-0.15	BH16_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006710	M22-JI0006711	M22-JI0006712	M22-JI0006713
Date Sampled			Jun 30, 2022	Jun 30, 2022	Jun 30, 2022	Jun 30, 2022
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	-	-
2-Nitrophenol	1.0	mg/kg	-	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	-	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	-	-
Total cresols*	0.5	mg/kg	-	< 0.5	-	-
4-Nitrophenol	5	mg/kg	-	< 5	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Phenol-d6 (surr.)	1	%	-	102	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-	-

Client Sample ID			BH17_0.0-0.1	BH18_0.0-0.1	BH19_0.0-0.1	BH19_0.1-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006714	M22-JI0006715	M22-JI0006716	M22-JI0006717
Date Sampled			Jun 30, 2022	Jun 30, 2022	Jun 29, 2022	Jun 29, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	-	-	< 20
TRH C10-C14	20	mg/kg	< 20	-	-	< 20
TRH C15-C28	50	mg/kg	< 50	-	-	< 50
TRH C29-C36	50	mg/kg	< 50	-	-	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	-	-	< 50
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	-	< 0.5
TRH C6-C10	20	mg/kg	< 20	-	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	-	< 20
TRH >C10-C16	50	mg/kg	< 50	-	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	-	< 50
TRH >C16-C34	100	mg/kg	< 100	-	-	< 100
TRH >C34-C40	100	mg/kg	< 100	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	-	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	75	-	-	77
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5

Client Sample ID			BH17_0.0-0.1	BH18_0.0-0.1	BH19_0.0-0.1	BH19_0.1-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006714	M22-JI0006715	M22-JI0006716	M22-JI0006717
Date Sampled			Jun 30, 2022	Jun 30, 2022	Jun 29, 2022	Jun 29, 2022
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	97	131	-	101
p-Terphenyl-d14 (surr.)	1	%	127	85	-	125
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	< 0.05
a-HCH	0.05	mg/kg	< 0.05	-	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
b-HCH	0.05	mg/kg	< 0.05	-	-	< 0.05
d-HCH	0.05	mg/kg	< 0.05	-	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	-	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	-	-	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	68	-	-	86
Tetrachloro-m-xylene (surr.)	1	%	96	-	-	126
Nitrate & Nitrite (as N)	5	mg/kg	-	< 5	< 5	-
Total Kjeldahl Nitrogen (as N)	10	mg/kg	-	390	580	-
Total Nitrogen (as N)*	10	mg/kg	-	390	580	-
Phosphorus	5	mg/kg	-	270	230	-

Client Sample ID			BH17_0.0-0.1	BH18_0.0-0.1	BH19_0.0-0.1	BH19_0.1-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006714	M22-JI0006715	M22-JI0006716	M22-JI0006717
Date Sampled			Jun 30, 2022	Jun 30, 2022	Jun 29, 2022	Jun 29, 2022
Test/Reference	LOR	Unit				
% Moisture	1	%	22	17	23	21
Chromium (hexavalent)	1	mg/kg	-	-	-	< 1
Chromium (trivalent)	5	mg/kg	-	-	-	17
Cyanide (total)	5	mg/kg	-	-	-	< 5
Heavy Metals						
Arsenic	2	mg/kg	< 2	2.1	3.9	2.6
Barium	10	mg/kg	-	-	-	48
Beryllium	2	mg/kg	-	-	-	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	15	21	30	17
Cobalt	5	mg/kg	-	-	-	< 5
Copper	5	mg/kg	7.5	9.6	18	35
Iron	20	mg/kg	-	-	-	14000
Lead	5	mg/kg	18	21	10	24
Manganese	5	mg/kg	-	-	-	180
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	-	< 5	< 5	-
Nickel	5	mg/kg	< 5	< 5	9.4	< 5
Selenium	2	mg/kg	-	< 2	< 2	-
Silver	2	mg/kg	-	< 2	< 2	< 2
Tin	10	mg/kg	-	< 10	< 10	-
Zinc	5	mg/kg	31	28	31	85
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	-	< 10	-	-
13C2-6:2 FTSA (surr.)	1	%	-	62	-	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	< 5	-	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	< 5	-	-
18O2-PFHxS (surr.)	1	%	-	85	-	-
13C8-PFOS (surr.)	1	%	-	91	-	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	< 5	-	-
13C8-PFOA (surr.)	1	%	-	80	-	-
Sum (PFHxS + PFOS)*	5	ug/kg	-	< 5	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	< 5	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	< 5	-	-
Pathogens						
Total Coliforms (MPN)	1	MPN/g	-	See attached	See attached	-
Volatile Organics						
Tetrachloroethene	0.5	mg/kg	-	-	-	< 0.5
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	86
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	126

Client Sample ID			BH17_0.0-0.1	BH18_0.0-0.1	BH19_0.0-0.1	BH19_0.1-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006714	M22-JI0006715	M22-JI0006716	M22-JI0006717
Date Sampled			Jun 30, 2022	Jun 30, 2022	Jun 29, 2022	Jun 29, 2022
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	-	< 1
Pentachlorophenol	1	mg/kg	-	-	-	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	-	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	-	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	-	< 5
2-Nitrophenol	1.0	mg/kg	-	-	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	-	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	-	< 0.4
Total cresols*	0.5	mg/kg	-	-	-	< 0.5
4-Nitrophenol	5	mg/kg	-	-	-	< 5
Dinoseb	20	mg/kg	-	-	-	< 20
Phenol	0.5	mg/kg	-	-	-	< 0.5
Phenol-d6 (surr.)	1	%	-	-	-	118
Total Non-Halogenated Phenol*	20	mg/kg	-	-	-	< 20

Client Sample ID			BH20_0.0-0.1	DUP01	DUP02
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006718	M22-JI0006760	M22-JI0006761
Date Sampled			Jun 29, 2022	Jun 29, 2022	Jun 30, 2022
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons					
TRH C6-C9	20	mg/kg	-	< 20	-
TRH C10-C14	20	mg/kg	-	< 20	-
TRH C15-C28	50	mg/kg	-	< 50	-
TRH C29-C36	50	mg/kg	-	< 50	-
TRH C10-C36 (Total)	50	mg/kg	-	< 50	-
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-
TRH C6-C10	20	mg/kg	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-
TRH >C10-C16	50	mg/kg	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	-
TRH >C16-C34	100	mg/kg	-	< 100	-
TRH >C34-C40	100	mg/kg	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	-
BTEX					
Benzene	0.1	mg/kg	-	< 0.1	-
Toluene	0.1	mg/kg	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-

Client Sample ID			BH20_0.0-0.1	DUP01	DUP02
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006718	M22-JI0006760	M22-JI0006761
Date Sampled			Jun 29, 2022	Jun 29, 2022	Jun 30, 2022
Test/Reference	LOR	Unit			
BTEX					
o-Xylene	0.1	mg/kg	-	< 0.1	-
Xylenes - Total*	0.3	mg/kg	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	81	-
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	102	83	-
p-Terphenyl-d14 (surr.)	1	%	110	80	-
Organochlorine Pesticides					
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05
a-HCH	0.05	mg/kg	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05
b-HCH	0.05	mg/kg	-	< 0.05	< 0.05
d-HCH	0.05	mg/kg	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	-	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	< 0.05

Client Sample ID			BH20_0.0-0.1	DUP01	DUP02
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006718	M22-JI0006760	M22-JI0006761
Date Sampled			Jun 29, 2022	Jun 29, 2022	Jun 30, 2022
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	95	120
Tetrachloro-m-xylene (surr.)	1	%	-	113	98
Nitrate & Nitrite (as N)	5	mg/kg	< 5	-	-
Total Kjeldahl Nitrogen (as N)	10	mg/kg	860	-	-
Total Nitrogen (as N)*	10	mg/kg	860	-	-
Phosphorus	5	mg/kg	110	-	-
% Moisture	1	%	17	20	14
Heavy Metals					
Arsenic	2	mg/kg	< 2	3.2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	15	20	34
Copper	5	mg/kg	5.3	34	14
Lead	5	mg/kg	14	23	21
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	-	< 5
Nickel	5	mg/kg	< 5	8.0	5.2
Selenium	2	mg/kg	< 2	-	< 2
Silver	2	mg/kg	< 2	-	< 2
Tin	10	mg/kg	< 10	-	< 10
Zinc	5	mg/kg	22	100	59
Organophosphorus Pesticides					
Azinphos-methyl	0.2	mg/kg	-	-	< 0.2
Bolstar	0.2	mg/kg	-	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	-	< 0.2
Chlorpyrifos	0.2	mg/kg	-	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	-	< 0.2
Coumaphos	2	mg/kg	-	-	< 2
Demeton-S	0.2	mg/kg	-	-	< 0.2
Demeton-O	0.2	mg/kg	-	-	< 0.2
Diazinon	0.2	mg/kg	-	-	< 0.2
Dichlorvos	0.2	mg/kg	-	-	< 0.2
Dimethoate	0.2	mg/kg	-	-	< 0.2
Disulfoton	0.2	mg/kg	-	-	< 0.2
EPN	0.2	mg/kg	-	-	< 0.2
Ethion	0.2	mg/kg	-	-	< 0.2
Ethoprop	0.2	mg/kg	-	-	< 0.2
Ethyl parathion	0.2	mg/kg	-	-	< 0.2
Fenitrothion	0.2	mg/kg	-	-	< 0.2
Fensulfothion	0.2	mg/kg	-	-	< 0.2
Fenthion	0.2	mg/kg	-	-	< 0.2
Malathion	0.2	mg/kg	-	-	< 0.2
Merphos	0.2	mg/kg	-	-	< 0.2
Methyl parathion	0.2	mg/kg	-	-	< 0.2
Mevinphos	0.2	mg/kg	-	-	< 0.2
Monocrotophos	2	mg/kg	-	-	< 2

Client Sample ID			BH20_0.0-0.1	DUP01	DUP02
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22-JI0006718	M22-JI0006760	M22-JI0006761
Date Sampled			Jun 29, 2022	Jun 29, 2022	Jun 30, 2022
Test/Reference	LOR	Unit			
Organophosphorus Pesticides					
Naled	0.2	mg/kg	-	-	< 0.2
Omethoate	2	mg/kg	-	-	< 2
Phorate	0.2	mg/kg	-	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	-	< 0.2
Pyrazophos	0.2	mg/kg	-	-	< 0.2
Ronnel	0.2	mg/kg	-	-	< 0.2
Terbufos	0.2	mg/kg	-	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	-	< 0.2
Tokuthion	0.2	mg/kg	-	-	< 0.2
Trichloronate	0.2	mg/kg	-	-	< 0.2
Triphenylphosphate (surr.)	1	%	-	-	107

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Eurofins Suite B9			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jul 07, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jul 07, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jul 07, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Jul 07, 2022	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Polycyclic Aromatic Hydrocarbons	Melbourne	Jul 07, 2022	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Melbourne	Jul 07, 2022	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Metals M8	Melbourne	Jul 07, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Total Nitrogen Set (as N)			
Nitrate & Nitrite (as N)	Melbourne	Jul 04, 2022	28 Days
- Method: LTM-INO-4120 Analysis of NOx NO2 NH3 by FIA			
Total Kjeldahl Nitrogen (as N)	Melbourne	Jul 04, 2022	28 Days
- Method: APHA 4500-Norg B,D Total Kjeldahl Nitrogen by FIA			
Eurofins Suite B19A: Total N (TKN, NOx), Total P			
Phosphorus	Melbourne	Jul 04, 2022	180 Days
- Method: LTM-MET-3010 Alkali Metals Sulfur Silicon and Phosphorus by ICP-AES			
% Moisture	Melbourne	Jul 06, 2022	14 Days
- Method: LTM-GEN-7080 Moisture			
NEPM Screen for Soil Classification			
% Clay	Brisbane	Jul 07, 2022	14 Days
- Method: LTM-GEN-7040			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Jul 04, 2022	7 Days
- Method: LTM-INO-4030 Conductivity			
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Melbourne	Jul 04, 2022	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Total Organic Carbon	Melbourne	Jul 05, 2022	28 Days
- Method: LTM-INO-4060 Total Organic Carbon in water and soil			
Heavy Metals	Melbourne	Jul 04, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Cation Exchange Capacity	Melbourne	Jul 07, 2022	28 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
SA Waste Screen			
Chromium (hexavalent)	Melbourne	Jul 04, 2022	28 Days
- Method: LTM-INO-4230 Hexavalent Chromium by UV-Vis			
Cyanide (total)	Melbourne	Jul 05, 2022	14 Days
- Method: LTM-INO-4020 Total Free WAD Cyanide by CFA			
SA Waste Metals : Metals M14SA	Melbourne	Jul 04, 2022	28 Days
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
Volatile Organics	Melbourne	Jul 04, 2022	7 Days
- Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS			
Polychlorinated Biphenyls	Melbourne	Jul 04, 2022	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			
Phenols (Halogenated)	Melbourne	Jul 04, 2022	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			

Description	Testing Site	Extracted	Holding Time
Phenols (non-Halogenated)	Melbourne	Jul 04, 2022	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals IWRG 621 : Metals M12	Melbourne	Jul 07, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Per- and Polyfluoroalkyl Substances (PFASs) - Short	Melbourne	Jul 04, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Suite B14: OCP/OPP			
Organophosphorus Pesticides	Melbourne	Jul 07, 2022	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8270)			

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
External Laboratory								X											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**														
1	BH01_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006698									X			X	X	
2	BH02_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006699						X		X	X					
3	BH03_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006700				X		X			X					
4	BH04_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006701						X		X	X					X
5	BH05_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006702									X	X		X		
6	BH06_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006703									X			X	X	
7	BH07_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006704						X		X	X					X
8	BH08_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006705						X		X	X				X	
9	BH09_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006706				X		X			X					X
10	BH10_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006707			X						X			X		
11	BH11_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006708						X		X	X				X	
12	BH12_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006709						X		X	X					
13	BH13_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006710									X			X		

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
14	BH14_0.0-0.15	Jun 30, 2022		Soil	M22-Jl0006711									X		X			
15	BH15_0.0-0.15	Jun 30, 2022		Soil	M22-Jl0006712						X		X	X					
16	BH16_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006713						X		X	X					X
17	BH17_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006714									X			X		
18	BH18_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006715			X	X		X			X				X	X
19	BH19_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006716			X			X			X				X	
20	BH19_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006717									X		X			
21	BH20_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006718				X		X			X				X	
22	TB01	Jun 29, 2022		Water	M22-Jl0006719							X							
23	RB01	Jun 30, 2022		Water	M22-Jl0006720					X									
24	BH01_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006721		X												
25	BH01_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006722		X												
26	BH02_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006723		X												
27	BH02_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006724		X												
28	BH03_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006725		X												
29	BH03_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006726		X												

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
30	BH04_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006727		X												
31	BH04_0.2-0.5	Jun 29, 2022		Soil	M22-Jl0006728		X												
32	BH05_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006729		X												
33	BH05_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006730		X												
34	BH06_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006731		X												
35	BH06_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006732		X												
36	BH07_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006733		X												
37	BH07_0.2-0.5	Jun 29, 2022		Soil	M22-Jl0006734		X												
38	BH08_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006735		X												
39	BH08_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006736		X												
40	BH09_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006737		X												
41	BH09_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006738		X												
42	BH10_0.1-0.2	Jun 30, 2022		Soil	M22-Jl0006739		X												
43	BH10_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006740		X												
44	BH11_0.2-0.4	Jun 30, 2022		Soil	M22-Jl0006741		X												
45	BH11_0.4-0.5	Jun 30, 2022		Soil	M22-Jl0006742		X												

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
46	BH12_0.1-0.25	Jun 30, 2022		Soil	M22-Jl0006743		X												
47	BH12_0.25-0.5	Jun 30, 2022		Soil	M22-Jl0006744		X												
48	BH13_0.2-0.3	Jun 30, 2022		Soil	M22-Jl0006745		X												
49	BH13_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006746		X												
50	BH14_0.15-0.35	Jun 30, 2022		Soil	M22-Jl0006747		X												
51	BH14_0.35-0.5	Jun 30, 2022		Soil	M22-Jl0006748		X												
52	BH15_0.15-0.3	Jun 30, 2022		Soil	M22-Jl0006749		X												
53	BH15_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006750		X												
54	BH16_0.2-0.3	Jun 30, 2022		Soil	M22-Jl0006751		X												
55	BH16_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006752		X												
56	BH17_0.1-0.2	Jun 30, 2022		Soil	M22-Jl0006753		X												
57	BH17_0.2-0.5	Jun 30, 2022		Soil	M22-Jl0006754		X												
58	BH18_0.2-0.3	Jun 30, 2022		Soil	M22-Jl0006755		X												
59	BH18_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006756		X												
60	BH19_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006757		X												

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
61	BH20_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006758		X												
62	BH20_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006759		X												
63	DUP01	Jun 29, 2022		Soil	M22-Jl0006760									X			X		
64	DUP02	Jun 30, 2022		Soil	M22-Jl0006761						X		X	X					
65	ACM01	Jun 30, 2022		Building Materials	M22-Jl0008347	X													
Test Counts						1	39	3	4	1	14	1	9	23	1	2	7	7	5

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

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

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

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

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

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

.

