The **Ordinary Meeting** of
Bayside Council
will be held in the Rockdale Town Hall, Council Chambers,
Level 1, 448 Princes Highway, Rockdale
on Wednesday, 14 August 2019 at 7:00 pm

UNDER SEPARATE COVER ATTACHMENTS

8 REPORTS

TRACE ENVIRONMENTAL

DETAILED SITE INVESTIGATION

146-154 O'Riordan Street, Mascot, NSW

Prepared for:
Toplace Pty Ltd

Revision	Date	Author	Approver	Issued
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Executive Summary

Toplace Pty. Ltd. engaged TRACE Environmental to undertake a Detailed Site Investigation (DSI), at 146-154 O'Riordan Street, Mascot, NSW ('the site'). The site is identified as Lot 1 of DP85597 (146 O'Riordan Street) and Lot A of DP320192, Lot A of DP402876 and Lot A of DP364217 (154 O'Riordan Street). The investigation was conducted to assess the site condition relative to the current commercial/light industrial land uses and proposed redevelopment of the site for medium to high density residential land use.

The scope of works undertaken for this investigation included:

- Undertake a review of available historical information, such as Certificates of Title, Council records and Environment Protection Authority New South Wales (EPA NSW) contaminated land registers;
- Undertake a field investigation including advancement of 21 boreholes across the site (utilising a Geoprobe drilling rig and/or hand auger) and analysis of selected soil samples for a selection of contaminants of potential concern (COPCs); as well as installation of four groundwater monitoring wells across the site and analysis of water samples for a selection of COPCs;
- Develop a preliminary conceptual site model (CSM) of the site outlining potential contamination sources and exposure pathways and receptors which may be impacted; and
- Preparation and submission of this report, which also includes recommendations for additional investigations.

Based on the findings of this investigation, TRACE Environmental provides the following summary and conclusions:

- The site has been used for a variety of light industrial and commercial purposes since the mid-1970's, prior to which, the site appears to have consisted of a mix of commercial/industrial-type structures, vegetated land and farmland (circa 1940s). The site has historically been used for a variety of purposes, including several types of manufacturing (e.g. fork lift trucks, electronic equipment, motor garage equipment, lubricating equipment and spraying equipment). The site is currently used for commercial/light industrial purposes, including electronics repair, fashion distribution, broadcasting, air freight transport, rail maintenance organisation workshop and food production/distribution. A potential underground stormwater detention basin is located in the south-western corner of the site, indicated by the land topography;
- Historical site uses, including a variety of manufacturing operations, are potential sources of sub-surface impact. Additionally, the likely historical importation of fill material from unknown sources has the potential to impact the sub-surface;
- Fill material was encountered during the investigation across the site to depths up to 3.0mbgs, and was observed to contain anthropogenic waste materials at most soil bore locations;
- Fill and natural soil samples were collected from 21 soil bores advanced across the site. A total of 87 soil samples were analysed for a variety of COPCs to determine if historical site uses had impacted the sub-surface at the site, of these 22 natural soil samples submitted for acid sulfate soil (ASS) analysis;

- Four of the soil bores were completed as permanent groundwater monitoring wells (MW-1 to MW-4) and were developed, gauged, purged and sampled. Groundwater was encountered at depths between approximately 3.7 and 4.6 mBTOC. Groundwater was calculated to flow south-westerly, towards Alexandra Canal;
- The results of the soil assessment showed COPCs at levels exceeding human health assessment criteria for the proposed medium to high density residential land use in fill material at locations across the site, with some COPCs reported above the ecological assessment criteria for urban residential and public open space from fill materials across the site;
- Asbestos (ACM and/or FA+AF) was identified in shallow fill material in the western and central areas of the site above the human health assessment criteria for the proposed land use;
- The results of the groundwater assessment showed heavy metal COPCs at levels exceeding the applicable guideline criteria in samples collected from all groundwater monitoring wells. Due to the urban setting of the site, these impacts are likely representative of background conditions at the site and surrounding site area; and
- Based on the laboratory analytical results for soil samples analysed for ASS parameters, it is considered likely that potential or actual acid sulfate soils are present in natural materials sampled at the site. As such, an Acid Sulfate Soil Management Plan (ASSMP) will be required prior to future development works or disturbance of the natural material at the site.

Based on the findings of the DSI, it is considered that the site can be made suitable for the proposed medium to high density residential land use following implementation of a Remedial Action Plan (RAP) for the site, incorporating a Data Gap Investigation (DGI), and the delineation, remediation and validation of identified soil impacts on the site. It is expected that implementation of the RAP would occur following demolition of site structures at the commencement of site redevelopment activities.

Based on the findings of the DSI, TRACE Environmental provides the following recommendations:

- A RAP should be prepared which outlines the remediation and/or management strategy for the identified impacts in fill material at the site for the proposed medium to high density residential land use. The remediation and/or management requirements outlined in the RAP should consider the findings of the current DSI in the context of the final redevelopment design, including ecological considerations as well as aesthetic observations made during the DSI fieldworks. The RAP should also include an unexpected finds protocol for the discovery of previously unidentified soil and/or groundwater impacts (including ACM and ASS) during hardstand removal and site redevelopment works;
- Due to access restrictions at some areas of the site, assessment of soil conditions could not be completed at all locations during the DSI. As such, the RAP should also incorporate a DGI which includes additional intrusive soil (and/or groundwater) investigations are required at the site to address current data gaps and to meet the recommended sampling densities outlined in NSW EPA 2006. This should also include additional investigation of areas of the site currently containing buildings, and shallow fill materials across the site should also be inspected following removal of concrete hardstand to assess for potential residual impacts relating to previous site infrastructure/operations;
- Prior to any disturbance of the sub-surface being undertaken at the site as part of the proposed site redevelopment, an Asbestos Management Plan (AMP) should be prepared in accordance with SafeWork NSW Codes of Practice, which identified the locations of the ACM, FA and AF detected

during this DSI and outlines how the asbestos risks will be controlled during work (including any air monitoring procedures that may be required);

- Due to the age and construction of the on-site structures, a hazardous materials survey should be conducted, and a hazardous materials register be prepared for the site prior to commencement of any demolition activities;
- Prior to any disturbance of the sub-surface being undertaken at the site as part of the proposed site development, an ASSMP should be prepared which identifies the locations of potential and/or actual ASS detected during this DSI and outlines how the ASS risks will be controlled during work;
- Any material to be removed must be classified in accordance with the NSW EPA (2014) *Waste Classification Guidelines*, and the soil be disposed appropriately to a facility licensed to accept the material; and
- Any imported material brought onto the site for any purpose must first be validated as being suitable for the intended land use, prior to being imported onto the site.

1 Introduction

Toplace Pty. Ltd. (Toplace) engaged TRACE Environmental to undertake a Detailed Site Investigation (DSI), incorporating a Preliminary Site Investigation (PSI) and Limited Soil Sampling Program for the property located at 146-154 O'Riordan Street, Mascot, NSW ('the site'). The site is identified as Lot 1 of DP85597 (146 O'Riordan Street) and Lot A of DP320192, Lot A of DP402876 and Lot A of DP364217 (154 O'Riordan Street).

A Locality Plan is presented in **Figure 1** showing the location of the site, and a Site Layout Plan is presented in **Figure 2**.

The investigation was conducted to assess the site condition relative to present and historical land uses, in particular the site condition relating to current commercial/light industrial land uses and proposed redevelopment of the site for medium to high density residential land use.

This investigation was completed in accordance with the National Environment Protection Measure (*Assessment of Site Contamination*) Measure, Amendment 2013 (NEPM) and relevant Environment Protection Authority New South Wales (EPA NSW) Guidelines.

1.1 Objectives

The specific objectives of this investigation are to:

- Assess the site condition relative to present and historical land uses;
- Identify any current or historical potentially contaminating activities;
- If applicable, identify the potential types and nature of contamination;
- If applicable, identify potential human and ecological receptors;
- Develop a preliminary Conceptual Site Model (CSM) to identify potential risks to human health and/or ecological receptors that may affect the suitability of the site for proposed residential land use with open space areas, and to inform further assessment at the site (if required); and
- Provide conclusions and recommendations regarding the contamination status of the site, and identify any further investigation, management and/or remediation measures for potential site contamination, if considered warranted.

1.2 Scope of Works

In order to achieve the objectives, the following scope of works were undertaken at the site:

- Undertake a review of historical information for the site, including:
  - Current and historical Certificates of Title;
  - Local Council records, including Planning Certificates;
  - EPA NSW administered environment management and contaminated land registers; and
  - Historical city directories; and

- Available historical aerial photographs.

- Undertake a review of the following information for the site and surrounds:
  - Registered groundwater bore database for groundwater bores in the vicinity of the site to assist in gaining an understanding of the local and regional hydrogeology;
  - Acid Sulfate Soils (ASS) and potential salinity risk maps; and
  - Available geological and hydrogeological information.
- Undertake a field investigation, including the following:
  - Conduct an inspection of the site to assist with the identification of potential on- and off-site sources of contamination;
  - Advancement of 21 boreholes (SB-1, SB-4, SB-6 to SB-12, SB-13, SB-14 and SB-17 to SB-27) at locations across the site and collection of fill and natural soil samples from each of the boreholes;
  - Analysis of selected soil samples for a selection of contaminants of potential concern (COPCs);
  - Conversion of four soil bores to permanent groundwater monitoring wells and collection of groundwater samples from each newly installed monitoring well; and
  - Analysis of collected groundwater samples for a selection of COPCs.
- Based on the results of the investigation, develop a preliminary CSM of the site, outlining potential contamination sources, exposure pathways and receptors which may be impacted, and undertake a preliminary environmental risk assessment; and
- Provide conclusions and recommendations regarding the contamination status of the site, and identify any further investigation, management and/or remediation measures for potential site contamination, if considered warranted.

Refer to **Sections 4** and **6** below for additional detail of the undertaken field investigation.

1.3 Statutory and Regulatory Framework

Field activities and reporting were carried out in accordance with the following guidelines, regulations and standards:

- CRC CARE (2011) *Technical Report No. 10 Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater Part 1: Technical Development Document*, September 2011;
- National Environmental Protection Council (NEPC), National Environmental Protection (*Assessment of Site Contamination*) Measure (NEPM), 1999, Amendment 2013;
- NEPM (2013) *Schedule B(1) Guideline on Investigation Levels for Soil and Groundwater*, NEPM, 1999, Amendment 2013;
- NEPM (2013) *Schedule B(2) Guideline on Site Characterisation*, NEPM, 1999, Amendment 2013;

- National Health and Medical Research Council (2018) *Australian Drinking Water Guidelines* (ADWG), Updated August 2018;
- NSW ASSMAC (1998) *Acid Sulfate Soils Manual*, New South Wales Acid Sulfate Soils Management Advisory Committee (ASSMAC), August 1998;
- NSW ASSMAC (1998) *Acid Sulfate Soils Assessment Guidelines*, ASSMAC, August 1998;
- NSW Department of Environment and Conservation (DEC) (2006) *Guidelines for the NSW Site Auditor Scheme (2nd Ed.)*, April 2006;
- NSW Department of Urban Affairs and Planning (1998) *Managing Land Contamination: Planning Guidelines: SEPP 55 Remediation of Land*, August 1998;
- NSW EPA (1995) *Sampling Design Guidelines*, September 1995;
- NSW EPA (2014), *Waste Classification Guidelines. Part 1: Classifying Waste*. NSW EPA, November 2014;
- NSW OEH (2011), *Guidelines for Consultants Reporting on Contaminated Sites*. NSW Office of Environment & Heritage (OEH), November 1997, Reprinted September 2000 and August 2011;
- NSW EPA (2015), *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act*. NSW EPA, September 2015;
- Standards Australia. *Guide to the investigation and sampling of sites with potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds*, AS4482.1 (2005) and Part 2: Volatile substances, AS4482.2 (1999);
- NSW WorkCover 2011a, *How to Manage and Control Asbestos in the Workplace Code of Practice*, WorkCover NSW, December 2011; and
- NSW WorkCover 2011b, *How to Safely Remove Asbestos Code of Practice*, WorkCover NSW, December 2011.

2 Site Description and Setting

2.1 Site Identification

Details of the site are included in **Tables 2-1** and **2-2** below. Photographs of the site are included in **Appendix A**.

Table 2-1: Summary of Site Identification Details – 146 O'Riordan Street

ID Element	Description
Site Address	146 O'Riordan Street
Standard Parcel Identifier	Lot 1 of DP85597
Local Council	Bayside Council
Site Coordinates	-33.926458, 151.189119
Zoning	Business Development (B5)
Approximate Site Elevation	17m AHD
Approximate Site Area	2,500 m²

Table 2-2: Summary of Site Identification Details – 154 O'Riordan Street

ID Element	Description
Site Address	154 O'Riordan Street
Standard Parcel Identifier	Lot A of DP320192, Lot A of DP402876 and Lot A of DP364217
Local Council	Bayside Council
Site Coordinates	-33.926987, 151.188651
Zoning	Business Development (B5)
Approximate Site Elevation	17m AHD to 9m AHD
Approximate Site Area	13,800 m²

The Locality Plan is presented in **Figure 1** and the Site Layout Plan is presented in **Figure 2**. Refer also to **Section 3.3** below for additional detail of each property comprising the site.

2.2 Site Description

A site inspection was completed by TRACE Environmental personnel on 3 August 2018. Photographs taken during the inspection are included in **Appendix A**. Details of the site, as observed during the inspection, are outline in **Table 2-3** below and are shown on **Figure 2**.

Table 2-3: Site Description

Category	Findings
Current Use and Users/Occupiers	The 146 O'Riordan Street site parcel currently comprises a large warehouse/office building with a car parking area in the western portion of the site. The warehouse is used for a variety of commercial purposes, including IT training and electronics repair and refurbishment.

	The 154 O'Riordan Street site parcel currently comprises of three large warehouse/office buildings, located in the northern, southern and eastern portions of the site parcel. Car parking areas are located in the western, central and south-eastern portions of the site. The on-site buildings are used for a variety of commercial and/or light industrial purposes, including fashion distribution, broadcasting, air freight transport, food production/distribution and rail maintenance organisation workshop.
Future Use and Users/Occupiers	It is understood that the proposed future land use of the site is medium to high density residential land use. The future users of the site will be third parties/visitors/customers/employees of the building or future residents (should the site be redeveloped for residential purposes). Intrusive maintenance workers would also be expected to undertake works periodically at the site.
Current Site Features	146 O'Riordan Street – Access to this portion of the site is from the western boundary, from O'Riordan Street. An irregular shaped warehouse/office building is present in the central and eastern portions of the site parcel. A car parking area with landscaped areas at the boundaries is present in the western portion of the site parcel. 154 O'Riordan Street – Access to this portion of the site is from the western boundary, from O'Riordan Street. An oblong shaped warehouse/office building is located in the northern portion of the site parcel and borders the 146 O'Riordan Street warehouse building. A larger warehouse building is present in the southern portion of the site parcel and extends for approximately 80% of the southern site boundary. A smaller warehouse building is located in the eastern portion of the site parcel. Car parking areas are located in the north-west, central and south-east portions of the site parcel, with a driveway linking them through the centre of the site (orientated west to east). A small landscaped area is located in the south-western portion of the site, with access from O'Riordan Street. An underground storage tank (UST) (likely a stormwater detention basin) appears to be located in this area, however its presence could not be confirmed by a service locator and underground service plans relating to the on-site infrastructure were unavailable to TRACE Environmental during the site investigation.
Proposed Site Features	It is understood that the site may potentially be redeveloped to medium to high density residential land use.
Chemicals, raw materials and intermediate products storage and use	A potential UST was identified in the south-western portion of the 154 O'Riordan Street site parcel; however, the potential uses of this UST are unknown (and appears to be associated with the on-site stormwater drainage). In addition, other chemicals such oils may have been stored at some locations across the site (e.g. workshops).
Waste Management	No hazardous waste is currently generated or stored on-site. Light commercial waste is temporarily stored in bins prior to off-site disposal.
Reported spills, chemical losses, discharges to land/water and/or incidents/accidents	No visible evidence of significant chemical spills was observed on the site. A review of available EPA databases indicates that the site has not been listed by the EPA NSW (refer to **Section 3.4**).
Surface covering/Vegetation	The majority of the 146 and 154 O'Riordan Street site parcels comprises concrete or bitumen hardstand associated with the on-site buildings and car parking areas. Landscaped areas are present along the eastern and western site boundaries and between car parking spaces in the western and central car parking areas. A larger landscaped area is present in the south-west corner of the 154 O'Riordan Street site parcel.
Electrical transformers/power generation	The site is provided power via underground services. No electrical transformers were observed at the site. An electrical substation is located in the south-western corner of the 154 O'Riordan Street site parcel.
Topography and infilling	The 146 O'Riordan Street site parcel is generally flat, and the 154 O'Riordan Street site parcel generally slopes towards the east. No visible areas of significant infilling

	were observed or suspected during the site inspection, however, it is noted that a small mound was observed at the south-west corner of the site which appeared to be associated with a suspected underground stormwater detention basin.
Surface drainage	Details of the on-site surface water drainage system were not provided. However, based on site observations, surface water from the building roof areas is expected to drain to the municipal storm drainage system. Sheet flow across the car park areas is expected to flow to storm drains located within the car parks and central driveway and discharge to the municipal storm drainage system. The discharge point of the on-site surface water drainage in the site area is likely the municipal stormwater system.

2.3 Surrounding Land Use

The current adjoining properties of the site comprised:

- North of the site: Mascot Oval;
- East of the site: low to medium density residential properties;
- South of the site: commercial/light industrial properties; and
- West of the site: O'Riordan Street and a construction site beyond (at the time of investigation, construction of a multi-story building was near completion across O'Riordan Street).

2.4 Surface Water Bodies

The nearest surface water body is an unnamed drain, located approximately 600m west of the site, that empties into the Alexandria canal, located approximately 1km north-west/west of the site. The nearest natural surface water body is Mill Stream, approximately 1.5km south-east of the site.

It is also noted that Botany Bay is located approximately 3km south of the site.

2.5 Regional Geology & Hydrogeology

The Lotsearch Pty Ltd (Lotsearch) *Environmental Risk and Planning Report (*provided in **Appendix B**) provides details of the geological information at the site, sourced from NSW Department of Industry, Resources and Energy.

The Lotsearch report indicates that the site is underlain by Quaternary age marine sands with podsols. No geological faults, dykes, marker beds, veins or shear zones are indicated to be located beneath or within a 1km radius of the site.

The Lotsearch report indicates that the on-site soil type consists of Podosol; coastal sand plains and dunes, lagoons and swampy areas. The chief soil type is indicated to be leached sands.

The Lotsearch report also indicates that the aquifer directly underlying the site is porous and an extensive highly productive aquifer. Based on the location of the nearest natural surface water body to the site (Mill Stream), and the close proximity to Botany Bay, it is inferred that regional groundwater at the site likely flows to the south/south-west.

2.6 Acid Sulfate Soils

The Lotsearch report indicates that the site is located within Acid Sulfate Soil (ASS) Plan Class 4, indicating that works more than 2m below natural ground surface present an environmental risk and works by which the water table is likely to be lowered more than 2m below natural ground surface present an environmental risk. In addition, a review of the maps provided online by the Australian Soil Resource Information System (ASRIS) (http://www.asris.csiro.au/) shows the site to be in a zone of low probability of occurrence for ASS. An ASS map is included in the Lotsearch report, provided in **Attachment B**.

Given the high risk of ASS at the site, an ASS investigation was undertaken.

2.7 Registered Groundwater Bore Search

Searches of the NSW Department of Primary Industries – Office of Water/Water Administration Ministerial Corporation and Commonwealth of Australia (Bureau of Meteorology) were conducted by Lotsearch on 6 August 2018 and identified 148 registered bores within a 1km radius of the site. Of these bores, 12 are listed as domestic bores, four are listed as recreation bores, 110 are listed as monitoring bores, 10 are listed as industrial bores, two are listed as dewatering bores, one is listed as a groundwater exploration bore, six are listed as general use bores and three are listed as groundwater remediation bores. The approximate depths of the bores with available data ranges between 0.90 and 20.10 metres below ground surface (mbgs). It is noted that the nearest bore to the site (a domestic bore located 24m east of the site) was drilled to a maximum depth of 42mbgs, however, no data regarding the final depth of the installed well was provided.

3 Site History and Background

Historical information was obtained for the site from a number of sources as presented in **Table 3-1**, below. The results of the site historical and background information are further discussed in the following sections.

Table 3-1: Historical and Background Information Search

Item	Source	Comments
Current Certificate of Title	Advance Legal Searchers Pty. Ltd.	Current Certificate of Title documents are discussed below, and copies are included in **Appendix C**.
Historical Certificate of Title	Advance Legal Searchers Pty. Ltd.	Historical Certificate of Title documents are discussed below, and copies are included in **Appendix C**.
Planning and Zoning Information	NSW Department of Planning & Environment Property Report	The Property Reports are discussed below, and copies are included in **Appendix D**.
Contaminated Land Register	NSW EPA	No records were found for the site. The search results are included in **Appendix E**.
SafeWork NSW Storage of Hazardous Chemicals Search	SafeWork NSW	Storage of Hazardous Chemicals search is discussed below, and a copy of the search results is included in **Appendix F**.
Aerial Photographs	NSW Department Finance, Services and Innovation, Google Earth	Aerial Photographs are discussed below, and the images are included in the Lotsearch report in **Appendix B**.

3.1 Certificates of Title

Current and historical Certificates of Title were obtained for the lots comprising the site including Lot 1 of DP85597 (146 O'Riordan Street) and Lot A of DP320192, Lot A of DP402876 and Lot A of DP364217 (154 O'Riordan Street). It is noted that the search for certificates of titles indicated that the folio identifiers of the site parcels appears to have been recently changed and are referred to Lot 15 of DP1232496 (146 O'Riordan Street) and Lots 13 and 14 of DP1231496 and Lot A of DP402876. Copies are included in **Appendix C**. Details are provided in **Tables 3-2**, **3-3**, **3-4** and **3-5** below.

Table 3-2: Summary of Titles - 146 O'Riordan Road – Lot 1 DP85597 / Lot 15 DP1232496:

Year	Proprietor(s)
	(Lot 15 DP 1232496)
2018 – to date	JKN Park Pty Ltd
	(Lot 1 DP 85597)
2013 – 2018	JKN Park Pty Ltd
2003 – 2013	Stead Denton
1994 – 2003	Balfour Grange Pty Limited
(1989 – 2018)	*(various leases shown on Historical Folio 1/85597)*
1988 – 1994	Tohaha Pty Limited
	(Lot 1 DP 85597 – CTVol 12181 Fol 96)
1987 – 1988	Tohaha Pty Limited

1980 – 1987	State Superannuation Board
1973 – 1980	CDL Developments (No.1) Pty Limited
1973 – 1973	J.E.L Developments (Australia) Pty Limited
	(Part Portion 136 Parish Botany – Area 2 Roods 30 ¼ Perches – CT Vol 5565 Fol 36)
1972 – 1973	J.E.L Developments (Australia) Pty Limited
(1968 – 1972)	*(lease to Dowel Industries (NSW) Pty Limited)*
1950 – 1972	Westcott Hazell Engineering & Steel Limited
1946 – 1950	Norge Investments Pty Limited
1946 – 1946	Peder Martin Andersen, mechanical engineer
	(Part Portion 136 Parish Botany – Area 2 Roods 30 ¼ Perches – Conv Bk 1917 No 776)
1942 – 1946	Peder Martin Andersen, mechanical engineer
	(Part Portion 136 Parish Botany – Area 2 Roods 30 ¼ Perches – New Trustee Bk 1917 No 79)
1942 – 1942	William James Lodge, carter / trustee Charles Henry Lodge, retired Gardner / trustee John Lodge, estate

Table 3-3: Summary of Titles - 154 O'Riordan Road – Lot A DP364217 / Lot 14 DP1232496:

Year	**Proprietor(s)**
	(Lot 14 DP 1232496)
2018 – todate	JKN Park Pty Ltd
(2018 – todate)	*(various current leases shown on Folio Identifier 14/1232496)*
	(Lot A DP 364217)
2013 – 2018	JKN Park Pty Ltd
2013 – 2013	Dexus Funds Management Limited
2002 – 2013	Perpetual Trustee Company Limited
2002 – 2002	Paladin Australia Limited
1997 – 2002	Trust Company of Australia Limited
1991 – 1997	Fai Life Insurance Society Limited
1989 – 1991	Fai Properties Pty Limited
(1989 – 2018)	*(various leases shown on Historical Folio A/364217)*
	(Lot A DP364217 – CTVol 15474 Fol 100)
1987 – 1989	Fai Properties Pty Limited
(1987 – 1989)	*(various leases shown on CTVol 15474 Fol 100)*
	(Part Portion 136 Parish Botany – Area 1 Rood 30 ¼ Perches – CT Vol 6084 Fol 26)
1982 – 1987	Lexane Pty Limited
1950 – 1982	Gearin O'Riordan Limited
1950 – 1950	Norge Investments Pty Limited
	(Part Portion 136, Parish Botany – Area 1 Acre 1 Rood 20 Perches – CTVol 5826 Fol 128)

1949 – 1950	Norge Investments Pty Limited
1948 – 1949	The Council of the Municipality of Mascot
	(Part Portion 136, Parish Botany – Area 1 Acre 1 Rood 20 Perches)
Prior – 1948	Sarah Emily Forster

Table 3-4: Summary of Titles - 154 O'Riordan Road – Lot A DP320192 / Lot 14 DP1232496:

Year	Proprietor(s)
	(Lot 13 DP 1232496)
2018 – todate	JKN Park Pty Ltd
(2018 – todate)	*(various current leases shown on Folio Identifier 13/1232496)*
	(Lot A DP 320192)
2013 – 2018	JKN Park Pty Ltd
2013 – 2013	Dexus Funds Management Limited
2002 – 2013	Perpetual Trustee Company Limited
2002 – 2002	Paladin Australia Limited
1997 – 2002	Trust Company of Australia Limited
1991 – 1997	Fai Life Insurance Society Limited
1989 – 1991	Fai Properties Pty Limited
(1989 – 2018)	*(various leases shown on Historical Folio A/364217)*
	(Lot A DP320192 – CTVol 15474 Fol 99)
1987 – 1989	Fai Properties Pty Limited
(1987 – 1989)	*(various leases shown on CTVol 15474 Fol 99)*
	(Part Portion 136, Parish Botany – Area 1 Acre 1 Rood 13 ¼ Perches – CT Vol 4142 Fol 133)
1982 – 1987	Lexane Pty Limited
1967 – 1982	Gearin O'Riordan Pty Limited
1928 – 1967	Gearin-O'Riordan Limited
	(Part Portion 136, Parish Botany – Area 4 Acres 2 Rood 8 Perches – CT Vol 1383 Fol 199)
1922 – 1928	M.Gearin and Sons Limited
1901 – 1922	Michael Gearin, fat extractor

Table 3-5: Summary of Titles - 154 O'Riordan Road – Lot A DP320192 / Lot 14 DP1232496:

Year	Proprietor(s)
	(Lot A DP 402876)
2015 – todate	JKN Park Pty Ltd
2013 – 2015	Dexus Funds Management Limited
2013 – 2013	Perpetual Trustee Company Limited
(2008 – todate)	*(various current leases shown on Folio Identifier A/402876)*
2002 – 2013	Paladin Australia Limited
2002 – 2002	Trust Company of Australia Limited
1997 – 2002	Fai Life Insurance Society Limited

1991 – 1997	Fai Properties Pty Limited
(1991 – todate)	*(various leases shown on Historical Folio A/402876)*
	(Lot A DP402876 – CTVol 15474 Fol 101)
1987 – 1991	Fai Properties Pty Limited
(1987 – 1989)	*(various leases shown on CTVol 15474 Fol 101)*
	(Part Portion 136 Parish Botany – Area 1 Acre 1 Rood 0 Perches – CT Vol 7457 Fol 156)
1982 – 1987	Lexane Pty Limited
1967 – 1982	Gearin-O'Riordan Pty Limited
1958 – 1967	Gearin-O'Riordan Limited
	(Part Portion 136 Parish Botany – Area 2 Acres 2 Rood 19 Perches – CT Vol 5564 Fol 144)
1946 – 1958	W.F.Campbell Pty Limited
	(Part Portion 136, Parish Botany – Area 2 Acres 2 Rood 33 ¾ Perches – CT Vol 5297 Fol 24)
1942 – 1946	M.Gearin and Sons Limited
	(Part Portion 136, Parish Botany – Area 4 Acres 2 Rood 8 Perches – CT Vol 1383 Fol 199)
1922 – 1942	M.Gearin and Sons Limited
1901 – 1922	Michael Gearin, fat extractor

3.2 Historical Aerial Photograph Review

Aerial photographs of the site for the years 1943, 1951, 1955, 1961, 1965, 1970, 1976, 1982, 1991, 2000, 2009 and 2015 were sourced from NSW Department of Finance, Services and Innovation. Aerial photographs for the years 2000, 2009 and 2015 were sourced from Google Inc.

A summary of the photographs is provided in **Table 3-6**, below. Aerial photograph extract images are presented in the Lotsearch report in **Appendix B**.

Table 3-6: Summary of Historical Aerial Photographs

Aerial Photograph	Description
1943 Black and White	Several irregular shaped buildings were present in the western portion of the site at this time and were potentially used for commercial/light industrial purposes. An additional building of unknown purpose was present in the north-west corner of the site. The remaining portion of the western half of the site appeared to be covered in vegetation, with an area of possible cleared land (or possible excavation) visible in the south-central west portion of the site. The eastern half of the site consisted of apparent agricultural fields (possible market gardens), with small buildings (possible sheds) located in the south-eastern corner of the site.
	The surrounding land use appeared to be a mix of industrial, residential and agricultural (possible market gardens). Several warehouse-style buildings were present approximately 30m and 120m north of the site and agricultural land directly south of the site. Residential properties are visible to the east (100m) and south (150m) of the site. A large plot of vacant land, which appeared to be cleared of vegetation, was present to the west of the site during this time.

Aerial Photograph	Description
1951 Black and White	The buildings in the north-west corner of the site had been extended eastwards and appear to be warehouses or industrial (possible factory-style) buildings. Remaining areas of the site appear generally consistent with the 1943 aerial photograph.
	An apparent factory building had been constructed on the vacant land to the west of the site, with the space between structures used for what appears to be container storage. The present-day Mascot Oval is visible to the north of the site.
1955 Black and White	The site layout is generally consistent with the 1951 aerial photograph, with less vegetation cover visible in the western portion of the site. An apparent drainage ditch oriented north-south appears to be located at the south-central portion of the site (immediately west of the on-site agricultural fields).
	Further development is visible at the formerly vacant property to the west of O'Riordan Street, with at least three additional warehouse-style buildings visible.
1961 Black and White	An apparent driveway is visible at the western portion of the site, providing access from O'Riordan Street to the eastern side of the warehouses in the western half of the site. The agricultural portion of the site (at the eastern portion of the site) appears partially overgrown.
	Further development of warehouses to the west and north-west of the site (across O'Riordan Street). Additional industrial land had been developed to the east and south of the site
1965 Black and White	An additional rectangular building is visible immediately east of the warehouses located in the southern half of the site. An apparent driveway is visible at the western portion of the site, extending south-east to the central portion of the site from O'Riordan Street. The eastern portion of the site appears to be used for miscellaneous storage (possibly miscellaneous debris).
	Further industrial development to the west and north and south of the site.
1970 Black and White	The site remained generally unchanged, with the exception that the central area of the site appears to have been paved
	The area surrounding the site remained generally unchanged.
1976 Black and White	The warehouses in the northern half of the site had been demolished. The eastern portion of the site was now in use as a car park.
	The area surrounding the site remained generally unchanged.
1982 Colour	Almost all warehouse buildings in the south-western portion of the site had been demolished, with the exception of a warehouse in the south-west corner and centre of the site. A warehouse building had been constructed in the northern portion of the site (at the 146 O'Riordan Street parcel).
	The present day carpark located immediately north-east of the site had been constructed.
1991 Colour	The southern half of the site (i.e. 154 O'Riordan Street site parcel) had been developed to its present day configuration, with warehouse buildings constructed in the southern, northern and eastern portions of the site parcel.
	Bourke Road had been developed to the west of the site. Redevelopment of the area north-west of the site, with new buildings similar to the present day hotels, offices and shops. The warehouses previously located immediately adjacent to the east of the site had been replaced with residential property.
2000 Colour	The site remained generally unchanged.
	The area surrounding the site remained generally unchanged.
2009 Colour	The warehouse in the northern portion of the site (i.e. 146 O'Riordan Street site parcel) had been developed to its present-day configuration (it is unclear if this is the same building that

Aerial Photograph	Description
	was first visible in the 1982 aerial photograph and was renovated, or if the original building was replaced).
	The area surrounding the site remained largely unchanged.
2015 Colour	The site remained generally unchanged.
	The area surrounding the site remained generally unchanged.

3.3 Relevant Planning Information

The property reports for the site were obtained from Bayside Council on 13 September 2018. A review of the property reports for the site indicates the following Lot and TP/LP information associated with the site:

- 146 O'Riordan Street:
  - Land Use Zone: B5 – Business Development;
  - Acid Sulfate Soils: Class 4
  - The land is not situated in a designated bushfire prone area;
- 154 O'Riordan Street:
  - Land Use Zone: B5 – Business Development;
  - Acid Sulfate Soils: Class 4
  - The land is not situated in a designated bushfire prone area;

It is also noted that the site is not listed on the property reports as being the subject of an environmental audit.

Copies of the property reports are provided in **Appendix D**.

3.4 Contaminated Land Record Review

The List of NSW Contaminated Sites Notified to EPA was accessed online on 16 August 2018 (https://www.epa.nsw.gov.au/your-environment/contaminated-land/notification-policy/contaminated-sites-list) and is provided in **Appendix E**. No notices or declarations under Section 60 of the Contaminated Land Management Act 1997 (CLM Act) were listed for the site.

The current list of activities licensed by NSW EPA under Schedule 1 of the Protection of the Environment Operations Act 1997 (POEO Act) was accessed online on 15 October 2018 (https://www.epa.nsw.gov.au/licensing-and-regulation/public-registers/about-prpoeo/list-of-licences). No activities are currently licensed by NSW EPA at the site. In addition, the current list of unlicensed premises regulated by NSW EPA under the POEO Act was accessed online on 15 October 2018 (https://www.epa.nsw.gov.au/licensing-and-regulation/public-registers/about-prpoeo/unlicensed-premises-epa-reg). No unlicensed premises regulated by NSW EPA are listed at the site.

The NSW EPA Contaminated Land Management (CLM) register was accessed online on 15 October 2018 (https://apps.epa.nsw.gov.au/prclmapp/searchregister.aspx). No notices were listed for the site.

The nearest property relative to the site listed on the List of Contaminated Sites is a former zinc smelter and paint manufacturing facility at 163 O'Riordan Road, approximately 50m north of the site. This site is listed as 'Regulation under CLM Act not Required'. Based on distance and direction, this site is considered a potential source of contamination for the site.

No other properties listed on the register were in the site area which are considered to have the potential to impact the site.

3.5 SafeWork NSW Storage of Hazardous Chemicals Search

A search on Storage of Hazardous Chemicals for the site was conducted by SafeWork on 10 August 2018, with no records identified. A copy of the SafeWork Storage of Hazardous Chemicals Search is presented in **Appendix F**.

3.6 Historical Business Directories

A search of historical UBD Business Directories for the years 1950, 1961, 1965, 1970, 1975, 1978, 1982 and 1991 was conducted by Lotsearch on 6 August 2018 (refer to **Appendix B**).

A summary of the historical UBD Business Directories for the site is provided in **Table 3-7**, below:

Table 3-7: Summary of UBD Business Directories Search

Year	Business Activity
1950	No business activities were recorded for the site at this time.
1961	Steam generator manufacturers
1965	Fork lift truck manufacturers Electronic equipment manufacturers and/or distributors Motor garage equipment manufacturers and/or distributors Spraying equipment manufacturers Motor foundation hard trim Lawn mowers importer and/or distributor Lubricating equipment manufacturers Material handling equipment manufacturers Conveyors and conveying equipment manufacturers Motor testing/tuning equipment manufacturers/distributors Battery charging and testing equipment distributors
1970	No business activities were recorded for the site at this time.
1975	No business activities were recorded for the site at this time.
1978	No business activities were recorded for the site at this time.
1982	Air cargo agents
1991	Freight forwarders Air cargo agents

Several businesses with potential to cause subsurface contamination were also identified within the surrounding area of the site that may or may not have potential to impact the site. These include motor service stations, a joinery, a crane hire yard and a variety of manufacturers (including paints, machinery and adhesives).

3.7 Heritage Database Searches

A review of available NSW Department of Finance, Services and Innovation was conducted by Lotsearch on 6 August 2018 to determine if the site contains any heritage items on statutory lists in New South Wales. No notices or heritage items were listed for the site (refer to the Lotsearch report in **Appendix B**).

4 Sampling and Analysis Quality Plan (SAQP)

4.1 Data Quality Objectives

Data Quality Objectives (DQOs) were adopted for this assessment. The DQO process is described within US EPA (2000) *Guidance for the Data Quality Objectives Process and Data Quality Objectives Process for Hazardous Waste Site Investigations*.

The DQOs for the site investigation are summarised in **Table 4-1**, below.

Table 4-1: Data Quality Objectives

Data Quality Objective	Description
Step 1 State the Problem	An intrusive investigation is required to assess the contamination status of soil and groundwater at the site. The results of the investigation will show the type, concentrations, and extent of potential contamination impacting the site, in exceedance of applicable guideline criteria (if any) as a preliminary assessment. Appropriate remedial measures, if required, to ensure the site is made suitable for the current and future land use, cannot be devised until a subsurface investigation has been completed.
Step 2 Identify the Decisions	The decisions that must be made are: • Is the site potentially contaminated from historical land use? • What is the risk posed to potential on-site (and off-site) receptors from the concentrations of COPCs identified at the site (if any)? • Are site soils and groundwater suitable for the intended land uses from a land contamination perspective? • If not, is remediation of site soils and/or groundwater necessary to ensure the site is made suitable for the intended land use?

Data Quality Objective	Description
Step 3 Identify Inputs to the Decision	This investigation has been devised to obtain the contamination status of the site. The primary inputs to the decisions described above are: • Conduct database searches and review of historical information; • Determine the local environmental sensitivity, including geological, hydrogeological and hydrological information and identification of nearby sensitive receptors; • Assessment of fill and natural soils, with samples collected from soil boreholes advanced across the site; • Assessment of groundwater beneath the site, with samples collected from monitoring wells installed following advancement of soil bores across the site; • Ensuring a sufficient number of samples are collected, in accordance with regulatory guidelines, to characterise site soils and groundwater, where present (i.e. as required as part of this investigation with an assessment to be made following review of the investigation results for any additional works that may be required at the site); • Laboratory analysis of soil and groundwater samples for relevant COPCs, based on current and historical land use; • Assessment of the analytical results against applicable guideline criteria, based on the current and future anticipated land use; • Assessment of the suitability of the analytical data obtained, against the Data Quality Indicators (DQIs); and • Aesthetic observations of soils and groundwater, including odours, staining, sheen and/or waste inclusions.
Step 4 Define the Study Boundaries	The site is located at 146 O'Riordan Street (identified as Lot 1 of DP85597) and 154 O'Riordan Street (identified as Lot A of DP320192, Lot A of DP402876 and Lot A of DP364217, respectively). The lateral extent of the study is the site boundaries (as shown on **Figure 2**). The vertical extent of the study extends to the depth of maximum drilling at 12.0 metres below ground surface (mbgs) in natural sands.
Step 5 Develop a Decision Rule	The decision rules for this investigation include: • If the concentration of a soil and/or groundwater COPC in a sample is below the applicable guideline criteria, then no further assessment/remediation will be required with respect to that COPC; • If soil and/or groundwater COPCs exceed the applicable guideline criteria, the site will be deemed to potentially contain 'hot spots' of contamination; • If the 95% upper confidence limit (UCL) of a soil and/or groundwater COPC is less than applicable guideline criteria, standard deviation is less than 50%, and no reported concentration is greater than 250% of criteria, then no further assessment/remediation will be required with respect to that COPC; and • If the concentration of a soil and/or groundwater COPC in a sample exceeds the applicable guideline criteria, the additional works (e.g. remediation or quantitative risk assessment) may be required to minimise the risk.

Data Quality Objective	Description
Step 6 Specify Limits on Decision Errors	Data Quality Indicators (DQIs) are used to assess the reliability of field procedures and analytical results. DQIs are described as follows and are presented in **Table 4-2**, below: • Completeness – a measure of the amount of useful data (expressed as %) from a data collection activity; • Comparability – the confidence (expressed qualitatively) that data may be equivalent for each sampling and analytical event; • Representativeness – the confidence (expressed qualitatively) that data are representative of each media present on the site; • Precision – a quantitative measure of the variability (or reproducibility) of data; and • Accuracy (bias) – a quantitative measure of the closeness of reported data to the true rule. In addition, this step should include the following considerations to quantify tolerable limits: • If 95% UCLs are adopted for a particular soil COPC, a decision can be made based on a 95% probability that the 'true' arithmetic average contaminant concentration within the sampling area will not exceed the value determined by this method. Therefore, the limit on the decision error will be that there is a 5% probability that the calculated arithmetic average contaminant concentration may be incorrect; and • If the minimum soil sampling points required for site characterisation based on detected circular hot spots by using a systematic sampling pattern is adopted (Standards Australia (2005) *Guide to the investigation and sampling of sites with potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds*), a decision can be made based on a 95% confidence of detecting a hot spot of a particular diameter. Therefore, the limit on the decision error will be that there is a 5% probability that a hotspot of a particular diameter may not be detected. However, as noted above in Step 3, this investigation is devised to obtain a preliminary overview of the contamination status of the site and an assessment to be made following review of the investigation results for any additional works that may be required at the site.

Data Quality Objective	Description
Step 7 Optimise the Design for Obtaining Data	To achieve the DQOs and DQIs, the following sampling procedures will be implemented to optimise the design for obtaining data: • Primary, duplicate and triplicate soil and groundwater samples will be analysed at NATA accredited laboratories; • Field and laboratory quality assurance/quality control (QA/QC) results will indicate reliability and representativeness of the data set; • Laboratory LORs will be below the applicable guideline criteria for the analysed COPC, where possible; • Applicable guideline criteria will be sourced from NEPM (2013) guidelines and other EPA NSW endorsed guidelines (as necessary); • Any soil and/or groundwater aesthetic issues will be evaluated including areas of discolouration, odour, sheen and/or hazardous waste inclusions; • Fill and natural soil samples will be collected, where possible, from 21 soil bores advanced at the site to target potential areas of impact at the site; • Groundwater samples will be collected from 4 groundwater monitoring wells installed at the site during investigation works, to obtain a representative view of groundwater conditions beneath the site; • Soil and groundwater COPCs will be selected based on a review of historical activities at the site and the surrounding area. Based on current and known historical site uses, the COPCs are considered to include asbestos, total recoverable hydrocarbons (TRH)/total petroleum hydrocarbons (TPH), benzene, toluene, ethyl-benzene, xylenes and naphthalene (BTEXN), heavy metals (arsenic, cadmium, copper, chromium, nickel, mercury and zinc), polycyclic aromatic hydrocarbons (PAHs), phenols, polychlorinated biphenyls (PCBs), organochlorine pesticides (OCPs), organophosphorus pesticides (OPPs), volatile organic compounds (VOCs) and/or per -and poly-fluoroalkyl substances (PFAS); • Samples will be collected by suitably qualified and experienced environmental consultants; • Soil and groundwater samples will be collected and preserved in accordance with relevant standards/guidelines; • Soil observations including odours, staining and photoionization detector (PID) readings will assist with selection of samples for laboratory analysis; and • Field and laboratory QA/QC procedures will be adopted and reviewed to indicate the reliability of the results obtained.

4.2 Data Quality Indicators

The DQIs outlined in **Table 4-2** below assist with decisions regarding the contamination status of the site, including the quality of the laboratory data obtained.

Table 4-2: Data Quality Indicators

Data Quality Indicator	Frequency	Data Acceptance Criteria
Completeness		
Field documentation correct	All samples	All samples
Soil bore logs complete and correct	All samples	All samples
Suitably qualified and experience sampler	All samples	All samples
Appropriate lab methods and LORs	All samples	All samples

Data Quality Indicator	Frequency	Data Acceptance Criteria
Chain of custodies (COCs) completed appropriately	All samples	All samples
Sample holding times complied with	All samples	All samples
Proposed/critical locations sampled	-	Proposed/critical locations sampled
Comparability		
Consistent standard operating procedures for collection of each sample. Samples should be collected, preserved and handled in a consistent manner	All samples	All samples
Experienced sampler	All samples	All samples
Climatic conditions (temp, rain etc.) recorded and influence on samples quantified (if required)	All samples	All samples
Consistent analytical methods, laboratories and units	All samples	All samples
Representativeness		
Sampling appropriate for media and analytes (appropriate collection, handling and storage)	All samples	All Samples
Samples homogenous	All samples	All Samples
Detection of laboratory artefacts, e.g. contamination blanks	-	Laboratory artefacts detected and assessed
Samples extracted and analysed within holding times	All samples	-
Precision		
Blind duplicates (intra-laboratory duplicates)	1 per 20 samples	<30% RPD (Inorganics) <50% RPD (Organics) No Limit RPD Result <10 × LOR
Split duplicates (inter-laboratory duplicates)	1 per 20 samples	<30% RPD (Inorganics) <50% RPD (Organics) No Limit RPD Result <10 × LOR
Laboratory duplicates	1 per 20 samples	<20% RPD Result > 20 × LOR <50% RPD Result 10-20 × LOR No Limit RPD Result <10 × LOR
Accuracy (Bias)		
Trip blanks	1 per sampling event	COPCs <LOR
Trip Spikes	1 per sampling event	70-130%
Surrogate spikes	All organic samples	50-150%
Matrix spikes	1 per 20 samples	70-130%
Laboratory control samples	1 per 20 samples	70-130%
Method blanks	1 per 20 samples	<LOR
Rinsate Blanks	1 per day of sampling	<LOR

4.3 Sampling Plan

The NSW EPA (1995) *Sampling Design Guidelines* state that 27 sampling points are required for a site the size of 1.7ha, however, due to accessibility across the site (i.e. high traffic areas and/or permission to some building areas not provided by tenants), 21 sampling locations were possible. The investigation includes advancement of soil borings at 21 strategic locations across the site with soil samples collected for analysis of

the COPCs outlined above in **Table 4-1**. In addition, four of these soil bores advanced were converted into permanent groundwater monitoring wells, with groundwater samples collected for analysis of the COPCs outlined above in **Table 4-1**.

Details of the undertaken sampling program, including the soil and groundwater investigation methodology, the undertaken soil and groundwater analytical program, and the undertaken QA/QC program, are outlined below in **Section 6**. Soil boring and groundwater monitoring well locations are shown on **Figure 3**.

5 Adopted Assessment Criteria

In consideration of the potential redevelopment of the site to medium-high density residential land uses (which may include gardens/accessible soils), the following soil criteria have been selected for this investigation.

5.1 Soil Criteria

- TRH and BTEXN:
  - NEPM (2013) Soil Health Screening Levels (HSLs) for Vapour Intrusion (VI) for residential (HSL A & B) and recreational/open space (HSL C) land use. Based on the soil characteristics recorded at the time of sampling, the sand HSLs are applicable at the site;
  - CRC CARE (2011) Soil HSLs for VI for Intrusive Maintenance Workers (Shallow Trench). Based on the soil characteristics recorded at the time of sampling, the sand HSLs are applicable at the site. These criteria are relevant for workers involved in shallow trenches of depths 0-<2m, 2-<4m and >4m;
  - CRC CARE (2011) Soil HSLs for Direct Contact for Intrusive Maintenance Workers and Low Density Residential land users; and
  - NEPM (2013) Management Limits for TPH fractions F1 – F4 in soil for residential, parkland and public open space land use. A review of the bore logs indicates that fine and coarse soil texture is applicable, dependent upon the sampling depth.
- Heavy metals, OCPs, OPPs, PAHs, phenols and PCBs:
  - NEPM (2013) Health Investigation Levels (HILs) for soil contaminants for residential land use with minimal opportunities for soil access (HIL B) and recreational/public open space land use (HIL C).
- Asbestos:
  - NEPM (2013) HSLs for asbestos contamination in soil for residential with minimal opportunities for soil access (HSL B) and recreational/public open space land use (HSL C).
- Ecological Investigation Levels/Ecological Screening Levels:
  - ESLs and EILs for urban residential and public open spaces included in NEPM (2013), Schedule B1, Tables 1B (1) to (6). The EILs for Cr, Cu, Ni, and Zn were calculated based on the methodology detailed in Schedule B1 in the NEPM (2013), and based on the average soil pH and conservative values of CEC and Organic Carbon Content.
- Acid Sulfate Soils:
  - Action criteria for coarse texture – sands to loamy sands included in Acid Sulfate Soil Management Advisory Committee (1998) *Acid Sulfate Soils Assessment Guidelines*.

A list of collected soil samples is included in **Table 1**. A summary of the soil analytical results compared to applicable human health and environmental criteria are presented in **Tables 2** to **9**.

5.2 Groundwater Beneficial Uses

This section details the applicable guideline criteria utilised as groundwater investigation levels (GILs) for comparison to the groundwater analytical data collected during this DSI. The GILs are utilised as initial screening values only to determine if there is potential risk to human health and the environment associated with the dissolved phase impacts. The adopted GILs were based on an evaluation of potential beneficial groundwater uses both on and off site. For the purposes of evaluating groundwater conditions at the site, a review of the potential on-site and off-site groundwater beneficial uses has been conducted. The results of the review are provided in **Table 5-1**.

Table 5-1: Data Quality Indicators

Beneficial Use		Likelihood of Use		Comment
		On site	Off site	
Aquatic Ecosystems	Groundwater	Nil	Unlikely	There are no aquatic ecosystems on site and none are anticipated after site redevelopment. An unnamed drain, located approximately 600m west of the site, drains into Alexandra Canal approximately 1km north-west/west of the site, which eventually discharges into Cooks River and Botany Bay. Based on the distance to these surface water bodies, they are considered unlikely to be receptors of groundwater impacts at the site (if any). However, as a conservative approach, the protection of aquatic ecosystems off-site has been evaluated as part of this DSI.
Human Uses	Potable Water	Unlikely	Potential	Although the site and surrounding suburb have an established reticulated water supply, 12 domestic bores are registered within a 1km radius of the site (the nearest located 24m east of the site) (refer to **Section 2.7**). As such, potential risks to human health from drinking water have been evaluated.
	Primary/Secondary Contact/Recreation/ Aesthetic	Unlikely	Unlikely	The site and surrounding area have no rivers, creeks or other surface water bodies that would potentially be utilised for swimming and other recreational activities within a 500 m radius of the site.
	Irrigation	Unlikely	Unlikely	At its closest point, Mascot Oval is located approximately 18m north-east of the site and may extract water for irrigation purposes. However, no irrigation use groundwater bores were identified within 1km of the site (refer to **Section 2.7**). Irrigation beneficial uses have not been considered for this DSI.
	Stock Watering	Unlikely	Unlikely	Given that the site is located within the Sydney metropolitan area, it is unlikely that groundwater will be extracted for stock watering purposes.
	Industrial Use	Unlikely	Potential	The potential exists for off-site industrial use of groundwater.
	Aquaculture	Unlikely	Unlikely	The nearest surface water bodies (i.e. unnamed drain and Alexandra Canal, located approximately 600m west and 1km north-west/west of the site) are considered unlikely to be utilised for aquaculture.
Intrusive Maintenance/Trench/Excavation Worker		Potential	Potential	On-site and off-site sub-surface activities have the potential for workers to come in direct contact with groundwater and COPCs if it is impacted.

5.3 Groundwater Investigation Levels

Based on **Table 5-1**, there are no on-site beneficial uses to be protected. However, the potential exists for on-site sub-surface workers to come in direct contact with groundwater in the future, both on and off site. The groundwater analytical data have been compared to the following criteria to account for the most conservative use of groundwater on site and potential off-site uses:

- NEPM (2013) Drinking Water GILs;
- NEPM (2013) Maintenance of Aquatic (Freshwater) Ecosystems;
- NEPM (2013) Groundwater HSLs for low to high density residential land use (HSL A/B);
- NEMP (2018) Health based guidance values; and
- NEMP (2018) Guidance values for 95% species protection – slightly to moderately disturbed systems.

Given that groundwater was encountered within sand during drilling of boreholes MW1 to MW4, the sand HSLs have been adopted for this DSI. The applicable guideline criteria with the groundwater analytical data are listed in **Table 13**.

Specific guidance on water quality parameters for industrial use are not provided in ANZECC (2000) *Australian Water Quality Guidelines for Fresh and Marine Waters* but are provided in the ANZECC (1992) *Australian Water Quality Guidelines for Fresh and Marine Waters*. However, the applicable criteria for industrial water uses are highly specific to the type of process, and therefore criteria for industrial water use have not been specified for the site.

6 Field Program

The field program included an intrusive investigation to assess the subsurface conditions at the site. Soil samples were collected from the 21 boreholes drilled at the site for laboratory analysis. The sampling methodologies are outlined in the following sections. Field documentation (borehole logs) is included in **Appendix G**.

6.1 Soil Investigation Program

The initial site inspection was conducted on 3 August 2018, with the soil environmental investigation undertaken on 8, 9, 10, 13 and 14 August 2018 by TRACE Environmental Scientists who are trained and experienced in the supervision and direction of drilling works, environmental logging and collection of environmental soil samples. All subsurface investigations were conducted with reference to the NEPM (2013) Schedule B2 and EPA VIC guidelines, as necessary.

Due to site restraints, including warehouse access restrictions, several areas of the site could not be investigated (i.e. the north-eastern portion of 146 O'Riordan Street and the eastern portion of 154 O'Riordan Street). As a result, the number of soil bores completed as part of the DSI does not conform to the minimum number of sampling points required to assess site contamination for a site area of approximately 1.6 ha, as defined in NSW EPA (1995) *Sampling Design Guidelines*. This is further discussed in **Section 8.3**. Borehole locations, including planned boreholes that could not be advanced due to access restrictions; are shown on **Figure 3**.

The sampling methodology adopted for the soil investigation conducted is detailed in **Table 6-1** below. Laboratory analytical results are discussed in **Section 7** and laboratory analytical reports are provided in **Appendix H**.

Table 6-1: Soil Investigation Methodology

Activities	Details
Concrete Coring	Concrete/bitumen coring was required at sixteen (SB-1, SB-6 to SB-8, SB-10, SB-11, SB-14, SB-17 to SB-20 and SB-23 to SB-27) locations to access the underlying soils during borehole drilling. Concrete/bitumen thickness ranged between 0.11 and 0.175m at these locations.
Borehole drilling	Soil bores were advanced at 21 locations (SB-1, SB-4, SB-6 to SB-11, SB-13, SB-14 and SB-17 to SB-27, refer to **Figure 3**) across the site. Eleven of the soil bores (SB-6, SB-11, SB-14, SB-17 to SB-22, SB-26 and SB-27) were advanced to depths between 0.8 and 12.0 mbgs using a combination of a hand auger and a Geoprobe drilling rig (using push tubes and rotating auger). Ten of the soil bores (SB-1, SB-4, SB-7 to SB-10, SB-13 and SB-23 to SB-25) were advanced to depths between 0.25 and 1.1 mbgs using a hand auger. Soil samples were collected directly from the hand auger, push tube liners and/or rotating auger at each location.
Field Logging	Logging of soil samples was conducted in general accordance with the Unified Soil Classification System. Soil materials were logged, and the following information was recorded in the field: soil/rock type, colour, grain size, inclusions, moisture conditions, staining and observation of any anthropogenic material (e.g., odours, and waste materials).

Activities	Details
Sampling Intervals	Samples were collected from each borehole from: • the surface (0.15 to 0.25 mbgs); • 0.3-0.9 mbgs; • At one metre intervals to the end of each borehole; • at changes in lithology; • at evidence of contamination (e.g. odours, staining, waste inclusions) (if any); and • at areas of elevated PID readings (if any).
Soil Sampling Procedures	Soil samples were collected from each borehole by hand (protected by a dedicated nitrile glove) from the hand auger and/or push tube liner. The soil samples were collected in laboratory supplied 250 mL jars and were labelled and immediately stored on ice for transport to the laboratory. Samples collected for asbestos analysis were collected in laboratory supplied 500mL plastic bags with a press ('Ziploc') seal. A total of 119 primary soil samples were collected for field screening and potential laboratory analysis from the soil bores advanced on 8, 9, 10, 13 and 14 August 2018. Based on a review of depth of sample, future land use, lithology, presence of staining, odours, waste inclusions and PID results, laboratory analysis was requested for 87 primary samples. Of these 22 natural soil samples were submitted for ASS analysis.
Field QC Samples	Field duplicates and triplicates of the soil samples were prepared in the field by collecting split samples of the same material from the same depth. Samples were not mixed or homogenised during collection or splitting. Samples for duplicate analyses were selected from sampling locations characterised by indicators of contamination, odour and/or elevated PID responses (if encountered). Additionally, a trip blank and trip spike sample was transported with the samples during the soil sampling and were analysed at the laboratory. Duplicates and triplicates were collected at the minimum rate of one per 20 primary samples analysed at the laboratory. A full discussion of the QA/QC procedures is included in **Section 7.6** and **Appendix I**. Laboratory analytical reports are provided in **Appendix H**.
Sample Labelling, Storage and Transport	All samples were clearly labelled with a unique sample identification consisting of the date, sample location, depth of sample and sampler's initials. In the case of field duplicates and triplicates, sample containers were labelled in a manner that did not reveal which primary sample the duplicate or triplicate belonged to.
Field Screening for VOCs	Additional soil from each sample depth range was placed in a sealed plastic bag for field screening purposes. After waiting approximately five minutes for the sample and the headspace to equilibrate, the headspace in the bagged samples was assessed by a calibrated (100 ± 3 parts per million (ppm) isobutylene) PID with a 10.6 eV lamp to measure the presence of total VOCs. PID readings are included **Table 1**. The PID calibration certificate is provided in **Appendix G**.
Decontamination	The hand auger was decontaminated between each borehole location, and a clean pair of disposable nitrile sampling gloves was used between collection of each sample. Rinsate samples were collected during soil sampling as discussed in **Appendix I**.
Waste Disposal	Soil cuttings generated during borehole drilling were returned to the borehole following sampling and boreholes were reinstated with concrete (where required).

6.2 Groundwater Investigation Program

Four of the boreholes advanced during the DSI were converted into permanent groundwater monitoring wells (MW1 to MW4) and were sampled to determine the condition of groundwater at the site. The groundwater monitoring well locations are shown on **Figure 3**.

Groundwater sampling was undertaken on 15 August 2018 by a TRACE Environmental Scientist who is trained and experienced in the collection of environmental groundwater samples. All groundwater installation works, and investigations were conducted with reference to the NEPM (2013) Schedule B2 and relevant guidelines

endorsed by NSW EPA. The sampling methodology adopted for the groundwater investigation conducted is detailed in **Table 6-2**, below.

Table 6-2: Groundwater Sampling Methodology

Activities	Details
Monitoring Well Construction	The four newly installed monitoring wells (MW1 to MW4) were constructed using Class 18 uPVC 50 mm inside diameter machine threaded casing and 0.4 mm slotted screen and casing. Well construction, including screen lengths, was based on observations made during drilling. Once the well screen was installed, a filtered sand of 2 mm in diameter was introduced as a filter pack to reduce sediment infiltrating the well annulus. The filter pack was placed around the screened section of the well to approximately 0.5 m above the top of the screen. Fine-grained bentonite pellets were placed above the sand filter pack around the well to approximately 0.5 m above the top of the filter pack and was slightly wetted to ensure an adequate seal was formed to prevent surface infiltration into the well. The annulus was subsequently backfilled using grout to approximately 0.1 mbgs. A well cap was then inserted and a steel gatic cover was installed flush mounted to the ground surface and secured with concrete at the top of the monitoring well to prevent tampering and damage. The bore logs are included in **Appendix G**.
Monitoring Well Development	The newly installed monitoring wells were developed using a bailer as soon as practical following installation. The bailer was used to disturb the water column within the well annulus to remove any groundwater and well debris that may have been introduced during the installation process.
Monitoring Well Gauging	Measurement of the standing water level in the groundwater monitoring well was undertaken prior to purging using an electronic interface probe. Both the standing water level and the depth to the base of the well were measured. Groundwater gauging data is presented in the groundwater sampling logs in **Appendix G**.
Monitoring Well Purging	The four monitoring wells were purged prior to sampling using low-flow sampling equipment on 15 August 2018. Water quality parameters including temperature, electrical conductivity, dissolved oxygen, redox potential and pH were measured during purging using a calibrated water quality meter. Sampling was completed following the stabilisation of the water quality parameters. Post purging water quality parameters and purging data is shown in **Appendix G**.
Monitoring Well Sampling	Sampling of the monitoring wells was completed using the same methods as for purging (i.e. low-flow sampling technique) and was completed following stabilisation of water quality parameters. Samples were collected into appropriate laboratory supplied sample containers. Samples collected for analysis for metals were first filtered through a 0.45 micron filter prior to being dispensed into an appropriate laboratory supplied sample container. All bottles were then sealed immediately using a Teflon lined cap, labelled and placed on ice.
Field QC Samples	Groundwater field duplicate and field triplicate samples were prepared in the field by collecting split samples from the same monitoring well. To meet the QA/QC program objectives, one duplicate was analysed at the laboratory for the COPCs and one triplicate sample was analysed at a secondary laboratory for the COPCs. Trip blank and trip spike samples that were transported with the samples during the groundwater sampling were also analysed at the laboratory.
Sample Labelling, Storage and Transport	All samples were clearly labelled with unique sample identification numbers consisting of the date, sample location and sampler's initials. In the case of field duplicates, sample containers were labelled so as to not reveal their purpose or sample location to the laboratory. All samples were kept chilled in an ice-filled esky prior to dispatch and during transport to the NATA registered laboratory under chain-of-custody procedures.
Decontamination	During the gauging of monitoring wells, an interface probe was used. The interface probe was decontaminated prior to its use by scrubbing with PFAS-free decontamination water. New tubing was used to purge the monitoring well during sampling. No reusable equipment was used during groundwater sampling.