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Nitrate & Nitrite (as N)	mg/kg	< 5			5	Pass	
Phosphorus	mg/kg	< 5			5	Pass	
Total Organic Carbon	%	0.1			0.1	Pass	
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Cyanide (total)	mg/kg	< 5			5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Arsenic	mg/kg	< 2			2	Pass	
Barium	mg/kg	< 10			10	Pass	
Beryllium	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Chromium	mg/kg	< 5			5	Pass	
Cobalt	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Iron	mg/kg	< 20			20	Pass	
Iron	mg/kg	< 20			20	Pass	
Lead	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Manganese	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Molybdenum	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	
Silver	mg/kg	< 2			2	Pass	
Silver	mg/kg	< 2			2	Pass	
Tin	mg/kg	< 10			10	Pass	
Zinc	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Per- and Polyfluoroalkyl Substances (PFASs) - Short							
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/kg	< 10			10	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
Sum (PFHxS + PFOS)*	ug/kg	-			5	N/A	
Sum of US EPA PFAS (PFOS + PFOA)*	ug/kg	-			5	N/A	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	ug/kg	-			5	N/A	
Method Blank							
Cation Exchange Capacity							
Cation Exchange Capacity	meq/100g	< 0.05			0.05	Pass	
Method Blank							
Volatile Organics							
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	81			70-130	Pass	
TRH C10-C14	%	88			70-130	Pass	
Naphthalene	%	97			70-130	Pass	
TRH C6-C10	%	80			70-130	Pass	
TRH >C10-C16	%	91			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	89			70-130	Pass	
Toluene	%	81			70-130	Pass	
Ethylbenzene	%	93			70-130	Pass	
m&p-Xylenes	%	91			70-130	Pass	
Xylenes - Total*	%	91			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	98			70-130	Pass	
Acenaphthylene	%	94			70-130	Pass	
Anthracene	%	74			70-130	Pass	
Benz(a)anthracene	%	92			70-130	Pass	
Benzo(a)pyrene	%	76			70-130	Pass	
Benzo(b&j)fluoranthene	%	74			70-130	Pass	
Benzo(g.h.i)perylene	%	79			70-130	Pass	
Benzo(k)fluoranthene	%	72			70-130	Pass	
Chrysene	%	86			70-130	Pass	
Dibenz(a.h)anthracene	%	110			70-130	Pass	
Fluoranthene	%	74			70-130	Pass	
Fluorene	%	90			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	85			70-130	Pass	
Naphthalene	%	97			70-130	Pass	
Phenanthrene	%	96			70-130	Pass	
Pyrene	%	72			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	87			70-130	Pass	
4.4'-DDD	%	123			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4.4'-DDE	%	99			70-130	Pass	
4.4'-DDT	%	96			70-130	Pass	
a-HCH	%	86			70-130	Pass	
Aldrin	%	87			70-130	Pass	
b-HCH	%	112			70-130	Pass	
d-HCH	%	71			70-130	Pass	
Dieldrin	%	82			70-130	Pass	
Endosulfan I	%	78			70-130	Pass	
Endosulfan II	%	91			70-130	Pass	
Endosulfan sulphate	%	98			70-130	Pass	
Endrin	%	76			70-130	Pass	
Endrin aldehyde	%	81			70-130	Pass	
Endrin ketone	%	100			70-130	Pass	
g-HCH (Lindane)	%	116			70-130	Pass	
Heptachlor	%	81			70-130	Pass	
Heptachlor epoxide	%	96			70-130	Pass	
Hexachlorobenzene	%	90			70-130	Pass	
Methoxychlor	%	120			70-130	Pass	
LCS - % Recovery							
Nitrate & Nitrite (as N)	%	80			70-130	Pass	
% Clay	%	100			70-130	Pass	
Conductivity (1:5 aqueous extract at 25°C as rec.)	%	92			70-130	Pass	
Total Organic Carbon	%	106			70-130	Pass	
Chromium (hexavalent)	%	107			70-130	Pass	
Cyanide (total)	%	73			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	96			80-120	Pass	
Arsenic	%	105			80-120	Pass	
Barium	%	91			80-120	Pass	
Beryllium	%	109			80-120	Pass	
Cadmium	%	92			80-120	Pass	
Cadmium	%	100			80-120	Pass	
Chromium	%	95			80-120	Pass	
Chromium	%	108			80-120	Pass	
Cobalt	%	97			80-120	Pass	
Copper	%	95			80-120	Pass	
Copper	%	109			80-120	Pass	
Iron	%	108			80-120	Pass	
Iron	%	114			80-120	Pass	
Lead	%	95			80-120	Pass	
Lead	%	110			80-120	Pass	
Manganese	%	96			80-120	Pass	
Mercury	%	93			80-120	Pass	
Mercury	%	108			80-120	Pass	
Molybdenum	%	92			80-120	Pass	
Nickel	%	89			80-120	Pass	
Nickel	%	102			80-120	Pass	
Selenium	%	93			80-120	Pass	
Silver	%	96			80-120	Pass	
Silver	%	105			80-120	Pass	
Tin	%	90			80-120	Pass	
Zinc	%	95			80-120	Pass	
Zinc	%	107			80-120	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	95			70-130	Pass	
Dimethoate	%	108			70-130	Pass	
Ethion	%	93			70-130	Pass	
Fenitrothion	%	72			70-130	Pass	
Methyl parathion	%	74			70-130	Pass	
Mevinphos	%	85			70-130	Pass	
LCS - % Recovery							
Per- and Polyfluoroalkyl Substances (PFASs) - Short							
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	103			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	112			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	96			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	103			50-150	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	76			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	47			25-140	Pass	
2.4-Dichlorophenol	%	46			25-140	Pass	
2.4.5-Trichlorophenol	%	44			25-140	Pass	
2.4.6-Trichlorophenol	%	48			25-140	Pass	
2.6-Dichlorophenol	%	41			25-140	Pass	
4-Chloro-3-methylphenol	%	37			25-140	Pass	
Pentachlorophenol	%	44			25-140	Pass	
Tetrachlorophenols - Total	%	54			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	89			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	31			25-140	Pass	
2-Nitrophenol	%	53			25-140	Pass	
2.4-Dimethylphenol	%	52			25-140	Pass	
2.4-Dinitrophenol	%	37			25-140	Pass	
2-Methylphenol (o-Cresol)	%	35			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	42			25-140	Pass	
4-Nitrophenol	%	36			25-140	Pass	
Dinoseb	%	32			25-140	Pass	
Phenol	%	38			25-140	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M22-Jl0009314	NCP	%	122			70-130	Pass	
Acenaphthylene	M22-Jl0009314	NCP	%	128			70-130	Pass	
Anthracene	M22-Jl0009314	NCP	%	98			70-130	Pass	
Benz(a)anthracene	M22-Jl0009314	NCP	%	119			70-130	Pass	
Benzo(a)pyrene	M22-Jl0009314	NCP	%	106			70-130	Pass	
Benzo(b&j)fluoranthene	M22-Jl0009314	NCP	%	104			70-130	Pass	
Benzo(g.h.i)perylene	M22-Jl0009314	NCP	%	87			70-130	Pass	
Benzo(k)fluoranthene	M22-Jl0009314	NCP	%	118			70-130	Pass	
Chrysene	M22-Jl0009314	NCP	%	131			70-130	Fail	Q08
Dibenz(a.h)anthracene	M22-Jl0009314	NCP	%	102			70-130	Pass	
Fluoranthene	M22-Jl0009314	NCP	%	106			70-130	Pass	
Fluorene	M22-Jl0009314	NCP	%	126			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Indeno(1.2.3-cd)pyrene	M22-JI0009314	NCP	%	88			70-130	Pass	
Naphthalene	M22-JI0009314	NCP	%	117			70-130	Pass	
Phenanthrene	M22-JI0009314	NCP	%	106			70-130	Pass	
Pyrene	M22-JI0009314	NCP	%	102			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M22-JI0005659	NCP	%	114			75-125	Pass	
Cadmium	M22-JI0005659	NCP	%	92			75-125	Pass	
Chromium	M22-JI0005659	NCP	%	108			75-125	Pass	
Copper	M22-JI0005659	NCP	%	125			75-125	Pass	
Lead	M22-JI0003514	NCP	%	119			75-125	Pass	
Mercury	M22-JI0005659	NCP	%	113			75-125	Pass	
Nickel	M22-JI0005659	NCP	%	124			75-125	Pass	
Zinc	M22-JI0003514	NCP	%	106			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Molybdenum	M22-JI0005659	NCP	%	104			75-125	Pass	
Selenium	M22-JI0005659	NCP	%	99			75-125	Pass	
Silver	M22-JI0005659	NCP	%	107			75-125	Pass	
Tin	M22-JI0003514	NCP	%	104			75-125	Pass	
Spike - % Recovery									
Per- and Polyfluoroalkyl Substances (PFASs) - Short				Result 1					
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M22-JI0004309	NCP	%	102			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-JI0004309	NCP	%	107			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-JI0004309	NCP	%	107			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-JI0004309	NCP	%	105			50-150	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M22-JI0006702	CP	%	89			70-130	Pass	
4.4'-DDD	M22-JI0006702	CP	%	116			70-130	Pass	
4.4'-DDE	M22-JI0006702	CP	%	90			70-130	Pass	
4.4'-DDT	M22-JI0006702	CP	%	87			70-130	Pass	
a-HCH	M22-JI0006702	CP	%	94			70-130	Pass	
Aldrin	M22-JI0006702	CP	%	85			70-130	Pass	
b-HCH	M22-JI0006702	CP	%	98			70-130	Pass	
d-HCH	M22-JI0006702	CP	%	86			70-130	Pass	
Dieldrin	M22-JI0006702	CP	%	94			70-130	Pass	
Endosulfan I	M22-JI0006702	CP	%	88			70-130	Pass	
Endosulfan II	M22-JI0006702	CP	%	90			70-130	Pass	
Endosulfan sulphate	M22-JI0006702	CP	%	78			70-130	Pass	
Endrin	M22-JI0006702	CP	%	83			70-130	Pass	
Endrin aldehyde	M22-JI0006702	CP	%	85			70-130	Pass	
Endrin ketone	M22-JI0006702	CP	%	98			70-130	Pass	
g-HCH (Lindane)	M22-JI0006702	CP	%	78			70-130	Pass	
Heptachlor	M22-JI0006702	CP	%	79			70-130	Pass	
Heptachlor epoxide	M22-JI0006702	CP	%	77			70-130	Pass	
Hexachlorobenzene	M22-JI0006702	CP	%	91			70-130	Pass	
Methoxychlor	M22-JI0006702	CP	%	112			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M22-JI0006711	CP	%	104			70-130	Pass	
Naphthalene	M22-JI0006711	CP	%	91			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C6-C10	M22-JI0006711	CP	%	114			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M22-JI0006711	CP	%	80			70-130	Pass	
Toluene	M22-JI0006711	CP	%	83			70-130	Pass	
Ethylbenzene	M22-JI0006711	CP	%	77			70-130	Pass	
m&p-Xylenes	M22-JI0006711	CP	%	78			70-130	Pass	
o-Xylene	M22-JI0006711	CP	%	83			70-130	Pass	
Xylenes - Total*	M22-JI0006711	CP	%	80			70-130	Pass	
Spike - % Recovery									
				Result 1					
Cyanide (total)	M22-JI0005975	NCP	%	124			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Barium	M22-JI0005659	NCP	%	98			75-125	Pass	
Beryllium	M22-JI0005659	NCP	%	115			75-125	Pass	
Cobalt	M22-JI0005659	NCP	%	105			75-125	Pass	
Manganese	M22-JI0006172	NCP	%	115			75-125	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	M22-JI0005910	NCP	%	98			70-130	Pass	
Aroclor-1260	M22-JI0005910	NCP	%	110			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	M22-JI0007451	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M22-JI0007451	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M22-JI0007451	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C10-C16	M22-JI0007451	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M22-JI0007451	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M22-JI0007451	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M22-JI0011148	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M22-JI0011148	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	M22-JI0011148	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Nitrate & Nitrite (as N)	M22-JI0002811	NCP	mg/kg	69	53	26	30%	Pass	
Total Kjeldahl Nitrogen (as N)	M22-JI0004619	NCP	mg/kg	3500	3600	2.2	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M22-JI0003618	NCP	mg/kg	4.3	4.9	13	30%	Pass	
Cadmium	M22-JI0003618	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M22-JI0003618	NCP	mg/kg	57	54	5.2	30%	Pass	
Copper	M22-JI0003618	NCP	mg/kg	29	28	2.8	30%	Pass	
Lead	M22-JI0003618	NCP	mg/kg	7.3	8.1	11	30%	Pass	
Mercury	M22-JI0003618	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M22-JI0003618	NCP	mg/kg	41	45	8.9	30%	Pass	
Zinc	M22-JI0003618	NCP	mg/kg	30	32	5.6	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M22-JI0006699	CP	%	7.8	8.2	5.8	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Molybdenum	M22-JI0003618	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Selenium	M22-JI0003618	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M22-JI0003618	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Tin	M22-JI0003618	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M22-JI0008850	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Diazinon	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M22-JI0008850	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M22-JI0008850	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M22-JI0008850	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Per- and Polyfluoroalkyl Substances (PFASs) - Short				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M22-JI0004308	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-JI0004308	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-JI0004308	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-JI0004308	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M22-JI0006702	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	M22-JI0006702	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M22-JI0006702	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M22-JI0006702	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M22-JI0006702	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M22-JI0006702	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M22-JI0006702	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M22-JI0006702	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M22-JI0006702	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Clay	M22-JI0010702	NCP	%	7.0	7.0	<1	30%	Pass	
Conductivity (1:5 aqueous extract at 25°C as rec.)	M22-JI0006465	NCP	uS/cm	200	180	11	30%	Pass	
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	M22-JI0008654	NCP	pH Units	8.4	8.3	pass	30%	Pass	
Total Organic Carbon	S22-JI0008938	NCP	%	0.9	1.2	32	30%	Fail	Q15

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Iron	M22-JI0005659	NCP	mg/kg	32000	33000	1.7	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M22-JI0006710	CP	%	18	18	3.8	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M22-JI0006711	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	M22-JI0006711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M22-JI0006711	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M22-JI0006711	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M22-JI0006711	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M22-JI0006711	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M22-JI0006711	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M22-JI0006711	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M22-JI0006711	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	M22-JI0007453	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Cyanide (total)	M22-JI0005863	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Barium	M22-JI0005659	NCP	mg/kg	280	290	1.9	30%	Pass	
Beryllium	M22-JI0003618	NCP	mg/kg	2.3	2.9	21	30%	Pass	
Cobalt	M22-JI0003618	NCP	mg/kg	21	30	36	30%	Fail	Q15
Manganese	M22-JI0005659	NCP	mg/kg	440	440	1.1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Tetrachloroethene	M22-JI0006711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	M22-JI0003619	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	M22-JI0003619	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	M22-JI0003619	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	M22-JI0003619	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	M22-JI0003619	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	M22-JI0003619	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	M22-JI0003619	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	M22-JI0003619	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M22-JI0003619	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	M22-JI0003619	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	M22-JI0003619	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	M22-JI0003619	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	M22-JI0003619	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M22-JI0003619	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	M22-JI0003619	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	M22-JI0003619	NCP	mg/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	M22-JI0003619	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	M22-JI0003619	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	M22-JI0003619	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	M22-JI0003619	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	M22-JI0003619	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	M22-JI0003619	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-JI0003619	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	M22-JI0003619	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	M22-JI0003619	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	M22-JI0003619	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Comments

Analysis of (Total Coliforms) has been completed by (Eurofins Food Testing Australia), NATA Accreditation Number (20293), report reference (AR-22-NV-008658-01)

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N09	Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Catherine Wilson	Analytical Services Manager
Joseph Edouard	Senior Analyst-PFAS
Scott Beddoes	Senior Analyst-Metal
Caitlin Breeze	Senior Analyst-Inorganic
Mary Makarios	Senior Analyst-Inorganic
Mary Makarios	Senior Analyst-Metal
Linda Chouman	Senior Analyst-Sample Properties
Joseph Edouard	Senior Analyst-Organic
Edward Lee	Senior Analyst-Organic
Jonathon Angell	Senior Analyst-Inorganic
Vivian Wang	Senior Analyst-Volatile
Harry Bacalis	Senior Analyst-Volatile
Scott Beddoes	Senior Analyst-Inorganic
Carroll Lee	Senior Analyst-Volatile

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Certificate of Analysis

eurofins | Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 1254

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

JBS & G Australia (SA) P/L
100 Hutt St
Adelaide
SA 5000

Attention:	Jack Ayers
Report	903019-AID
Project Name	RENASCOR WATERLOO CNR RD
Project ID	63155
Received Date	Jul 04, 2022
Date Reported	Jul 12, 2022

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name RENASCOR WATERLOO CNR RD
Project ID 63155
Date Sampled Jun 30, 2022
Report 903019-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
ACM01	22-Jl0008347	Jun 30, 2022	Approximate Sample 71g / 80 x 50 x 5mm Sample consisted of: Cement sheet	Chrysotile asbestos detected. Organic fibres detected.

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Melbourne	Jul 05, 2022	Indefinite

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
External Laboratory								X											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**														
1	BH01_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006698									X			X	X	
2	BH02_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006699						X		X	X					
3	BH03_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006700				X		X			X					
4	BH04_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006701						X		X	X					X
5	BH05_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006702									X	X		X		
6	BH06_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006703									X			X	X	
7	BH07_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006704						X		X	X					X
8	BH08_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006705						X		X	X				X	
9	BH09_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006706				X		X			X					X
10	BH10_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006707			X						X			X		
11	BH11_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006708						X		X	X				X	
12	BH12_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006709						X		X	X					
13	BH13_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006710									X			X		

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
14	BH14_0.0-0.15	Jun 30, 2022		Soil	M22-Jl0006711									X		X			
15	BH15_0.0-0.15	Jun 30, 2022		Soil	M22-Jl0006712						X		X	X					
16	BH16_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006713						X		X	X					X
17	BH17_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006714									X			X		
18	BH18_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006715			X	X		X			X				X	X
19	BH19_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006716			X			X			X				X	
20	BH19_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006717									X		X			
21	BH20_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006718				X		X			X				X	
22	TB01	Jun 29, 2022		Water	M22-Jl0006719							X							
23	RB01	Jun 30, 2022		Water	M22-Jl0006720					X									
24	BH01_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006721		X												
25	BH01_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006722		X												
26	BH02_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006723		X												
27	BH02_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006724		X												
28	BH03_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006725		X												
29	BH03_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006726		X												

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
30	BH04_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006727		X												
31	BH04_0.2-0.5	Jun 29, 2022		Soil	M22-Jl0006728		X												
32	BH05_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006729		X												
33	BH05_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006730		X												
34	BH06_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006731		X												
35	BH06_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006732		X												
36	BH07_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006733		X												
37	BH07_0.2-0.5	Jun 29, 2022		Soil	M22-Jl0006734		X												
38	BH08_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006735		X												
39	BH08_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006736		X												
40	BH09_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006737		X												
41	BH09_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006738		X												
42	BH10_0.1-0.2	Jun 30, 2022		Soil	M22-Jl0006739		X												
43	BH10_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006740		X												
44	BH11_0.2-0.4	Jun 30, 2022		Soil	M22-Jl0006741		X												
45	BH11_0.4-0.5	Jun 30, 2022		Soil	M22-Jl0006742		X												

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
46	BH12_0.1-0.25	Jun 30, 2022		Soil	M22-Jl0006743		X												
47	BH12_0.25-0.5	Jun 30, 2022		Soil	M22-Jl0006744		X												
48	BH13_0.2-0.3	Jun 30, 2022		Soil	M22-Jl0006745		X												
49	BH13_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006746		X												
50	BH14_0.15-0.35	Jun 30, 2022		Soil	M22-Jl0006747		X												
51	BH14_0.35-0.5	Jun 30, 2022		Soil	M22-Jl0006748		X												
52	BH15_0.15-0.3	Jun 30, 2022		Soil	M22-Jl0006749		X												
53	BH15_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006750		X												
54	BH16_0.2-0.3	Jun 30, 2022		Soil	M22-Jl0006751		X												
55	BH16_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006752		X												
56	BH17_0.1-0.2	Jun 30, 2022		Soil	M22-Jl0006753		X												
57	BH17_0.2-0.5	Jun 30, 2022		Soil	M22-Jl0006754		X												
58	BH18_0.2-0.3	Jun 30, 2022		Soil	M22-Jl0006755		X												
59	BH18_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006756		X												
60	BH19_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006757		X												

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
61	BH20_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006758		X												
62	BH20_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006759		X												
63	DUP01	Jun 29, 2022		Soil	M22-Jl0006760									X			X		
64	DUP02	Jun 30, 2022		Soil	M22-Jl0006761						X		X	X					
65	ACM01	Jun 30, 2022		Building Materials	M22-Jl0008347	X													
Test Counts						1	39	3	4	1	14	1	9	23	1	2	7	7	5

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. Information identified on this report with the colour **orange** indicates sections of the report not covered by the laboratory's scope of NATA accreditation.
6. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).
If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (**% w/w**)
F/fld	Airborne fibre filter loading as Fibres (**N**) per Fields counted (**n**)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (**C**)
g, kg	Mass, e.g. of whole sample (**M**) or asbestos-containing find within the sample (**m**)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (**V** = **r** x **t**)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (**r**)
min	Time (**t**), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$

Asbestos Content (as asbestos): $\%\, w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A)_x}{x}$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 *Appendix 2*, else assumed to be 15% in accordance with WA DOH *Appendix 2* (**P_A**).
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to "non-bonded / friable".
AFM	Airborne Fibre Monitoring, e.g. by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total % w/w asbestos content in asbestos-containing finds in a soil sample (**% w/w**).
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory's remit to assess degree of friability.
HSG248	UK HSE HSG248, *Asbestos: The Analysts Guide*, 2nd Edition (2021).
HSG264	UK HSE HSG264, *Asbestos: The Survey Guide* (2012).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (**K**) as derived from the effective filter area of the given AFM membrane used for collecting the sample (**A**) and the projected eyepiece graticule area of the specific microscope used for the analysis (**a**).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*, 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Asbestos Counter/Identifier:

Hiren Patel	Senior Analyst-Asbestos

Authorised by:

Zoe Burke	Senior Analyst-Asbestos

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

ANALYTICAL REPORT

REPORT CODE **AR-22-NV-008658-01**

REPORT DATE **07/07/2022**

For the attention of

Eurofins Environment Testing Australia Pty Ltd
Analytical Reports
6 Monterey Road
Dandenong South
3175 Melbourne
AUSTRALIA

Phone
Email EnviroReportsau@eurofins.com

Contact for your orders: Ruvini Herath
Submission Reference: Merged from order cau001-order-903019-220705.xml

Order code: EUAUTWU-00019235
Purchase Order Number: 903019

SAMPLE CODE 726-2022-00023956

Client Reference: 22-JI0006716
Sample described as: BH19_0.0-0.1
Reception Date: 05/07/2022
Analysis Starting Date: 05/07/2022
Sampled Date & Time 29/06/2022 12:00:00

Reception temperature: 5.6 °C
Analysis Ending Date: 07/07/2022

	RESULTS		LOQ
VQ237 Total Coliforms			
Analysis Starting Date: 5/07/2022 10:00			
Total Coliforms	300	MPN/g	1

SAMPLE CODE 726-2022-00023957

Client Reference: 22-JI0006707
Sample described as: BH10_0.0-0.1
Reception Date: 05/07/2022
Analysis Starting Date: 05/07/2022
Sampled Date & Time 30/06/2022 12:00:00

Reception temperature: 5.6 °C
Analysis Ending Date: 07/07/2022

	RESULTS		LOQ
VQ237 Total Coliforms			
Analysis Starting Date: 5/07/2022 10:00			
Total Coliforms	17000	MPN/g	1

SAMPLE CODE 726-2022-00023958

Client Reference: 22-JI0006715
Sample described as: BH18_0.0-0.1
Reception Date: 05/07/2022
Analysis Starting Date: 05/07/2022
Sampled Date & Time 30/06/2022 12:00:00

Reception temperature: 5.6 °C
Analysis Ending Date: 07/07/2022

	RESULTS		LOQ
VQ237 Total Coliforms			
Analysis Starting Date: 5/07/2022 10:00			
Total Coliforms	3100	MPN/g	1

LIST OF METHODS

VQ237	**Total Coliforms:** Internal Method, E-Cultural technique (MPN tubes)

Signature

Di Shen Scientist

EXPLANATORY NOTE

- ◆ Test is not accredited
- ○ Test is subcontracted within Eurofins group and is accredited
- ● Test is subcontracted within Eurofins group and is not accredited
- □ Test is subcontracted outside Eurofins group and is accredited
- ■ Test is subcontracted outside Eurofins group and is not accredited

N/A means Not applicable
Not Detected means not detected at or above the Limit of Quantification (LOQ)
LOQ Limit of Quantification
U Measurement Uncertainty
< Less than, ≤ Less than or equal to
> Greater than, ≥ Greater than or equal to
The tests are identified by a 5 digit code, full details can be provided on request.
Information supplied by the client. This information can have an impact on the validity of results.
Samples are tested as received and the results relate only to the sample tested.
Analysis date is reported as the start date of extraction for a method.
The results may not be reproduced except in full, without a written approval from the laboratory.

Eurofins General Terms and Conditions apply.

END OF REPORT

Eurofins Food Testing Australia Pty Ltd
6 Monterey Road
Dandenong South
Melbourne
VIC 3175
AUSTRALIA
Phone +61385645000
https://www.eurofins.com.au/food-testing

Accredited for compliance with ISO/IEC 17025 - Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.
Accreditation Number 20293

JBS & G Australia (SA) P/L
100 Hutt St
Adelaide
SA 5000

NATA Accredited
Accreditation Number 1261
Site Number 1254

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

Attention: **Jack Ayers**

Report **903019-W**
Project name RENASCOR WATERLOO CNR RD
Project ID 63155
Received Date Jul 04, 2022

Client Sample ID			**TB01**	**RB01**
Sample Matrix			**Water**	**Water**
Eurofins Sample No.			**M22-JI0006719**	**M22-JI0006720**
Date Sampled			**Jun 29, 2022**	**Jun 30, 2022**
Test/Reference	LOR	Unit		
BTEX				
Benzene	0.001	mg/L	< 0.001	-
Toluene	0.001	mg/L	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	-
o-Xylene	0.001	mg/L	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	106	-
Heavy Metals				
Arsenic	0.001	mg/L	-	< 0.001
Cadmium	0.0002	mg/L	-	< 0.0002
Chromium	0.001	mg/L	-	< 0.001
Copper	0.001	mg/L	-	< 0.001
Lead	0.001	mg/L	-	< 0.001
Mercury	0.0001	mg/L	-	< 0.0001
Nickel	0.001	mg/L	-	< 0.001
Zinc	0.005	mg/L	-	< 0.005

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Eurofins Suite B9			
BTEX	Melbourne	Jul 04, 2022	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Metals M8	Melbourne	Jul 04, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
External Laboratory								X											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**														
1	BH01_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006698									X			X	X	
2	BH02_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006699						X		X	X					
3	BH03_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006700				X		X			X					
4	BH04_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006701						X		X	X					X
5	BH05_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006702									X	X		X		
6	BH06_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006703									X			X	X	
7	BH07_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006704						X		X	X					X
8	BH08_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006705						X		X	X				X	
9	BH09_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006706				X		X			X					X
10	BH10_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006707			X						X			X		
11	BH11_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006708						X		X	X				X	
12	BH12_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006709						X		X	X					
13	BH13_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006710									X			X		

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
14	BH14_0.0-0.15	Jun 30, 2022		Soil	M22-Jl0006711									X		X			
15	BH15_0.0-0.15	Jun 30, 2022		Soil	M22-Jl0006712						X		X	X					
16	BH16_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006713						X		X	X					X
17	BH17_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006714									X			X		
18	BH18_0.0-0.1	Jun 30, 2022		Soil	M22-Jl0006715			X	X		X			X				X	X
19	BH19_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006716			X			X			X				X	
20	BH19_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006717									X		X			
21	BH20_0.0-0.1	Jun 29, 2022		Soil	M22-Jl0006718				X		X			X				X	
22	TB01	Jun 29, 2022		Water	M22-Jl0006719							X							
23	RB01	Jun 30, 2022		Water	M22-Jl0006720					X									
24	BH01_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006721		X												
25	BH01_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006722		X												
26	BH02_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006723		X												
27	BH02_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006724		X												
28	BH03_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006725		X												
29	BH03_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006726		X												

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
30	BH04_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006727		X												
31	BH04_0.2-0.5	Jun 29, 2022		Soil	M22-Jl0006728		X												
32	BH05_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006729		X												
33	BH05_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006730		X												
34	BH06_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006731		X												
35	BH06_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006732		X												
36	BH07_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006733		X												
37	BH07_0.2-0.5	Jun 29, 2022		Soil	M22-Jl0006734		X												
38	BH08_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006735		X												
39	BH08_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006736		X												
40	BH09_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006737		X												
41	BH09_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006738		X												
42	BH10_0.1-0.2	Jun 30, 2022		Soil	M22-Jl0006739		X												
43	BH10_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006740		X												
44	BH11_0.2-0.4	Jun 30, 2022		Soil	M22-Jl0006741		X												
45	BH11_0.4-0.5	Jun 30, 2022		Soil	M22-Jl0006742		X												

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
46	BH12_0.1-0.25	Jun 30, 2022		Soil	M22-Jl0006743		X												
47	BH12_0.25-0.5	Jun 30, 2022		Soil	M22-Jl0006744		X												
48	BH13_0.2-0.3	Jun 30, 2022		Soil	M22-Jl0006745		X												
49	BH13_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006746		X												
50	BH14_0.15-0.35	Jun 30, 2022		Soil	M22-Jl0006747		X												
51	BH14_0.35-0.5	Jun 30, 2022		Soil	M22-Jl0006748		X												
52	BH15_0.15-0.3	Jun 30, 2022		Soil	M22-Jl0006749		X												
53	BH15_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006750		X												
54	BH16_0.2-0.3	Jun 30, 2022		Soil	M22-Jl0006751		X												
55	BH16_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006752		X												
56	BH17_0.1-0.2	Jun 30, 2022		Soil	M22-Jl0006753		X												
57	BH17_0.2-0.5	Jun 30, 2022		Soil	M22-Jl0006754		X												
58	BH18_0.2-0.3	Jun 30, 2022		Soil	M22-Jl0006755		X												
59	BH18_0.3-0.5	Jun 30, 2022		Soil	M22-Jl0006756		X												
60	BH19_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006757		X												

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Project Name: RENASCOR WATERLOO CNR RD
Project ID: 63155

Order No.:
Report #: 903019
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Jul 4, 2022 6:13 PM
Due: Jul 12, 2022
Priority: 5 Day
Contact Name: Jack Ayers

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos Absence /Presence	HOLD	Total Coliforms (MPN)	Polycyclic Aromatic Hydrocarbons	Metals M8	Metals IWRG 621 : Metals M12	BTEX	Suite B14: OCP/OPP	Moisture Set	NEPM Screen for Soil Classification	SA Waste Screen	Eurofins Suite B9	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X		X	X	X	X	X	X	X	X	X	X	X
61	BH20_0.1-0.2	Jun 29, 2022		Soil	M22-Jl0006758		X												
62	BH20_0.3-0.5	Jun 29, 2022		Soil	M22-Jl0006759		X												
63	DUP01	Jun 29, 2022		Soil	M22-Jl0006760									X			X		
64	DUP02	Jun 30, 2022		Soil	M22-Jl0006761						X		X	X					
65	ACM01	Jun 30, 2022		Building Materials	M22-Jl0008347	X													
Test Counts						1	39	3	4	1	14	1	9	23	1	2	7	7	5

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

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

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

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

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

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

.