6.3 Soil Analytical Program

The collected fill and natural soil samples were submitted for laboratory analysis of various COPCs potentially related to the current food distribution and historical transport and logistics operations, as well as the site located within an area primarily used for industrial purposes. Primary and intra-laboratory duplicate samples

were submitted to Eurofins-mgt of Lane Cove West, NSW and the inter-laboratory duplicate samples were submitted to ALS in Smithfield, NSW. A summary of the soil analytical program is provided in **Table 6-3**, below.

Table 6-3: Summary of Soil Analytical Program

Analysis	Analytical Method	LORs (mg/kg)	# Primary Samples	# QA/QC Samples
TRH Fraction F1 and F2 TPH C_6 to C_{40}	TRH C6-C40 - LTM-ORG-2010	20 to 100	33	6
BTEXN	TRH C6-C40 - LTM-ORG-2010	0.1 to 0.5	33	6
Polycyclic Aromatic Hydrocarbons	LTM-ORG-2140 PAH and Phenols in Soils by GCMS	0.5	43	6
Metals (As, Cd, Total Cr, Cu, Pb, Hg, Ni, Zn)	LTM-MET-3040_R0	0.1 to 5	43	6
OCPs/OPPs	LTM-ORG-2220 OCP & PCB in Soil/LTM-ORG-2200 Organophosphorus Pesticides by GC-MS	0.05 to 2	21	0
PCBs	LTM-ORG-2220 OCP & PCB in Soil	0.1 to 0.5	21	0
Phenols	LTM-ORG-2140 PAH and Phenols in Soils by GCMS	0.2 to 20	18	0
VOCs	LTM-ORG-2150 VOCs in Soils	0.1 to 0.5	7	0
Asbestos	LTM-ASB-8020	0.001 %	24	4
pH	LTM-GEN-7090 pH in soil by ISE	0.1 units	5	0
Electrical Conductivity	LTM-INO-4030	10 µS/cm	5	0
ASS – SPOCAS	LTM-GEN-7050	Various	13	0
ASS – S_{CR}	LTM-GEN-7070 LTM-GEN-7050/7070	Various	14	0
TCLP	(TCLP) USEPA Method 1311 (ASLP) AS 4439.2; AS 4439.3	0.1	9	0

6.4 Groundwater Analytical Program

The collected groundwater samples were submitted for laboratory analysis of various COPCs potentially related to the current and historic site uses as identified during the DSI completed by TRACE Environmental (2017). A summary of the overall groundwater analytical program is presented in **Table 6-4**, below.

Table 6-4: Summary of Groundwater Analytical Program

Analysis	Analytical Method	LORs (mg/L)	# Primary Samples	# QA/QC Samples
TRH Fraction F1 and F2 TPH C_6 to C_{40}	TRH C6-C40 - LTM-ORG-2010	0.02 to 0.1	4	2

Analysis	Analytical Method	LORs (mg/L)	# Primary Samples	# QA/QC Samples
BTEXN	TRH C6-C40 - LTM-ORG-2010	0.001 to 0.01	4	2
Polycyclic Aromatic Hydrocarbons	LTM-ORG-2130 PAH and Phenols in Water by GCMS	0.001	4	2
Metals (As, Cd, Total Cr, Cu, Pb, Hg, Ni, Zn)	LTM-MET-3040 Metals in Waters by ICP-MS	0.0001 to 0.005	4	2
OCPs/OPPs	LTM-ORG-2220 OCP & PCB in Soil and Water/LTM-ORG-2200 Organophosphorus Pesticides by GC-MS	0.0001 to 0.02	4	0
PCBs	LTM-ORG-2220 OCP & PCB in Soil and Water	0.001 to 0.005	4	0
Phenols	LTM-ORG-2130 PAH and Phenols in Water by GCMS	0.001 to 0.1	4	2
VOCs	LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices	0.005	4	0
PFASs	USEPA Method 537	0.05 to 0.01	4	0

7 Assessment Results

7.1 Site Observations and Lithology

The soil profile encountered by TRACE Environmental during drilling of boreholes at the site is summarised below:

- Fill (consisting of sand, gravel, cobbles, sandy gravel, silty sand and/or sandy clay) with bricks, concrete, glass, metal, organic material (such as wood and roots) and/or slag, to between 0.8 and 3.0 mbgs; overlying
- Natural sand, medium grained, white/grey to orange/brown to black.

In addition to the anthropogenic material described above, hydrocarbon odour was noted in fill and natural material at borehole SB-26 at depths between 1.5 and 6.0 mbgs.

PID measurements of 0.4 ppm and 0.3 ppm in soil samples SB-14/0.4 and 2.0, 0.8 ppm and 1.0 ppm in soil samples SB-19/0.8 and 1.5 and 2.0 ppm to 8.9 ppm in the soil samples obtained from soil bore SB-26 at depths ranging between 1.0 and 8.0 mbgs were recorded during borehole drilling. All other PID measurements for soil samples collected during borehole drilling were recorded at 0.0 ppm.

Boreholes SB-4, SB-7, SB-8, SB-9, SB-13, SB-23, SB-24 and SB-25 encountered hand auger refusal in fill material at depths ranging between 0.25 (SB-4) and 0.6 These boreholes were terminated at the hand auger refusal depth. Boreholes SB-1 and SB-21 encountered rotating auger refusal in fill material at depths of 0.75 and 0.8 mbgs, respectively, on potential concrete material. Boreholes SB-10 and SB-18 were terminated at depths of 1.1 and 1.0 mbgs in sand potentially indicating service trenches in close proximity to these locations (based on on-site observations and available Dial Before You Dig plans).

Borehole logs are provided in **Appendix G**.

7.2 Soil Analytical Results

Soil analytical results are summarised in **Tables 2A** to **10** and laboratory analytical reports are included in **Appendix H**. A summary of the soil analytical results is presented below:

- TPH/TRH compounds were reported at concentrations exceeding the laboratory LORs in various analysed soil samples across the site. Of these, TRH C_{10}-C_{16} (Fraction F2) was detected at concentrations exceeding the NEPM (2013) ESL (Urban Residential and Public Open Space) criteria in soil samples SB-4/0.2, SB-18/1.0 and SB-26/1.5-2.0. In addition, TRH Fraction F2 in soil sample SB-26/1.5-2.0 was reported at a concentration exceeding the NEPM (2013) Management Limits for TPH in residential, parkland and public open space criteria (for coarse and fine soils);
- TRH compound C_{10}-C_{16} (Fraction F2) in soil samples SB-4/0.2, SB-18/1.0 and SB-26/1.5-2.0 were reported at concentrations exceeding the NEPM (2013) soil HSL for vapour intrusion criteria for low to high density residential land use (in sand depths of 0 to <1m and 1 to <2m) (HSL A & B). All other samples were reported below the laboratory LORs and applicable guideline criteria for TPH/TRH compounds in soil;

- Ethylbenzene, m&p-xylenes, o-xylenes and total xylenes were detected at concentrations exceeding the laboratory LORs, but below applicable guideline criteria, in the analysed soil sample SB-26/1.5-2.0. Naphthalene was also detected in this sample at a concentration exceeding the NEPM (2013) HSL A & B criteria. In addition, toluene was detected at a concentration exceeding the laboratory LOR, but below applicable guideline criteria, in the analysed soil sample SB-7/0.25. BTEXN compounds were not reported at concentrations exceeding the laboratory LORs in any other analysed soil sample;
- PAH compounds were reported in various analysed soil samples at concentrations exceeding the laboratory LORs. Of these, benzo(a)pyrene TEQ was reported at a concentration exceeding the NEPM (2013) HIL B criteria (Residential B) in analysed soil sample SB-14/1.2, and benzo(a)pyrene was reported at concentrations exceeding the NEPM (2013) ESL (Urban Residential and Public Open Space) in analysed soil samples SB-1/0.5, SB-6/1.0, SB-14/1.2, SB-19/1.5 and SB-26/1.5-2.0. It is noted that the concentration of benzo(a)pyrene in soil sample SB-19/0.8 was reported at a concentration equal to the NEPM (2013) ESL criteria;
- Heavy metals arsenic, chromium, copper, lead, mercury, nickel and/or zinc were reported at concentrations exceeding the laboratory LORs in all analysed soil samples, with the exception of soil samples SB-11/4.4, SB-14/10.0, SB-19/3.7, SB-20/3.8 and SB-27/6.0. Arsenic, copper, lead, nickel and/or zinc were reported at concentrations exceeding the NEPM (2013) EILs (Urban Residential and Public Open Space) in analysed soil samples SB-1/0.5, SB-6/1.0, SB-7/0.25, SB-11/0.5, SB-11/1.2, SB-11/1.6, SB-14/1.2, SB-18/1.0, SB-19/0.8, SB-19/1.5, SB-20/0.3, SB-20/1.0, SB-20/1.5, SB-21/0.15, SB-22/0.5, SB-25-0.25, SB-26/0.2, SB-26/1.5-2.0 and/or SB-27/0.5. In addition, the concentration of lead reported in soil samples SB-1/0.5, SB-14/1.2 and SB-18/1.0 exceeds the NEPM (2013) HIL C criteria (recreational/open space land use) and SB-26/1.5-2.0 exceeds the NEPM (2013) HIL B (residential land use);
- No OCPs or OPPs were reported at concentrations exceeding the laboratory LORs and/or applicable guideline criteria in any of the analysed soil samples;
- No PCBs or phenols were reported at concentrations exceeding the laboratory LORs and/or applicable guideline criteria in any of the analysed soil samples;
- VOCs were not reported at concentrations exceeding the laboratory LORs in any of the analysed soil samples. It is noted that EPA NSW has not endorsed applicable guideline criteria for VOCs in soil; and
- Asbestos was detected in soil samples SB-1/0.5 (ACM), SB-6/0.4 (ACM and FA+AF), SB-8/0.3 (AF), QA1A (FA+AF) and SB-27/0.2 (ACM). Of these samples, ACM and FA+AF in soil sample SB-6/0.4 and FA in soil sample SB-7/0.25 were reported at weight percentages exceeding the NEPM (2013) HSLs for Residential B (bonded/non-friable ACM) and for FA and AF asbestos. In addition, ACM in soil sample SB-1/0.5 was reported at a weight percentage exceeding the NEPM (2013) HSLs for Recreational C (bonded/non-friable ACM). No respirable fibres were detected in any of the analysed soil samples.

The soil samples with COPCs that have been reported at concentrations exceeding the applicable guideline criteria are summarised in **Figure 4**.

7.3 Hydrogeological Conditions

Monitoring wells MW1 to MW4 were installed at the site between 8 and 13 August 2018. Groundwater well installation details are shown on the bore logs presented in **Appendix G**. Details regarding the encountered site hydrogeological conditions are summarised in **Table 7.1**, below.

Table 7-1: Site Hydrogeology

Component	Description
Depth to Groundwater	Gauged between 3.682 mbtoc (MW1) and 4.596 mbtoc (MW4)
Non-aqueous phase liquid (NAPL)	No measurable NAPL was detected at the site
Inferred Flow Direction	Based on the measured depth to groundwater and monitoring well survey data (refer to **Appendix G**), the calculated groundwater flow direction is to the west/south-west, with apparent mounding in the centre of the site. Groundwater flow direction is presented in **Figure 6**.
Water Bearing Unit	Sand
Lateral Hydraulic Gradient	0.0099 m/m
Total Dissolved Solids	Between approximately 737 mg/L (MW-1 and MW2) and 1407 mg/L (MW-4)
Potential Groundwater Discharge Zones	Alexandra Canal located approximately 1 km west/north-west of the site

Notes:
mbtoc: metres below top of casing

7.4 Groundwater Analytical Results

Based on review of the laboratory analytical results for groundwater samples collected at the site, the following summary of identified COPCs and assessment criteria exceedances is provided:

- Arsenic, copper, lead, nickel and/or zinc were reported at concentrations exceeding the laboratory LORs in groundwater samples MW-1, MW-2, MW-3 and/or MW-4. Of these, arsenic (MW-2) and lead (MW-1) were reported at concentrations exceeding the NEPM (2013) Drinking Water GILs, and copper (MW-1 to MW-4), lead (MW-2 and MW-3) and zinc (MW-1 to MW-4) were reported at concentrations exceeding the NEPM (2013) Freshwater GILs;
- PFAS compounds were reported at concentrations slightly exceeding the laboratory LORs, but below the applicable guideline criteria, in the groundwater samples analysed (MW-1 to MW-4); and
- BTEXN, PAHs, OCPs, OPPs, phenols, PCBs and VOCs were not reported above laboratory LORs in the groundwater samples analysed.

A summary of laboratory analytical data for groundwater samples collected at the site is presented in **Table 13**, and guideline exceedances are further discussed in **Section 8**.

The groundwater samples with COPCs that have been reported at concentrations exceeding the applicable guideline criteria are summarised in **Figure 5**.

7.5 Acid Sulfate Soils Analysis

A total of 22 natural soil samples collected from boreholes drilled across the site were submitted for ASS field screening analysis to investigate the potential for ASS to be present at the site. Laboratory analytical results for ASS field screening showed pH-F and pH-FOX values ≥5.6 and ≥2.2, respectively, for the analysed soil

samples. Of the samples analysed, pH-FOX was reported between 2.2 and 3.3 in soil samples SB-6/5.0, SB-14/8.0, SB14/10.0, SB-17/8.0, SB-17/10.0, SB-20/8.0, SB-20/10.0, SB-20/12.0, SB-26/6.0, SB-26/8.0 and SB-26/10.0.

Based on the above results, 17 of the 22 natural soil samples were submitted for chromium reducible sulfur (S_{CR}) and/or SPOCAS analysis to further assess the potential for ASS to be present at the site. The results of the S_{CR} and SPOCAS analysis reported that net acidity and sulfur – peroxide oxidisable sulfur exceeded the ASSMAC criteria in multiple soil samples collected from across the site. This indicates that PASS or AASS are likely to be present in natural materials sampled at the site. As such, an Acid Sulfate Soil Management Plan (ASSMP) will be required prior to future development works or disturbance of the natural material (refer to **Section 9** below for additional detail).

A summary of ASS laboratory analytical data for soil samples collected at the site is presented in **Table 9**.

7.6 Quality Assurance/Quality Control

The overall project QA/QC program included collecting of duplicate, triplicate and field blanks and internal laboratory QA/QC. A summary of the results of the QA/QC results are included in the following sections. The full QA/QC evaluation is in included in **Appendix I**.

Three intra-laboratory soil duplicates (QS1, QS2 and QS3) and three inter-laboratory soil duplicates (QS1A, QS2A and QS3A) were collected during this investigation. In addition, two intra-laboratory soil duplicates for asbestos analysis (QA1 and QA2) and two inter-laboratory soil duplicates for asbestos analysis (QA1A and QA2A) were collected during this investigation. Furthermore, one intra-laboratory water duplicate (QW1) and one inter-laboratory water duplicate (QW1A) was collected during this investigation.

A summary of the QA/QC samples is included in **Table 7-2**, below.

Table 7-2: Summary of QA/QC Samples

Parent Sample	Date	Blind Duplicate	Blind Triplicate	Analysis
SB-27/3.8	08/08/2018	QS1	QS1A	BTEXN, vTRH, PAHs, Metals
SB-14/0.2	10/08/2018	QS2	QS2A	BTEXN, vTRH, PAHs, Metals
SB-22/6.0	13/08/2018	QS3	QS3A	BTEXN, vTRH, PAHs, Metals
SB-21/0.4	13/08/2018	QA1	QA1A	Asbestos
SB-23/0.4	14/08/2018	QA2	QA2A	Asbestos
MW2	15/08/2018	QW1	QW1A	BTEXN, vTRH, PAHs, Metals, Phenols

The Relative Percent Difference (RPD) was calculated between the primary and QA/QC samples (groundwater) and the QA/QC samples (soil) and are shown on **Table 11**.

Standards AS 4482.1-1997, AS 4482.2-1999, AS/NZ 5667.1-1998, AS/NZ 5667.11-1998 and NEPM (2013) state that replicate and original sample RPDs should generally be within 30%. However, this variation can be expected to be higher for organic compounds than for inorganics. In addition, greater variation is observed where low concentrations of analytes are present. Therefore, the following RPD acceptance criteria were adopted during this investigation:

- Inorganics – 30% RPD;
- Organics – 50% RPD; and
- If primary and/or duplicate concentration <10 × LOR – No Limit.

A discussion of the RPD results is included in **Appendix I**.

7.6.1 Laboratory QA/QC

The chosen analytical laboratories undertake internal QA/QC procedures which include the analysis of method blanks, internal duplicate samples, laboratory control samples, matrix spikes and surrogate recovery. Additionally, laboratory QA/QC procedures include sample receipt, logging, storage, preservation and analysis within the method specified holding time. The full review of the laboratory QA/QC program is included in **Appendix I**. A review of the laboratory QA/QC procedures indicated that the laboratory QA/QC samples percent recoveries were generally within the laboratory recommended range for acceptable reproducibility. Additionally, samples were received and stored appropriately, and all samples were analysed within the specified holding times.

7.6.2 Data Useability

Assessment of the field and laboratory QA/QC procedures and results indicates that the DQOs were met and therefore that the analytical data is considered representative of site conditions at the time of the investigation and suitable to enable an investigation of the site. The majority of internal laboratory QA/QC procedures were met. The data validation procedure employed in the assessment of the field and laboratory QA/QC data indicated that the reported analytical results are representative of the conditions at the sample locations and that the analytical data can be relied upon for the purpose of this investigation. It is concluded that overall the quality of the analytical data produced is reliable for the purposes of evaluating the potential risks posed by subsurface impacts to human health and the environment at the site.

8 Conceptual Site Model

8.1 Preliminary CSM

The environmental risk assessment is based on a contaminant (source) - exposure pathway - receptor methodology. This relationship allows an assessment of potential environmental risk to be determined, in accordance with the current national guidelines. Central to the requirements for the assessment of risk is the development of an initial CSM, identifying each contaminant source and the associated receptor exposures.

Generally, a CSM provides an assessment of the fate and transport of COPCs relative to site-specific subsurface conditions with regard to their potential risk to human health and the environment. The CSM considers site specific factors including:

- Sources of subsurface impacts;
- Identification of COPCs derived from the sources;
- Vertical and lateral distribution of COPCs;
- Site specific lithologic information including soil type(s), depth to groundwater, effective porosity, and groundwater flow velocity; and
- Actual or potential receptors focusing on future and current land use both of the site and adjacent properties and sensitive ecological receptors.

Based on the information sourced in this investigation, a preliminary CSM has been developed and is outlined in **Table 8-1**, below. Additional details are included in the sections that follow as necessary.

Table 8-1: Preliminary Conceptual Site Model

Conceptual Site Model Element	Description
Site History/Contaminant Sources	The site historically comprised of a mix of structures, vegetated and farmed land from circa 1940's to mid-1970's. the vegetated/farm land was developed into a car park until the early 1990's when a warehouse was developed in the southern portion of the site (remaining largely unchanged to present day). The northern portion of the site was developed into its current configuration circa 2009. The site is currently used for a variety of commercial and light industrial purposes, such as electronics repair, fashion distribution, office space, broadcasting, air freight transport, food production/distribution and rail maintenance organisation workshop. Historical site operations, including a variety of manufacturers (such as fork lift truck, electronic equipment, motor garage equipment, lubricating equipment, and spraying equipment) is a potential source of subsurface impact at the site (i.e. via storage of hazardous chemicals, refuelling of machinery and/or vehicles etc.). Additionally, the likely historical importation of fill material from unknown sources has the potential to impact the subsurface.
Site Current and Future Use	The site is currently occupied by a large warehouse/office building in the northern portion of the site (146 O'Riordan Street) and large warehouses in the central, eastern and southern portions of the site (154 O'Riordan Street). These warehouses/office spaces are used for a variety of commercial and light industrial purposes, as noted above. It is understood that the intended future land use of the sight is medium to high density residential with open space areas.

Conceptual Site Model Element	Description
Site Geology	The results of the investigation showed a range of fill materials across the site, including sands and gravels, extending to a maximum depth of approximately 3.0 mbgs. Underlying the fill materials were natural sands. Further details of the site lithology are outlined above in **Section 7.1**, with bore logs provided in **Appendix G.**
Site Hydrogeology	Groundwater was gauged between 3.682 mbtoc (MW1) and 4.596 mbtoc (MW4) in the four groundwater monitoring wells installed by TRACE Environmental during this DSI and was encountered in natural sand beneath the site at depths between 3.5 mbgs (SB-11/MW3) and 4.2 mbgs (SB-22/MW4). The inferred groundwater flow direction at the site is towards the west/south-west, with apparent mounding in the centre of the site. Based on topography and the location of surrounding surface water bodies, groundwater beneath the site would be expected to flow toward an unnamed drain, located approximately 600m west of the site that drains into Alexandra Canal approximately 1km north-west/west of the site. Alexandra Canal eventually discharges into Cooks River and Botany Bay
COPCs – Soil	The following COPCs were detected at concentrations above applicable site assessment criteria for human health: • TRH C_{10}-C_{16} (fraction F2) exceeded the NEPM (2013) HSL A/B criterion for VI in fill samples SB-4/0.2, SB-18/1.0 and SB-26/1.5-2.0; • Naphthalene exceeded the NEPM (2013) HSL A/B criterion for VI in fill sample SB-26/1.5-2.0; • Benzo(a)pyrene TEQ exceeded the NEPM (2013) HIL B criterion in fill sample SB-14/1.2; • Lead exceeded the NEPM (2013) HIL B criterion in fill sample SB-26/1.5-2.0 and HIL C in fill samples SB-1/0.5, SB-14/1.2 and SB-18/1.0; • ACM exceeded the NEPM (2013) HSL B criterion in fill sample SB-6/0.4 and HSL C in fill sample SB-1/0.5; • FA and AF exceeded the NEPM (2013) HIL B criterion in fill sample SB-6/0.4; and • AF exceeded the NEPM (2013) HIL B criterion in fill sample SB-7/0.25. The following COPCs were detected at concentrations above applicable ecological assessment criteria for the site: • TRH C_{10}-C_{16} (fraction F2) exceeded the NEPM (2013) ESL criteria for urban residential and public open space land use in fill samples SB-4/0.2, SB-18/1.0 and SB-26/1.5-2.0; • TRH C_{10}-C_{16} (fraction F2) exceeded the NEPM (2013) management limits for TPH in residential, parkland and public open space criteria in fill sample SB-26/1.5-2.0; • Benzo(a)pyrene exceeded the NEPM (2013) ESL for urban residential and public open space land use in fill samples SB-1/0.5, SB-6/1.0, SB-14/1.2, SB-19/0.8, SB-19/1.5 and SB-26/1.5-2.0; • Arsenic exceeded the NEPM (2013) EIL criterion for urban residential and public open space land use in fill samples SB-1/0.5, SB-6/1.0, SB-11/1.6 and SB-26/1.5-2.0; • Copper exceeded the NEPM (2013) EIL criterion for urban residential and public open space land use in fill samples SB-1/0.5, SB-6/1.0, SB-11/1.6, SB-14/1.2, SB-21/0.15 and SB-26/1.5-2.0; • Lead exceeded the NEPM (2013) EIL criterion for urban residential and public open space land use in fill sample SB-26/1.5-2.0; • Nickel exceeded the NEPM (2013) EIL criterion for urban residential and public open space land use in fill samples SB-6/1.0, SB-7/0.25, SB-11/1.6, SB-19/0.8, SB-19/1.5, SB-20/0.3, SB-20/1.0, SB-20/1.5, SB-26/1.5-2.0 and SB-27/0.5; and • Zinc exceeded the NEPM (2013) EIL criterion for urban residential and public open space land use in fill samples SB-6/1.0, SB-7/0.25, SB-11/0.5, SB-11/1.2, SB-11/1.6, SB-14/1.2, SB-18/1.0, SB-19/0.8, SB-20/0.3, SB-21/0.15, SB-22/0.5, SB-25/0.25, SB-26/0.2, SB-26/1.5-2.0, SB-27/0.5. COPCs were not detected at concentrations above the applicable human health or ecological site assessment criteria in natural soil samples collected at the site.

Conceptual Site Model Element	Description
COPCs – Groundwater	The following COPCs were detected at concentrations above applicable site assessment criteria for human health: • Arsenic exceeded the NEPM (2013) Drinking Water GILs criterion in groundwater sample MW-2; and • Lead exceeded the NEPM (2013) Drinking Water GILS criterion in groundwater sample MW-1. The following COPCs were detected at concentrations above applicable ecological assessment criteria for the site: • Copper exceeded the NEPM (2013) Freshwater GILs criterion in groundwater samples MW-1, MW-2, MW-3 and MW-4; • Lead exceeded the NEPM (2013) Freshwater GILs criterion in groundwater samples MW-2 and MW-3; and • Zinc exceeded the NEPM (2013) Freshwater GILs criterion in groundwater samples MW-1, MW-2, MW-3 and MW-4.
COPCs – Soil Vapour	While a soil vapour assessment was not undertaken as part of the DSI, a potential VI risk may be present to future high density residential site users in the vicinity of boreholes SB-4, SB-18 and SB-26, based on the identified NEPM (2013) HSL A/B criteria exceedances in fill samples collected at these locations. Concentrations of analysed volatile compounds were reported below the respective criteria for the proposed medium to high density redevelopment of the site in the analysed groundwater samples.
Extent of Impacts – Soil	Based on the laboratory analytical results for soil samples collected at the site, fill material appears to be impacted by the COPCs at levels exceeding human health assessment criteria for the proposed medium to high density residential land use in the north-east (SB-4 and SB-6), central (SB-7), east (SB-14) and central south (SB-18 and SB-26) areas of the site, and at concentrations above ecological assessment criteria across the general site area. Soil impacts exceeding human health and ecological assessment criteria appear to be generally limited to the shallow fill material. Data gaps have been identified relating to the assessment of soil conditions at the site following the DSI works and are discussed further in **Section 8.3**.
Extent of Impacts – Groundwater	With the exception of arsenic, lead, copper and/or zinc reported above the NEPM (2013) Drinking Water and/or Freshwater GILs in the groundwater samples collected from monitoring wells MW-1 to MW-4, no COPCs were reported above the groundwater assessment criteria.

8.2 Preliminary CSM Summary and Risk Assessment

The site has been used for a variety of light industrial and commercial purposes since the mid-1970's, prior to which, the site appears to have consisted of a mix of structures, vegetated land and farmland circa 1940s. The site has historically been used for a variety of purposes, including several types of manufacturing (e.g. fork lift trucks, electronic equipment, motor garage equipment, lubricating equipment and spraying equipment). The site is currently used for commercial/light industrial purposes, including electronics repair, fashion distribution, broadcasting, air freight transport, food production/distribution and rail maintenance organisation workshop.

The following potential sources of subsurface contamination have been identified at the site:

- Historical land uses on site and in the vicinity of the site;
- Potential import of fill from unknown sources to facilitate construction of the site's current configuration; and

Based on the results of the soil investigation conducted at the site by TRACE Environmental, fill material appears to be impacted by COPCs at levels exceeding human health assessment criteria for the proposed medium to high density residential land use in the north-east (SB-4 and SB-6), central (SB-7), east (SB-14) and central south (SB-18 and SB-26) areas of the site, and may present a health risk to future site users in a medium to high density residential setting in the vicinity of these hot spots.

Asbestos was identified in shallow fill material (<0.5mbgs) in the centre (SB-7) and north-west (SB-7) of the site at concentrations exceeding the NEPM (2013) HIL B criterion for asbestos in soils. It is likely that fill material on the site will be removed during future excavation completed as part of the site redevelopment and will require delineation and appropriate classification (in accordance with NSW EPA (2014) *Waste Classification Guidelines*) prior to off-site disposal of fill material.

COPCs were also identified at concentrations exceeding ecological assessment criteria in fill at soil bore locations across the general site area.

COPCs were not detected at concentrations above the applicable human health or ecological site assessment criteria in natural soil samples collected at the site. Based on the findings of the DSI, soil impacts exceeding human health and ecological assessment criteria appear to be vertically delineated to fill material on the site.

Groundwater beneath the site is generally free of measurable COPC concentrations, with the exception of heavy metals reported in all groundwater monitoring wells at the site. As no other COPCs were reported at concentration exceeding applicable guideline criteria, and considering the site is located in an urban environment, the reported metals concentrations are likely representative of background conditions at the site. It is also noted that the site is located in close proximity to a domestic ban associated with the Botany Sands aquifer (with the ban area located across O'Riordan Street to the north and west as noted in the Lotsearch report in **Appendix B**), and as such it is considered likely that any groundwater impacts associated with the domestic ban area could also potentially impact the site.

8.3 Data Gaps and Uncertainties

Due to access restrictions in buildings in the north-east, central and east portions of the site and in the driveway in the west of the site (i.e. planned soil bores SB-2, SB-3, SB-5, SB-12, SB-15 and SB-16), assessment of soil conditions in these areas could not be completed during the DSI. In addition, vertical delineation of identified impacts in fill material in soil bore locations SB-1, SB-7 and SB-25 due to hand auger refusal in fill material. Soil bore SB-21 was also abandoned due to mechanical drilling refusal on concrete, and soil bore and SB-18 was abandoned due to the likely presence of underground utility services in close proximity to this location. It also is noted that soil bore SB-1 encountered an apparent concrete slab at the respective depth of refusal.

As a result of the above site restraints, the sampling density completed as part of this DSI does not conform to the minimum number of sampling points required to assess the site (as defined in NSW EPA (1995) *Sampling Design Guidelines*) and it is recommended that further assessment beneath the current building footprints in the north-east, central and east of the site, and the driveway in the west of the site, be undertaken prior to site development. In addition, vertical delineation of identified impacts at soil bore locations SB-1, SB-7, SB-18, SB-21 and SB-25 should be undertaken prior to site development.

In addition, inspection of the shallow fill materials across the site during removal of the concrete hardstand is recommended to assess for potential residual impacts relating to previous site infrastructure/operations. The shallow fill materials should be carefully inspected for the presence of ACM, stained soils and/or below-ground residual former site infrastructure that could not be observed during the DSI field activities.

It is recommended that the above additional areas requiring investigation and/or remediation/validation be summarised in a Remedial Action Plan (RAP), which should also include an unexpected finds protocol to address unexpected finds that may be encountered during hardstand removal and/or during site redevelopment works. Refer to **Section 9.2** below for further details.