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	100			70-130	Pass	
Toluene	%	110			70-130	Pass	
Ethylbenzene	%	96			70-130	Pass	
m&p-Xylenes	%	96			70-130	Pass	
Xylenes - Total*	%	95			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	102			80-120	Pass	
Cadmium	%	102			80-120	Pass	
Chromium	%	102			80-120	Pass	
Copper	%	102			80-120	Pass	
Lead	%	105			80-120	Pass	
Mercury	%	104			80-120	Pass	
Nickel	%	103			80-120	Pass	
Zinc	%	103			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
BTEX				Result 1					
Benzene	S22-Jl0004054	NCP	%	100			70-130	Pass	
Toluene	S22-Jl0004054	NCP	%	112			70-130	Pass	
Ethylbenzene	S22-Jl0004054	NCP	%	101			70-130	Pass	
m&p-Xylenes	S22-Jl0004054	NCP	%	99			70-130	Pass	
o-Xylene	S22-Jl0004054	NCP	%	98			70-130	Pass	
Xylenes - Total*	S22-Jl0004054	NCP	%	99			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M22-Jl0002217	NCP	%	101			75-125	Pass	
Cadmium	M22-Jl0002217	NCP	%	103			75-125	Pass	
Chromium	M22-Jl0002217	NCP	%	101			75-125	Pass	
Copper	M22-Jl0002217	NCP	%	101			75-125	Pass	
Lead	M22-Jl0002217	NCP	%	111			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Mercury	M22-Jl0002217	NCP	%	97			75-125	Pass	
Nickel	M22-Jl0002217	NCP	%	100			75-125	Pass	
Zinc	M22-Jl0002217	NCP	%	104			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M22-Jl0004047	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M22-Jl0004047	NCP	mg/L	< 0.001	0.002	14	30%	Pass	
Ethylbenzene	M22-Jl0004047	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M22-Jl0004047	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M22-Jl0004047	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	M22-Jl0004047	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M22-Jl0002217	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	M22-Jl0002217	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M22-Jl0002217	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	M22-Jl0002217	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	M22-Jl0002217	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	M22-Jl0002217	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	M22-Jl0002217	NCP	mg/L	0.001	0.002	12	30%	Pass	
Zinc	M22-Jl0002217	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Authorised by:

Catherine Wilson	Analytical Services Manager
Scott Beddoes	Senior Analyst-Metal
Vivian Wang	Senior Analyst-Volatile

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

CHAIN OF CUSTODY DOCUMENTATION

JBS&G (Australia) Pty Ltd

Adelaide
100 Hutt Street ADELAIDE SA 5000
T: +61 8 8431 7113 F: +61 8 8431 7115
ACN 100 220 479 ABN 62 100 220 479

JBS&G

CLIENT: JBS&G	LABORATORY: Eurofins	LABORATORY BATCH NO.:
SITE/PROJECT NAME: Renascor Waterloo Cnr Rd	COC Reference #: 5641	SAMPLERS: JA AT
SEND REPORT TO: JBS&G Australia Pty Ltd	SEND INVOICE TO: JBS&G Australia Pty Ltd	PHONE: 08 8431 7113 FAX: 08 8431 7115
DATA NEEDED BY: **Standard TAT**	REPORT NEEDED BY: **Standard TAT**	REPORT FORMAT: HARD: NO FAX: NO E-MAIL: YES
SITE/PROJECT NUMBER: 63155	**QUOTE #:**	JBS&G OFFICE TO SEND RESULTS: South Australia
RELINQUISHED BY:		**RECEIVED BY** / METHOD OF SHIPMENT: Overnight
NAME : Jack Ayers	DATE: 30/06/2022	NAME : DATE: / CONSIGNMENT NOTE NO.
OF: JBS&G (Australia) Pty Ltd	TIME:	OF: TIME:
NAME:	DATE:	NAME : DATE: / TRANSPORT CO. NAME.
OF:	TIME:	OF: TIME:
P.O. NO.:	COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:	ANALYSIS REQUIRED

FOR LAB USE ONLY
COOLER SEAL
Yes ..... No .....
Broken ..... Intact .....
COOLER TEMP: deg.C

Please forward results and invoice to:
labresults@jbsg.com.au
msarunic@jbsg.com.au
jayers@jbsg.com.au
atschirn@jbsg.com.au

SAMPLE DATA				CONTAINER DATA			M12: Heavy Metals Suite	B14: OCP & OPP	B9: Metals, TRH, BTEX, PAH & OCP	PFAS: Short Suite	B19A: Nutrients	R7: SA Waste Screen	R21: NEPM Screen for Soil Classification	M8: Metals	BTEX	Asbestos	Coliforms (total)	PAH					
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	NO.	pH field																	
BH19_0.3-0.5	SOIL	29/06/2022		1 Jar																			
BH20_0.0-0.1	SOIL	29/06/2022		1 Jar			X				X							X					
BH20_0.1-0.2	SOIL	29/06/2022		1 Jar																			
BH20_0.3-0.5	SOIL	29/06/2022		1 Jar																			
ACM01	CEMENT SHEET	29/06/2022														X							
DUP01	SOIL	29/06/2022		1 Jar					X														
DUP02	SOIL	30/06/2022		1 Jar			X	X															
SPLIT01	SOIL	29/06/2022		1 Jar					X														
SPLIT02	SOIL	30/06/2022		1 Jar			X	X															
TB01	WATER	29/06/2022		2 V											X								
RB01	WATER	30/06/2022		1 Metals										X									
						TOTAL	15	10	8	5	7	2	1	1	1	1	3	4	0	0	0	0	

***Container Type and Preservative Codes:**
P = Neutral Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Jar; S = Solvent Washed Glass Bottle; VC = HCL Preserved Vial; PC = HCL Preserved Plastic; PS = Sulfuric Acid Preserved Plastic; BS = Sulfuric Acid Preserved Glass Bottle; Z = Zinc Acetate Preserved Bottle; ST =Sodium Thiosuplhate Preserved Plastic, E = EDTA Preserved Bottles; ST = Sterile Bottle; O = Other.

***NOTES**

PLEASE FORWARD TO ENVIROLAB

COC received 6/7 6.17pm

CHAIN OF CUSTODY DOCUMENTATION

JBS&G (Australia) Pty Ltd

Adelaide
100 Hutt Street ADELAIDE SA 5000
T: +61 8 8431 7113 · F: +61 8 8431 7115
ACN 100 220 479 · ABN 62 100 220 479

JBS&G

CLIENT: JBS&G	LABORATORY: Eurofins	LABORATORY BATCH NO.:	
SITE/PROJECT NAME: Renascor Waterloo Cnr Rd	COC Reference #: 5641	SAMPLERS: JA AT	
SEND REPORT TO: JBS&G Australia Pty Ltd	SEND INVOICE TO: JBS&G Australia Pty Ltd	PHONE: 08 8431 7113 FAX: 08 8431 7115	
DATA NEEDED BY: **Standard TAT**	REPORT NEEDED BY: **Standard TAT**	REPORT FORMAT: HARD: NO FAX: NO E-MAIL: YES	
SITE/PROJECT NUMBER: 63155	**QUOTE #:**	JBS&G OFFICE TO SEND RESULTS: South Australia	
RELINQUISHED BY:		**RECEIVED BY**	METHOD OF SHIPMENT: Overnight
NAME: Jack Ayers	DATE: 30/06/2022	NAME: Alisha P	DATE: 5/7/22
OF: JBS&G (Australia) Pty Ltd	TIME:	OF: ELS Melb	TIME: 11:45am
NAME:	DATE:	NAME:	DATE:
OF:	TIME:	OF:	TIME:
P.O. NO.:	COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:		CONSIGNMENT NOTE NO.
FOR LAB USE ONLY COOLER SEAL Yes ..... No ..... Broken ..... Intact .... COOLER TEMP: deg.C	**Please forward results and invoice to:** **labresults@jbsg.com.au** msarunic@jbsg.com.au jayers@jbsg.com.au atschirn@jbsg.com.au		TRANSPORT CO. NAME.

SAMPLE DATA				CONTAINER DATA			ANALYSIS REQUIRED																	
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	NO.	pH field	M12: Heavy Metals Suite	B14: OCP & OPP	B9: Metals, TRH, BTEX, PAH & OCP	PFAS: Short Suite	B19A: Nutrients	R7: SA Waste Screen	R21: NEPM Screen for Soil Classification	M8: Metals	BTEX	Asbestos	Coliforms (total)	PAH					
BH19_0.3-0.5	SOIL	29/06/2022		1 Jar																				
BH20_0.0-0.1	SOIL	29/06/2022		1 Jar			X				X							X						
BH20_0.1-0.2	SOIL	29/06/2022		1 Jar																				
BH20_0.3-0.5	SOIL	29/06/2022		1 Jar																				
ACM01	CEMENT SHEET	29/06/2022														X								
DUP01	SOIL	29/06/2022		1 Jar																				
DUP02	SOIL	30/06/2022		1 Jar																				
SPLIT01	SOIL	29/06/2022		1 Jar																				
SPLIT02	SOIL	30/06/2022		1 Jar																				
TB01	WATER	29/06/2022		2 V																				
RB01	WATER	30/06/2022		1 Metals											X									
					TOTAL		13	8	6	5	7	2	1	1	1	1	3	4	0	0	0	0		

***Container Type and Preservative Codes:**
P = Neutral Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Jar; S = Solvent Glass Bottle; VC = HCL Preserved Vial; PC = HCL Preserved Plastic; PS = Sulfuric Acid Preserved Plastic; BS = Sulfuric Preserved Glass Bottle; Z = Zinc Acetate Preserved Bottle; =Sodium Thiosuplhate Preserved Plastic, E = EDTA Preserv Bottles; ST = Sterile Bottle; O = Other.

'NOTES

PLEASE FORWARD TO ENVIROLAB

RELINQUISHED BY:
ELANE G. 5/7/22 8AM

Envirolab Services
12 Ashley Street
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 32327
Date Received: 5/7/22
Time Received: 11:45am
Received By: AP
Temp: Cool / Ambient 3.2
Cooling: Ice / Icepack
Security: Intact / Broken/None

COPY 9

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	JBS & G Australia Pty Ltd
Attention	Jack Ayers

Sample Login Details

Your reference	63155 Renascor Waterloo Cnr Rd
Envirolab Reference	32327
Date Sample Received	05/07/2022
Date Instructions Received	07/07/2022
Date Results Expected to be Reported	13/07/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	2 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	3.2
Cooling Method	Ice
Sampling Date Provided	YES

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:

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 ID	vTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	OCP in Soil	OP in Soil	Acid Extractable metalsin soil
Split01	✓	✓	✓	✓		✓
Split02				✓	✓	✓

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

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

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 32327

Client Details

Client	JBS & G Australia Pty Ltd
Attention	Jack Ayers
Address	100 Hutt Street, ADELAIDE, SA, 5000

Sample Details

Your Reference	**63155 Renascor Waterloo Cnr Rd**
Number of Samples	2 Soil
Date samples received	05/07/2022
Date completed instructions received	07/07/2022

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.

Report Details

Date results requested by	13/07/2022
Date of Issue	13/07/2022

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Chris De Luca, Operations Manager

Authorised By

Pamela Adams, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		32327-1
Your Reference	UNITS	Split01
Date Sampled		29/06/2022
Type of sample		Soil
Date extracted	-	07/07/2022
Date analysed	-	12/07/2022
vTRH C_6 - C_9	mg/kg	<25
vTRH C_6 - C_{10}	mg/kg	<25
TRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total BTEX	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	98

TRH Soil C10-C40 NEPM		
Our Reference		32327-1
Your Reference	UNITS	Split01
Date Sampled		29/06/2022
Type of sample		Soil
Date extracted	-	07/07/2022
Date analysed	-	09/07/2022
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	103

PAHs in Soil		
Our Reference		32327-1
Your Reference	UNITS	Split01
Date Sampled		29/06/2022
Type of sample		Soil
Date extracted	-	07/07/2022
Date analysed	-	09/07/2022
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}	%	108

OCP in Soil			
Our Reference		32327-1	32327-2
Your Reference	UNITS	Split01	Split02
Date Sampled		29/06/2022	30/06/2022
Type of sample		Soil	Soil
Date extracted	-	07/07/2022	07/07/2022
Date analysed	-	09/07/2022	09/07/2022
alpha-BHC	mg/kg	<0.1	<0.1
Hexachlorobenzene	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Total +ve reported Aldrin + Dieldrin	mg/kg	<0.1	<0.1
Total +ve reported DDT+DDD+DDE	mg/kg	<0.1	<0.1
Surrogate 2-chlorophenol-d4	%	98	88

OP in Soil		
Our Reference	UNITS	32327-2
Your Reference		Split02
Date Sampled		30/06/2022
Type of sample		Soil
Date extracted	-	07/07/2022
Date analysed	-	09/07/2022
Azinphos-methyl	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Chlorpyrifos	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Dichlorovos	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Ethion	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Surrogate 2-chlorophenol-d4	%	88

Acid Extractable metals in soil			
Our Reference		32327-1	32327-2
Your Reference	UNITS	Split01	Split02
Date Sampled		29/06/2022	30/06/2022
Type of sample		Soil	Soil
Date digested	-	08/07/2022	08/07/2022
Date analysed	-	08/07/2022	08/07/2022
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	23	41
Copper	mg/kg	26	15
Lead	mg/kg	14	22
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	13	6
Zinc	mg/kg	49	44

Moisture			
Our Reference		32327-1	32327-2
Your Reference	UNITS	Split01	Split02
Date Sampled		29/06/2022	30/06/2022
Type of sample		Soil	Soil
Date prepared	-	07/07/2022	07/07/2022
Date analysed	-	08/07/2022	08/07/2022
Moisture	%	22	18

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105°C for a minimum of 12 hours.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
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).
Org-021/022	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD or GC-MS. 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.