9 Conclusions and Recommendations

9.1 Summary and Conclusions

Based on the findings of this investigation, TRACE Environmental provides the following summary and conclusions:

- The site has been used for a variety of light industrial and commercial purposes since the mid-1970s, prior to which, the site appears to have consisted of a mix of structures, vegetated land and farmland circa 1940s. The site has historically been used for a variety of purposes, including several types of manufacturing (e.g. fork lift trucks, electronic equipment, motor garage equipment, lubricating equipment and spraying equipment. The site is currently used for commercial/light industrial purposes, including electronics repair, fashion distribution, broadcasting, air freight transport, food production/distribution and rail maintenance organisation workshop. It is understood the site we be redeveloped for medium to high density residential purposes;
- A potential underground stormwater detention basin is located in the south-western corner of the site, indicated by the land topography, underground utility service cover and mechanical drilling refusal on likely concrete. Historical site uses, including a variety of manufacturing operations, are potential sources of sub-surface impact. Additionally, the likely historical importation of fill material from unknown sources has the potential to impact the sub-surface;
- Based on the age of the on-site structures, in particular the building at the northern portion of the site, lead based paint and/or other hazardous building materials (such as ACM) may be present;
- Fill material was encountered across the site to depths up to 3.0mbgs and was observed to contain anthropogenic waste materials at most soil bore locations;
- A total of 119 primary fill and natural soil samples were collected from 21 soil bores advanced across the site. Of these, a total of 87 selected soil samples were analysed for a variety of COPCs to determine if historical site uses had impacted the sub-surface at the site. 22 of the natural soil samples were submitted for ASS analysis;
- Four of the soil bores were completed as permanent groundwater monitoring wells (MW-1 to MW-4) and were developed, gauged, purged and sampled. Groundwater was encountered at depths between approximately 3.7 and 4.6 mBTOC. Groundwater was calculated to flow south-westerly, towards Alexandra Canal;
- The results of the soil assessment showed COPCs at levels exceeding human health assessment criteria for the proposed medium to high density residential land use in fill material in the north-west (SB-4 and SB-6), centre (SB-7), South (SB-18 and SB-26) and north-east (SB-14) areas of the site;
- PAH, arsenic, copper, lead, nickel and/or zinc were reported above the ecological assessment criteria for urban residential and public open space from fill materials across the site;
- ACM and/or FA+AF was identified in shallow fill material (V0.5mbgs) in the northern (SB-1), western (SB-6) and central (SB-7) areas of the site, above the human health assessment criteria for the proposed land use;

- Due to the presence of anthropogenic waste materials, the aesthetic characteristics of fill material should be considered during future site development;
- The results of the groundwater assessment showed heavy metal COPCs (arsenic and lead) at levels exceeding Drinking Water assessment in the south-east (MW-1) and north-west (MW-2) of the site;
- Copper, lead and/or zinc were reported above the Freshwater criteria across the site, in monitoring wells MW-1, MW-2, MW-3 and/or MW-4. Due to the urban setting of the site, these impacts are likely representative of background conditions at the site and surrounding site area; and
- Based on the laboratory analytical results for soil samples analysed for ASS parameters, it is considered likely that PASS or AASS are present in natural materials sampled at the site. As such, an ASSMP will be required prior to future development works or disturbance of the natural material.

Based on the findings of the DSI, it is considered that the site can be made suitable for the proposed medium to high density residential land use following implementation of a RAP for the site, incorporating a Data Gap Investigation (DGI), and the delineation, remediation and validation of identified soil impacts on the site. It is expected that implementation of the RAP would occur following demolition of site structures at the commencement of site redevelopment activities.

9.2 Recommendations

Based on the findings of the DSI, TRACE Environmental provides the following recommendations:

- A RAP should be prepared which outlines the remediation and/or management strategy for the identified impacts in fill material at the site for the proposed medium to high density residential land use. The remediation and/or management requirements outlined in the RAP should consider the findings of the current DSI in the context of the final redevelopment design (e.g. the RAP should assess the applicability of ecological criteria exceedances identified during the current DSI based on the presence/absence and/or locations of gardens/landscaped areas in the final redevelopment design), including aesthetic observations made during the DSI fieldworks. The RAP should also include an unexpected finds protocol for the discovery of previously unidentified soil and/or groundwater impacts (including ACM and ASS) during hardstand removal and site redevelopment works;
- Given the data gaps identified during the DSI (refer to **Section 8.3**), the RAP should incorporate a DGI, which needs to be completed at the site to assess the soil conditions in areas of the site that were inaccessible during this DSI. This includes beneath the current building footprints in the north-eastern, central and eastern areas of the site and the driveway in the western portion of the site, in addition to vertical delineation of identified impacts in fill material at soil bore locations SB-1, SB-7, SB-18, SB-21 and SB-25 following demolition of existing site infrastructure and prior to site development. Shallow fill materials across the site should also be inspected following removal of concrete hardstand to assess for potential residual impacts relating to previous site infrastructure/operations;
- Due to the age and construction of the on-site structures, a hazardous materials survey should be conducted, and a hazardous materials register be prepared for the site prior to commencement of any demolition activities;
- Prior to any disturbance of the sub-surface being undertaken at the site as part of the proposed site redevelopment, an Asbestos Management Plan (AMP) should be prepared in accordance with SafeWork NSW Codes of Practice, which identified the locations of the ACM, FA and AF detected

during this DSI and outlines how the asbestos risks will be controlled during work (including any air monitoring procedures that may be required);

- Prior to any disturbance of the sub-surface being undertaken at the site as part of the proposed site development, an ASS Management Plan (ASSMP) should be prepared prior to future development works or disturbance of the natural material, which identifies the locations of PASS/AASS detected during this DSI and outlines how the ASS risks will be controlled during work;
- Any material to be removed must be classified in accordance with the NSW EPA (2014) *Waste Classification Guidelines*, and the soil be disposed appropriately to a facility licensed to accept the material; and
- Any imported material brought onto the site for any purpose must first be validated as being suitable for the intended land use, prior to being imported onto the site.

10 References

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- Standards Australia (1999), Australian Standard AS 4482.2-1999 - *Guide to the sampling and investigation of potentially contaminated soil. Part 2: Volatile substances*. Standards Australia, Homebush, NSW.

11 Limitations

This report has been prepared for Toplace Pty. Ltd. and for the specific purpose to which it refers. No responsibility is accepted to any third party and neither the whole of the report or any part or reference thereto may be published in any document, statement or circular nor in any communication with third parties without our prior written approval of the form and context in which it will appear.

TRACE Environmental has used a degree of skill and care ordinarily exercised by reputable members of our profession practicing in the same or similar locality. The conclusions presented in this report are relevant to the conditions of the site and the state of legislation currently enacted as at the date of this report. We do not make any representation or warranty that the conclusions in this report were applicable in the future as there may be changes in the condition of the site, applicable legislation or other factors that would affect the conclusions contained in this report.

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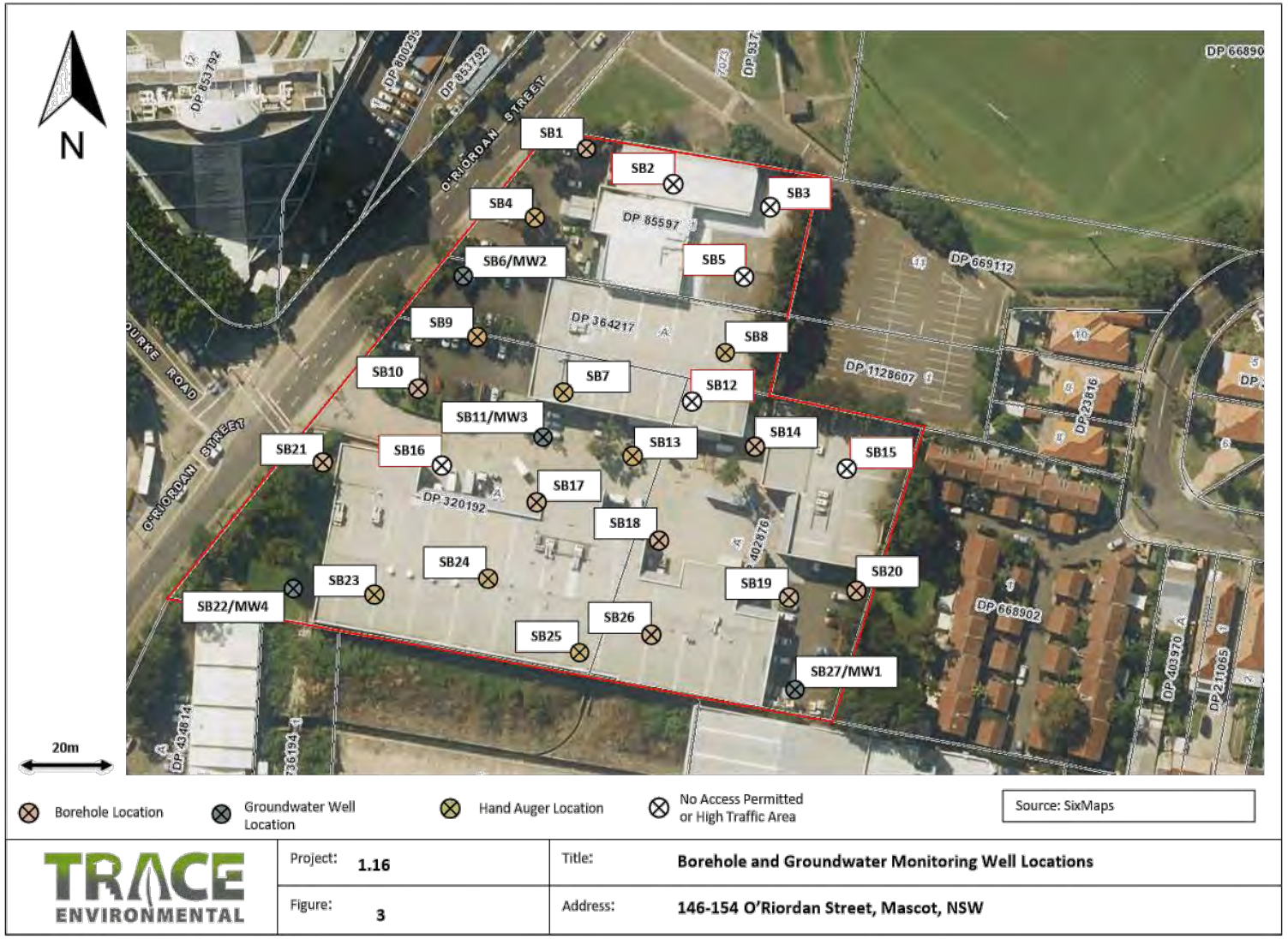
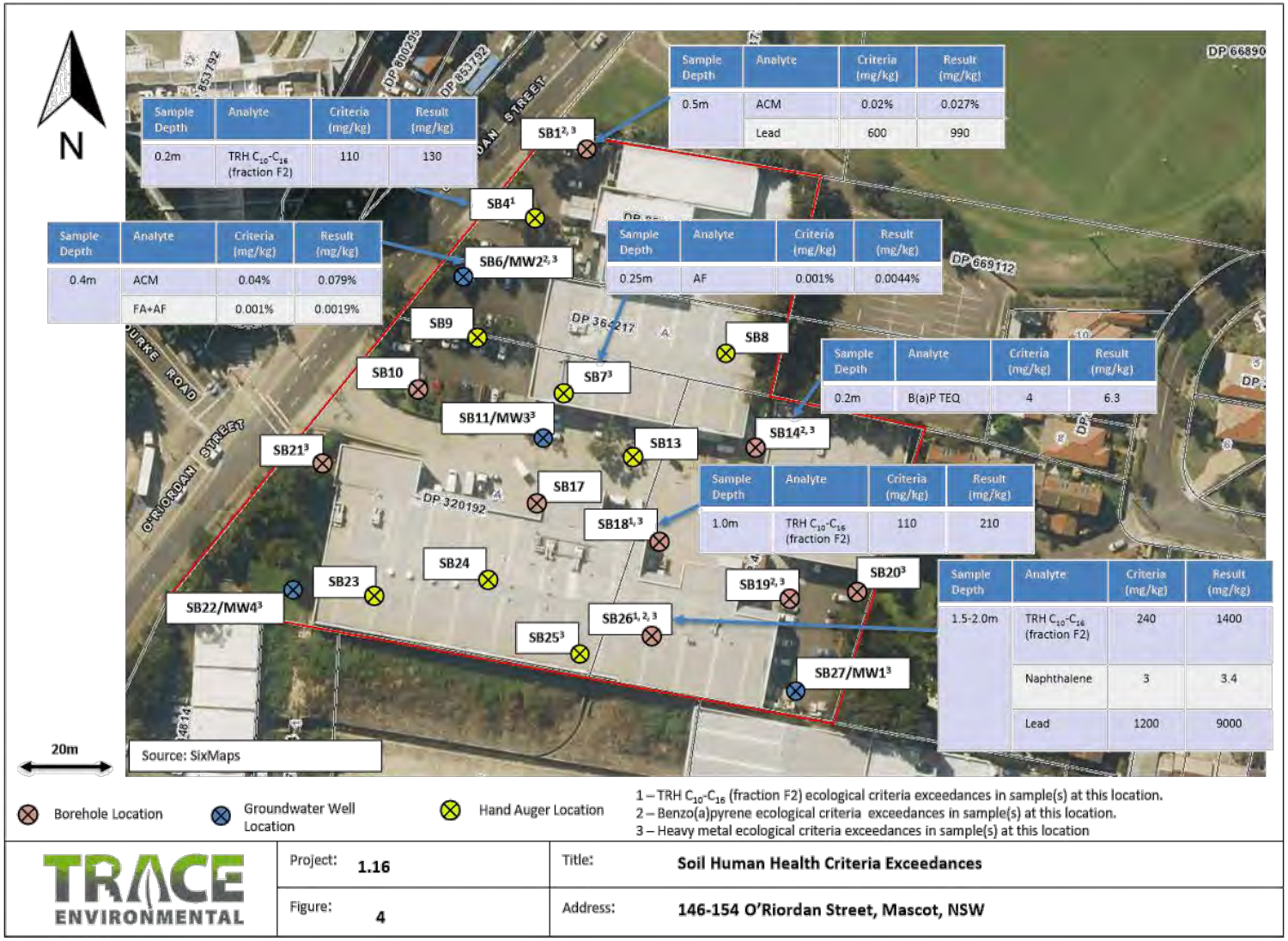
Figures

Source: Google

TRACE ENVIRONMENTAL	Project: 1.16	Title:	**Site Locality Plan**
	Figure: 1	Address:	**146 O'Riordan Street, Mascot, NSW**

TRACE ENVIRONMENTAL	Project: 1.16	Title:	Site Map
	Figure: 2	Address:	146-154 O'Riordan Street, Mascot, NSW


N
SB1
SB2
SB3
SB4
SB5
SB6/MW2
SB7
SB8
SB9
SB10
SB11/MW3
SB12
SB13
SB14
SB15
SB16
SB17
SB18
SB19
SB20
SB21
SB22/MW4
SB23
SB24
SB25
SB26
SB27/MW1
O'RIORDAN STREET
BOURKE ROAD
DP 85597
DP 364217
DP 320192
DP 1128607
DP 669112
DP 668902
DP 66890
20m
Borehole Location
Groundwater Well Location
Hand Auger Location
No Access Permitted or High Traffic Area
Source: SixMaps
TRACE ENVIRONMENTAL
Project: 1.16
Title: Borehole and Groundwater Monitoring Well Locations
Figure: 3
Address: 146-154 O'Riordan Street, Mascot, NSW



Sample Depth	Analyte	Criteria (mg/kg)	Result (mg/kg)
0.2m	TRH C_{10}-C_{16} (fraction F2)	110	130

Sample Depth	Analyte	Criteria (mg/kg)	Result (mg/kg)
0.5m	ACM	0.02%	0.027%
	Lead	600	990

Sample Depth	Analyte	Criteria (mg/kg)	Result (mg/kg)
0.4m	ACM	0.04%	0.079%
	FA+AF	0.001%	0.0019%

Sample Depth	Analyte	Criteria (mg/kg)	Result (mg/kg)
0.25m	AF	0.001%	0.0044%

Sample Depth	Analyte	Criteria (mg/kg)	Result (mg/kg)
0.2m	B(a)P TEQ	4	6.3

Sample Depth	Analyte	Criteria (mg/kg)	Result (mg/kg)
1.0m	TRH C_{10}-C_{16} (fraction F2)	110	210

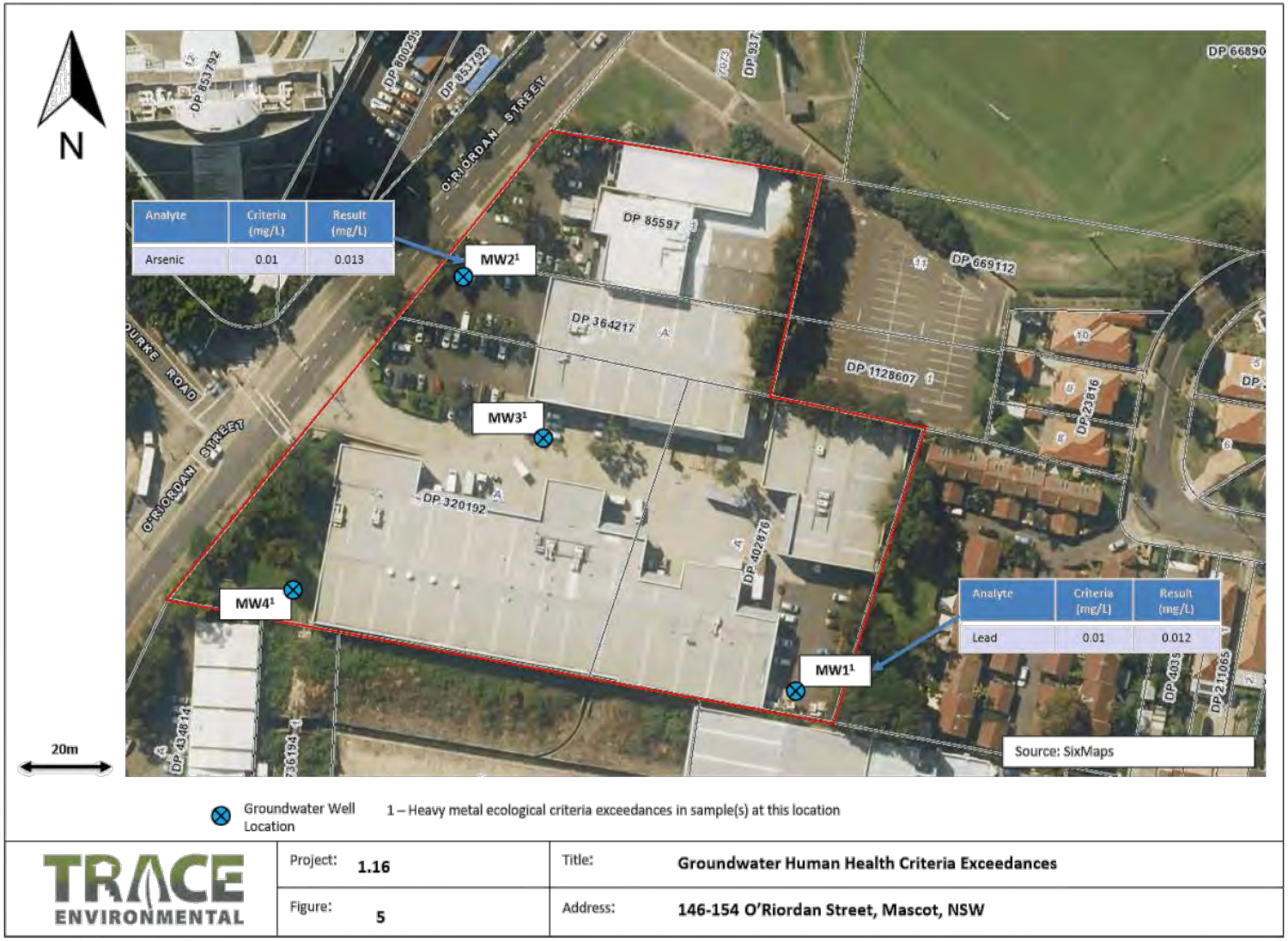
Sample Depth	Analyte	Criteria (mg/kg)	Result (mg/kg)
1.5-2.0m	TRH C_{10}-C_{16} (fraction F2)	240	1400
	Naphthalene	3	3.4
	Lead	1200	9000

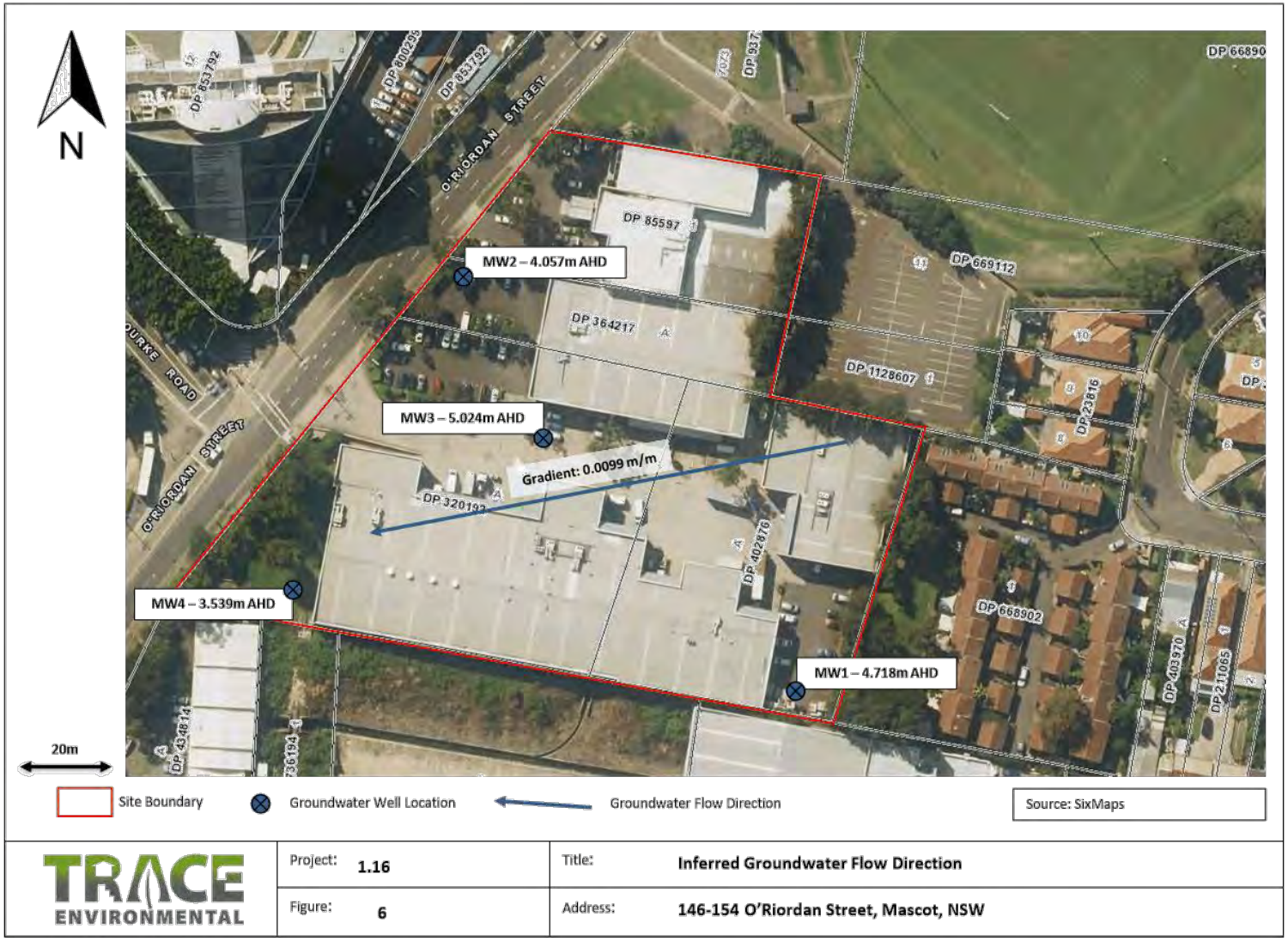
Borehole Location
Groundwater Well Location
Hand Auger Location

1 – TRH C_{10}-C_{16} (fraction F2) ecological criteria exceedances in sample(s) at this location.
2 – Benzo(a)pyrene ecological criteria exceedances in sample(s) at this location.
3 – Heavy metal ecological criteria exceedances in sample(s) at this location

TRACE ENVIRONMENTAL

Project:	1.16	Title:	**Soil Human Health Criteria Exceedances**
Figure:	4	Address:	**146-154 O'Riordan Street, Mascot, NSW**


N
Analyte | Criteria (mg/L) | Result (mg/L)
Arsenic | 0.01 | 0.013
MW2¹
MW3¹
MW4¹
MW1¹
Analyte | Criteria (mg/L) | Result (mg/L)
Lead | 0.01 | 0.012
O'RIORDAN STREET
BOURKE ROAD
DP 66890
DP 85597
DP 669112
DP 364217
DP 1128607
DP 320192
DP 402876
DP 23816
20m
Source: SixMaps
Groundwater Well Location
1 – Heavy metal ecological criteria exceedances in sample(s) at this location
TRACE ENVIRONMENTAL
Project: 1.16
Title: Groundwater Human Health Criteria Exceedances
Figure: 5
Address: 146-154 O'Riordan Street, Mascot, NSW


N
MW2 – 4.057m AHD
MW3 – 5.024m AHD
Gradient: 0.0099 m/m
MW4 – 3.539m AHD
MW1 – 4.718m AHD
O'RIORDAN STREET
BOURKE ROAD
DP 85597
DP 364217
DP 669112
DP 1128607
DP 668902
DP 66890
20m
Site Boundary
Groundwater Well Location
Groundwater Flow Direction
Source: SixMaps
TRACE ENVIRONMENTAL
Project: 1.16
Title: Inferred Groundwater Flow Direction
Figure: 6
Address: 146-154 O'Riordan Street, Mascot, NSW

Tables

TABLE 1
SUMMARY OF SOIL SAMPLES COLLECTED
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample Identification	Date Collected	Depth (mbgl)	PID (ppm)	Requested Analysis
SB1/0.3	9/08/2018	0.30	0.0	VOCs, BTEXN, vTRH, PAHs, Metals
SB1/0.5	9/08/2018	0.5	0.0	Asbestos, PAHs, Metals, OCPs, PCBs, OPPs, NEPM Soil Screen, TCLP
SB4/0.2	14/08/2018	0.2	-	Asbestos, BTEXN, vTRH, PAHs, Metals, Phenols
SB6/0.4	9/08/2018	0.4	0.0	Asbestos, OCPs, PCBs, OPPs
SB6/1.0	9/08/2018	1.0	-	BTEXN, vTRH, PAHs, Metals, TCLP
SB6/1.25	9/08/2018	1.25	-	Not Analysed
SB6/2.0	9/08/2018	2.0	0.0	ASS
SB6/2.6	9/08/2018	2.6	-	NEPM Soil Screen, BTEXN, vTRH, PAHs, Metals
SB6/3.0	9/08/2018	3.0	0.0	Not Analysed
SB6/3.2	9/08/2018	3.2	-	OCPs, PCBs, OPPs
SB6/3.9	9/08/2018	3.9	-	Not Analysed
SB6/4.0	9/08/2018	4.0	0.0	ASS
SB6/4.8	9/08/2018	4.8	-	BTEXN, vTRH, PAHs, Metals, Phenols
SB6/5.0	9/08/2018	5.0	0.0	ASS
SB7/0.25	14/08/2018	0.25	-	Asbestos, BTEXN, vTRH, PAHs, Metals, Phenols, TCLP
SB8/0.15	14/08/2018	0.15	-	BTEXN, vTRH, PAHs, Metals, Phenols
SB8/0.3	14/08/2018	0.3	-	Asbestos
SB9/0.25	14/08/2018	0.25	-	Asbestos, BTEXN, vTRH, PAHs, Metals, Phenols
SB10/0.3	10/08/2018	0.3	0.0	Asbestos
SB10/0.5	10/08/2018	0.5	0.0	pH, Metals, OCPs, PCBs, OPPs
SB11/0.2	9/08/2018	0.2	0.0	OCPs, PCBs, OPPs
SB11/0.5	9/08/2018	0.5	0.0	BTEXN, vTRH, PAHs, Metals, Phenols
SB11/1.2	9/08/2018	1.2	0.0	Asbestos, PAHs, Metals
SB11/1.6	9/08/2018	1.6	-	VOCs, BTEXN, vTRH, PAHs, Metals
SB11/2.0	9/08/2018	2.0	0.0	Not Analysed
SB11/2.6	9/08/2018	2.6	-	Not Analysed
SB11/3.6	9/08/2018	3.6	-	Not Analysed
SB11/4.4	9/08/2018	4.4	-	BTEXN, vTRH, PAHs, Metals, Phenols
SB11/4.8	9/08/2018	4.8	0.0	Not Analysed
SB11/5.0	9/08/2018	5.0	-	OCPs, PCBs, OPPs
SB13/0.3	10/08/2018	0.3	0.0	Asbestos, PAHs
SB14/0.2	10/08/2018	0.2	0.0	Asbestos, BTEXN, vTRH, PAHs, Metals
SB14/0.4	10/08/2018	0.4	0.4	Not Analysed
SB14/0.5	10/08/2018	0.5	0.0	OCPs, PCBs, OPPs
SB14/1.2	10/08/2018	1.2	0.0	PAHs, Metals, NEPM Soil Screen, TCLP
SB14/2.0	10/08/2018	2.0	0.3	Not Analysed
SB14/2.5	10/08/2018	2.5	0.0	Asbestos, VOCs
SB14/3.0	10/08/2018	3.0	0.0	Not Analysed
SB14/3.2	10/08/2018	3.2	-	Not Analysed
SB14/3.8	10/08/2018	3.8	-	OCPs, PCBs, OPPs
SB14/4.0	10/08/2018	4.0	0.0	Not Analysed
SB14/5.0	10/08/2018	5.0	0.0	Not Analysed
SB14/6.0	10/08/2018	6.0	0.0	ASS
SB14/7.0	10/08/2018	7.0	0.0	Not Analysed
SB14/8.0	10/08/2018	8.0	0.0	ASS
SB14/9.0	10/08/2018	9.0	0.0	Not Analysed
SB14/10.0	10/08/2018	10.0	0.0	ASS, OCPs, PCBs, OPPs, BTEXN, vTRH, PAHs, Metals
SB17/0.2	10/08/2018	0.2	0.0	Not Analysed
SB17/0.5	10/08/2018	0.5	0.0	BTEXN, vTRH, PAHs, Metals
SB17/1.0	10/08/2018	1.0	0.0	Asbestos, OCPs, PCBs, OPPs
SB17/1.2	10/08/2018	1.2	0.0	Not Analysed
SB17/1.3	10/08/2018	1.3	-	Not Analysed

TABLE 1
SUMMARY OF SOIL SAMPLES COLLECTED
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample Identification	Date Collected	Depth (mbgl)	PID (ppm)	Requested Analysis
SB17/1.6	10/08/2018	1.6	-	Not Analysed
SB17/1.9	10/08/2018	1.9	-	Not Analysed
SB17/3.8	10/08/2018	3.8	0.0	ASS
SB17/5.0	10/08/2018	5.0	0.0	Not Analysed
SB17/6.0	10/08/2018	6.0	0.0	ASS, pH
SB17/7.0	10/08/2018	7.0	0.0	Not Analysed
SB17/7.5	10/08/2018	7.5	0.0	BTEXN, vTRH, PAHs, Metals, Phenols
SB17/8.0	10/08/2018	8.0	0.0	ASS
SB17/9.0	10/08/2018	9.0	0.0	OCPs, PCBs, OPPs
SB17/10.0	10/08/2018	10.0	0.0	ASS
SB18/0.2	10/08/2018	0.2	-	Asbestos, pH, PAHs, Metals, OCPs, PCBs, OPPs
SB18/0.6	10/08/2018	0.6	-	Asbestos, VOCs
SB18/1.0	10/08/2018	1.0	-	BTEXN, vTRH, PAHs, Metals, Phenols, TCLP
SB19/0.2	8/08/2018	0.2	0.0	Not Analysed
SB19/0.8	8/08/2018	0.8	0.8	Asbestos, PAHs, Metals, OCPs, PCBs, OPPs
SB19/1.5	8/08/2018	1.5	1.0	BTEXN, vTRH, PAHs, Metals, TCLP
SB19/2.5	8/08/2018	2.5	-	OCPs, PCBs, OPPs, VOCs
SB19/3.2	8/08/2018	3.2	-	Not Analysed
SB19/3.7	8/08/2018	3.7	-	BTEXN, vTRH, PAHs, Metals, Phenols
SB20/0.3	8/08/2018	0.3	0.0	PAHs, Metals, OCPs, PCBs, OPPs
SB20/1.0	8/08/2018	1.0	0.0	Asbestos, BTEXN, vTRH, PAHs, Metals, TCLP
SB20/1.5	8/08/2018	1.5	0.0	Metals
SB20/2.2	8/08/2018	2.2	0.0	Not Analysed
SB20/2.4	8/08/2018	2.4	0.0	Not Analysed
SB20/2.6	8/08/2018	2.6	0.0	Not Analysed
SB20/3.0	8/08/2018	3.0	0.0	OCPs, PCBs, OPPs
SB20/3.8	8/08/2018	3.8	0.0	BTEXN, vTRH, PAHs, Metals, Phenols
SB20/5.0	8/08/2018	5.0	0.0	ASS
SB20/6.0	8/08/2018	6.0	0.0	Not Analysed
SB20/7.0	8/08/2018	7.0	0.0	Not Analysed
SB20/8.0	8/08/2018	8.0	0.0	ASS
SB20/9.0	8/08/2018	9.0	0.0	PAHs, NEPM Soil Screen
SB20/10.0	8/08/2018	10.0	0.0	ASS
SB20/11.0	8/08/2018	11.0	0.0	Not Analysed
SB20/12.0	8/08/2018	12.0	0.0	ASS, BTEXN, vTRH, PAHs, Metals, Phenols
SB21/0.15	13/08/2018	0.15	0.0	BTEXN, vTRH, PAHs, Metals, Phenols, TCLP
SB21/0.4	13/08/2018	0.4	-	Asbestos
SB21/0.5	13/08/2018	0.5	-	Not Analysed
SB21/0.8	13/08/2018	0.8	-	Not Analysed
SB22/0.1	13/08/2018	0.1	0.0	OCPs, PCBs, OPPs
SB22/0.5	13/08/2018	0.5	-	Asbestos, PAHs, Metals
SB22/0.9	13/08/2018	0.9	-	Not Analysed
SB22/1.0	13/08/2018	1.0	0.0	Not Analysed
SB22/1.3	13/08/2018	1.3	-	NEPM Soil Screen, BTEXN, vTRH, PAHs, Metals, Phenols
SB22/2.0	13/08/2018	2.0	0.0	Not Analysed
SB22/2.6	13/08/2018	2.6	-	Not Analysed
SB22/3.0	13/08/2018	3.0	0.0	ASS
SB22/4.0	13/08/2018	4.0	0.0	Not Analysed
SB22/5.0	13/08/2018	5.0	0.0	ASS
SB22/6.0	13/08/2018	6.0	-	BTEXN, vTRH, PAHs, Metals
SB22/7.0	13/08/2018	7.0	-	ASS
SB23/0.2	14/08/2018	0.2	-	Not Analysed
SB23/0.4	14/08/2018	0.4	-	Asbestos, BTEXN, vTRH, PAHs, Metals, Phenols

TABLE 1
SUMMARY OF SOIL SAMPLES COLLECTED
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample Identification	Date Collected	Depth (mbgl)	PID (ppm)	Requested Analysis
SB24/0.3	14/08/2018	0.3	-	Asbestos, BTEXN, vTRH, PAHs, Metals, Phenols
SB25/0.25	14/08/2018	0.25	-	Asbestos, BTEXN, vTRH, PAHs, Metals, Phenols
SB26/0.2	10/08/2018	0.2	0.0	Asbestos, BTEXN, vTRH, PAHs, Metals
SB26/0.5	10/08/2018	0.5	-	OCPs, PCBs, OPPs
SB26/1.0	10/08/2018	1.0	3.9	Not Analysed
SB26/1.5-2.0	10/08/2018	1.5-2.0	8.3	VOCs, BTEXN, vTRH, PAHs, Metals, Phenols, TCLP
SB26/2.0	10/08/2018	2.0	7.3	ASS, pH
SB26/3.0	10/08/2018	3.0	6.4	OCPs, PCBs, OPPs
SB26/4.0	10/08/2018	4.0	8.5	ASS, BTEXN, vTRH, PAHs, Metals
SB26/5.0	10/08/2018	5.0	8.9	VOCs
SB26/6.0	10/08/2018	6.0	5.5	ASS, BTEXN, vTRH, PAHs, Metals
SB26/7.0	10/08/2018	7.0	2.7	Not Analysed
SB26/8.0	10/08/2018	8.0	2.0	ASS, OCPs, PCBs, OPPs
SB26/9.0	10/08/2018	9.0	-	Not Analysed
SB26/10.0	10/08/2018	10.0	0.0	ASS
SB27/0.2	8/08/2018	0.2	0.0	Asbestos, OCPs, PCBs, OPPs
SB27/0.5	8/08/2018	0.5	0.0	Metals
SB27/1.0	8/08/2018	1.0	0.0	PAHs
SB27/1.5	8/08/2018	1.5	0.0	Asbestos
SB27/3.1	8/08/2018	3.1	0.0	Not Analysed
SB27/3.8	8/08/2018	3.8	0.0	BTEXN, vTRH, PAHs, Metals
SB27/5.0	8/08/2018	5.0	0.0	pH
SB27/6.0	8/08/2018	6.0	0.0	BTEXN, vTRH, PAHs, Metals
QA1	13/08/2018	-	-	Asbestos
QA2	14/08/2018	-	-	Asbestos
QS1	10/08/2018	-	-	BTEXN, vTRH, PAHs, Metals
QS2	8/08/2018	-	-	BTEXN, vTRH, PAHs, Metals
QS3	13/08/2018	-	-	BTEXN, vTRH, PAHs, Metals
QA1A	13/08/2018	-	-	Asbestos
QA2A	14/08/2018	-	-	Asbestos
QS1A	8/08/2018	-	-	BTEXN, vTRH, PAHs, Metals
QS2A	10/08/2018	-	-	BTEXN, vTRH, PAHs, Metals
QS3A	13/08/2018	-	-	BTEXN, vTRH, PAHs, Metals
RB1	8/08/2018	-	-	BTEXN, vTRH, PAHs, Metals, Phenols
RB2	13/08/2018	-	-	OCPs, PCBs, OPPs
RB3	14/08/2018	-	-	OCPs, PCBs, OPPs
RB4	14/08/2018	-	-	BTEXN, vTRH, PAHs, Metals, Phenols
TRIP BLANK	9/08/2018	-	-	BTEXN, vTRH
TRIP SPIKE	9/08/2018	-	-	BTEXN, vTRH
TRIP BLANK	14/09/2019	-	-	BTEXN, vTRH
TRIP SPIKE	14/09/2018	-	-	BTEXN, vTRH

Notes:
mbgl - metres below ground surface
PID - Photoionisation Detector
ppm - parts per million
QS-1 - duplicate of primary sample SB11-0.75
QS-1A - triplicate of primary sample SB11-0.75
QS-2 - duplicate of primary sample SB19-2.5
QS-2A - triplicate of primary sample SB19-2.5
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0
QA1 - duplicate of primary asbestos sample SB13-0.2
QA1A - triplicate of primary abestos sample SB13-0.2
QA2 - duplicate of primary asbestos sample SB6-0.2
QA2A - triplicate of primary abestos sample SB6-0.2

TABLE 2A:
SUMMARY OF SOIL ANALYTICAL RESULTS - TRH & BTEX
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID						SB1/0.3	SB4/0.2	SB6/1.0	SB6/2.6	SB6/4.8	SB7/0.25	SB8/0.15	SB9/0.25	SB11/0.5	SB11/1.6	SB11/4.4	SB14/0.2	QS2	QS2A
Sample Date						9/08/2018	14/08/2018	9/08/2018	9/08/2018	9/08/2018	14/08/2018	14/08/2018	14/08/2018	9/08/2018	9/08/2018	9/08/2018	10/08/2018		
Compounds	LOR	Management Limits for TPH [1]	HSL Direct Contact Intrusive Maintenance Worker [2]	HSL Direct Contact Low Density Residential land users [3]	ESLs for Urban Residential and Public Open Space [4]														
C6 - C9 Fraction	20	NE	NE	NE	NE	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C10 - C14 Fraction	20	NE	NE	NE	NE	<20	120	<20	<20	<20	22	<20	<20	<20	60	<20	<20	<20	<20
C15 - C28 Fraction	50	NE	NE	NE	NE	<50	400	74	<50	<50	120	<50	<50	70	350	<50	<50	<50	<100
C29 - C36 Fraction	50	NE	NE	NE	NE	<50	310	100	<50	<50	140	<50	57	71	93	<50	<50	<50	<100
C10 - C36 Fraction (sum)	50	NE	NE	NE	NE	<50	830	174	<50	<50	282	<50	57	141	503	<50	<50	<50	<50
C6 - C10 Fraction	20	NE	32000	4400	NE	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<10
C6 - C10 Fraction F1	20	700, 800	NE	NE	180	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<10
>C10 - C16 Fraction	50	1000, 1000	62000	5300	NE	<50	130	<50	<50	<50	<50	<50	<50	<50	92	<50	<50	<50	<50
>C16 - C34 Fraction	100	2500, 3500	85000	4500	NE	<100	680	160	<100	<100	240	<100	<100	140	480	<100	<100	<100	<100
>C34 - C40 Fraction	100	NE	120000	6300	NE	<100	150	<100	<100	<100	110	<100	<100	<100	<100	<100	<100	<100	<100
>C10 - C16 Fraction F2	50	1000, 1000	NE	NE	120	<50	130	<50	<50	<50	<50	<50	<50	<50	92	<50	<50	<50	<50
Benzene	0.1	NE	1,100	100	50, 65	<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	<0.2
Toluene	0.1	NE	120000	1400	85, 105	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5
Ethylbenzene	0.1	NE	85000	4500	70, 125	<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
meta- & para-Xylene	0.2	NE	NE	NE	NE	<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	<0.5
ortho-Xylene	0.1	NE	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5
Total Xylenes	0.3	NE	130000	12000	105, 45	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.5
Naphthalene	0.5	NE	29000	1400	NE	<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	<0.5

Notes:
All units are in mg/kg unless otherwise noted.
1. NEPM 2013, Schedule B1 Management Limits for TPH - Residential, parkland and public open space Land use, Coarse & Fine Soils
2. CRC CARE 2011 Health Screening Level for Direct Contact with Soil (Intrusive Maintenance Worker)
3. CRC CARE 2011 Health Screening Level for Direct Contact with Soil (HSL-A Low Density Residential)
2. NEPM 2013 ESLs (urban residential/public open space)
LOR - Limits of Reporting
NL - Not limiting
NE - Not established
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TABLE 2A:
SUMMARY OF SOIL ANALYTICAL RESULTS - TRH & BTEX
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID						SB14/10.0	SB17/0.5	SB17/7.5	SB18/1.0	SB19/1.5	SB19/3.7	SB20/1.0	SB20/3.8	SB20/12.0	SB21/0.15	SB22/1.3	SB22/6.0	QS3	QS3A
Sample Date						10/08/2018	10/08/2018	10/08/2018	10/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	13/08/2018	13/08/2018	13/08/2018		
Compounds	LOR	Management Limits for TPH [1]	HSL Direct Contact Intrusive Maintenance Worker [2]	HSL Direct Contact Low Density Residential land users [3]	ESLs for Urban Residential and Public Open Space [4]														
C6 - C9 Fraction	20	NE	NE	NE	NE	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<10
C10 - C14 Fraction	20	NE	NE	NE	NE	<20	<20	<20	**150**	<20	<20	<20	<20	<20	<20	<20	<20	<20	<10
C15 - C28 Fraction	50	NE	NE	NE	NE	<50	<50	<50	**1100**	**91**	<50	<50	<50	<50	<50	<50	<50	<50	<100
C29 - C36 Fraction	50	NE	NE	NE	NE	<50	<50	<50	**1100**	**66**	<50	<50	<50	<50	<50	<50	<50	<50	<100
C10 - C36 Fraction (sum)	50	NE	NE	NE	NE	<50	<50	<50	**2350**	**157**	<50	<50	<50	<50	<50	<50	<50	<50	<50
C6 - C10 Fraction	20	NE	82000	4400	NE	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<10
C6 - C10 Fraction F1	20	700, 800	NE	NE	180	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<10
>C10 - C16 Fraction	50	1000, 1000	62000	3300	NE	<50	<50	<50	**210**	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
>C16 - C34 Fraction	100	2500, 3500	85000	4500	NE	<100	<100	<100	**2000**	**160**	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C34 - C40 Fraction	100	NE	120000	6300	NE	<100	<100	<100	**810**	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C10 - C16 Fraction F2	50	1000, 1000	NE	NE	120	<50	<50	<50	**210**	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Benzene	0.1	NE	1,100	100	50, 65	<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	<0.2
Toluene	0.1	NE	120000	1400	85, 105	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5
Ethylbenzene	0.1	NE	85000	4500	70, 125	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5
meta- & para-Xylene	0.2	NE	NE	NE	NE	<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	<0.5
ortho-Xylene	0.1	NE	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5
Total Xylenes	0.3	NE	130000	12000	105, 45	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.5
Naphthalene	0.5	NE	29000	1400	NE	<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	<0.5

Notes:
All units are in mg/kg unless otherwise noted.
1. NEPM 2013, Schedule B1 Management Limits for TPH - Residential, parkland and public open space Land use, Coarse & Fine Soils
2. CRC CARE 2011 Health Screening Level for Direct Contact with Soil (Intrusive Maintenance Worker)
3. CRC CARE 2011 Health Screening Level for Direct Contact with Soil (HSL-A Low Density Residential)
2. NEPM 2013 ESLs (urban residential/public open space)
LOR - Limits of Reporting
NL - Not limiting
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QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TABLE 2A:
SUMMARY OF SOIL ANALYTICAL RESULTS - TRH & BTEX
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID						SB23/0.4	SB24/0.3	SB25/0.25	SB26/0.2	SB26/1.5-2.0	SB26/4.0	SB26/6.0	SB27/3.8	QS1	QS1A	SB27/6.0
Sample Date						14/08/2018	14/08/2018	14/08/2018	10/08/2018	10/8/18	10/08/2018	10/08/2018	8/08/2018			8/08/2018
Compounds	LOR	Management Limits for TPH [1]	HSL Direct Contact Intrusive Maintenance Worker [2]	HSL Direct Contact Low Density Residential land users [3]	ESLs for Urban Residential and Public Open Space [4]											
C6 - C9 Fraction	20	NE	NE	NE	NE	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C10 - C14 Fraction	20	NE	NE	NE	NE	<20	<20	<20	<20	**1000**	**43**	**39**	<20	<20	<20	<20
C15 - C28 Fraction	50	NE	NE	NE	NE	<50	<50	<50	<50	**1500**	**50**	**81**	<50	<50	<100	<50
C29 - C36 Fraction	50	NE	NE	NE	NE	<50	<50	<50	<50	**500**	<50	**69**	<50	<50	<100	<50
C10 - C36 Fraction (sum)	50	NE	NE	NE	NE	<50	<50	<50	<50	**3000**	**93**	**189**	<50	<50	<50	<50
C6 - C10 Fraction	20	NE	82000	4400	NE	<20	<20	<20	<20	**41**	<20	<20	<20	<20	<20	<20
C6 - C10 Fraction F1	20	700, 800	NE	NE	180	<20	<20	<20	<20	**40**	<20	<20	<20	<20	<20	<20
>C10 - C16 Fraction	50	1000, 1000	62000	3300	NE	<50	<50	<50	<50	**1400**	**72**	**63**	<50	<50	<50	<50
>C16 - C34 Fraction	100	2500, 3500	85000	4500	NE	<100	<100	<100	<100	**1800**	<100	**130**	<100	<100	<100	<100
>C34 - C40 Fraction	100	NE	120000	6300	NE	<100	<100	<100	<100	**270**	<100	<100	<100	<100	<100	<100
>C10 - C16 Fraction F2	50	1000, 1000	NE	NE	120	<50	<50	<50	<50	**1400**	**72**	**63**	<50	<50	<50	<50
Benzene	0.1	NE	1,100	100	50, 65	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1
Toluene	0.1	NE	120000	1400	85, 105	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1
Ethylbenzene	0.1	NE	85000	4500	70, 125	<0.1	<0.1	<0.1	<0.1	**0.3**	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1
meta- & para-Xylene	0.2	NE	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	**0.5**	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2
ortho-Xylene	0.1	NE	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	**0.3**	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1
Total Xylenes	0.3	NE	130000	12000	105, 45	<0.3	<0.3	<0.3	<0.3	**0.8**	<0.3	<0.3	<0.3	<0.3	<0.5	<0.3
Naphthalene	0.5	NE	29000	1400	NE	<0.5	<0.5	<0.5	<0.5	**3.4**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:
All units are in mg/kg unless otherwise noted.
1. NEPM 2013, Schedule B1 Management Limits for TPH - Residential, parkland and public open space Land use, Coarse & Fine Soils
2. CRC CARE 2011 Health Screening Level for Direct Contact with Soil (Intrusive Maintenance Worker)
3. CRC CARE 2011 Health Screening Level for Direct Contact with Soil (HSL-A Low Density Residential)
2. NEPM 2013 ESLs (urban residential/public open space)
LOR - Limits of Reporting
NL - Not limiting
NE - Not established
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TABLE 2B:
SUMMARY OF SOIL ANALYTICAL RESULTS - TRH & BTEX
SOIL HSLS FOR VAPOUR INTRUSION
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB1/0.3	SB4/0.2	SB6/1.0	SB6/2.6	SB6/4.8	SB7/0.25	SB8/0.15	SB9/0.25	SB11/0.5	SB11/1.6	SB11/4.4
Sample Date					9/08/2018	14/08/2018	9/08/2018	9/08/2018	9/08/2018	14/08/2018	14/08/2018	14/08/2018	9/08/2018	9/08/2018	9/08/2018
Depth					0.3	0.2	1.0	2.6	4.8	0.25	0.2	0.25	0.5	1.6	4.4
Predominant Soil Type					Sand	Sand	0/01/1900	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Compounds	LOR	HSL A & HSL B Sand [1]	HSL C Sand [2]	HSL Intrusive Maintenance Worker Sand [3]											
Benzene	0.1	0.5, 0.5, 0.5, 0.5	NL	77, 160, NL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1
Toluene	0.1	160, 220, 310, 540	NL	NL	<0.1	<0.1	<0.1	<0.1	<0.1	**0.3**	<0.1	<0.1	<0.5	<0.1	<0.1
Ethylbenzene	0.1	55, NL, NL, NL	NL	NL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
Total Xylenes	0.3	40, 60, 95, 170	NL	NL	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.5	<0.3	<0.3
Naphthalene	0.5	3, NL, NL, NL	NL	NL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5
C6 - C10 Fraction F1	20	65, 70, 110, 200	NL	NE	<20	<20	<20	<20	<20	<20	<20	<20	<50	<20	<20
>C10 - C16 Fraction F2	50	110, 240, 440, NL	NL	NE	<50	**130**	<50	<50	<50	<50	<50	<50	<100	**92**	<50

Notes:
All concentrations in mg/kg
F1 Fraction denotes TRH C_6-C_{10} fraction minus BTEX compounds
F2 Fraction denotes TRH >C_{10}-C_{16} minus naphthalene
1. NEPM 2013 Soil HSL for vapour intrusion - Low-high density residential land use - 0 to <1m, 1 to <2m, 2 to <4m, 4m+ (Sand)
2. NEPM 2013 Soil HSL for vapour intrusion - recreational/open space land use - 0 to <1m, 1 to <2m, 2 to <4m, 4m+ (Sand)
3. CRC CARE 2011 Health Screening Level for Vapour Intrusion - Intrusive Maintenance Worker in a Shallow Trench - 0m to <2m, 2m to <4m, ≥4m
NL - Not limiting
NE - Not established
LOR - Limit of reporting
Shading indicates concentration in excess of a relevant HSL (by predominant overlying soil type and depth).
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TABLE 2B:
SUMMARY OF SOIL ANALYTICAL RESULTS - TRH & BTEX
SOIL HSLS FOR VAPOUR INTRUSION
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB14/0.2	QS2	QS2A	SB14/10.0	SB17/0.5	SB17/7.5	SB18/1.0	SB19/1.5	SB19/3.7	SB20/1.0	SB20/3.8	SB20/12.0	SB21/0.15	SB22/1.3
Sample Date					10/08/2018			10/08/2018	10/08/2018	10/08/2018	10/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	13/08/2018	13/08/2018
Depth					0.2			10.0	0.5	7.5	1.0	1.5	3.7	1.0	3.8	12.0	0.2	1.3
Predominant Soil Type					Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Compounds	LOR	HSL A & HSL B Sand [1]	HSL C Sand [2]	HSL Intrusive Maintenance Worker Sand [3]														
Benzene	0.1	0.5, 0.5, 0.5, 0.5	NL	77, 160, NL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1
Toluene	0.1	160, 220, 310, 540	NL	NL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1
Ethylbenzene	0.1	55, NL, NL, NL	NL	NL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1
Total Xylenes	0.3	40, 60, 95, 170	NL	NL	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.9	<0.3
Naphthalene	0.5	3, NL, NL, NL	NL	NL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
C6 - C10 Fraction F1	20	45, 70, 110, 200	NL	NE	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<10	<20
>C10 - C16 Fraction F2	50	110, 240, 440, NL	NL	NE	<50	<50	<50	<50	<50	<50	210	<50	<50	<50	<50	<50	<50	<50

Notes:
All concentrations in mg/kg
F1 Fraction denotes TRH C_6-C_{10} fraction minus BTEX compounds
F2 Fraction denotes TRH >C_{10}-C_{16} minus naphthalene
1. NEPM 2013 Soil HSL for vapour intrusion - Low-high density residential land use - 0 to <1m, 1 to <2m, 2 to <4m, 4m+ (Sand)
2. NEPM 2013 Soil HSL for vapour intrusion - recreational/open space land use - 0 to <1m, 1 to <2m, 2 to <4m, 4m+ (Sand)
3. CRC CARE 2011 Health Screening Level for Vapour Intrusion - Intrusive Maintenance Worker in a Shallow Trench - 0m to <2m, 2m to <4m, >4m
NL - Not limiting
NE - Not established
LOR - Limit of reporting
Shading indicates concentration in excess of a relevant HSL (by predominant overlying soil type and depth
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TABLE 2B:
SUMMARY OF SOIL ANALYTICAL RESULTS - TRH & BTEX
SOIL HSLS FOR VAPOUR INTRUSION
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB22/6.0	QS3	QS3A	SB23/0.4	SB24/0.3	SB25/0.25	SB26/0.2	SB26/1.5-2.0	SB26/4.0	SB26/6.0	SB27/3.8	QS1	QS1A	SB27/6.0
Sample Date					13/08/2018			14/08/2018	14/08/2018	14/08/2018	10/08/2018	10/8/18	10/08/2018	10/08/2018	8/08/2018			8/08/2018
Depth					6.0			0.4	0.3	0.25	0.2	1.5-2.0	4.0	6.0	3.8			6.0
Predominant Soil Type					Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Compounds	LOR	HSL A & HSL B Sand [1]	HSL C Sand [2]	HSL Intrusive Maintenance Worker Sand [3]														
Benzene	0.1	0.5, 0.5, 0.5, 0.3	NL	77, 160, NL	<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
Toluene	0.1	160, 220, 310, 540	NL	NL	<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
Ethylbenzene	0.1	55, NL, NL, NL	NL	NL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	0.3	40, 60, 95, 170	NL	NL	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.8	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.5	3, NL, NL, NL	NL	NL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C6 - C10 Fraction F1	20	45, 70, 110, 200	NL	NE	<20	<20	<20	<20	<20	<20	<20	40	<20	<20	<20	<20	<20	<20
>C10 - C16 Fraction F2	50	110, 240, 440, NL	NL	NE	<50	<50	<50	<50	<50	<50	<50	1480	72	63	<50	<50	<50	<50

Notes:
All concentrations in mg/kg
F1 Fraction denotes TRH C_6-C_{10} fraction minus BTEX compounds
F2 Fraction denotes TRH >C_{10}-C_{16} minus naphthalene
1. NEPM 2013 Soil HSL for vapour intrusion - Low-high density residential land use - 0 to <1m, 1 to <2m, 2 to <4m, 4m+ (Sand)
2. NEPM 2013 Soil HSL for vapour intrusion - recreational/open space land use - 0 to <1m, 1 to <2m, 2 to <4m, 4m+ (Sand)
3. CRC CARE 2011 Health Screening Level for Vapour Intrusion - Intrusive Maintenance Worker in a Shallow Trench - 0m to <2m, 2m to <4m, >4m
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Shading indicates concentration in excess of a relevant HSL (by predominant overlying soil type and depth
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TRACE ENVIRONMENTAL

TABLE 3:
SUMMARY OF SOIL ANALYTICAL RESULTS - PAHs
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB1/0.3	SB1/0.5	SB4/0.2	SB6/1.0	SB6/2.6	SB6/4.8	SB7/0.25	SB8/0.15	SB9/0.25	SB11/0.5
Sample Date					9/08/2018	9/08/2018	14/08/2018	9/08/2018	9/08/2018	9/08/2018	14/08/2018	14/08/2018	14/08/2018	9/08/2018
Compounds	LOR	HIL B [1]	HIL C [2]	EILs/ESLs for Urban Residential and Public Open Space [3]										
Naphthalene	0.5	NE	NE	170	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	0.5	NE	NE	NE	<0.5	**3.1**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	0.5	NE	NE	NE	<0.5	**0.7**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	0.5	NE	NE	NE	<0.5	**3.0**	<0.5	**0.9**	<0.5	<0.5	**1**	<0.5	<0.5	<0.5
Pyrene	0.5	NE	NE	NE	<0.5	**3.1**	<0.5	**1.0**	<0.5	<0.5	**1.1**	<0.5	<0.5	<0.5
Benz[a]anthracene	0.5	NE	NE	NE	<0.5	**1.7**	<0.5	<0.5	<0.5	<0.5	**0.5**	<0.5	<0.5	<0.5
Chrysene	0.5	NE	NE	NE	<0.5	**1.5**	<0.5	**0.7**	<0.5	<0.5	**0.6**	<0.5	<0.5	<0.5
Benzo[b+j]fluoranthene	0.5	NE	NE	NE	<0.5	**1.3**	<0.5	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo[k]fluoranthene	0.5	NE	NE	NE	<0.5	**1.0**	<0.5	**0.6**	<0.5	<0.5	**0.6**	<0.5	<0.5	<0.5
Benzo[a]pyrene	0.5	NE	NE	0.7, 0.7	<0.5	**1.7**	<0.5	**0.8**	<0.5	<0.5	**0.6**	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	0.5	NE	NE	NE	<0.5	**0.8**	<0.5	**0.6**	<0.5	<0.5	**0.6**	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo[g.h.i]perylene	0.5	NE	NE	NE	<0.5	**1.0**	<0.5	<0.5	<0.5	<0.5	**0.8**	<0.5	<0.5	<0.5
Total PAH	0.5	400	300	NE	<0.5	**18.9**	<0.5	**5.2**	<0.5	<0.5	**5.8**	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ (zero)	0.5	4	3	NE	<0.5	**2.2**	<0.5	**1.0**	<0.5	<0.5	**0.8**	<0.5	<0.5	<0.5

Notes:
All units in milligrams/kilogram (mg/kg)
1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access
2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces
3. NEPM 2013 EILs/ESLs (urban residential/public open space)
LOR - Limits of Reporting
NE - Not Established
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TRACE ENVIRONMENTAL

TABLE 3:
SUMMARY OF SOIL ANALYTICAL RESULTS - PAHs
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB11/1.2	SB11/1.6	SB11/4.4	SB13/0.3	SB14/0.2	QS2	QS2A	SB14/1.2	SB14/10.0	SB17/0.5
Sample Date					9/08/2018	9/08/2018	9/08/2018	13/08/2018	10/08/2018			10/08/2018	10/08/2018	10/08/2018
Compounds	LOR	HIL B [1]	HIL C [2]	EILs/ESLs for Urban Residential and Public Open Space [3]										
Naphthalene	0.5	NE	NE	170	<0.5	3.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5
Acenaphthene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5
Phenanthrene	0.5	NE	NE	NE	<0.5	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	4.3	<0.5	<0.5
Anthracene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5
Fluoranthene	0.5	NE	NE	NE	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7.1	<0.5	<0.5
Pyrene	0.5	NE	NE	NE	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7.2	<0.5	<0.5
Benz(a)anthracene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.9	<0.5	<0.5
Chrysene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.6	<0.5	<0.5
Benzo[b+j]fluoranthene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.4	<0.5	<0.5
Benzo[k]fluoranthene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.1	<0.5	<0.5
Benzo[a]pyrene	0.5	NE	NE	0.7, 0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.8	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5	<0.5
Dibenz(a.h)anthracene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5
Benzo(g.h.i)perylene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.2	<0.5	<0.5
Total PAH	0.5	400	300	NE	0.7	5.4	<0.5	<0.5	<0.5	<0.5	<0.5	44.1	<0.5	<0.5
Benzo(a)pyrene TEQ (zero)	0.5	4	3	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.3	<0.5	<0.5

Notes:
All units in milligrams/kilogram (mg/kg)
1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access
2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces
3. NEPM 2013 EILs/ESLs (urban residential/public open space)
LOR - Limits of Reporting
NE - Not Established
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TRACE ENVIRONMENTAL