Method ID	Methodology Summary
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:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-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 CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			07/07/2022	[NT]	[NT]	[NT]	[NT]	07/07/2022	[NT]
Date analysed	-			12/07/2022	[NT]	[NT]	[NT]	[NT]	12/07/2022	[NT]
vTRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	97	[NT]
vTRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	97	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	99	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	100	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	92	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	96	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	112	[NT]	[NT]	[NT]	[NT]	108	[NT]

QUALITY CONTROL: TRH Soil C10-C40 NEPM						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			07/07/2022	[NT]	[NT]	[NT]	[NT]	07/07/2022	[NT]
Date analysed	-			09/07/2022	[NT]	[NT]	[NT]	[NT]	09/07/2022	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	92	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	102	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	120	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	92	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	102	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	120	[NT]
Surrogate o-Terphenyl	%		Org-020	89	[NT]	[NT]	[NT]	[NT]	79	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			07/07/2022	[NT]	[NT]	[NT]	[NT]	07/07/2022	[NT]
Date analysed	-			09/07/2022	[NT]	[NT]	[NT]	[NT]	09/07/2022	[NT]
Naphthalene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Acenaphthylene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Fluorene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Phenanthrene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Anthracene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Pyrene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Benzo(b,j&k)fluoranthene	mg/kg	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022	<0.05	[NT]	[NT]	[NT]	[NT]	84	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022	110	[NT]	[NT]	[NT]	[NT]	110	[NT]

QUALITY CONTROL: OCP in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			07/07/2022	[NT]	[NT]	[NT]	[NT]	07/07/2022	[NT]
Date analysed	-			09/07/2022	[NT]	[NT]	[NT]	[NT]	09/07/2022	[NT]
alpha-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Hexachlorobenzene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
gamma-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
delta-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
alpha-chlordane	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Dieldrin	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Endrin	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Methoxychlor	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022	86	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: OP in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			07/07/2022	[NT]	[NT]	[NT]	[NT]	07/07/2022	[NT]
Date analysed	-			09/07/2022	[NT]	[NT]	[NT]	[NT]	09/07/2022	[NT]
Azinphos-methyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Diazinon	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Dichlorovos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Fenitrothion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	78	[NT]
Malathion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022	86	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date digested	-			08/07/2022	[NT]	[NT]	[NT]	[NT]	08/07/2022	[NT]
Date analysed	-			08/07/2022	[NT]	[NT]	[NT]	[NT]	08/07/2022	[NT]
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	[NT]	[NT]	105	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	[NT]	[NT]	105	[NT]
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	113	[NT]
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]

Result Definitions

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

Quality Control Definitions

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

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

Appendix J – Groundwater Logs

GROUNDWATER WELL GW01

PROJECT NUMBER 63155	**DRILLING COMPANY** SMS Geotechnical	**EASTING** 277,271
PROJECT NAME Waterloo Corner Baseline	**DRILLING DATE** 10-Nov-22	**NORTHING** 6,153,651
CLIENT Renascor	**DRILL RIG** DrillMan	**ELEVATION** 5 m AHD
PERMIT NO. 428528	**DRILLING METHOD** Hollow Flight Auger	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**TOTAL DEPTH** 4 m bgl	**COORD SOURCE** GPS
	DIAMETER 150 mm	**LOGGED BY** JA
COMPLETION Gatic	**CASING** Class 18 PVC - 50mm	**SCREEN INTERVAL** 1 - 4 m bgl

COMMENTS

Drilling Method	Water (m bgl)	Well Details	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture
HA			0		SM	Silty SAND, brown, fine to medium, low plasticity fines.	D
			0.2		CH-SC	Silty CLAY, brown to red-brown, medium plasticity, with some fine to medium sand.	SM
			0.4		CH-SC	Sandy CLAY, brown to orange-brown, medium plasticity, fine to medium sand.	SM
			0.6		CL-ML	Silty CLAY, orange-brown, medium plasticity, fine to medium sand, trace or medium gravels.	M
			0.8				
HFA	▽		1				
			1.2		SM	Silty SAND, dark brown, fine to medium, low plasticity fines, with some decayed organics.	W
			1.4		CL-ML	Silty CLAY, brown, low plasticity.	M
			1.6				
			1.8		SM	Silty SAND, brown, fine, low plasticity fines, trace of medium gravels.	W
			2				
			2.2		CH-SC	Sandy CLAY, pale brown, high plasticity, fine to medium sand.	SM
			2.4				
			2.6				
			2.8				
			3		CH	CLAY, dark orange-brown with grey mottling, high plasticity, with some white gravels.	D
			3.2				
			3.4				
			3.6				
			3.8				
			4			Termination Depth at: 4.00 m.	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Nov 2022

GROUNDWATER WELL GW02

PROJECT NUMBER 63155	**DRILLING COMPANY** SMS Geotechnical	**EASTING** 277,203
PROJECT NAME Waterloo Corner Baseline	**DRILLING DATE** 10-Nov-22	**NORTHING** 6,153,499
CLIENT Renascor	**DRILL RIG** DrillMan	**ELEVATION** 5 m AHD
PERMIT NO. 428529	**DRILLING METHOD** Hollow Flight Auger	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**TOTAL DEPTH** 4 m bgl	**COORD SOURCE** GPS
	DIAMETER 150 mm	**LOGGED BY** JA
COMPLETION Gatic	**CASING** Class 18 PVC - 50mm	**SCREEN INTERVAL** 1 - 4 m bgl

COMMENTS

Drilling Method	Water (m bgl)	Well Details	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture
HA			0.2		SM	Silty SAND, brown, fine, low plasticity fines.	D
			0.4		CL-SC	Sandy CLAY, brown to red-brown, low plasticity, medium to coarse sand, with some fine gravels.	M
			0.6				
			0.8				
	▽		1				
HFA			1.2		SM	Silty SAND, dark brown, fine to medium, low plasticity fines.	SM
			1.4		CL-ML	Silty CLAY, orange-brown, low plasticity, with some fine sand.	M
			1.6				
			1.8				
			2		CL-ML	Silty CLAY, orange-brown with grey mottling, medium plasticity.	M
			2.2				
			2.4		ML-CL	Clayey SILT, pale brown with grey mottling, low plasticity, trace of fine sand.	M
			2.6				
			2.8				
			3		SM	Silty SAND, pale brown, medium, low plasticity fines.	W
			3.2				
			3.4				
			3.6				
			3.8		CH	CLAY, grey-brown, high plasticity.	D
			4			Termination Depth at: 4.00 m.	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Nov 2022

GROUNDWATER WELL GW03

PROJECT NUMBER 63155	**DRILLING COMPANY** SMS Geotechnical	**EASTING** 277,453
PROJECT NAME Waterloo Corner Baseline	**DRILLING DATE** 11-Nov-22	**NORTHING** 6,153,384
CLIENT Renascor	**DRILL RIG** DrillMan	**ELEVATION** 5 m AHD
PERMIT NO. 428530	**DRILLING METHOD** Hollow Flight Auger	**COORD SYS** GDA94_MGA_zone_54
ADDRESS Robinson Road, Waterloo Corner SA	**TOTAL DEPTH** 4 m bgl	**COORD SOURCE** GPS
	DIAMETER 150 mm	**LOGGED BY** JA
COMPLETION Gatic	**CASING** Class 18 PVC - 50mm	**SCREEN INTERVAL** 0.8 - 3.8 m bgl

COMMENTS

Drilling Method	Water (m bgl)	Well Details	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture
HA	▽		0.2		SM	Silty SAND, dark brown to black, fine to medium, medium plasticity clay.	SM
			0.4		CL-SC	Sandy CLAY, orange-brown, low plasticity, fine to medium sand, trace of fine gravels.	M
			0.6		CL-ML	Silty CLAY, brown, low to medium plasticity.	W
			0.8				
HFA			1				
			1.2				
			1.4				
			1.6				
			1.8		CH	CLAY, pale brown with grey mottling, high plasticity.	D
			2				
			2.2				
			2.4				
			2.6				
			2.8				
			3				
			3.2				
			3.4				
			3.6				
			3.8				
			4			Termination Depth at: 4.00 m.	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Nov 2022

Appendix K – Groundwater Field Sampling Sheets

GROUNDWATER WELL FIELD SAMPLING SHEET

JBS&G

Project Number:	63155	**WELL ID**	GWO1
Client:	Remascor	**Purging date:**	18/11/22
Site Location:	Waterloo Cnr Rd	**Sampling date:**	18/11/22
Field Sampler(s):	AJ / JA / JB	**Stick up (m):**	–
Casing Diameter (mm):	50mm / 100mm / 150mm	**Depth to NAPL (mBTOC):**	–
Well completion:	Gatic / Standpipe	**Depth to SWL (mBTOC):**	0.565
Cap type:	Envirocap / PVC End cap	**NAPL thickness (m):**	–
Well condition:	Comprimised / Good	**Well Depth (mBTOC):**	3.810
Sampling method:	Purge / Low Flow / Manifold	**Water Column Depth (m)**	
	Low Flow: Pump submersion depth (mBTOC): 3.3	Sampling SWL (mBTOC): 0.565	

Volume Purged	Dissolved Oxygen	Electrical Conductivity	pH	Redox Potential	Temperature	Comments	Time
L	ppm	µS/cm @25°C	pH units	mV	°C	SWL for low flow (mBTOC)	
0.5	0.30	26627	7.07	109.3	17.0	0.565	13:12
1.3	0.19	26540	7.03	104.6	17.0	↓	13:15
2.1	0.13	26329	7.01	100.8	17.1		13:18
2.9	0.15	26880	7.00	99.8	17.1		13:21
Acceptable Variation	+/-10%	+/-5%	+/- 0.1pH unit	+/- 10mV	+/- 0.1 °C	Field results acceptable:	YES / NO

LOW FLOW: Max. flow rate = 0.5 L/min - Max. drawdown = 0.1 m - Well stable when 3 consecutive readings of 3 parameters (either 3min apart or 1L apart)

PURGE: Min. sampling volume is 4 casing volumes or dry twice - 1 casing volume (50mm wells) = 2 L/m - 1 casing volume (100mm wells) = 8 L/m

Turbidity	High / Medium / Low	**Hydrocarbon sheen?**	YES / NO
Colour:	OBN	**Odour:**	Nil
Shaker Test:	X	**Foam Observed**	None

		Analyte	*No.*	*Bottle/label colour (Eurofins)*
Primary sample ID:	GWO1	Metals	1	plastic - red/orange (preserved) ~60ml
Duplicate (intra) sample ID:	–	Inorganic	1	plastic - green (unpreserved) ~500ml
Triplicate (inter) sample ID:	–	Semi Vols.	1	Amber Glass - orange (unpreserved) ~ 200ml
Rinse blank after?	YES / NO ID: RBO1	Volitiles	2	Glass Vials (x2) - pink (preserved) ~ 40ml
Samples filtered for metals?	YES / NO	Nutrients		plastic - purple (preserved) ~60ml
Filter Method:	0.45um stericup filter	Cyanide/ Cr6+		plastic - aqua blue (preserved) ~60ml
Water Quality Meter:	YSI 2	Microbiological		plastic - black/red (preserved) ~500ml
Dipper / Interface probe:	Solinst 150m	PFAS	1	plastic - blue (unpreserved) ~600ml
Pump:	Peri			

Notes: Bailed ~5L from top of well.

Fast recovery.

GROUNDWATER WELL FIELD SAMPLING SHEET

JBS&G

Project Number:	63155	WELL ID	GW02
Client:	Renascor	Purging date:	18/11/22
Site Location:	Waterloo Cnr Rd	Sampling date:	18/11/22
Field Sampler(s):	AJ (JA) JB	Stick up (m):	0
Casing Diameter (mm):	50mm / 100mm / 150mm	Depth to NAPL (mBTOC):	–
Well completion:	Gatic / Standpipe	Depth to SWL (mBTOC):	0.731
Cap type:	Envirocap / PVC End cap	NAPL thickness (m):	–
Well condition:	Comprimised / Good	Well Depth (mBTOC):	3.940
Sampling method:	Purge / Low Flow / Manifold	Water Column Depth (m)	
	Low Flow: Pump submersion depth (mBTOC): 3.5	Sampling SWL (mBTOC): 0.731	

Volume Purged	Dissolved Oxygen	Electrical Conductivity	pH	Redox Potential	Temperature	Comments	Time
L	ppm	µS/cm @25°C	pH units	mV	°C	SWL for low flow (mBTOC)	
0.5	0.63	28296	7.12	89.3	18.0	0.731	12:12
1.5	0.39	27440	7.10	79.4	17.1	↓	12:15
2.5	0.44	27394	7.09	77.4	17.1	↓	12:18
3.5	0.51	27364	7.09	76.1	17.1	↓	12:21
4.5	0.60	27294	7.09	75.4	17.2	↓	12:24
Acceptable Variation	+/-10%	+/-5%	+/- 0.1pH unit	+/- 10mV	+/- 0.1 °C	Field results acceptable:	(YES) / NO

LOW FLOW: Max. flow rate = 0.5 L/min - Max. drawdown = 0.1 m - Well stable when 3 consecutive readings of 3 parameters (either 3min apart or 1L apart)

PURGE: Min. sampling volume is 4 casing volumes or dry twice - 1 casing volume (50mm wells) = 2 L/m - 1 casing volume (100mm wells) = 8 L/m

Turbidity	(High) / Medium / Low	Hydrocarbon sheen?	YES / (NO)
Colour:	OBN	Odour:	Nil
Shaker Test:	Y	Foam Observed	Nil

Primary sample ID:	GW02	*Analyte*	*No.*	*Bottle/label colour (Eurofins)*
Duplicate (intra) sample ID:	DUP01	Metals	1 + 2	plastic - red/orange (preserved) ~60ml
Triplicate (inter) sample ID:	SPLIT01	Inorganic	1 + 2	plastic - green (unpreserved) ~500ml
Rinse blank after?	YES / (NO) ID:	Semi Vols.	1 + 2	Amber Glass - orange (unpreserved) ~ 200ml
Samples filtered for metals?	(YES) / NO	Volitiles	2 + 4	Glass Vials (x2) - pink (preserved) ~ 40ml
Filter Method:	0.45um stericup filter	Nutrients		plastic - purple (preserved) ~60ml
Water Quality Meter:	YSI 2	Cyanide/ Cr6+		plastic - aqua blue (preserved) ~60ml
Dipper / Interface probe:	Solinst 150m	Microbiological		plastic - black/red (preserved) ~500ml
Pump:	Peri	PFAS	1 L 2	plastic - blue (unpreserved) ~600ml

Notes: ~5 L bailed from top of well.