TABLE 3:
SUMMARY OF SOIL ANALYTICAL RESULTS - PAHs
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB17/7.5	SB18/0.2	SB18/1.0	SB19/0.8	SB19/1.5	SB19/3.7	SB20/0.3	SB20/1.0	SB20/3.8	SB20/9.0
Sample Date					10/08/2018	10/08/2018	10/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018
Compounds	LOR	HIL B [1]	HIL C [2]	EILs/ESLs for Urban Residential and Public Open Space [3]										
Naphthalene	0.5	NE	NE	170	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	0.5	NE	NE	NE	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	0.5	NE	NE	NE	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	0.5	NE	NE	NE	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	0.5	NE	NE	NE	<0.5	<0.5	<2	**0.7**	**0.7**	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	0.5	NE	NE	NE	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	0.5	NE	NE	NE	<0.5	<0.5	<2	**0.9**	**1.5**	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	0.5	NE	NE	NE	<0.5	<0.5	<2	**0.9**	**1.5**	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	0.5	NE	NE	NE	<0.5	<0.5	<2	**0.6**	**0.8**	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	0.5	NE	NE	NE	<0.5	<0.5	<2	<0.5	**0.9**	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	0.5	NE	NE	NE	<0.5	<0.5	<2	<0.5	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	0.5	NE	NE	NE	<0.5	<0.5	<2	<0.5	**0.9**	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	0.5	NE	NE	0.7, 0.7	<0.5	<0.5	<2	**0.7**	**0.9**	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	0.5	NE	NE	NE	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	0.5	NE	NE	NE	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	0.5	NE	NE	NE	<0.5	<0.5	<2	**0.6**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5
Total PAH	0.5	400	300	NE	<0.5	<0.5	<2	**4.4**	**8.4**	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ (zero)	0.5	4	3	NE	<0.5	<0.5	<0.5	**0.8**	**1.1**	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:
All units in milligrams/kilogram (mg/kg)
1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access
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NE - Not Established
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TRACE ENVIRONMENTAL

TABLE 3:
SUMMARY OF SOIL ANALYTICAL RESULTS - PAHs
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB20/12.0	SB21/0.15	SB22/0.5	SB22/1.3	SB22/6.0	QS3	QS3A	SB23/0.4	SB24/0.3	SB25/0.25
Sample Date					8/08/2018	13/08/2018	13/08/2018	13/08/2018	13/08/2018			14/08/2018	14/08/2018	14/08/2018
Compounds	LOR	HIL B [1]	HIL C [2]	EILs/ESLs for Urban Residential and Public Open Space [3]										
Naphthalene	0.5	NE	NE	170	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	0.5	NE	NE	NE	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	0.5	NE	NE	0.7, 0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total PAH	0.5	400	300	NE	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ (zero)	0.5	4	3	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:
All units in milligrams/kilogram (mg/kg)
1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access
2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces
3. NEPM 2013 EILs/ESLs (urban residential/public open space)
LOR - Limits of Reporting
NE - Not Established
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TRACE ENVIRONMENTAL

TABLE 3:
SUMMARY OF SOIL ANALYTICAL RESULTS - PAHs
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB26/0.2	SB26/1.5-2.0	SB26/4.0	SB26/6.0	SB27/1.0	SB27/3.8	QS1	QS1A	SB27/6.0
Sample Date					10/08/2018	10/08/2018	10/08/2018	10/08/2018	8/08/2018	8/08/2018			8/08/2018
Compounds	LOR	HIL B [2]	HIL C [2]	EILs/ESLs for Urban Residential and Public Open Space [3]									
Naphthalene	0.5	NE	NE	170	<0.5	4.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	0.5	NE	NE	NE	<0.5	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	0.5	NE	NE	NE	<0.5	2.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	0.5	NE	NE	NE	<0.5	7.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	0.5	NE	NE	NE	<0.5	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	0.5	NE	NE	NE	<0.5	4.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	0.5	NE	NE	NE	<0.5	5.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	0.5	NE	NE	NE	<0.5	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	0.5	NE	NE	NE	<0.5	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	0.5	NE	NE	NE	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	0.5	NE	NE	NE	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	0.5	NE	NE	0.7, 0.7	<0.5	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	0.5	NE	NE	NE	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	0.5	NE	NE	NE	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total PAH	0.5	400	300	NE	<0.5	37.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ (zero)	0.5	4	3	NE	<0.5	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:
All units in milligrams/kilogram (mg/kg)
1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access
2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces
3. NEPM 2013 EILs/ESLs (urban residential/public open space)
LOR - Limits of Reporting
NE - Not Established
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TRACE ENVIRONMENTAL

TABLE 4:
SUMMARY OF SOIL ANALYTICAL RESULTS - HEAVY METALS
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB1/0.3	SB1/0.5	SB4/0.2	SB6/1.0	SB6/2.6	SB6/4.8	SB7/0.25	SB8/0.15	SB9/0.25	SB10/0.5
Sample Date					9/08/2018	9/08/2018	14/08/2018	9/08/2018	9/08/2018	9/08/2018	14/08/2018	14/08/2018	14/08/2018	9/08/2018
Metal	LOR	HIL B[1]	HIL C[2]	EIL[3]										
Arsenic	2	500	300	40	2.1	41	15	45	<2	<2	24.0	6.2	4.0	<2
Cadmium	0.4	150	90	NE	<0.4	<0.4	<0.4	0.7	<0.4	<0.4	0.7	<0.4	<0.4	<0.4
Chromium (Total)*	5	500	300	200	8.9	14	19	39	<5	6.4	120	7.5	12	<5
Copper	5	30000	17000	110	37	390	64	170	<5	<5	65	16	18	7.4
Lead	5	1200	600	1100	22	990	84	460	<5	<5	270	77	26	12
Mercury **	0.1	120	80	NE	<0.1	0.1	<0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	5	1200	1200	30	<5	9.9	8.5	120	<5	<5	140	13	11	7.3
Zinc	5	60000	30000	330	42	190	220	1100	17	21	1400	230	61	110

Notes:
All units in mg/kg unless otherwise noted
1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access
2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces
3. NEPM 2013 ELs (urban residential/public open space)
LOR - Limits of Reporting
* criteria for Chromium (VI) shown
** criteria for mercury (inorganic) shown
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TRACE ENVIRONMENTAL

TABLE 4:
SUMMARY OF SOIL ANALYTICAL RESULTS - HEAVY METALS
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB11/0.5	SB11/1.2	SB11/1.6	SB11/4.4	SB14/0.2	QS2	QS2A	SB14/1.2	SB14/10.0	SB17/0.5
Sample Date					9/08/2018	9/08/2018	9/08/2018	9/08/2018	10/08/2018			10/08/2018	10/08/2018	10/08/2018
Metal	LOR	HIL B[1]	HIL C[2]	EIL[3]										
Arsenic	2	500	300	40	3.7	4.8	42	<2	<2	<3	<5	7.7	<2	3.3
Cadmium	0.4	150	90	NE	<0.4	0.4	3.3	<0.4	<0.4	<0.4	<1	1.0	<0.4	<0.4
Chromium (Total)*	5	500	300	200	12	13	22	<5	<5	<5	2	63	<5	8
Copper	5	30000	17000	110	30	45	150	<5	<5	<5	<5	110	<5	9.5
Lead	5	1200	600	1100	160	280	100	<5	<5	<5	<5	710	<5	31
Mercury **	0.1	120	80	NE	0.1	0.1	0.2	<0.1	<0.1	<0.1	-	0.5	<0.1	<0.1
Nickel	5	1200	1200	30	11	18	53	<5	<5	<5	<2	12	<5	7.5
Zinc	5	60000	30000	330	990	1900	2400	<5	16	19	17	850	<5	250

Notes:
All units in mg/kg unless otherwise noted
1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access
2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces
3. NEPM 2013 ELs (urban residential/public open space)
LOR - Limits of Reporting
* criteria for Chromium (VI) shown
** criteria for mercury (inorganic) shown
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TRACE ENVIRONMENTAL

TABLE 4:
SUMMARY OF SOIL ANALYTICAL RESULTS - HEAVY METALS
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB17/7.5	SB18/0.2	SB18/1.0	SB19/0.8	SB19/1.5	SB19/3.7	SB20/0.3	SB20/1.0	SB20/1.5	SB20/3.8
Sample Date					10/08/2018	10/08/2018	10/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018
Metal	LOR	HIL B[1]	HIL C[2]	EIL[3]										
Arsenic	2	500	300	40	<2	<2	4.9	4	3.6	<2	6.9	3.2	5.8	<2
Cadmium	0.4	150	90	NE	<0.4	<0.4	<0.4	<0.4	1.5	<0.4	0.5	<0.4	<0.4	<0.4
Chromium (Total)*	5	500	300	200	<5	<5	21	24	24	<5	28	39	38	<5
Copper	5	30000	17000	110	<5	<5	37	30	26	<5	47	89	35	<5
Lead	5	1200	600	1100	11	8.4	620	89	34	<5	200	90	460	<5
Mercury **	0.1	120	80	NE	<0.1	<0.1	0.1	0.1	<0.1	<0.1	0.2	0.5	0.2	<0.1
Nickel	5	1200	1200	30	<5	<5	21	58	120	<5	66	200	71	<5
Zinc	5	60000	30000	330	61	9.3	1000	860	320	<5	810	92	170	<5

Notes:
All units in mg/kg unless otherwise noted
1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access
2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces
3. NEPM 2013 EILs (urban residential/public open space)
LOR - Limits of Reporting
* criteria for Chromium (VI) shown
** criteria for mercury (inorganic) shown
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TRACE ENVIRONMENTAL

TABLE 4:
SUMMARY OF SOIL ANALYTICAL RESULTS - HEAVY METALS
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB20/12.0	SB21/0.15	SB22/0.5	SB22/1.3	SB22/6.0	QS3	QS3A	SB23/0.4	SB24/0.3	SB25/0.25
Sample Date					8/08/2018	13/08/2018	13/08/2018	13/08/2018	13/08/2018			14/08/2018	14/08/2018	14/08/2018
Metal	LOR	HIL B[1]	HIL C[2]	EIL[3]										
Arsenic	2	500	300	40	3.9	4.8	3.7	<2	<2	<2	<5	2.0	2.7	3.9
Cadmium	0.4	150	90	NE	<0.4	<0.4	0.7	<0.4	<0.4	<0.4	<1	<0.4	<0.4	<0.4
Chromium (Total)*	5	500	300	200	<5	13	13	<5	<5	<5	<2	<5	12	17
Copper	5	30000	17000	110	<5	220	32	9.9	<5	<5	<5	13	10	12
Lead	5	1200	600	1100	<5	310	150	25	<5	<5	<5	33	50	43
Mercury **	0.1	120	80	NE	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1
Nickel	5	1200	1200	30	<5	26	12	<5	<5	<5	<2	7.1	14	12
Zinc	5	60000	30000	330	12	570	910	240	9.1	11	9	280	190	520

Notes:
All units in mg/kg unless otherwise noted
1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access
2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces
3. NEPM 2013 EILs (urban residential/public open space)
LOR - Limits of Reporting
* criteria for Chromium (VI) shown
** criteria for mercury (inorganic) shown
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TRACE ENVIRONMENTAL

TABLE 4:
SUMMARY OF SOIL ANALYTICAL RESULTS - HEAVY METALS
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB26/0.2	SB26/1.5-2.0	SB26/4.0	SB26/6.0	SB27/0.5	SB27/3.8	QS1	QS1A	SB27/6.0
Sample Date					10/08/2018	10/08/2018	10/08/2018	10/08/2018	8/08/2018	8/08/2018			8/08/2018
Metal	LOR	HIL B[1]	HIL C[2]	EIL[3]									
Arsenic	2	500	300	40	3.5	46	<2	<2	4.8	<2	<2	2	<2
Cadmium	0.4	150	90	NE	<0.4	1.1	<0.4	<0.4	7.8	<0.4	<0.4	<1	<0.4
Chromium (Total)*	5	500	300	200	17	77	<5	<5	38	<5	<5	<2	<5
Copper	5	30000	17000	110	25	290	<5	<5	66	<5	<5	<5	<5
Lead	5	1200	600	1100	120	9000	39	11	440	<5	<5	<5	<5
Mercury **	0.1	120	80	NE	0.2	0.2	<0.1	<0.1	0.1	<0.1	<0.1	-	<0.1
Nickel	5	1200	1200	30	19	76	<5	<5	84	<5	<5	4	<5
Zinc	5	60000	30000	330	430	2700	12	<5	1500	5.4	<5	10	<5

Notes:
All units in mg/kg unless otherwise noted
1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access
2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces
3. NEPM 2013 EILs (urban residential/public open space)
LOR - Limits of Reporting
* criteria for Chromium (VI) shown
** criteria for mercury (inorganic) shown
QS-1 - duplicate of primary sample SB27/3.8
QS-1A - triplicate of primary sample SB27/3.8
QS2 - duplicate of primary sample SB14/0.2
QS2A - triplicate of primary sample SB14/0.2
QS3 - duplicate of primary sample SB22/6.0
QS3A - triplicate of primary sample SB22/6.0

TABLE 5:
SUMMARY OF SOIL ANALYTICAL RESULTS - OCPs & OPPs
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB1/0.5	SB6/0.4	SB6/3.2	SB10/0.5	SB11/0.2	SB11/5.0	SB14/0.5	SB14/3.8	SB14/10.0	SB17/1.0
Sample Date					9/08/2018	9/08/2018	9/08/2018	10/08/2018	9/08/2018	9/08/2018	10/08/2018	10/08/2018	10/08/2018	10/08/2018
OCP	LOR	HIL B[1]	HIL C[2]	EILs for Urban Residential and Public Open Space[3]										
4,4'-DDD	0.05	600	400	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDE	0.05	600	400	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDT	0.05	600	400	180	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	0.05	NE	NE	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	0.05	NE	NE	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin and Dieldrin (Total)*	0.05	10	10	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
b-BHC	0.05	NE	NE	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlordanes - Total	0.1	90	70	NE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.05	NE	NE	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT + DDE + DDD (Total)*	0.05	600	400	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	0.05	NE	NE	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	0.05	400	340	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	0.05	400	340	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	0.05	400	340	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	0.05	20	20	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	0.05	20	20	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	0.05	20	20	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	0.05	NE	NE	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	0.05	10	10	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	0.05	10	10	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	0.05	15	10	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	0.05	500	400	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toxaphene	1	30	30	NE	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
OPP	LOR	HIL B[1]	HIL C[2]	EILs for Urban Residential and Public Open Space[3]										
Azinphos-methyl	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	0.2	340	250	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	2	NE	NE	NE	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Demeton-O	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethyl parathion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mevinphos	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	2	NE	NE	NE	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Naled	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	2	NE	NE	NE	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Phorate	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
All units in mg/kg unless otherwise noted
1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access
2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces
3. NEPM 2013 EILs (urban residential/public open space)
LOR - Limits of Reporting

TABLE 5:
SUMMARY OF SOIL ANALYTICAL RESULTS - OCPs & OPPs
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID					SB17/0.0	SB18/0.2	SB19/0.8	SB19/2.5	SB20/0.3	SB20/3.0	SB22/0.1	SB26/0.5	SB26/3.0	SB26/8.0	SB27/0.2
Sample Date					10/08/2018	10/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	13/08/2018	10/08/2018	10/08/2018	10/08/2018	8/08/2018
OCP	LOR	HIL B[1]	HIL C[2]	EILs for Urban Residential and Public Open Space[3]											
4,4'-DDD	0.05	600	400	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDE	0.05	600	400	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDT	0.05	600	400	180	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	0.05	NE	NE	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	0.05	NE	NE	NE	<0.05	<0.05	<0.05	**0.07**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin and Dieldrin (Total)*	0.05	10	10	NE	<0.05	<0.05	<0.05	**0.31**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
b-BHC	0.05	NE	NE	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlordanes - Total	0.1	90	70	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.05	NE	NE	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT + DDE + DDD (Total)*	0.05	600	400	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	0.05	NE	NE	NE	<0.05	<0.05	<0.05	**0.24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	0.05	400	340	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	0.05	400	340	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	0.05	400	340	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	0.05	20	20	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	0.05	20	20	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	0.05	20	20	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	0.05	NE	NE	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	0.05	10	10	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	0.05	10	10	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	0.05	15	10	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	0.05	500	400	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toxaphene	1	30	30	NE	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
OPP	LOR	HIL B[1]	HIL C[2]	EILs for Urban Residential and Public Open Space[3]											
Azinphos-methyl	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	0.2	140	250	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	2	NE	NE	NE	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Demeton-O	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethyl parathion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mevinphos	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	2	NE	NE	NE	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Naled	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	2	NE	NE	NE	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Phorate	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
All units in mg/kg unless otherwise noted
1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access
2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces
3. NEPM 2013 EILs (urban residential/public open space)
LOR - Limits of Reporting

TRACE ENVIRONMENTAL

TABLE 6:
SUMMARY OF SOIL ANALYTICAL RESULTS - PCB & PHENOLS
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID				SB1/0.5	SB4/0.2	SB6/0.4	SB6/3.2	SB6/4.8	SB7/0.25	SB8/0.15	SB9/0.25	SB10/0.5	SB11/0.2
Sample Date				9/08/2018	14/08/2018	9/08/2018	9/08/2018	9/08/2018	14/08/2018	14/08/2018	14/08/2018	10/08/2018	9/08/2018
PCB	LOR	HIL B[1]	HIL C[2]										
Total PCB	0.1	1	1	<0.1	-	<1	<0.1	-	-	-	-	<0.1	<0.1
Phenols	LOR	HIL B[1]	HIL C[2]										
2.4.5-Trichlorophenol	1	NE	NE	-	<1	-	-	<1	<1	<1	<1	-	-
2.4.6-Trichlorophenol	1	NE	NE	-	<1	-	-	<1	<1	<1	<1	-	-
2.4-Dichlorophenol	0.5	NE	NE	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-
2.6-Dichlorophenol	0.5	NE	NE	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-
2-Chlorophenol	0.5	NE	NE	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-
4-Chloro-3-methylphenol	1	NE	NE	-	<1	-	-	<1	<1	<1	<1	-	-
Pentachlorophenol	1	130	120	-	<1	-	-	<1	<1	<1	<1	-	-
Tetrachlorophenols - Total	1	NE	NE	-	<1	-	-	<1	<1	<1	<1	-	-
Total Halogenated Phenol	1	NE	NE	-	<1	-	-	<1	<1	<1	<1	-	-
2.4-Dimethylphenol	0.5	NE	NE	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-
2.4-Dinitrophenol	5	NE	NE	-	<5	-	-	<5	<5	<5	<5	-	-
2-Cyclohexyl-4.6-dinitrophenol	20	NE	NE	-	<20	-	-	<20	<20	<20	<20	-	-
2-Methyl-4.6-dinitrophenol	5	NE	NE	-	<5	-	-	<5	<5	<5	<5	-	-
2-Methylphenol (o-Cresol)	0.2	4700	4000	-	<0.2	-	-	<0.2	<0.2	<0.2	<0.2	-	-
2-Nitrophenol	1	NE	NE	-	<1	-	-	<1	<1	<1	<1	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	4700	4000	-	<0.4	-	-	<0.4	<0.4	<0.4	<0.4	-	-
4-Nitrophenol	5	NE	NE	-	<5	-	-	<5	<5	<5	<5	-	-
Dinoseb	20	NE	NE	-	<20	-	-	<20	<20	<20	<20	-	-
Phenol	0.5	45000	40000	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-
Total Non-Halogenated Phenol	20	NE	NE	-	<20	-	-	<20	<20	<20	<20	-	-

Notes:

All units in mg/kg unless otherwise noted

1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access

2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces

LOR - Limits of Reporting

- indicates analysis not requested

TRACE ENVIRONMENTAL

TABLE 6:
SUMMARY OF SOIL ANALYTICAL RESULTS - PCB & PHENOLS
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID				SB11/0.5	SB11/4.4	SB11/5.0	SB14/0.5	SB14/3.8	SB14/10.0	SB17/1.0	SB17/7.5	SB17/9.0	SB18/0.2
Sample Date				9/08/2018	9/08/2018	9/08/2018	10/08/2018	10/08/2018	10/08/2018	10/08/2018	10/08/2018	10/08/2018	10/08/2018
PCB	LOR	HIL B[1]	HIL C[2]										
Total PCB	0.1	1	1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
Phenols	LOR	HIL B[1]	HIL C[2]										
2.4.5-Trichlorophenol	1	NE	NE	<1	<1	-	-	-	-	-	<1	-	-
2.4.6-Trichlorophenol	1	NE	NE	<1	<1	-	-	-	-	-	<1	-	-
2.4-Dichlorophenol	0.5	NE	NE	<0.5	<0.5	-	-	-	-	-	<0.5	-	-
2.6-Dichlorophenol	0.5	NE	NE	<0.5	<0.5	-	-	-	-	-	<0.5	-	-
2-Chlorophenol	0.5	NE	NE	<0.5	<0.5	-	-	-	-	-	<0.5	-	-
4-Chloro-3-methylphenol	1	NE	NE	<1	<1	-	-	-	-	-	<1	-	-
Pentachlorophenol	1	130	120	<1	<1	-	-	-	-	-	<1	-	-
Tetrachlorophenols - Total	1	NE	NE	<1	<1	-	-	-	-	-	<1	-	-
Total Halogenated Phenol	1	NE	NE	<1	<1	-	-	-	-	-	<1	-	-
2.4-Dimethylphenol	0.5	NE	NE	<0.5	<0.5	-	-	-	-	-	<0.5	-	-
2.4-Dinitrophenol	5	NE	NE	<5	<5	-	-	-	-	-	<5	-	-
2-Cyclohexyl-4.6-dinitrophenol	20	NE	NE	<20	<20	-	-	-	-	-	<20	-	-
2-Methyl-4.6-dinitrophenol	5	NE	NE	<5	<5	-	-	-	-	-	<5	-	-
2-Methylphenol (o-Cresol)	0.2	4700	4000	<0.2	<0.2	-	-	-	-	-	<0.2	-	-
2-Nitrophenol	1	NE	NE	<1	<1	-	-	-	-	-	<1	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	4700	4000	<0.4	<0.4	-	-	-	-	-	<0.4	-	-
4-Nitrophenol	5	NE	NE	<5	<5	-	-	-	-	-	<5	-	-
Dinoseb	20	NE	NE	<20	<20	-	-	-	-	-	<20	-	-
Phenol	0.5	45000	40000	<0.5	<0.5	-	-	-	-	-	<0.5	-	-
Total Non-Halogenated Phenol	20	NE	NE	<20	<20	-	-	-	-	-	<20	-	-

Notes:

All units in mg/kg unless otherwise noted

1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access

2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces

LOR - Limits of Reporting

- indicates analysis not requested

TRACE ENVIRONMENTAL

TABLE 6:
SUMMARY OF SOIL ANALYTICAL RESULTS - PCB & PHENOLS
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID				SB18/1.0	SB19/0.8	SB19/2.5	SB19/3.7	SB20/0.3	SB20/3.0	SB20/3.8	SB20/12.0	SB21/0.15	SB22/0.1
Sample Date				10/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	8/08/2018	13/08/2018	13/08/2018
PCB	LOR	HIL B[1]	HIL C[2]										
Total PCB	0.1	1	1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	-	<0.1
Phenols	LOR	HIL B[1]	HIL C[2]										
2.4.5-Trichlorophenol	1	NE	NE	<1	-	-	<1	-	-	<1	<1	<1	-
2.4.6-Trichlorophenol	1	NE	NE	<1	-	-	<1	-	-	<1	<1	<1	-
2.4-Dichlorophenol	0.5	NE	NE	<0.5	-	-	<0.5	-	-	<0.5	<0.5	<0.5	-
2.6-Dichlorophenol	0.5	NE	NE	<0.5	-	-	<0.5	-	-	<0.5	<0.5	<0.5	-
2-Chlorophenol	0.5	NE	NE	<0.5	-	-	<0.5	-	-	<0.5	<0.5	<0.5	-
4-Chloro-3-methylphenol	1	NE	NE	<1	-	-	<1	-	-	<1	<1	<1	-
Pentachlorophenol	1	130	120	<1	-	-	<1	-	-	<1	<1	<1	-
Tetrachlorophenols - Total	1	NE	NE	<1	-	-	<1	-	-	<1	<1	<1	-
Total Halogenated Phenol	1	NE	NE	<1	-	-	<1	-	-	<1	<1	<1	-
2.4-Dimethylphenol	0.5	NE	NE	<0.5	-	-	<0.5	-	-	<0.5	<0.5	<0.5	-
2.4-Dinitrophenol	5	NE	NE	<5	-	-	<5	-	-	<5	<5	<5	-
2-Cyclohexyl-4.6-dinitrophenol	20	NE	NE	<20	-	-	<20	-	-	<20	<20	<20	-
2-Methyl-4.6-dinitrophenol	5	NE	NE	<5	-	-	<5	-	-	<5	<5	<5	-
2-Methylphenol (o-Cresol)	0.2	4700	4000	<0.2	-	-	<0.2	-	-	<0.2	<0.2	<0.2	-
2-Nitrophenol	1	NE	NE	<1	-	-	<1	-	-	<1	<1	<1	-
3&4-Methylphenol (m&p-Cresol)	0.4	4700	4000	<0.4	-	-	<0.4	-	-	<0.4	<0.4	<0.4	-
4-Nitrophenol	5	NE	NE	<5	-	-	<5	-	-	<5	<5	<5	-
Dinoseb	20	NE	NE	<20	-	-	<20	-	-	<20	<20	<20	-
Phenol	0.5	45000	40000	<0.5	-	-	<0.5	-	-	<0.5	<0.5	<0.5	-
Total Non-Halogenated Phenol	20	NE	NE	<20	-	-	<20	-	-	<20	<20	<20	-

Notes:

All units in mg/kg unless otherwise noted

1. NEPM 2013 Health Investigation levels for soil contaminants - Residential B with minimal opportunities for soil access

2. NEPM 2013 Health Investigation levels for soil contaminants - Recreational C - Public open spaces

LOR - Limits of Reporting

- indicates analysis not requested

TRACE ENVIRONMENTAL

TABLE 6:
SUMMARY OF SOIL ANALYTICAL RESULTS - PCB & PHENOLS
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID				SB22/1.3	SB23/0.4	SB24/0.3	SB25/0.25	SB26/0.5	SB26/1.5-2.0	SB26/3.0	SB26/8.0	SB27/0.2	SB27/6.0
Sample Date				13/08/2018	14/08/2018	14/08/2018	14/08/2018	10/08/2018	10/08/2018	10/08/2018	10/08/2018	8/08/2018	8/08/2018
PCB	LOR	HIL B[1]	HIL C[2]										
Total PCB	0.1	1	1	-	-	-	-	<0.1	-	<0.1	<0.1	<0.1	-
Phenols	LOR	HIL B[1]	HIL C[2]										
2.4.5-Trichlorophenol	1	NE	NE	<1	<1	<1	<1	-	<1	-	-	-	<1
2.4.6-Trichlorophenol	1	NE	NE	<1	<1	<1	<1	-	<1	-	-	-	<1
2.4-Dichlorophenol	0.5	NE	NE	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	<0.5
2.6-Dichlorophenol	0.5	NE	NE	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	<0.5
2-Chlorophenol	0.5	NE	NE	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	<0.5
4-Chloro-3-methylphenol	1	NE	NE	<1	<1	<1	<1	-	<1	-	-	-	<1
Pentachlorophenol	1	130	120	<1	<1	<1	<1	-	<1	-	-	-	<1
Tetrachlorophenols - Total	1	NE	NE	<1	<1	<1	<1	-	<1	-	-	-	<1
Total Halogenated Phenol	1	NE	NE	<1	<1	<1	<1	-	<1	-	-	-	<1
2.4-Dimethylphenol	0.5	NE	NE	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	<0.5
2.4-Dinitrophenol	5	NE	NE	<5	<5	<5	<5	-	<5	-	-	-	<5
2-Cyclohexyl-4.6-dinitrophenol	20	NE	NE	<20	<20	<20	<20	-	<20	-	-	-	<20
2-Methyl-4.6-dinitrophenol	5	NE	NE	<5	<5	<5	<5	-	<5	-	-	-	<5
2-Methylphenol (o-Cresol)	0.2	4700	4000	<0.2	<0.2	<0.2	<0.2	-	<0.2	-	-	-	<0.2
2-Nitrophenol	1	NE	NE	<1	<1	<1	<1	-	<1	-	-	-	<1
3&4-Methylphenol (m&p-Cresol)	0.4	4700	4000	<0.4	<0.4	<0.4	<0.4	-	<0.4	-	-	-	<0.4
4-Nitrophenol	5	NE	NE	<5	<5	<5	<5	-	<5	-	-	-	<5
Dinoseb	20	NE	NE	<20	<20	<20	<20	-	<20	-	-	-	<20
Phenol	0.5	45000	40000	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	<0.5
Total Non-Halogenated Phenol	20	NE	NE	<20	<20	<20	<20	-	<20	-	-	-	<20

Notes:

All units in mg/kg unless otherwise noted

1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access

2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces

LOR - Limits of Reporting

- indicates analysis not requested

TRACE ENVIRONMENTAL

TABLE 7:
SUMMARY OF SOIL ANALYTICAL RESULTS - VOCs
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID		SB1/0.3	SB11/1.6	SB14/2.5	SB18/0.6	SB19/2.5	SB26/1.5-2.0	SB26/5.0
Sample Date		9/08/2018	9/08/2018	10/08/2018	10/08/2018	8/08/2018	10/08/2018	10/08/2018
VOCs	LOR							
1.1.1.2-Tetrachloroethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.1.1-Trichloroethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.1.2.2-Tetrachloroethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.1.2-Trichloroethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.1-Dichloroethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.1-Dichloroethene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.2.3-Trichloropropane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.2.4-Trimethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**4.9**	<0.5
1.2-Dibromoethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dichloroethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dichloropropane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.3.5-Trimethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.9**	<0.5
1.3-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.3-Dichloropropane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.4-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Butanone (MEK)	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Propanone (Acetone)	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chlorotoluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-Methyl-2-pentanone (MIBK)	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Allyl chloride	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromochloromethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon disulfide	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloromethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1.2-Dichloroethene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1.3-Dichloropropene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Iodomethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Isopropyl benzene (Cumene)	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methylene Chloride	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1.2-Dichloroethene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1.3-Dichloropropene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl chloride	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:
All units are in mg/kg unless otherwise noted
LOR - Limits of Reporting

TRACE ENVIRONMENTAL

TABLE 8:
SUMMARY OF SOIL ANALYTICAL RESULTS - ASBESTOS
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID				SB1/0.5	SB4/0.2	SB6/0.4	SB7/0.25	SB8/0.3	SB9/0.25	SB10/0.3	SB11/1.2	SB13/0.3	SB14/0.2	SB14/2.5	SB17/1.0	SB18/0.2	SB18/0.6
Sample Date				9/08/2018	14/08/2018	9/08/2018	14/08/2018	14/08/2018	14/08/2018	10/08/2018	9/08/2018	10/08/2018	10/08/2018	10/08/2018	10/08/2018	10/08/2018	10/08/2018
Depth				0.50	0.2	0.4	0.25	0.3	0.3	0.30	1.2	0.3	0.2	2.5	1.0	0.2	0.6
Asbestos	LOR	HSL B[1]	HSL C[2]														
Asbestos	0.001% w/w	0.04%[3], 0.001%[4]	0.02%[3], 0.001%[4]	ACM: 0.027 NRFD	ND/NRFD	ACM: 0.079 FA + AF: 0.0019 NRFD[5]	FA: 0.0044 NRFD	AF: 0.00087 NRFD	ND/NRFD	ND/NRFD	ND/NRFD	ND/NRFD	ND/NRFD	ND/NRFD	ND/NRFD	ND/NRFD	ND/NRFD