GROUNDWATER WELL FIELD SAMPLING SHEET

JBS&G

Project Number:	631 55	**WELL ID**	GW03
Client:	Renascor	**Purging date:**	18/11/22
Site Location:	Waterloo Cur Rd	**Sampling date:**	18/11/22
Field Sampler(s):	AJ (JA) JB	**Stick up (m):**	–
Casing Diameter (mm):	(50mm) / 100mm / 150mm	**Depth to NAPL (mBTOC):**	–
Well completion:	(Gatic) / Standpipe	**Depth to SWL (mBTOC):**	0.15
Cap type:	(Envirocap) / PVC End cap	**NAPL thickness (m):**	–
Well condition:	Comprimised / (Good)	**Well Depth (mBTOC):**	3.98
Sampling method:	Purge / (Low Flow) / Manifold	**Water Column Depth (m)**	–
	Low Flow: Pump submersion depth (mBTOC): 3.5	Sampling SWL (mBTOC): 0.15	

Volume Purged	Dissolved Oxygen	Electrical Conductivity	pH	Redox Potential	Temperature	Comments	Time
L	ppm	µS/cm @25°C	pH units	mV	°C	SWL for low flow (mBTOC)	
0.5	0.33	34835	7.09	37.7	18.8	0.15	11:07
1.2	0.21	34873	7.10	38.3	18.8	↓	11:10
1.9	0.15	34869	7.11	39.5	18.6	↓	11:13
2.6	0.12	34842	7.12	40.5	18.5	↓	11:16
3.3	0.13	34792	7.12	40.9	18.5	↓	11:19
Acceptable Variation	+/-10%	+/-5%	+/- 0.1pH unit	+/- 10mV	+/- 0.1 °C	Field results acceptable:	(YES) / NO

LOW FLOW: Max. flow rate = 0.5 L/min - Max. drawdown = 0.1 m - Well stable when 3 consecutive readings of 3 parameters (either 3min apart or 1L apart)

PURGE: Min. sampling volume is 4 casing volumes or dry twice - 1 casing volume (50mm wells) = 2 L/m - 1 casing volume (100mm wells) = 8 L/m

Turbidity	High / (Medium) / Low	**Hydrocarbon sheen?**	YES / (NO)
Colour:	ORN	**Odour:**	Nil
Shaker Test:	Y	**Foam Observed**	Nil

Primary sample ID:	GW03	*Analyte*	*No.*	*Bottle/label colour (Eurofins)*
Duplicate (intra) sample ID:	–	Metals	1	plastic - red/orange (preserved) ~60ml
Triplicate (inter) sample ID:	–	Inorganic	1	plastic - green (unpreserved) ~500ml
Rinse blank after?	YES / (NO) ID:	Semi Vols.	1	Amber Glass - orange (unpreserved) ~ 200ml
Samples filtered for metals?	(YES) / NO	Volitiles	2	Glass Vials (x2) - pink (preserved) ~ 40ml
Filter Method:	0.45um stericup filter	Nutrients		plastic - purple (preserved) ~60ml
Water Quality Meter:	YSI 2	Cyanide/ Cr6+		plastic - aqua blue (preserved) ~60ml
Dipper / Interface probe:	Solinst 150m	Microbiological		plastic - black/red (preserved) ~500ml
Pump:	Peri	PFAS	1	plastic - blue (unpreserved) ~600ml

Notes: Bailed ~5L from top of well prior to sampling

Appendix L – NATA Laboratory Documentation (Groundwater)

CHAIN OF CUSTODY DOCUMENTATION

JBS&G (Australia) Pty Ltd

Adelaide
100 Hutt St, ADELAIDE, SA, 5000
T: +61 8 8431 7113 · F: +61 8 8431 7115
ACN 100 220 479 · ABN 62 100 220 479

JBS&G

CLIENT: JBS&G	LABORATORY: Eurofins	LABORATORY BATCH NO.:	
SITE/PROJECT NAME: Renascor / Waterloo Corner	COC Reference 5708	SAMPLERS: JA	
SEND REPORT TO: JBS&G Australia Pty Ltd	SEND INVOICE TO: JBS&G Australia Pty Ltd	PHONE: 08 8431 7113 FAX: 08 8431 7115	
DATA NEEDED BY: Std TAT	REPORT NEEDED BY: Std TAT	REPORT FORMAT: HARD: NO FAX: NO E-MAIL: YES	
SITE/PROJECT NUMBER: 63155	QUOTE #	JBS&G OFFICE TO SEND RESULTS: South Australia	
	RELINQUISHED BY:	RECEIVED BY	METHOD OF SHIPMENT: Overnight
NAME: Marina Sarunic	DATE: 18/11/22	NAME: Rassyal DATE: 18/11	CONSIGNMENT NOTE NO.
OF: JBS&G (Australia) Pty Ltd	TIME:	OF: Eurofins TIME: 3:15pm	
NAME:	DATE:	NAME: DATE:	TRANSPORT CO. NAME
OF:	TIME:	OF: TIME:	

P.O. NO.:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

FOR LAB USE ONLY
COOLER SEAL
Yes ..... No .....
Broken ..... Intact ....
COOLER TEMP: deg.C

Please forward results and invoice to:
labresults@jbsg.com.au
msarunic@jbsg.com.au

SAMPLE DATA				CONTAINER DATA			ANALYSIS REQUIRED																	
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	NO.	pH field	TDS	B7 - TRH / BTEXN / PAH / Metals	VOC	PFAS	Metals M8	BTEX												
GW01	Water	22.03.22		1 Amber, 1 Metals, 1 Plastic (Unpreserved), 2 Vials, 1 Plastic (Preserved)			X	X	X	X														
GW02	Water	22.03.22					X	X	X	X														
GW03	Water	22.03.22					X	X	X	X														
DUP01	Water	22.03.22					X	X	X	X														
[illegible]	Water	22.03.22					X	X	X	X														
TB01	Water	22.03.22		2 Vials								X												
RB01	Water	22.03.22		1 Plastic (Preserved)							X													
						TOTAL	0	5	5	5	5	1	1	0	0	0	0	0	0	0	0	0			

*Container Type and Preservative Codes:
P = Neutral Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Jar; S = Solvent Washed Glass Bottle; VC = HCL Preserved Vial; PC = HCL Preserved Plastic; PS = Sulfuric Acid Preserved Plastic; BS = Sulfuric Acid Preserved Glass Bottle; Z = Zinc Acetate Preserved Bottle; ST =Sodium Thiosulphate Preserved Plastic, E = EDTA Preserved Bottles; ST = Sterile Bottle; O = Other.

*NOTES

PLEASE FORWARD TO ENVIROLAB

12.2°C
− 1.2°C
11.0°C
on 1B.

#942724
19/11 TW

Parimal Acharya

From: Jack Ayers <jayers@jbsg.com.au>
Sent: Friday, 18 November 2022 2:50 PM
To: Parimal Acharya
Cc: Marina Sarunic
Subject: 63155 GW COC
Attachments: 5708_63155_COC - GW.xlsx

CAUTION: EXTERNAL EMAIL - Sent from an email domain that is not formally trusted by Eurofins. Do not click on links or open attachments unless you recognise the sender and are certain that the content is safe.

Hi Parimal,

Please find attached the COC for water samples delivered today.

Please not that some reference number may be mislabelled as 61355, this is my bad! All are from the same reference.

Thanks,

Jack

Jack Ayers | Project Scientist | JBS&G
Kaurna Country | 100 Hutt St, Adelaide, SA
T: 08 8431 7113 | M: 0459 534 775 | E: jayers@jbsg.com.au | W: jbsg.com.au | L: Conditions and Limitations

CHAIN OF CUSTODY DOCUMENTATION

JBS&G (Australia) Pty Ltd

Adelaide
100 Hutt St, ADELAIDE, SA, 5000
T: +61 8 8431 7113 · F: +61 8 8431 7115
ACN 100 220 479 · ABN 62 100 220 479

JBS&G

COPY 18

CLIENT: JBS&G	LABORATORY: Eurofins	LABORATORY BATCH NO.:	
SITE/PROJECT NAME: Renascor / Waterloo Corner	COC Reference 5708	SAMPLERS: JA	
SEND REPORT TO: JBS&G Australia Pty Ltd	SEND INVOICE TO: JBS&G Australia Pty Ltd	PHONE: 08 8431 7113 FAX: 08 8431 7115	
DATA NEEDED BY: Std TAT	REPORT NEEDED BY: Std TAT	REPORT FORMAT: HARD: NO FAX: NO E-MAIL: YES	
SITE/PROJECT NUMBER: 63155	QUOTE #:	JBS&G OFFICE TO SEND RESULTS: South Australia	
RELINQUISHED BY:		RECEIVED BY	METHOD OF SHIPMENT: Overnight
NAME : Marina Saruric	DATE: 18/11/22	NAME : Kathryn	DATE: 18/11
OF: JBS&G (Australia) Pty Ltd	TIME:	OF: Eurofins	TIME: 3:15pm
NAME:	DATE:	NAME :	DATE: CONSIGNMENT NOTE NO.
OF:	TIME:	OF:	TIME: TRANSPORT CO. NAME.
P.O. NO.:	COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:		
FOR LAB USE ONLY COOLER SEAL Yes ..... No ..... Broken ..... Intact .... COOLER TEMP: deg.C	Please forward results and invoice to: labresults@jbsg.com.au msaruni@jbsg.com.au		

SAMPLE DATA				CONTAINER DATA			ANALYSIS REQUIRED																		
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	NO.	pH field	TDS	B7 - TRH / BTEXN / PAH / Metals	VOC	PFAS	Metals M8	BTEX													
GW01	Water	22.03.22		1 Amber, 1 Metals, 1 Plastic (Unpreserved), 2 Vials, 1 Plastic (Preserved)			X	X	X	X															
GW02	Water	22.03.22					X	X	X	X															
GW03	Water	22.03.22					X	X	X	X															
DUP01	Water	22.03.22					X	X	X	X															
SPLIT01	Water	22.03.22					X	X	X	X															
TB01	Water	22.03.22		2 Vials								X													
RB01	Water	22.03.22		1 Plastic (Preserved)							X														
						TOTAL	0	5	5	5	5	1	1	0	0	0	0	0	0	0	0	0				

*Container Type and Preservative Codes:
P = Neutral Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Jar; S = Solvent Washed Glass Bottle; VC = HCL Preserved Vial; PC = HCL Preserved Plastic; PS = Sulfuric Acid Preserved Plastic; BS = Sulfuric Acid Preserved Glass Bottle; Z = Zinc Acetate Preserved Bottle; ST =Sodium Thiosulphate Preserved Plastic, E = EDTA Preserved Bottles; ST = Sterile Bottle; O = Other.

*NOTES

PLEASE FORWARD TO ENVIROLAB

12.2°C
− 1.2°C
11.0°C
on 1B.

1

Amy Meunier

From: Marina Sarunic <msarunic@jbsg.com.au>
Sent: Wednesday, 23 November 2022 5:52 PM
To: Michael Cassidy; #AU_CAU001_EnviroSampleVic
Subject: FW: 63155 GW COC
Attachments: 5708_63155_COC - GW.xlsx

Follow Up Flag: Follow up
Flag Status: Flagged

CAUTION: EXTERNAL EMAIL - Sent from an email domain that is not formally trusted by Eurofins. Do not click on links or open attachments unless you recognise the sender and are certain that the content is safe.

Hi Michael,

Could I please order **B19A: Nutrients** testing to groundwater samples GW01, GW02 and GW03 for the attached COC (I don't think I have received a SRA).

Let me know if there are any issues with this.

Thanks,
Marina

Marina Sarunic | Associate Environmental Scientist | JBS&G
Kaurna Country | 100 Hutt St, Adelaide, SA
T: 08 8431 7113 | M: 0432 799 882 | E: msarunic@jbsg.com.au | W: jbsg.com.au | L: Conditions and Limitations

Exceptional Outcomes

From: Jack Ayers <jayers@jbsg.com.au>
Sent: Friday, 18 November 2022 2:50 PM
To: Parimal Acharya <ParimalAcharya@eurofins.com>
Cc: Marina Sarunic <msarunic@jbsg.com.au>
Subject: 63155 GW COC

Hi Parimal,

Please find attached the COC for water samples delivered today.

Please not that some reference number may be mislabelled as 61355, this is my bad! All are from the same reference.

Thanks,

Jack

Jack Ayers | Project Scientist | JBS&G
Kaurna Country | 100 Hutt St, Adelaide, SA
T: 08 8431 7113 | M: 0459 534 775 | E: jayers@jbsg.com.au | W: jbsg.com.au | L: Conditions and Limitations

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	4/52 Industrial Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield East NSW 2304
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	PO Box 60 Wickham 2293
Tel: +61 3 8564 5000	Tel: +61 3 8564 5000	Tel: +61 2 9900 8400	Tel: +61 2 6113 8091	Tel: +61 7 3902 4600	Tel: +61 2 4968 8448
NATA# 1261 Site# 1254	NATA# 1261 Site# 1254	NATA# 1261 Site# 18217		NATA# 1261 Site# 20794	NATA# 1261 Site# 25079

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Christchurch
35 O'Rorke Road	43 Detroit Drive
Penrose,	Rolleston,
Auckland 1061	Christchurch 7675
Tel: +64 9 526 45 51	Tel: 0800 856 450
IANZ# 1327	IANZ# 1290

Sample Receipt Advice

Company name:	JBS & G Australia (SA) P/L
Contact name:	Marina Sarunic
Project name:	RENASCOR/ WATERLOO CORNER
Project ID:	63155
Turnaround time:	5 Day
Date/Time received	Nov 18, 2022 2:50 PM
Eurofins reference	942724

Sample Information

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

Notes

Contact

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

Michael Cassidy on phone : +61 3 8564 5000 or by email: MichaelCassidy@eurofins.com

Results will be delivered electronically via email to Marina Sarunic - msarunic@jbsg.com.au.

Global Leader - Results you can trust

JBS & G Australia (SA) P/L
100 Hutt St
Adelaide
SA 5000

NATA Accredited
Accreditation Number 1261
Site Number 1254

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

Attention: **Marina Sarunic**

Report **942724-W**
Project name RENASCOR/ WATERLOO CORNER
Project ID 63155
Received Date Nov 18, 2022

Client Sample ID			**GW01**	**GW02**	**GW03**	**DUP01**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M22-No0047219**	**M22-No0047220**	**M22-No0047221**	**M22-No0047222**
Date Sampled			**Nov 18, 2022**	**Nov 18, 2022**	**Nov 18, 2022**	**Nov 18, 2022**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	0.06	0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	79	144	141	148
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			GW01	GW02	GW03	DUP01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M22-No0047219	M22-No0047220	M22-No0047221	M22-No0047222
Date Sampled			Nov 18, 2022	Nov 18, 2022	Nov 18, 2022	Nov 18, 2022
Test/Reference	LOR	Unit				
Volatile Organics						
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Propanone (Acetone)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vinyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Bromofluorobenzene (surr.)	1	%	79	144	141	148
Toluene-d8 (surr.)	1	%	88	97	96	96

Client Sample ID			GW01	GW02	GW03	DUP01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M22-No0047219	M22-No0047220	M22-No0047221	M22-No0047222
Date Sampled			Nov 18, 2022	Nov 18, 2022	Nov 18, 2022	Nov 18, 2022
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Fluorobiphenyl (surr.)	1	%	70	79	76	82
p-Terphenyl-d14 (surr.)	1	%	116	138	116	118
Nitrate & Nitrite (as N)	0.05	mg/L	10	19	18	-
Phosphate total (as P)	0.01	mg/L	0.02	0.01	0.01	-
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	17000	16000	22000	16000
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	1.0	1.5	0.5	-
Total Nitrogen (as N)*	0.2	mg/L	11	20.5	18.5	-
Heavy Metals						
Arsenic	0.001	mg/L	0.001	0.001	0.001	0.001
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper	0.001	mg/L	0.003	0.006	0.006	0.007
Lead	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Mercury	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel	0.001	mg/L	0.002	0.002	0.002	0.002
Zinc	0.005	mg/L	0.007	0.005	0.008	0.006
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	45	39	53	105
13C5-PFPeA (surr.)	1	%	57	52	61	107
13C5-PFHxA (surr.)	1	%	64	56	67	109

Client Sample ID			GW01	GW02	GW03	DUP01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M22-No0047219	M22-No0047220	M22-No0047221	M22-No0047222
Date Sampled			Nov 18, 2022	Nov 18, 2022	Nov 18, 2022	Nov 18, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	53	47	59	103
13C8-PFOA (surr.)	1	%	58	52	60	94
13C5-PFNA (surr.)	1	%	70	60	69	93
13C6-PFDA (surr.)	1	%	71	60	70	80
13C2-PFUnDA (surr.)	1	%	70	56	73	79
13C2-PFDoDA (surr.)	1	%	80	56	74	72
13C2-PFTeDA (surr.)	1	%	163	104	158	101
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	79	75	103	95
D3-N-MeFOSA (surr.)	1	%	63	50	62	60
D5-N-EtFOSA (surr.)	1	%	66	49	65	61
D7-N-MeFOSE (surr.)	1	%	43	35	40	44
D9-N-EtFOSE (surr.)	1	%	54	44	59	50
D5-N-EtFOSAA (surr.)	1	%	49	43	45	75
D3-N-MeFOSAA (surr.)	1	%	35	30	39	54
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	63	58	68	102
18O2-PFHxS (surr.)	1	%	45	45	51	81
13C8-PFOS (surr.)	1	%	62	53	64	83
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	71	63	65	64
13C2-6:2 FTSA (surr.)	1	%	74	77	68	69
13C2-8:2 FTSA (surr.)	1	%	112	99	103	117
13C2-10:2 FTSA (surr.)	1	%	59	48	59	59