Notes:
LOR - Limits of Reporting
ND = No asbestos dected at the reporting limit of 0.001%
NRFD = No respirable fibres detected
1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access
2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces
3. NEPM 2013 Health Screening Levels - bonded/non-friable ACM
4. NEPM 2013 Health Screening Level for FA & AF asbestos
5. FA + AF detected at weight of 0.0021g
QA1 - duplicate of primary sample SB21-0.4
QA1A - triplicate of primary sample SB21-0.4
QA2 - duplicate of primary sample SB23-0.4
QA2A - triplicate of primary sample SB23-0.4

TRACE ENVIRONMENTAL

TABLE 8:
SUMMARY OF SOIL ANALYTICAL RESULTS - ASBESTOS
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID				SB19/0.8	SB20/1.0	SB21/0.4	QA1	QA1A	SB22/0.5	SB23/0.4	QA2	QA2A	SB24/0.3	SB25/0.25	SB26/0.2	SB27/0.2	SB27/1.5
Sample Date				8/08/2018	8/08/2018	13/08/2018			13/08/2018	14/08/2018			14/08/2018	14/08/2018	10/08/2018	8/08/2018	8/08/2018
Depth				0.8	1.0	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.25	0.2	0.2	1.5
Asbestos	LOR	HSL B[1]	HSL C[2]														
Asbestos	0.001% w/w	0.04%[3]; 0.001%[4]	0.02%[3]; 0.001%[4]	ND/NRFD	ND/NRFD	ND/NRFD	ND/NRFD	FA + AF: <0.001[5] NRFD	ND/NRFD	ND/NRFD	ND/NRFD	ND/NRFD	ND/NRFD	ND/NRFD	ND/NRFD	ACM: 0.013 NRFD	ND/NRFD

Notes:
LOR - Limits of Reporting
ND = No asbestos dected at the reporting limit of 0.001%
NRFD = No respirable fibres detected
1. NEPM 2013 Health investigation levels for soil contaminants - Residential B with minimal opportunities for soil access
2. NEPM 2013 Health investigation levels for soil contaminants - Recreational C - Public open spaces
3. NEPM 2013 Health Screening Levels - bonded/non-friable ACM
4. NEPM 2013 Health Screening Level for FA & AF asbestos
5. FA + AF detected at weight of 0.0021g
QA1 - duplicate of primary sample SB21-0.4
QA1A - triplicate of primary sample SB21-0.4
QA2 - duplicate of primary sample SB23-0.4
QA2A - triplicate of primary sample SB23-0.4

TRACE ENVIRONMENTAL

TABLE 9:
SUMMARY OF SOIL ANALYTICAL RESULTS - ACID SULFATE SOILS
146-154 O'RIORDAN STREET, MASCOT, NSW

Compounds	LOR	Units	Net Acidity Criteria (+MOL tonnes)	Net Acidity Criteria (+1Mol tonnes)	SAND: white/grey	SAND: brown/grey	SAND: black, fine grained	SAND: black, fine grained	SAND: black, fine grained	SAND: black, fine grained	SAND: black	SAND: black	SAND: black	SAND: black	SAND: black	SAND: grey	SAND: grey	SAND: grey	SAND: brown	SAND: grey/brown	SAND: grey/brown	SAND: black	SAND: black	SAND: brown	SAND: brown	SAND: brown
Sample ID					SB6/2.0	SB6/4.0	SB6/5.0	SB14/4.6	SB14/6.6	SB14/10.0	SB17/3.8	SB17/6.8	SB17/8.0	SB17/10.0	SB20/5.0	SB26/8.0	SB26/10.0	SB20/12.0	SB22/3.0	SB22/5.0	SB22/7.0	SB26/2.0	SB26/4.0	SB26/6.8	SB26/8.0	SB26/10.0
Sample Date					9/08/18	9/08/18	9/08/18	10/08/18	10/08/18	10/08/18	10/08/18	10/08/18	10/08/18	10/08/18	8/08/18	8/08/18	8/08/18	8/08/18	13/08/18	13/08/18	13/08/18	10/08/18	10/08/18	10/08/18	10/08/18	10/08/18
Sample to Survey Depth																										
Field Test:																										
pH-F	0.1	pH Units	<4.0	<4.0	7.8	6.3	6.4	6.9	6.4	6.6	8.2	7.5	6.6	6.7	7.2	6.1	6.2	6.5	7.1	7	6.9	9.1	7.7	5.6	6.8	6.3
pH-FOX	0.1	pH Units	<3.5	<3.5	5.7	4.4	3.5	4.4	2.9	3.2	6.7	6.6	2.4	3	4.1	2.2	3.2	2.8	5.1	5.9	4.5	6.9	5.1	2.3	2.8	2.7
Change[2]	0.1	pH Units	±1.0	±1.0	2.1	1.9	3.1	2.5	3.5	3.4	1.5	0.7	4.2	3.7	3.1	3.9	3	3.3	2	3.1	2.4	2.2	2.6	3.3	4	3.6
Reaction Rating[3]	-	-			3	1	1	1	3	3	3	2	2	2	1	1	1	3	3	1	1	1	1	2	3	3
Chromium Suite																										
Acid Neutralising Capacity - acidity (ANCbt)	2	mol H+/t			23	-	n/a	-	n/a	n/a	-	-	n/a	n/a	n/a	n/a	n/a	-	n/a	n/a	-	100	-	n/a	-	n/a
Acid Neutralising Capacity - equivalent 5% pyrite (s-ANCbt)	0.02	% S			0.04	-	n/a	-	n/a	n/a	-	-	n/a	n/a	n/a	n/a	n/a	-	n/a	n/a	-	0.16	-	n/a	-	n/a
Acid Neutralising Capacity (ANCbt)	0.01	TiCaCO3			0.02	-	n/a	-	n/a	n/a	-	-	n/a	n/a	n/a	n/a	n/a	-	n/a	n/a	-	0.01	-	n/a	-	n/a
Acid trail - Titratable Actual Acidity	2	mol H+/t			<2	-	2.6	-	4.8	2.3	-	-	<2	<2	3.5	7	8.2	-	<2	6.6	-	<2	-	6.6	-	27
ANC Fineness Factor	-	factor			1.5	-	1.5	-	1.5	1.5	-	-	1.5	1.5	1.5	1.5	1.5	-	1.5	1.5	-	1.5	-	1.5	-	1.5
Chromium Reducible Sulfur	0.005	% S	0.03	0.03	<0.005	-	0.051	0.016	-	-	0.007	0.022	<0.005	<0.005	0.051	-	<0.005	<0.005	-	0.031	-	0.011	-	0.078		
Chromium Reducible Sulfur-acidity units	9	mol H+/t			<9	-	<9	-	32	<9	-	-	<9	14	<9	<9	32	-	<9	<9	-	20	-	<9	-	49
Liming Rate	1	kg CaCO3/t			<1	-	<1	-	2.7	<1	-	-	<1	1	<1	<1	3	-	<1	<1	-	<1	-	1	-	5.7
Net Acidity (Acidity Units)[4]	10	mol H+/t	10	10	<10	-	<10	-	39	12	-	-	<10	14	<10	<10	40	-	<10	<10	-	<10	-	14	-	75
Net Acidity (Sulfur Units)[4]	0.02	% S	0.03	0.03	<0.02	-	<0.02	-	0.05	0.02	-	-	<0.02	0.02	<0.02	<0.02	0.05	-	<0.02	<0.02	-	<0.02	-	<0.02	-	0.12
HCl Extractable Sulfur	0.02	% S			n/a	-	n/a	-	n/a	n/a	-	-	n/a	n/a	n/a	n/a	n/a	-	n/a	n/a	-	n/a	-	n/a	-	n/a
Net Acid soluble sulfur	0.02	% S			n/a	-	n/a	-	n/a	n/a	-	-	n/a	n/a	n/a	n/a	n/a	-	n/a	n/a	-	n/a	-	n/a	-	n/a
Net Acid soluble sulfur - acidity units	10	mol H+/t			n/a	-	n/a	-	n/a	n/a	-	-	n/a	n/a	n/a	n/a	n/a	-	n/a	n/a	-	n/a	-	n/a	-	n/a
Net Acid soluble sulfur - equivalent 5% pyrite	0.02	% S			n/a	-	n/a	-	n/a	n/a	-	-	n/a	n/a	n/a	n/a	n/a	-	n/a	n/a	-	n/a	-	n/a	-	n/a
pH-KCl[5]	0.1	pH Units	<4.0	<4.0	7.4	-	5.8	-	5.4	5.6	-	-	5.7	5.7	5.7	5.3	5.2	-	6.1	5.6	-	8.2	-	5.4	-	4.9
sulfidic - TAA equiv. 5% pyrite	0.02	% pyrite S			<0.02	-	<0.02	-	<0.02	<0.02	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	-	<0.02	-	0.04
Sulfur - KCl Extractable	0.02	% S			<0.02	-	<0.02	-	<0.02	n/a	-	-	n/a	<0.02	n/a	<0.02	<0.02	-	n/a	<0.02	-	<0.02	-	<0.02	-	<0.02
SPOCAS Suite																										
Acid Neutralising Capacity - Acidity units	10	mol H+/t			49	-	n/a	n/a	n/a	-	86	-	-	n/a	n/a	-	n/a	-	-	n/a	-	n/a	-	n/a	n/a	n/a
Acid Neutralising Capacity equivalent 5% pyrite	0.02	% S			0.08	-	n/a	n/a	n/a	-	0.14	-	-	n/a	n/a	-	n/a	-	-	n/a	-	n/a	-	n/a	n/a	n/a
Acid Neutralising Capacity	0.28	TiCaCO3			0.35	-	n/a	n/a	n/a	-	0.43	-	-	n/a	n/a	-	n/a	-	-	n/a	-	n/a	-	n/a	n/a	n/a
Acid Reacted Calcium	0.02	% Ca			0.03	-	<0.02	<0.02	<0.02	-	0.12	-	-	0.02	-	<0.02	<0.02	-	-	<0.02	-	<0.02	-	<0.02	<0.02	<0.02
Acid Reacted Magnesium	0.02	% Mg			<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	-	<0.02	-	<0.02	<0.02	-	-	<0.02	-	<0.02	-	<0.02	<0.02	<0.02
Acid trail - Titratable Actual Acidity	2	mol H+/t			<2	-	2.6	<2	4.8	-	<2	-	-	<2	-	7	8.2	-	-	6.6	-	<2	-	6.6	6	27
Acid trail - Titratable Peroxide Acidity[6]	2	mol H+/t	10	10	<2	-	10	<2	53	-	<2	-	-	24	-	73	82	-	-	24	-	<2	-	57	<2	170
Acid trail - Titratable Sulfidic Acidity[7]	2	mol H+/t	10	10	<2	-	<2	<2	48	-	<2	-	-	24	-	68	73	-	-	17	-	<2	-	51	<2	140
acidity - Acid Reacted Calcium	10	mol H+/t			40	-	<10	<10	<10	-	61	-	-	11	-	<10	<10	-	-	<10	-	<10	-	<10	<10	<10
acidity - Acid Reacted Magnesium	10	mol H+/t			<10	-	<10	<10	<10	-	<10	-	-	<10	-	<10	<10	-	-	<10	-	<10	-	<10	<10	<10
acidity - Peroxide Oxidisable Sulfur	10	mol H+/t			<10	-	<10	<10	46	-	33	-	-	20	-	10	48	-	-	<10	-	21	-	20	48	90
ANC Fineness Factor	-	factor			1.5	-	1.5	1.5	1.5	-	1.5	-	-	1.5	-	1.5	1.5	-	-	1.5	-	1.5	-	1.5	1.5	1.5
Calcium - KCl Extractable	0.02	% Ca			0.04	-	<0.02	<0.02	<0.02	-	0.17	-	-	<0.02	-	<0.02	<0.02	-	-	0.08	-	0.05	-	0.02	<0.02	<0.02
Calcium - Peroxide	0.02	% Ca			0.12	-	<0.02	<0.02	<0.02	-	0.3	-	-	0.02	-	<0.02	<0.02	-	-	0.06	-	0.05	-	0.03	<0.02	<0.02
HCl Extractable Sulfur	0.02	% S			n/a	-	n/a	n/a	n/a	-	n/a	-	-	n/a	-	n/a	n/a	-	-	n/a	-	n/a	-	n/a	n/a	n/a
Magnesium - KCl Extractable	0.02	% Mg			<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	-	<0.02	-	<0.02	<0.02	-	-	<0.02	-	<0.02	-	<0.02	<0.02	<0.02
Magnesium - Peroxide	0.02	% Mg			<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	-	<0.02	-	<0.02	<0.02	-	-	<0.02	-	<0.02	-	<0.02	<0.02	<0.02
Net Acid soluble sulfur	0.02	% S			n/a	-	n/a	n/a	n/a	-	n/a	-	-	n/a	-	n/a	n/a	-	-	n/a	-	n/a	-	n/a	n/a	n/a
Net Acid soluble sulfur - acidity units	10	mol H+/t			n/a	-	n/a	n/a	n/a	-	n/a	-	-	n/a	-	n/a	n/a	-	-	n/a	-	n/a	-	n/a	n/a	n/a
Net Acid soluble sulfur - equivalent 5% pyrite	0.02	% S			n/a	-	n/a	n/a	n/a	-	n/a	-	-	n/a	-	n/a	n/a	-	-	n/a	-	n/a	-	n/a	n/a	n/a
pH-KCl[5]	0.1	pH Units	<4.0	<4.0	7.4	-	5.8	6.4	5.4	-	7.6	-	-	5.7	-	5.3	5.2	-	-	5.6	-	8.2	-	5.4	5.3	4.9
pH-OX[8]	0.1	pH Units	<3.5	<3.5	6.8	-	4.4	5.4	3	-	7.4	-	-	3.2	-	2.8	3.2	-	-	4.2	-	8.2	-	2.9	3	2.5
Change[2]	-	pH Units	±1.0	±1.0	0.6	-	1.4	1.0	2.4	-	0.2	-	-	2.5	-	2.5	2.0	-	-	1.4	-	2.0	-	2.5	2.3	2.4
sulfidic - TAA equiv. 5% pyrite	0.02	% pyrite S			<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	-	<0.02	-	<0.02	<0.02	-	-	<0.02	-	<0.02	-	<0.02	<0.02	0.04
sulfidic - TPA equiv. 5% pyrite	0.02	% pyrite S			<0.02	-	0.02	<0.02	0.08	-	<0.02	-	-	0.04	-	0.12	0.13	-	-	0.04	-	0.03	-	0.09	<0.02	0.27
sulfidic - TSA equiv. 5% pyrite	0.02	% pyrite S			<0.02	-	<0.02	<0.02	0.08	-	<0.02	-	-	0.04	-	0.11	0.12	-	-	0.03	-	<0.02	-	0.08	<0.02	0.25
Sulfur - KCl Extractable	0.02	% S			<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	-	<0.02	-	<0.02	<0.02	-	-	<0.02	-	<0.02	-	<0.02	<0.02	<0.02
Sulfur - Peroxide	0.02	% S			<0.02	-	<0.02	<0.02	0.07	-	0.05	-	-	0.03	-	0.05	0.08	-	-	<0.02	-	0.03	-	0.03	0.08	0.14
Sulfur - Peroxide Oxidisable Sulfur[9]	0.02	% S	0.03	0.03	<0.02	-	<0.02	<0.02	0.07	-	0.05	-	-	0.03	-	0.03	0.08	-	-	<0.02	-	0.03	-	0.03	0.08	0.14
Liming rate - SPOCAS	1	kg CaCO3/t			<1	-	<1	<1	4	-	<1	-	-	2	-	2	4	-	-	<1	-	1	-	2	4	9
Net Acidity (acid:sy units) - SPOCAS	10	mol H+/t	10	10	<10	-	<10	<10	51	-	<10	-	-	20	-	29	56	-	-	<10	-	<10	-	27	54	120
Net Acidity (sulfur units) - SPOCAS	0.02	% S	0.03	0.03	<0.02	-	<0.02	<0.02	0.08	-	<0.02	-	-	0.03	-	0.04	0.09	-	-	<0.02	-	<0.02	-	0.04	0.09	0.19
sulfidic - Acid Reacted Ca equiv. 5% pyrite	0.02	% S			0.06	-	<0.02	<0.02	<0.02	-	0.1	-	-	0.02	-	<0.02	<0.02	-	-	<0.02	-	0.02	-	<0.02	<0.02	<0.02
sulfidic - Acid Reacted Mg equiv. 5% pyrite	0.02	% S			<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	-	<0.02	-	<0.02	<0.02	-	-	<0.02	-	<0.02	-	<0.02	<0.02	<0.02
Extraneous Material																										
>2mm Fraction	0.005	g			130	-	93	97	93	110	110	-	120	110	110	99	120	-	100	130	-	120	-	98	120	110
<2mm Fraction	0.005	g			<0.005	-	<0.005	<0.005	<0.005	<0.005	1.5	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	-	<0.005	<0.005	<0.005
Analysed Material	0.1	%			100	-	100	100	100	100	99	-	100	100	100	100	100	-	100	100	-	100	-	100	100	100
Extraneous Material	0.1	%			<0.1	-	<0.1	<0.1	<0.1	<0.1	1.4	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1

Notes:
LOR - Limits of Reporting
1 : Indicative of Actual Acid Sulfate Soils
2 : Indicative of Potential Acid Sulfate Soils
3 : action criteria for need to prepare an Acid Sulfate Soil Management Plan
* 1 = No reaction to slight, 2 = Moderate reaction, 3 = Strong reaction with persistent fresh, 4 = Extreme reaction

TABLE 10:
SUMMARY OF SOIL ANALYTICAL RESULTS - TCLP
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID		SB1/0.5	SB6/1.0	SB7/0.25	SB14/1.2	SB18/1.0	SB19/1.5	SB20/1.0	SB21/0.15	SB26/1.5-2.0
Sample Date		10/08/2018	10/08/2018	13/08/2018	10/08/2018	10/08/2018	10/08/2018	10/08/2018	13/08/2018	10/08/2018
Heavy Metals	**LOR**									
Lead	0.01	0.24	0.04	0.36	1.1	1.4	-	-	0.10	3.4
Nickel	0.01	-	0.41	0.14	-	-	0.29	0.44	-	0.28
Chromium	0.01	-	-	<0.01	-	-	-	-	-	-
USA Leaching Procedure										
Leachate Fluid	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
pH (initial)	0.1	7.0	7.5	7.9	6.1	8.3	8.0	7.7	7.6	7.7
pH (Leachate Fluid)	0.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
pH (off)	0.1	5.3	5.9	5.4	5.3	5.6	5.3	5.1	5.1	5.6
pH (USA HCl addition)	0.1	2.0	1.8	2.0	1.9	1.9	2.0	2.0	2.0	2.0

TABLE 11:
SUMMARY OF SOIL QUALITY ASSURANCE / QUALITY CONTROL DATA
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID		SB27/3.8	QS1	RPD	SB27/3.8	QS1A	RPD	SB14/0.2	QS2	RPD	SB14/0.2	QS2A	RPD
Sample Date		8/08/2018	8/08/2018		8/08/2018	8/08/2018		10/08/2018	10/08/2018		10/08/2018	10/08/2018	
Metals	LOR												
Arsenic	2	<2	<2	0%	<2	2	67%	<2	<2	0%	<2	<2	0%
Cadmium	0.4	<0.4	<0.4	0%	<0.4	<1	0%	<0.4	<0.4	0%	<0.4	<1	0%
Chromium (Total)	5	<5	<5	0%	<5	<2	0%	<5	<5	0%	<5	2	22%
Copper	5	<5	<5	0%	<5	<5	0%	<5	<5	0%	<5	<5	0%
Lead	5	<5	<5	0%	<5	<5	0%	<5	<5	0%	<5	<5	0%
Mercury	0.1	<0.1	<0.1	0%	<0.1	-	-	<0.1	<0.1	0%	<0.1	-	-
Nickel	5	<5	<5	0%	<5	4	46%	<5	<5	0%	<5	<2	0%
Zinc	5	5.4	<5	73%	5.4	10	60%	16	19	17%	16	17	6%
Asbestos	0.001% w/w	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
All units in mg/kg
High RPDs are shaded (where applicable).
Acceptable RPDs for each LOR multiplier range are: No Limit (<10 x LOR); <30% RPD (Inorganic); and <50% RPD (Organic).

Primary samples SB27/3.8, SB14/0.2 and SB22/6.0 and duplicate/triplicate samples QS1/QS1A, QS2/QS2A and QS3A also all analysed for BTEXN, TPH/TRH and PAHs, with all results reported at concentrations <LOR.

TABLE 11:
SUMMARY OF SOIL QUALITY ASSURANCE / QUALITY CONTROL DATA
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID		SB22/6.0	QS3	RPD	SB22/6.0	QS3A	RPD	SB21/0.4	QA1	QA1A	SB23/0.4	QA2	QA2A
Sample Date		13/08/2018	13/08/2018		13/08/2018	13/08/2018		13/08/2018	13/08/2018	13/08/2018	14/08/2018	14/08/2018	14/08/2018
Metals	LOR												
Arsenic	2	<2	<2	0%	<2	<2	0%	"	"	"	"	"	"
Cadmium	0.4	<0.4	<0.4	0%	<0.4	<1	0%	"	"	"	"	"	"
Chromium (Total)	5	<5	<5	0%	<5	<2	22%	"	"	"	"	"	"
Copper	5	<5	<5	0%	<5	<5	0%	-	-	-	-	-	-
Lead	5	<5	<5	0%	<5	<5	0%	-	-	-	-	-	-
Mercury	0.1	<0.1	<0.1	0%	<0.1	-	-	"	"	"	"	"	"
Nickel	5	<5	<5	0%	<5	<2	0%	"	"	"	"	"	"
Zinc	5	9.1	11	19%	9.1	9	1%	"	"	"	"	"	"
Asbestos	0.001% w/w	"	"	"	"	"	"	ND/NRFD	ND/NRFD	FA + AF: <0.001 [1] NRFD	ND/NRFD	ND/NRFD	ND/NRFD

Notes:
All units in mg/kg
High RPDs are shaded (where applicable).
Acceptable RPDs for each LOR multiplier range are: No Limit (<10 x LOR); <30% RPD (Inorganic); and <50% RPD (Organic).

Primary samples SB27/3.8, SB14/0.2 and SB22/6.0 and duplicate/triplicate samples QS1/QS1A, QS2/QS2A and QS3A also all analysed for BTEXN, TPH/TRH and PAHs, with all results reported at concentrations <LOR.

TABLE 12:
SUMMARY OF TRIP BLANK AND
TRIP SPIKE ANALYTICAL DATA (SOIL AND GROUNDWATER SAMPLING)
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID	TRIP BLANK - Soil (mg/kg)	TRIP SPIKE - Soil (%)	Rinsate - Water: RB1 (mg/L)	Rinsate - Water: RB2 (mg/L)	Rinsate - Water: RB3 (mg/L)	Rinsate - Water: RB4 (mg/L)	TRIP BLANK - Water (mg/L)	TRIP SPIKE - Water (mg/L)
Sample Date	9/08/2018	9/08/2018	8/08/2018	13/08/2018	14/08/2018	14/08/2018	15/08/2018	15/08/2018
TPH/TRH								
C6-C9	<20	110	< 0.02	-	-	< 0.02	<0.02	71
C10-C14	-	-	<0.05	-	-	<0.05	-	-
C15-C28	-	-	<0.1	-	-	<0.1	-	-
C29-C36	-	-	<0.1	-	-	<0.1	-	-
C6-C36 (total)	-	-	<0.1	-	-	<0.1	-	-
C6-C10	<20	110	< 0.02	-	-	< 0.02	<0.02	75
C6-C10 - BTEX (fraction F1)	<20	-	<0.2	-	-	<0.2	<0.02	-
C10-C16	-	-	<0.05	-	-	<0.05	-	-
C10-C16 - Naphthalene (fraction F2)	-	-	<0.05	-	-	<0.05	-	-
C16-C34	-	-	<0.1	-	-	<0.1	-	-
C34-C40	-	-	<0.1	-	-	<0.1	-	-
C10-C40 (total)	-	-	<0.1	-	-	<0.1	-	-
Naphthalene	<0.5	99	< 0.01	-	-	< 0.01	<0.01	85
BTEX								
Benzene	<0.1	110	< 0.001	-	-	< 0.001	<0.001	86
Toluene	<0.1	110	< 0.001	-	-	< 0.001	<0.001	85
Ethylbenzene	<0.1	110	< 0.002	-	-	< 0.002	<0.001	80
meta- & para-Xylene	<0.2	110	< 0.001	-	-	< 0.001	<0.001	85
ortho-Xylene	<0.1	110	< 0.001	-	-	< 0.001	<0.001	84
Total Xylenes	<0.3	110	< 0.003	-	-	< 0.003	<0.003	84
Metal								
Arsenic	-	-	< 0.001	-	-	< 0.001	-	-
Cadmium	-	-	< 0.0002	-	-	< 0.0002	-	-
Chromium (Total)*	-	-	<0.001	-	-	<0.001	-	-
Copper	-	-	< 0.001	-	-	< 0.001	-	-
Lead	-	-	< 0.001	-	-	< 0.001	-	-
Mercury **	-	-	< 0.0001	-	-	< 0.0001	-	-
Nickel	-	-	<0.001	-	-	<0.001	-	-
Zinc	-	-	< 0.005	-	-	< 0.005	-	-
PAHs								
Naphthalene	-	-	<0.001	-	-	<0.001	-	-
Acenaphthylene	-	-	<0.001	-	-	<0.001	-	-
Acenaphthene	-	-	<0.001	-	-	<0.001	-	-
Fluorene	-	-	<0.001	-	-	<0.001	-	-
Phenanthrene	-	-	<0.001	-	-	<0.001	-	-
Anthracene	-	-	<0.001	-	-	<0.001	-	-
Fluoranthene	-	-	<0.001	-	-	<0.001	-	-
Pyrene	-	-	<0.001	-	-	<0.001	-	-
Benz[a]anthracene	-	-	<0.001	-	-	<0.001	-	-
Chrysene	-	-	<0.001	-	-	<0.001	-	-
Benzo[b+j]fluoranthene	-	-	<0.001	-	-	<0.001	-	-
Benzo[k]fluoranthene	-	-	<0.001	-	-	<0.001	-	-

TABLE 12:
SUMMARY OF TRIP BLANK AND
TRIP SPIKE ANALYTICAL DATA (SOIL AND GROUNDWATER SAMPLING)
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID	TRIP BLANK - Soil (mg/kg)	TRIP SPIKE - Soil (%)	Rinsate - Water: RB1 (mg/L)	Rinsate - Water: RB2 (mg/L)	Rinsate - Water: RB3 (mg/L)	Rinsate - Water: RB4 (mg/L)	TRIP BLANK - Water (mg/L)	TRIP SPIKE - Water (mg/L)
Sample Date	9/08/2018	9/08/2018	8/08/2018	13/08/2018	14/08/2018	14/08/2018	15/08/2018	15/08/2018
Benzo(a)pyrene	-	-	<0.001	-	-	<0.001	-	-
Indeno(1.2.3.cd)pyrene	-	-	<0.001	-	-	<0.001	-	-
Dibenz(a.h)anthracene	-	-	<0.001	-	-	<0.001	-	-
Benzo(g.h.i)perylene	-	-	<0.001	-	-	<0.001	-	-
Total PAH	-	-	<0.001	-	-	<0.001	-	-
Benzo(a)pyrene TEQ (zero)	-	-	<0.001	-	-	<0.001	-	-
Phenols								
2.4.5-Trichlorophenol	-	-	<0.01	-	-	<0.01	-	-
2.4.6-Trichlorophenol	-	-	<0.01	-	-	<0.01	-	-
2.4-Dichlorophenol	-	-	<0.003	-	-	<0.003	-	-
2.6-Dichlorophenol	-	-	<0.005	-	-	<0.003	-	-
2-Chlorophenol	-	-	<0.003	-	-	<0.003	-	-
4-Chloro-3-methylphenol	-	-	<0.01	-	-	<0.01	-	-
Pentachlorophenol	-	-	<0.01	-	-	<0.01	-	-
Tetrachlorophenols - Total	-	-	<0.03	-	-	<0.03	-	-
Total Halogenated Phenol	-	-	<0.01	-	-	<0.01	-	-
2.4-Dimethylphenol	-	-	<0.005	-	-	<0.003	-	-
2.4-Dinitrophenol	-	-	<0.03	-	-	<0.03	-	-
2-Cyclohexyl-4.6-dinitrophenol	-	-	<0.1	-	-	<0.1	-	-
2-Methyl-4.6-dinitrophenol	-	-	<0.03	-	-	<0.03	-	-
2-Methylphenol (o-Cresol)	-	-	<0.005	-	-	<0.003	-	-
2-Nitrophenol	-	-	<0.01	-	-	<0.01	-	-
3&4-Methylphenol (m&p-Cresol)	-	-	<0.005	-	-	<0.006	-	-
4-Nitrophenol	-	-	<0.03	-	-	<0.03	-	-
Dinoseb	-	-	<0.1	-	-	<0.1	-	-
Phenol	-	-	<0.005	-	-	<0.003	-	-
Total Non-Halogenated Phenol	-	-	<0.1	-	-	<0.1	-	-
OCP								
4.4'-DDD	-	-	-	<0.0001	<0.0001	-	-	-
4.4'-DDE	-	-	-	<0.0001	<0.0001	-	-	-
4.4'-DDT	-	-	-	<0.0001	<0.0001	-	-	-
a-BHC	-	-	-	<0.0001	<0.0001	-	-	-
Aldrin	-	-	-	<0.0001	<0.0001	-	-	-
Aldrin and Dieldrin (Total)*	-	-	-	<0.0001	<0.0001	-	-	-
b-BHC	-	-	-	<0.0001	<0.0001	-	-	-
Chlordanes - Total	-	-	-	<0.001	<0.001	-	-	-
d-BHC	-	-	-	<0.0001	<0.0001	-	-	-
DDT + DDE + DDD (Total)*	-	-	-	<0.0001	<0.0001	-	-	-
Dieldrin	-	-	-	<0.0001	<0.0001	-	-	-
Endosulfan I	-	-	-	<0.0001	<0.0001	-	-	-
Endosulfan II	-	-	-	<0.0001	<0.0001	-	-	-
Endosulfan sulphate	-	-	-	<0.0001	<0.0001	-	-	-
Endrin	-	-	-	<0.0001	<0.0001	-	-	-
Endrin aldehyde	-	-	-	<0.0001	<0.0001	-	-	-
Endrin ketone	-	-	-	<0.0001	<0.0001	-	-	-