Client Sample ID			GW01	GW02	GW03	DUP01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M22-No0047219	M22-No0047220	M22-No0047221	M22-No0047222
Date Sampled			Nov 18, 2022	Nov 18, 2022	Nov 18, 2022	Nov 18, 2022
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			TB01	RB01
Sample Matrix			Water	Water
Eurofins Sample No.			M22-No0047223	M22-No0047224
Date Sampled			Nov 18, 2022	Nov 18, 2022
Test/Reference	LOR	Unit		
BTEX				
Benzene	0.001	mg/L	< 0.001	-
Toluene	0.001	mg/L	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	-
o-Xylene	0.001	mg/L	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	147	-
Heavy Metals				
Arsenic	0.001	mg/L	-	< 0.001
Cadmium	0.0002	mg/L	-	< 0.0002
Chromium	0.001	mg/L	-	< 0.001
Copper	0.001	mg/L	-	< 0.001
Lead	0.001	mg/L	-	< 0.001
Mercury	0.0001	mg/L	-	< 0.0001
Nickel	0.001	mg/L	-	< 0.001
Zinc	0.005	mg/L	-	< 0.005

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Eurofins Suite B7			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Nov 22, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Nov 22, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Nov 22, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Nov 22, 2022	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Polycyclic Aromatic Hydrocarbons	Melbourne	Nov 22, 2022	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Melbourne	Nov 22, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Melbourne	Nov 22, 2022	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)			
Total Nitrogen Set (as N)			
Nitrate & Nitrite (as N)	Melbourne	Nov 24, 2022	28 Days
- Method: LTM-INO-4120 Analysis of NOx NO2 NH3 by FIA			
Total Kjeldahl Nitrogen (as N)	Melbourne	Nov 24, 2022	28 Days
- Method: APHA 4500-Norg B,D Total Kjeldahl Nitrogen by FIA			
Eurofins Suite B19A: Total N (TKN, NOx), Total P			
Phosphate total (as P)	Melbourne	Nov 24, 2022	28 Days
- Method: LTM-INO-4040 Phosphate by CFA			
Total Dissolved Solids Dried at 180 °C ± 2 °C	Melbourne	Nov 22, 2022	28 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Melbourne	Nov 22, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Nov 22, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Nov 22, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Nov 22, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Nov 19, 2022	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

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

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

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

Company Name: JBS & G Australia (SA) P/L
Address: 100 Hutt St
Adelaide
SA 5000

Order No.:
Report #: 942724
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Nov 18, 2022 2:50 PM
Due: Nov 23, 2022
Priority: 5 Day
Contact Name: Marina Sarunic

Project Name: RENASCOR/ WATERLOO CORNER
Project ID: 63155

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Metals M8	BTEX	Volatile Organics	Eurofins Suite B7	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Per- and Polyfluoroalkyl Substances (PFASs)	Total Dissolved Solids Dried at 180 °C ± 2 °C
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	GW01	Nov 18, 2022		Water	M22-No0047219			X	X	X	X	X
2	GW02	Nov 18, 2022		Water	M22-No0047220			X	X	X	X	X
3	GW03	Nov 18, 2022		Water	M22-No0047221			X	X	X	X	X
4	DUP01	Nov 18, 2022		Water	M22-No0047222			X	X		X	X
5	TB01	Nov 18, 2022		Water	M22-No0047223		X					
6	RB01	Nov 18, 2022		Water	M22-No0047224	X						
Test Counts						1	1	4	4	3	4	4

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

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

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

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

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

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

.

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.005			0.005	Pass	
2-Propanone (Acetone)	mg/L	< 0.005			0.005	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.005			0.005	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.005			0.005	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.005			0.005	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chloromethane	mg/L	< 0.005			0.005	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.005			0.005	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.005			0.005	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.005			0.005	Pass	
Vinyl chloride	mg/L	< 0.005			0.005	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Nitrate & Nitrite (as N)	mg/L	< 0.05			0.05	Pass	
Phosphate total (as P)	mg/L	< 0.01			0.01	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	mg/L	< 10			10	Pass	
Total Kjeldahl Nitrogen (as N)	mg/L	< 0.2			0.2	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	75			70-130	Pass	
TRH C10-C14	%	116			70-130	Pass	
Naphthalene	%	80			70-130	Pass	
TRH C6-C10	%	76			70-130	Pass	
TRH >C10-C16	%	112			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	88			70-130	Pass	
Toluene	%	90			70-130	Pass	
Ethylbenzene	%	83			70-130	Pass	
m&p-Xylenes	%	112			70-130	Pass	
Xylenes - Total*	%	113			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	80			70-130	Pass	
1.1.1-Trichloroethane	%	77			70-130	Pass	
1.2-Dichlorobenzene	%	75			70-130	Pass	
1.2-Dichloroethane	%	75			70-130	Pass	
Trichloroethene	%	79			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	112			70-130	Pass	
Acenaphthylene	%	110			70-130	Pass	
Anthracene	%	104			70-130	Pass	
Benz(a)anthracene	%	72			70-130	Pass	
Benzo(a)pyrene	%	98			70-130	Pass	
Benzo(b&j)fluoranthene	%	102			70-130	Pass	
Benzo(g.h.i)perylene	%	126			70-130	Pass	
Benzo(k)fluoranthene	%	112			70-130	Pass	
Chrysene	%	94			70-130	Pass	
Dibenz(a.h)anthracene	%	100			70-130	Pass	
Fluoranthene	%	104			70-130	Pass	
Fluorene	%	108			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	94			70-130	Pass	
Naphthalene	%	82			70-130	Pass	
Phenanthrene	%	102			70-130	Pass	
Pyrene	%	80			70-130	Pass	
LCS - % Recovery							
Nitrate & Nitrite (as N)	%	94			70-130	Pass	
Phosphate total (as P)	%	96			70-130	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	%	106			70-130	Pass	
Total Kjeldahl Nitrogen (as N)	%	101			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	95			80-120	Pass	
Cadmium	%	88			80-120	Pass	
Chromium	%	89			80-120	Pass	
Copper	%	91			80-120	Pass	
Lead	%	91			80-120	Pass	
Mercury	%	83			80-120	Pass	
Nickel	%	91			80-120	Pass	
Zinc	%	91			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	93			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	84			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	68			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	75			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	77			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	80			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	98			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	71			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	72			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	71			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	65			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	77			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	80			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	86			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	84			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	75			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	79			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	75			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	59			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	68			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	63			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	75			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	82			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	67			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	65			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	63			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	64			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	104			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	71			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	65			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M22-No0046902	NCP	%	92			70-130	Pass	
TRH C10-C14	W22-No0043869	NCP	%	126			70-130	Pass	
Naphthalene	M22-No0046902	NCP	%	83			70-130	Pass	
TRH C6-C10	M22-No0046902	NCP	%	94			70-130	Pass	
TRH >C10-C16	W22-No0043869	NCP	%	128			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M22-No0046902	NCP	%	87			70-130	Pass	
Toluene	M22-No0046902	NCP	%	91			70-130	Pass	
Ethylbenzene	M22-No0046902	NCP	%	109			70-130	Pass	
m&p-Xylenes	M22-No0046902	NCP	%	130			70-130	Pass	
o-Xylene	M22-No0046902	NCP	%	100			70-130	Pass	
Xylenes - Total*	M22-No0046902	NCP	%	120			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	M22-No0046902	NCP	%	87			70-130	Pass	
1.1.1-Trichloroethane	M22-No0046902	NCP	%	71			70-130	Pass	
1.2-Dichlorobenzene	M22-No0046902	NCP	%	99			70-130	Pass	
1.2-Dichloroethane	M22-No0046902	NCP	%	85			70-130	Pass	
Trichloroethene	M22-No0046902	NCP	%	77			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M22-No0045874	NCP	%	84			70-130	Pass	
Acenaphthylene	M22-No0045874	NCP	%	78			70-130	Pass	
Anthracene	M22-No0045874	NCP	%	98			70-130	Pass	
Benz(a)anthracene	M22-No0045874	NCP	%	86			70-130	Pass	
Benzo(a)pyrene	M22-No0045874	NCP	%	104			70-130	Pass	
Benzo(b&j)fluoranthene	M22-No0045874	NCP	%	86			70-130	Pass	
Benzo(g.h.i)perylene	M22-No0045874	NCP	%	100			70-130	Pass	
Benzo(k)fluoranthene	M22-No0045874	NCP	%	82			70-130	Pass	
Chrysene	M22-No0045874	NCP	%	113			70-130	Pass	
Dibenz(a.h)anthracene	M22-No0045874	NCP	%	83			70-130	Pass	
Fluoranthene	M22-No0045874	NCP	%	85			70-130	Pass	
Fluorene	M22-No0045874	NCP	%	93			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Indeno(1.2.3-cd)pyrene	M22-No0045874	NCP	%	100			70-130	Pass	
Naphthalene	M22-No0050054	NCP	%	54			70-130	Fail	Q08
Phenanthrene	M22-No0045874	NCP	%	80			70-130	Pass	
Pyrene	M22-No0045874	NCP	%	81			70-130	Pass	
Spike - % Recovery									
				Result 1					
Nitrate & Nitrite (as N)	M22-No0051417	NCP	%	101			70-130	Pass	
Total Kjeldahl Nitrogen (as N)	M22-No0053743	NCP	%	79			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M22-No0045846	NCP	%	93			75-125	Pass	
Cadmium	M22-No0045846	NCP	%	94			75-125	Pass	
Chromium	M22-No0046482	NCP	%	108			75-125	Pass	
Copper	M22-No0045846	NCP	%	85			75-125	Pass	
Lead	M22-No0045846	NCP	%	84			75-125	Pass	
Mercury	M22-No0045846	NCP	%	114			75-125	Pass	
Nickel	M22-No0046482	NCP	%	103			75-125	Pass	
Zinc	M22-No0045846	NCP	%	100			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	M22-No0045851	NCP	%	83			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-No0045851	NCP	%	83			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-No0045851	NCP	%	71			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-No0045851	NCP	%	85			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-No0045851	NCP	%	87			50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-No0045851	NCP	%	91			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-No0045851	NCP	%	110			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-No0045851	NCP	%	80			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-No0045851	NCP	%	67			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-No0045851	NCP	%	75			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-No0045851	NCP	%	62			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M22-No0045851	NCP	%	94			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-No0045851	NCP	%	79			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-No0045851	NCP	%	85			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M22-No0045851	NCP	%	81			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M22-No0045851	NCP	%	76			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-No0045851	NCP	%	83			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-No0045851	NCP	%	72			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M22-No0045851	NCP	%	64			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-No0045851	NCP	%	77			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoropropanesulfonic acid (PFPrS)	M22-No0045851	NCP	%	69			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-No0045851	NCP	%	79			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-No0045851	NCP	%	98			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-No0045851	NCP	%	71			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-No0045851	NCP	%	73			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-No0045851	NCP	%	77			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-No0045851	NCP	%	68			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M22-No0045851	NCP	%	82			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-No0045851	NCP	%	80			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-No0045851	NCP	%	74			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	L22-No0049294	NCP	mg/L	0.06	0.08	31	30%	Fail	Q15
TRH C15-C28	L22-No0049294	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	L22-No0049294	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C10-C16	L22-No0049294	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	L22-No0049294	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	L22-No0049294	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	M22-No0045867	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Nitrate & Nitrite (as N)	S22-No0032348	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Phosphate total (as P)	S22-No0044084	NCP	mg/L	0.04	0.02	45	30%	Fail	Q15
Total Dissolved Solids Dried at 180 °C ± 2 °C	W22-No0044487	NCP	mg/L	220	210	2.8	30%	Pass	
Total Kjeldahl Nitrogen (as N)	R22-No0039941	NCP	mg/L	1.9	2.1	13	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M22-No0045846	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	M22-No0045846	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M22-No0045846	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	M22-No0045846	NCP	mg/L	0.032	0.032	1.0	30%	Pass	
Lead	M22-No0045846	NCP	mg/L	0.001	0.001	3.6	30%	Pass	
Mercury	M22-No0045846	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	M22-No0045846	NCP	mg/L	0.013	0.013	1.0	30%	Pass	
Zinc	M22-No0039468	NCP	mg/L	13	14	4.8	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M22-No0047220	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M22-No0047220	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-No0047220	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-No0047220	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M22-No0047220	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M22-No0047220	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-No0047220	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-No0047220	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M22-No0047220	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-No0047220	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N09	Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Michael Cassidy	Analytical Services Manager
Caitlin Breeze	Senior Analyst-Inorganic
Carroll Lee	Senior Analyst-PFAS
Edward Lee	Senior Analyst-Organic
Emily Rosenberg	Senior Analyst-Metal
Joseph Edouard	Senior Analyst-Volatile
Mary Makarios	Senior Analyst-Inorganic
Mary Makarios	Senior Analyst-Metal
Mele Singh	Senior Analyst-Volatile

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

CHAIN OF CUSTODY DOCUMENTATION **JBS&G (Australia) Pty Ltd**

Adelaide
100 Hutt St, ADELAIDE, SA, 5000
T: +61 8 8431 7113 · F: +61 8 8431 7115
ACN 100 220 479 · ABN 62 100 220 479

JBS&G

COPY 18

CLIENT: JBS&G	LABORATORY: Eurofins	LABORATORY BATCH NO.:
SITE/PROJECT NAME: Renascor / Waterloo Corner	COC Reference 5708	SAMPLERS: JA
SEND REPORT TO: JBS&G Australia Pty Ltd	SEND INVOICE TO: JBS&G Australia Pty Ltd	PHONE: 08 8431 7113 FAX: 08 8431 7115
DATA NEEDED BY: Std TAT	REPORT NEEDED BY: Std TAT	REPORT FORMAT: HARD: NO FAX: NO E-MAIL: YES
SITE/PROJECT NUMBER: 63155	QUOTE #:	JBS&G OFFICE TO SEND RESULTS: South Australia

RELINQUISHED BY: Tyrone G EF 21/11/22 8am		RECEIVED BY		
NAME: Marina Sarunic	DATE: 18/11/22	NAME: Pasfund	DATE: 18/11	METHOD OF SHIPMENT: Overnight
OF: JBS&G (Australia) Pty Ltd	TIME:	OF: Eurofins	TIME: 3:15pm	CONSIGNMENT NOTE NO.
NAME:	DATE:	NAME: Alisha	DATE: 21/11/22	TRANSPORT CO. NAME.
OF:	TIME:	OF: ELS Melb	TIME: 11:55am	

P.O. NO.:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

Please forward results and invoice to:
labresults@jbsg.com.au
msarunic@jbsg.com.au

FOR LAB USE ONLY
COOLER SEAL
Yes ...... No ......
Broken ...... Intact ....
COOLER TEMP deg.C

SAMPLE ID	MATRIX	DATE	TIME	CONTAINER DATA: TYPE & PRESERVATIVE	NO.	pH field		TDS	B7 - TRH / BTEXN / PAH / Metals	VOC	PFAS	Metals M8	BTEX										
GW01	Water	22.03.22		1 Amber, 1 Metals, 1 Plastic (Unpreserved), 2 Vials, 1 Plastic (Preserved)																			
GW02	Water	22.03.22						X	X	X	X												
GW03	Water	22.03.22						X	X	X	X												
DUP01	Water	22.03.22						X	X	X	X												
SPLIT01	Water	22.03.22						X	X	X	X												
TB01	Water	22.03.22		2 Vials				X	X	X	X												
RB01	Water	22.03.22		1 Plastic (Preserved)									X										
												X											
						TOTAL	0	5	5	5	5	1	1	0	0	0	0	0	0	0	0	0	0

1

*Container Type and Preservative Codes:
P = Neutral Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Jar; S = Solvent Washed Glass Bottle; VC = HCl Preserved Vial; PC = HCL Preserved Plastic; PS = Sulfuric Acid Preserved Plastic; BS = Sulfuric Acid Preserved Glass Bottle; Z = Zinc Acetate Preserved Bottle; ST = Sodium Thiosulphate Preserved Plastic; E = EDTA Preserved Bottles; ST = Sterile Bottle; O = Other.

*NOTES

PLEASE FORWARD TO ENVIROLAB

Envirolab Services
25 Research Drive
Croydon South VIC 3136
Ph: (03) 9763 2500

Job No: 34654
Date Received: 21/11/22
Time Received: 11:55am
Received By: LO
Temp: Cool/Ambient 5.4°C
Cooling: Ice/Icepack
Security: Intact/Broken/None

12.2°C
− 1.2°C
11.0°C
on IB.

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	JBS & G Australia Pty Ltd
Attention	Marina Sarunic

Sample Login Details

Your reference	63155 Renascor/ Waterloo Comer
Envirolab Reference	34654
Date Sample Received	21/11/2022
Date Instructions Received	21/11/2022
Date Results Expected to be Reported	28/11/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	5.4
Cooling Method	Ice Pack
Sampling Date Provided	YES

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:

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 ID	VOCs in water - Routine Level	vTRH(C6-C10)/BTEXN in Water	TRH Water(C10-C40) NEPM	PAHs in Water	HM in water - dissolved	Total Dissolved Solids(grav)	PFAS in Waters Extended
SPLIT01	✓	✓	✓	✓	✓	✓	✓

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

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

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 34654

Client Details

Client	JBS & G Australia Pty Ltd
Attention	Marina Sarunic
Address	100 Hutt Street, ADELAIDE, SA, 5000

Sample Details

Your Reference	**63155 Renascor/ Waterloo Comer**
Number of Samples	1 Water
Date samples received	21/11/2022
Date completed instructions received	21/11/2022

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.

Report Details

Date results requested by	28/11/2022
Date of Issue	28/11/2022

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Chaminda Gunasekara, Inorganics Supervisor
Phalak Inthakesone, Group Organics Manager
Tara White, Metals Team Leader
Tianna Milburn, Chemist

Authorised By

Pamela Adams, Laboratory Manager

VOCs in water - Routine Level		
Our Reference		34654-1
Your Reference	UNITS	SPLIT01
Date Sampled		18/11/2022
Type of sample		Water
Date extracted	-	23/11/2022
Date analysed	-	23/11/2022
Dichlorodifluoromethane	µg/L	<10
Chloromethane	µg/L	<10
Vinyl Chloride	µg/L	<10
Bromomethane	µg/L	<10
Chloroethane	µg/L	<10
Trichlorofluoromethane	µg/L	<10
1,1-Dichloroethene	µg/L	<1
Trans-1,2-dichloroethene	µg/L	<1
1,1-dichloroethane	µg/L	<1
Cis-1,2-dichloroethene	µg/L	<1
Bromochloromethane	µg/L	<1
Chloroform	µg/L	<1
2,2-dichloropropane	µg/L	<1
1,2-dichloroethane	µg/L	<1
1,1,1-trichloroethane	µg/L	<1
1,1-dichloropropene	µg/L	<1
Cyclohexane	µg/L	<1
Carbon tetrachloride	µg/L	<1
Benzene	µg/L	<1
Dibromomethane	µg/L	<1
1,2-dichloropropane	µg/L	<1
Trichloroethene	µg/L	<1
Bromodichloromethane	µg/L	<1
trans-1,3-dichloropropene	µg/L	<1
cis-1,3-dichloropropene	µg/L	<1
1,1,2-trichloroethane	µg/L	<1
Toluene	µg/L	<1
1,3-dichloropropane	µg/L	<1
Dibromochloromethane	µg/L	<1
1,2-dibromoethane	µg/L	<1
Tetrachloroethene	µg/L	<1
1,1,1,2-tetrachloroethane	µg/L	<1
Chlorobenzene	µg/L	<1
Ethylbenzene	µg/L	<1

VOCs in water - Routine Level		
Our Reference		34654-1
Your Reference	UNITS	SPLIT01
Date Sampled		18/11/2022
Type of sample		Water
Bromoform	µg/L	<1
m+p-xylene	µg/L	<2
Styrene	µg/L	<1
1,1,2,2-tetrachloroethane	µg/L	<1
o-xylene	µg/L	<1
1,2,3-trichloropropane	µg/L	<1
Isopropylbenzene	µg/L	<1
Bromobenzene	µg/L	<1
n-propyl benzene	µg/L	<1
2-chlorotoluene	µg/L	<1
4-chlorotoluene	µg/L	<1
1,3,5-trimethyl benzene	µg/L	<1
Tert-butyl benzene	µg/L	<1
1,2,4-trimethyl benzene	µg/L	<1
1,3-dichlorobenzene	µg/L	<1
Sec-butyl benzene	µg/L	<1
1,4-dichlorobenzene	µg/L	<1
4-isopropyl toluene	µg/L	<1
1,2-dichlorobenzene	µg/L	<1
n-butyl benzene	µg/L	<1
1,2-dibromo-3-chloropropane	µg/L	<1
1,2,4-trichlorobenzene	µg/L	<1
Hexachlorobutadiene	µg/L	<1
1,2,3-trichlorobenzene	µg/L	<1
Surrogate Dibromofluoromethane	%	108
Surrogate toluene-d8	%	103
Surrogate 4-BFB	%	98

vTRH(C6-C10)/BTEXN in Water		
Our Reference		34654-1
Your Reference	UNITS	SPLIT01
Date Sampled		18/11/2022
Type of sample		Water
Date extracted	-	23/11/2022
Date analysed	-	23/11/2022
TRH C_6 - C_9	µg/L	<10
TRH C_6 - C_{10}	µg/L	<10
TRH C_6 -C_{10} less BTEX (F1)	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Total +ve Xylenes	µg/L	<1
Total BTEX in water	µg/L	<1
Surrogate Dibromofluoromethane	%	111
Surrogate toluene-d8	%	107
Surrogate 4-BFB	%	98

TRH Water(C10-C40) NEPM		
Our Reference	UNITS	34654-1
Your Reference		SPLIT01
Date Sampled		18/11/2022
Type of sample		Water
Date extracted	-	23/11/2022
Date analysed	-	24/11/2022
TRH C_{10} - C_{14}	µg/L	<50
TRH C_{15} - C_{28}	µg/L	<100
TRH C_{29} - C_{36}	µg/L	<100
Total +ve TRH (C10-C36)	µg/L	<50
TRH >C_{10} - C_{16}	µg/L	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50
TRH >C_{16} - C_{34}	µg/L	<100
TRH >C_{34} - C_{40}	µg/L	<100
Total +ve TRH (>C10-C40)	µg/L	<50
Surrogate o-Terphenyl	%	81

PAHs in Water		
Our Reference		34654-1
Your Reference	UNITS	SPLIT01
Date Sampled		18/11/2022
Type of sample		Water
Date extracted	-	23/11/2022
Date analysed	-	24/11/2022
Naphthalene	µg/L	<1
Acenaphthylene	µg/L	<1
Acenaphthene	µg/L	<1
Fluorene	µg/L	<1
Phenanthrene	µg/L	<1
Anthracene	µg/L	<1
Fluoranthene	µg/L	<1
Pyrene	µg/L	<1
Benzo(a)anthracene	µg/L	<1
Chrysene	µg/L	<1
Benzo(b,j&k)fluoranthene	µg/L	<2
Benzo(a)pyrene	µg/L	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1
Dibenzo(a,h)anthracene	µg/L	<1
Benzo(g,h,i)perylene	µg/L	<1
Total +ve PAH's	µg/L	<1
Benzo(a)pyrene TEQ	µg/L	<5
Surrogate p-Terphenyl-d_{14}	%	90

HM in water - dissolved		
Our Reference		34654-1
Your Reference	UNITS	SPLIT01
Date Sampled		18/11/2022
Type of sample		Water
Date prepared	-	25/11/2022
Date analysed	-	25/11/2022
Arsenic-Dissolved	µg/L	1
Cadmium-Dissolved	µg/L	<0.1
Chromium-Dissolved	µg/L	2
Copper-Dissolved	µg/L	7
Lead-Dissolved	µg/L	<1
Nickel-Dissolved	µg/L	3
Zinc-Dissolved	µg/L	9
Mercury-Dissolved	µg/L	<0.05

Miscellaneous Inorganics		
Our Reference		34654-1
Your Reference	UNITS	SPLIT01
Date Sampled		18/11/2022
Type of sample		Water
Date prepared	-	22/11/2022
Date analysed	-	22/11/2022
Total Dissolved Solids (grav)	mg/L	19,000

PFAS in Waters Extended		
Our Reference		34654-1
Your Reference	UNITS	SPLIT01
Date Sampled		18/11/2022
Type of sample		Water
Date prepared	-	21/11/2022
Date analysed	-	21/11/2022
Perfluorobutanesulfonic acid	µg/L	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01
Perfluorohexanesulfonic acid PFHxS	µg/L	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02
Perfluorobutanoic acid	µg/L	<0.02
Perfluoropentanoic acid	µg/L	<0.02
Perfluorohexanoic acid	µg/L	<0.01
Perfluoroheptanoic acid	µg/L	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01
Perfluorononanoic acid	µg/L	<0.01
Perfluorodecanoic acid	µg/L	<0.02
Perfluoroundecanoic acid	µg/L	<0.02
Perfluorododecanoic acid	µg/L	<0.05
Perfluorotridecanoic acid	µg/L	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5
4:2 FTS	µg/L	<0.01
6:2 FTS	µg/L	<0.01
8:2 FTS	µg/L	<0.02
10:2 FTS	µg/L	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05
N-Ethyl perfluorooctanesulfon -amide	µg/L	<0.1
N-Me perfluorooctanesulfonamid -oethanol	µg/L	<0.05
N-Et perfluorooctanesulfonamid -oethanol	µg/L	<0.5
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02
Surrogate $^{13}C_8$ PFOS	%	100
Surrogate $^{13}C_2$ PFOA	%	101
Extracted ISTD $^{13}C_3$ *PFBS*	%	107
Extracted ISTD $^{18}O_2$ *PFHxS*	%	108
Extracted ISTD $^{13}C_4$ *PFOS*	%	102
Extracted ISTD $^{13}C_4$ *PFBA*	%	110

PFAS in Waters Extended		
Our Reference		34654-1
Your Reference	UNITS	SPLIT01
Date Sampled		18/11/2022
Type of sample		Water
Extracted ISTD $^{13}C_3$ *PFPeA*	%	129
Extracted ISTD $^{13}C_2$ *PFHxA*	%	105
Extracted ISTD $^{13}C_4$ *PFHpA*	%	106
Extracted ISTD $^{13}C_4$ *PFOA*	%	121
Extracted ISTD $^{13}C_5$ *PFNA*	%	120
Extracted ISTD $^{13}C_2$ *PFDA*	%	116
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	117
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	112
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	110
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	126
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	122
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	108
Extracted ISTD $^{13}C_8$ *FOSA*	%	109
Extracted ISTD d_3 *N MeFOSA*	%	117
Extracted ISTD d_5 *NEtFOSA*	%	124
Extracted ISTD d_7 *N MeFOSE*	%	115
Extracted ISTD d_9 *N EtFOSE*	%	102
Extracted ISTD d_3 *N MeFOSAA*	%	106
Extracted ISTD d_5 *N EtFOSAA*	%	131
Total Positive PFHxS & PFOS	µg/L	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01
Total Positive PFAS	µg/L	<0.01

Method ID	Methodology Summary
Inorg-018	Total Dissolved Solids - determined gravimetrically. The solids are dried at 180±10°C.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Metals-022 ICP-MS	Determination of various metals by ICP-MS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-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.
Org-023	Water samples are analysed directly 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.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLP/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER

QUALITY CONTROL: VOCs in water - Routine Level					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			23/11/2022	[NT]	[NT]	[NT]	[NT]	23/11/2022	[NT]
Date analysed	-			23/11/2022	[NT]	[NT]	[NT]	[NT]	23/11/2022	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroform	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
2,2-dichloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
1,1-dichloropropene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibromomethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Bromodichloromethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
1,2-dibromoethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromoform	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Styrene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: VOCs in water - Routine Level					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	106	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate toluene-d8	%		Org-023	101	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate 4-BFB	%		Org-023	94	[NT]	[NT]	[NT]	[NT]	97	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			23/11/2022	[NT]	[NT]	[NT]	[NT]	23/11/2022	[NT]
Date analysed	-			23/11/2022	[NT]	[NT]	[NT]	[NT]	23/11/2022	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	114	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	114	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	117	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	114	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	115	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Surrogate Dibromofluoromethane	%		Org-023	108	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate toluene-d8	%		Org-023	104	[NT]	[NT]	[NT]	[NT]	98	[NT]
Surrogate 4-BFB	%		Org-023	94	[NT]	[NT]	[NT]	[NT]	93	[NT]

QUALITY CONTROL: TRH Water(C10-C40) NEPM						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			23/11/2022	[NT]	[NT]	[NT]	[NT]	23/11/2022	[NT]
Date analysed	-			24/11/2022	[NT]	[NT]	[NT]	[NT]	24/11/2022	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	74	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	87	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	80	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	74	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	87	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	80	[NT]
Surrogate o-Terphenyl	%		Org-020	84	[NT]	[NT]	[NT]	[NT]	77	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			23/11/2022	[NT]	[NT]	[NT]	[NT]	23/11/2022	[NT]
Date analysed	-			24/11/2022	[NT]	[NT]	[NT]	[NT]	24/11/2022	[NT]
Naphthalene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	78	[NT]
Acenaphthylene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Fluorene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Phenanthrene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Anthracene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Pyrene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Benzo(a)anthracene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Benzo(b,j&k)fluoranthene	µg/L	2	Org-022	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	1	Org-022	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022	98	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			25/11/2022	[NT]	[NT]	[NT]	[NT]	25/11/2022	[NT]
Date analysed	-			25/11/2022	[NT]	[NT]	[NT]	[NT]	25/11/2022	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022 ICP-MS	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Chromium-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Copper-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Lead-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Nickel-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Zinc-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021 CV-AAS	<0.05	[NT]	[NT]	[NT]	[NT]	112	[NT]

QUALITY CONTROL: Miscellaneous Inorganics					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			22/11/2022	[NT]	[NT]	[NT]	[NT]	22/11/2022	[NT]
Date analysed	-			22/11/2022	[NT]	[NT]	[NT]	[NT]	22/11/2022	[NT]
Total Dissolved Solids (grav)	mg/L	5	Inorg-018	<5	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: PFAS in Waters Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	101	[NT]
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorohexanesulfonic acid PFHxS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorobutanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	109	[NT]
Perfluoropentanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluorohexanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluoroheptanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluorononanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorodecanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluoroundecanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorododecanoic acid	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorotridecanoic acid	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorotetradecanoic acid	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	106	[NT]
4:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	101	[NT]
6:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	97	[NT]
8:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	104	[NT]
10:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	109	[NT]
Perfluorooctane sulfonamide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	103	[NT]
N-Ethyl perfluorooctanesulfon -amide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
N-Me perfluorooctanesulfonamid -oethanol	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	104	[NT]
N-Et perfluorooctanesulfonamid -oethanol	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	108	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	106	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	95	[NT]
Surrogate $^{13}C_8$ PFOS	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate $^{13}C_2$ PFOA	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_3$ PFBS	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	103	[NT]

QUALITY CONTROL: PFAS in Waters Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	112	[NT]	[NT]	[NT]	[NT]	109	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	110	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	109	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	94	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	112	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	116	[NT]	[NT]	[NT]	[NT]	112	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	114	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD d_5 *NEtFOSA*	%		Org-029	114	[NT]	[NT]	[NT]	[NT]	109	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	109	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: PFAS in Waters Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	110	[NT]	[NT]	[NT]	[NT]	110	[NT]

Result Definitions

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

Quality Control Definitions

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

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

© JBS&G

This document is and shall remain the property of JBS&G. The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited

Document Distribution

Rev No.	Copies	Recipient	Date
0	1 x Electronic	Simon Ballestrin	28 July 2022
1	1 x Electronic	Simon Ballestrin & William Tregenza	22 December 2022

Document Status

Rev No.	Author	Reviewer	Approved for Issue		
		Name	Name	Signature	Date
0	Marina Sarunic	Will Ellis	Will Ellis		28 July 2022
1	Marina Sarunic	Will Ellis	Will Ellis		22 December 2022

www.jbsg.com.au