TABLE 12:
SUMMARY OF TRIP BLANK AND
TRIP SPIKE ANALYTICAL DATA (SOIL AND GROUNDWATER SAMPLING)
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID	TRIP BLANK - Soil (mg/kg)	TRIP SPIKE - Soil (%)	Rinsate - Water: RB1 (mg/L)	Rinsate - Water: RB2 (mg/L)	Rinsate - Water: RB3 (mg/L)	Rinsate - Water: RB4 (mg/L)	TRIP BLANK - Water (mg/L)	TRIP SPIKE - Water (mg/L)
Sample Date	9/08/2018	9/08/2018	8/08/2018	13/08/2018	14/08/2018	14/08/2018	15/08/2018	15/08/2018
g-BHC (Lindane)	-	-	-	<0.0001	<0.0001	-	-	-
Heptachlor	-	-	-	<0.0001	<0.0001	-	-	-
Heptachlor epoxide	-	-	-	<0.0001	<0.0001	-	-	-
Hexachlorobenzene	-	-	-	<0.0001	<0.0001	-	-	-
Methoxychlor	-	-	-	<0.0001	<0.0001	-	-	-
Toxaphene	-	-	-	<0.01	<0.01	-	-	-
OPP								
Azinphos-methyl	-	-	-	<0.002	<0.002	-	-	-
Bolstar	-	-	-	<0.002	<0.002	-	-	-
Chlorfenvinphos	-	-	-	<0.002	<0.002	-	-	-
Chlorpyrifos	-	-	-	<0.02	<0.02	-	-	-
Chlorpyrifos-methyl	-	-	-	<0.002	<0.002	-	-	-
Coumaphos	-	-	-	<0.02	<0.02	-	-	-
Demeton-O	-	-	-	<0.002	<0.002	-	-	-
Demeton-S	-	-	-	<0.02	<0.02	-	-	-
Diazinon	-	-	-	<0.002	<0.002	-	-	-
Dichlorvos	-	-	-	<0.002	<0.002	-	-	-
Dimethoate	-	-	-	<0.002	<0.002	-	-	-
Disulfoton	-	-	-	<0.002	<0.002	-	-	-
EPN	-	-	-	<0.002	<0.002	-	-	-
Ethion	-	-	-	<0.002	<0.002	-	-	-
Ethoprop	-	-	-	<0.002	<0.002	-	-	-
Ethyl parathion	-	-	-	<0.002	<0.002	-	-	-
Fenitrothion	-	-	-	<0.002	<0.002	-	-	-
Fensulfothion	-	-	-	<0.002	<0.002	-	-	-
Fenthion	-	-	-	<0.002	<0.002	-	-	-
Malathion	-	-	-	<0.002	<0.002	-	-	-
Merphos	-	-	-	<0.002	<0.002	-	-	-
Methyl parathion	-	-	-	<0.002	<0.002	-	-	-
Mevinphos	-	-	-	<0.002	<0.002	-	-	-
Monocrotophos	-	-	-	<0.002	<0.002	-	-	-
Naled	-	-	-	<0.002	<0.002	-	-	-
Omethoate	-	-	-	<0.002	<0.002	-	-	-
Phorate	-	-	-	<0.002	<0.002	-	-	-
Pirimiphos-methyl	-	-	-	<0.02	<0.02	-	-	-
Pyrazophos	-	-	-	<0.002	<0.002	-	-	-
Ronnel	-	-	-	<0.002	<0.002	-	-	-
Terbufos	-	-	-	<0.002	<0.002	-	-	-
Tetrachlorvinphos	-	-	-	<0.002	<0.002	-	-	-
Tokuthion	-	-	-	<0.002	<0.002	-	-	-
Trichloronate	-	-	-	<0.002	<0.002	-	-	-

Notes:
LOR - Limits of Reporting
Recoveries (%) are shown for Trip Spike Sample
Rinsate samples RB1 and RB2 also all analysed for TPH/TRH, PAHs, Phenols, OCPs, OPPs, PCBs and VOCs

TRACE ENVIRONMENTAL

TABLE 13
SUMMARY OF GROUNDWATER ANALYTICAL DATA
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID								MW1	MW2	QW-1	RPD	QW-1A	RPD	MW3	MW4
Sample Date								15/08/18	15/08/18	15/08/18	-	15/08/18	-	15/08/18	15/08/18
Compounds	LOR	NEPM 2013 Drinking Water GIL[1]	NEPM 2013 Freshwater GIL[2]	NEPM 2013 SAND HSL 2 to <4m, 4 to <8 HSL A/B	PFAS NEPM 2018 Drinking Water[3]	PFAS NEPM 2018 Recreational Water[3]	PFAS NEPM 2018 Freshwater + Marine Water (interim)[4]								
BTEXN															
Benzene	0.001	0.001	950	0.8, 0.8	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Toluene	0.001	0.8	NE	NL	NE	NE	NE	0.002	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Ethylbenzene	0.001	0.3	NE	NL	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
meta- & para-Xylene	0.002	NE	200	NE	NE	NE	NE	<0.002	<0.002	<0.002	0%	<0.002	0%	<0.002	<0.002
ortho-Xylene	0.001	NE	350	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Total Xylenes	0.003	0.6	NE	NL	NE	NE	NE	<0.003	<0.003	<0.003	0%	<0.003	0%	<0.003	<0.003
Naphthalene	0.01	NE	16	NL	NE	NE	NE	<0.01	<0.01	<0.01	0%	<0.01	0%	<0.01	<0.01
Total Petroleum Hydrocarbons/Total Recoverable Hydrocarbons															
C6 - C9 Fraction	0.02	NE	NE	NE	NE	NE	NE	<0.02	<0.02	<0.02	0%	<0.02	0%	<0.02	<0.02
C10 - C14 Fraction	0.05	NE	NE	NE	NE	NE	NE	<0.05	<0.05	<0.05	0%	<0.05	0%	<0.05	<0.05
C15 - C28 Fraction	0.1	NE	NE	NE	NE	NE	NE	<0.1	<0.1	<0.1	0%	<0.1	0%	<0.1	<0.1
C29 - C36 Fraction	0.1	NE	NE	NE	NE	NE	NE	<0.1	<0.1	<0.1	0%	<0.05	0%	<0.1	<0.1
C10 - C36 Fraction (sum)	0.1	NE	NE	NE	NE	NE	NE	<0.1	<0.1	<0.1	0%	<0.05	0%	<0.1	<0.1
TRH Fraction F1	0.02	NE	NE	1, 1	NE	NE	NE	<0.02	<0.02	<0.02	0%	<0.02	0%	<0.02	<0.02
C6 - C10 Fraction	0.02	NE	NE	NE	NE	NE	NE	<0.02	<0.02	<0.02	0%	<0.02	0%	<0.02	<0.02
>C10 - C16 Fraction	0.05	NE	NE	NE	NE	NE	NE	<0.05	<0.05	<0.05	0%	<0.1	0%	<0.05	<0.05
>C16 - C34 Fraction	0.1	NE	NE	NE	NE	NE	NE	<0.1	<0.1	<0.1	0%	<0.1	0%	<0.1	<0.1
>C34 - C40 Fraction	0.1	NE	NE	NE	NE	NE	NE	<0.1	<0.1	<0.1	0%	<0.1	0%	<0.1	<0.1
TRH Fraction F2	0.05	NE	NE	1, 1	NE	NE	NE	<0.05	<0.05	<0.05	0%	<0.1	0%	<0.05	<0.05
Metals															
Arsenic	0.001	0.01	0.024	NE	NE	NE	NE	<0.001	0.013	0.013	0%	0.012	8%	0.007	<0.001
Cadmium	0.0002	0.002	0.0002	NE	NE	NE	NE	<0.0002	<0.0002	<0.0002	0%	<0.0002	0%	<0.0002	<0.0002
Chromium	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Copper	0.001	2	0.0014	NE	NE	NE	NE	0.19	0.10	0.057	55%	0.017	142%	0.033	0.059
Lead	0.001	0.01	0.0034	NE	NE	NE	NE	0.012	0.007	0.004	55%	0.001	150%	0.003	0.005
Mercury	0.0001	0.001	0.00006	NE	NE	NE	NE	<0.0001	<0.0001	<0.0001	0%	<0.0001	0%	<0.0001	<0.0001
Nickel	0.001	0.02	0.011	NE	NE	NE	NE	0.009	0.007	0.005	33%	0.003	80%	0.007	0.006
Zinc	0.005	NE	0.008	NE	NE	NE	NE	0.18	0.21	0.17	21%	0.114	59%	0.16	0.053
Polycyclic Aromatic Hydrocarbons															
Naphthalene	0.001	NE	16	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Acenaphthylene	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Acenaphthene	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Fluorene	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Phenanthrene	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Anthracene	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Fluoranthene	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Pyrene	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Benz[a]anthracene	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Chrysene	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Benzo[b]fluoranthene	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Benzo[k]fluoranthene	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Benzo[a]pyrene	0.001	0.00001	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.0005	0%	<0.001	<0.001
Indeno[1,2,3-cd]pyrene	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Dibenz[a,h]anthracene	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Benzo[g,h,i]perylene	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
Sum of PAHs	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.0005	0%	<0.001	<0.001
Organochlorine Pesticides															
4,4'-DDD	0.0001	NE	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
4,4'-DDE	0.0001	NE	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
4,4'-DDT	0.0001	0.00006	0.006	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
a-BHC	0.0001	NE	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Aldrin	0.0001	NE	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Aldrin and Dieldrin (Total)	0.0001	NE	0.0003	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
b-BHC	0.0001	NE	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Chlordanes - Total	0.001	0.00001	0.002	NE	NE	NE	NE	<0.001	<0.001	-	-	-	-	<0.001	<0.001
d-BHC	0.0001	NE	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
DDT + DDE + DDD (Total)	0.0001	NE	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Dieldrin	0.0001	NE	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Endosulfan I	0.0001	0.00003	0.02	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Endosulfan II	0.0001	0.00003	0.02	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Endosulfan sulphate	0.0001	NE	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Endrin	0.0001	0.00001	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Endrin aldehyde	0.0001	NE	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Endrin ketone	0.0001	NE	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
g-BHC (Lindane)	0.0001	0.0002	0.01	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Heptachlor	0.0001	0.00001	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Heptachlor epoxide	0.0001	NE	0.0003	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Hexachlorobenzene	0.0001	NE	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Methoxychlor	0.0001	NE	NE	NE	NE	NE	NE	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001
Toxaphene	0.01	0.0001	NE	NE	NE	NE	NE	<0.01	<0.01	-	-	-	-	<0.01	<0.01

Notes:
NE - Not Established
NL - Not Limiting
All units in mg/L unless otherwise noted
1. NEPM 2013 Groundwater Investigation Level for Drinking Water
2. NEPM 2013 Groundwater Investigation Level for protection of freshwater at 95% confidence for typical slightly to moderately disturbed systems.
3. NEMP 2018 health-based guidance values
4. NEMP 2018 guideline values for 95% species protection - slightly to moderately disturbed systems
QW1/QW1A are duplicate/triplicates of primary groundwater sample MW2
Shading indicates concentration exceeds criteria.

TRACE ENVIRONMENTAL

TABLE 13
SUMMARY OF GROUNDWATER ANALYTICAL DATA
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID								MW1	MW2	QW-1	RPD	QW-1A	RPD	MW3	MW4
Sample Date								15/08/18	15/08/18	15/08/18	-	15/08/18	-	15/08/18	15/08/18
Organophosphorous Pesticides															
Azinphos-methyl	0.002	0.03	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Bolstar	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Chlorfenvinphos	0.002	0.002	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Chlorpyrifos	0.02	0.01	NE	NE	NE	NE	NE	<0.02	<0.02	-	-	-	-	<0.02	<0.02
Chlorpyrifos-methyl	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Coumaphos	0.02	NE	NE	NE	NE	NE	NE	<0.02	<0.02	-	-	-	-	<0.02	<0.02
Demeton-O	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Demeton-S	0.02	NE	NE	NE	NE	NE	NE	<0.02	<0.02	-	-	-	-	<0.02	<0.02
Diazinon	0.002	0.00001	0.004	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Dichlorvos	0.002	NE	0.005	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Dimethoate	0.002	0.00015	0.007	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Disulfoton	0.002	NE	0.004	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
EPN	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Ethion	0.002	NE	0.004	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Ethoprop	0.002	NE	0.001	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Ethyl parathion	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Fenitrothion	0.002	0.0002	0.007	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Fensulfothion	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Fenthion	0.002	NE	0.007	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Malathion	0.002	0.00005	0.07	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Merphos	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Methyl parathion	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Mevinphos	0.002	NE	0.008	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Monocrotophos	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Naled	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Omethoate	0.002	NE	0.001	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Phorate	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Pirimiphos-methyl	0.02	NE	0.02	NE	NE	NE	NE	<0.02	<0.02	-	-	-	-	<0.02	<0.02
Pyrazophos	0.002	NE	0.02	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Ronnel	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Terbufos	0.002	NE	0.0009	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Tetrachlorvinphos	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Tokuthion	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Trichloronate	0.002	NE	NE	NE	NE	NE	NE	<0.002	<0.002	-	-	-	-	<0.002	<0.002
Phenols (halogenated)															
2,4,5-Trichlorophenol	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
2,4,6-Trichlorophenol	0.01	0.02	0.003	NE	NE	NE	NE	<0.01	<0.01	<0.01	0%	<0.01	0%	<0.01	<0.01
2,4-Dichlorophenol	0.001	0.2	0.12	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
2,6-Dichlorophenol	0.003	NE	NE	NE	NE	NE	NE	<0.003	<0.003	<0.003	0%	<0.001	0%	<0.003	<0.003
3-Chlorophenol	0.005	0.3	0.34	NE	NE	NE	NE	<0.005	<0.005	<0.005	0%	<0.001	0%	<0.005	<0.005
3-Chloro-3-methylphenol	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	<0.01	0%	<0.001	0%	<0.01	<0.01
Pentachlorophenol	0.01	0.01	0.018%	NE	NE	NE	NE	<0.01	<0.01	<0.01	0%	<0.002	0%	<0.01	<0.01
Tetrachlorophenols - Total	0.03	NE	NE	NE	NE	NE	NE	<0.03	<0.03	<0.03	0%	-	-	<0.03	<0.03
Total Halogenated Phenol	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	<0.01	0%	-	-	<0.01	<0.01
Phenols (non-halogenated)															
2,4-Dimethylphenol	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	<0.001	0%	<0.001	0%	<0.001	<0.001
2,4-Dinitrophenol	0.03	NE	0.045	NE	NE	NE	NE	<0.03	<0.03	<0.03	0%	-	-	<0.03	<0.03
2-Cyclohexyl-4,6-Dinitrophenol	0.1	NE	NE	NE	NE	NE	NE	<0.1	<0.1	<0.1	0%	-	-	<0.1	<0.1
2-Methyl-4,6-Dinitrophenol	0.03	NE	NE	NE	NE	NE	NE	<0.03	<0.03	<0.03	0%	-	-	<0.03	<0.03
2-Methylphenol (o-Cresol)	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<0.005	0%	<0.001	0%	<0.005	<0.005
2-Nitrophenol	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	<0.01	0%	<0.001	0%	<0.01	<0.01
3&4-Methylphenol (m&p-Cresol)	0.006	NE	NE	NE	NE	NE	NE	<0.006	<0.006	<0.006	0%	<0.001	0%	<0.006	<0.006
4-Nitrophenol	0.03	NE	NE	NE	NE	NE	NE	<0.03	<0.03	<0.03	0%	-	-	<0.03	<0.03
Dinoseb	0.1	NE	NE	NE	NE	NE	NE	<0.1	<0.1	<0.1	0%	-	-	<0.1	<0.1
Phenol	0.005	NE	0.32	NE	NE	NE	NE	<0.005	<0.005	<0.005	0%	<0.001	0%	<0.005	<0.005
Total Non-Halogenated Phenol	0.1	NE	NE	NE	NE	NE	NE	<0.1	<0.1	<0.1	0%	-	-	<0.1	<0.1
Polychlorinated Biphenyls															
Aroclor-1016	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	-	-	-	-	<0.005	<0.005
Aroclor-1221	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	-	-	-	-	<0.001	<0.001
Aroclor-1232	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	-	-	-	-	<0.005	<0.005
Aroclor-1242	0.005	0.0003	NE	NE	NE	NE	NE	<0.005	<0.005	-	-	-	-	<0.005	<0.005
Aroclor-1248	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	-	-	-	-	<0.005	<0.005
Aroclor-1254	0.005	0.00001	NE	NE	NE	NE	NE	<0.005	<0.005	-	-	-	-	<0.005	<0.005
Aroclor-1260	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	-	-	-	-	<0.005	<0.005
Total PCB	0.001	NE	NE	NE	NE	NE	NE	<0.001	<0.001	-	-	-	-	<0.001	<0.001

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QW1/QW1A are duplicate/triplicates of primary groundwater sample MW2
Shading indicates concentration exceeds criteria.

TRACE ENVIRONMENTAL

TABLE 13
SUMMARY OF GROUNDWATER ANALYTICAL DATA
146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID								MW1	MW2	GW-1	RPD	GW-1A	RPD	MW3	MW4
Sample Date								15/08/18	15/08/18	15/08/18	-	15/08/18	-	15/08/18	15/08/18
Volatile Organic Compounds															
1,1,1,2-Tetrachloroethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,1,1-Trichloroethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,1,2,2-Tetrachloroethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,1,2-Trichloroethane	0.005	NE	6.5	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,1-Dichloroethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,1-Dichloroethene	0.005	0.03	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,2,3-Trichloropropane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,2,4-Trimethylbenzene	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,2-Dibromoethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,2-Dichlorobenzene	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,2-Dichloroethane	0.005	0.003	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,2-Dichloropropane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,3,5-Trimethylbenzene	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,3-Dichlorobenzene	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,3-Dichloropropane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
1,4-Dichlorobenzene	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
2-Butanone (MEK)	0.05	NE	NE	NE	NE	NE	NE	<0.05	<0.05	<	-	<	-	<0.05	<0.05
2-Propanone (Acetone)	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
4-Chlorotoluene	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
4-Methyl-2-pentanone (MIBK)	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Allyl chloride	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Bromobenzene	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Bromochloromethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Bromodichloromethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Bromoform	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Bromomethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Carbon disulfide	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Carbon Tetrachloride	0.005	0.003	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Chlorobenzene	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Chloroethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Chloroform	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Chloromethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
cis-1,2-Dichloroethene	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
cis-1,3-Dichloropropene	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Dibromochloromethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Dibromomethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Dichlorodifluoromethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Iodomethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Isopropyl benzene (Cumene)	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Methylene Chloride	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Styrene	0.005	0.03	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Tetrachloroethene	0.005	0.05	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
trans-1,2-Dichloroethene	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
trans-1,3-Dichloropropene	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Trichloroethene	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Trichlorofluoromethane	0.005	NE	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005
Vinyl chloride	0.005	0.0003	NE	NE	NE	NE	NE	<0.005	<0.005	<	-	<	-	<0.005	<0.005

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Shading indicates concentration exceeds criteria.

TABLE 13
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146-154 O'RIORDAN STREET, MASCOT, NSW

Sample ID								MW1	MW2	DW-1	RPD	DW-1A	RPD	MW3	MW4
Sample Date								15/08/18	15/08/18	15/08/18	-	15/08/18	-	15/08/18	15/08/18
Perfluoroalkyl Carboxylic Acids (PFCAs)															
Perfluorobutanoic acid (PFBA)	0.05	NE	NE	NE	NE	NE	NE	<0.05	<0.05	"	"	"	"	<0.05	<0.05
Perfluorodecanoic acid (PFDA)	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	"	"	"	"	<0.01	<0.01
Perfluorododecanoic acid (PFDoDA)	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	"	"	"	"	<0.01	<0.01
Perfluoroheptanoic acid (PFHpA)	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	"	"	"	"	<0.01	<0.01
Perfluorohexanoic acid (PFHxA)	0.01	NE	NE	NE	NE	NE	NE	<0.01	**0.01**	"	"	"	"	**0.02**	<0.01
Perfluorononanoic acid (PFNA)	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	"	"	"	"	<0.01	<0.01
Perfluorooctanoic acid (PFOA)	0.01	NE	NE	NE	0.54	5.6	236	<0.01	**0.01**	"	"	"	"	**0.01**	<0.01
Perfluoropentanoic acid (PFPeA)	0.01	NE	NE	NE	NE	NE	NE	<0.01	**0.01**	"	"	"	"	**0.02**	<0.01
Perfluorotetradecanoic acid (PFTeDA)	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	"	"	"	"	<0.01	<0.01
Perfluorotridecanoic acid (PFTrDA)	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	"	"	"	"	<0.01	<0.01
Perfluoroundecanoic acid (PFUnDA)	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	"	"	"	"	<0.01	<0.01
Perfluoroalkyl Sulfonamido Substances															
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	0.05	NE	NE	NE	NE	NE	NE	<0.05	<0.05	"	"	"	"	<0.05	<0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	0.05	NE	NE	NE	NE	NE	NE	<0.05	<0.05	"	"	"	"	<0.05	<0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	0.05	NE	NE	NE	NE	NE	NE	<0.05	<0.05	"	"	"	"	<0.05	<0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	0.05	NE	NE	NE	NE	NE	NE	<0.05	<0.05	"	"	"	"	<0.05	<0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	0.05	NE	NE	NE	NE	NE	NE	<0.05	<0.05	"	"	"	"	<0.05	<0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	0.05	NE	NE	NE	NE	NE	NE	<0.05	<0.05	"	"	"	"	<0.05	<0.05
Perfluorooctane sulfonamide (FOSA)	0.05	NE	NE	NE	NE	NE	NE	<0.05	<0.05	"	"	"	"	<0.05	<0.05
Perfluoroalkyl Sulfonic Acids (PFSAs)															
Perfluorobutanesulfonic acid (PFBS)	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	"	"	"	"	**0.01**	<0.01
Perfluorodecanesulfonic acid (PFDS)	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	"	"	"	"	<0.01	<0.01
Perfluoroheptanesulfonic acid (PFHpS)	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	"	"	"	"	<0.01	<0.01
Perfluorohexanesulfonic acid (PFHxS)	0.01	NE	NE	NE	NE	NE	NE	**0.01**	**0.02**	"	"	"	"	**0.03**	**0.01**
Perfluorooctanesulfonic acid (PFOS)	0.01	NE	NE	NE	NE	NE	NE	<0.01	**0.05**	"	"	"	"	<0.05	**0.02**
Perfluoropentanesulfonic acid (PFPeS)	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	"	"	"	"	<0.01	<0.01
n:2 Fluorotelomer Sulfonic Acids (n:2 FTSAs)															
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTSA)	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	"	"	"	"	<0.01	<0.01
1H,1H,2H,2H-perfluorododecanesulfonic acid (10:2 FTSA)	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	"	"	"	"	<0.01	<0.01
1H,1H,2H,2H-perfluorohexanesulfonic acid (6:2 FTSA)	0.01	NE	NE	NE	NE	NE	NE	<0.01	<0.01	"	"	"	"	<0.01	<0.01
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTSA)	0.05	NE	NE	NE	NE	NE	NE	<0.05	<0.05	"	"	"	"	<0.05	<0.05
PFASs Summations															
Sum (PFHxS + PFOS)*	0.01	NE	NE	NE	0.07	0.7	NE	**0.01**	**0.05**	"	"	"	"	**0.03**	**0.03**
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	NE	NE	NE	NE	NE	NE	**0.01**	**0.05**	"	"	"	"	**0.05**	**0.03**
Sum of PFASs (n=26)*	0.01	NE	NE	NE	NE	NE	NE	<0.1	<0.1	"	"	"	"	<0.1	<0.1
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	NE	NE	NE	NE	NE	NE	<0.01	**0.04**	"	"	"	"	**0.01**	**0.02**
Sum of WA DWER PFAS (n=20)*	0.05	NE	NE	NE	NE	NE	NE	<0.05	**0.08**	"	"	"	"	**0.09**	<0.05

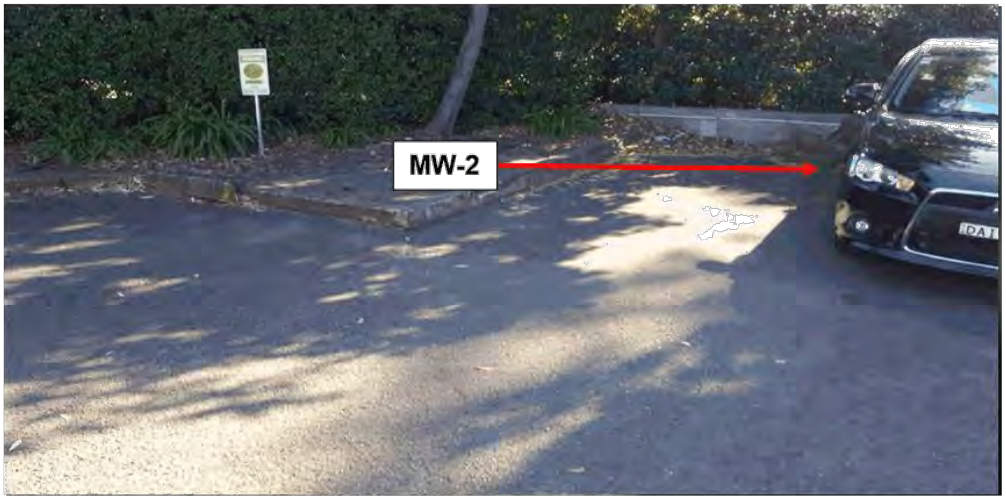
Notes:
NE - Not Established
NL - Not Limiting
All units in mg/L unless otherwise noted
1. NEPM 2013 Groundwater Investigation Level for Drinking Water
2. NEPM 2013 Groundwater Investigation Level for protection of freshwater at 95% confidence for typical slightly to moderately disturbed systems.
3. NEMP 2018 health-based guidance values
4. NEMP 2018 guideline values for 95% species protection - slightly to moderately disturbed systems
QA1/QA1A are duplicate/triplicates of primary groundwater sample MW2
Shading indicates concentration exceeds criteria.

Appendix A

Site Photographs

Photographic Log – Toplace Pty Ltd
146-154 O'Riordan Street, Mascot, NSW

Photograph 1: View of south-east portion of site and location of monitoring well MW-1. Photograph taken during initial site inspection on 3 August 2018.



Photograph 2: View of north-west portion of site and location of monitoring well MW-2. Photograph taken during initial site inspection on 3 August 2018.

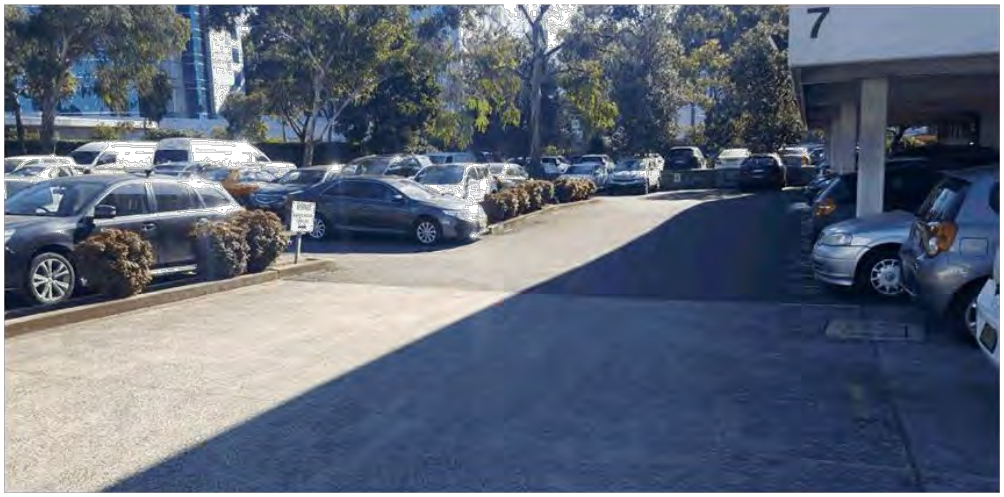
Photographic Log – Toplace Pty Ltd
146-154 O'Riordan Street, Mascot, NSW

Photograph 3: View of central portion of site (looking east) and location of monitoring well MW-3 (between blue and silver cars). Photograph taken during initial site inspection on 3 August 2018.

Photograph 4: View of south-west portion of site, location of monitoring well MW-4 and location of suspected stormwater detention basin. Photograph taken during initial site inspection on 3 August 2018.

Photographic Log – Toplace Pty Ltd
146-154 O'Riordan Street, Mascot, NSW

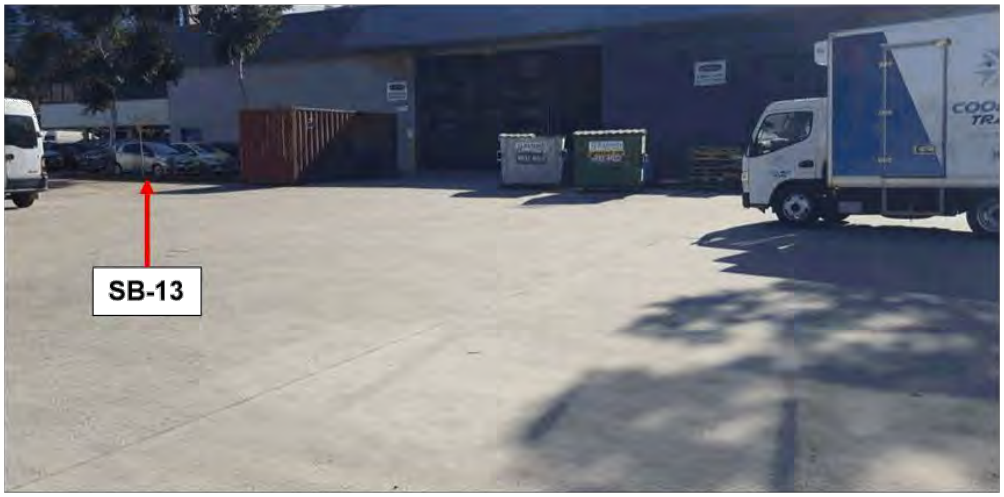
Photograph 5: View of north-east portion of the site and location of soil bore SB-14. Photograph taken during initial site inspection on 3 August 2018.



Photograph 6: View of north-west portion of 154 O'Riordan Street. Photograph taken during initial site inspection on 3 August 2018.

Photographic Log – Toplace Pty Ltd
146-154 O'Riordan Street, Mascot, NSW

Photograph 7: View of rail maintenance organisation workshop (south-east portion of the site) and location of soil bores SB-18 and SB-26 (inside workshop). Photograph taken during initial site inspection on 3 August 2018.



Photograph 8: View of central-east portion of the site and location of soil bore SB-13. Photograph taken during initial site inspection on 3 August 2018.

TRACE ENVIRONMENTAL

Appendix B

Lotsearch Environmental Risk & Planning Report

LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 06 Aug 2018 18:01:18

Reference: LS003932

Address: 146-154 O'Riordan Street, Mascot, NSW 2020

Disclaimer:
The purpose of this report is to provide an overview of some of the site history, environmental risk and planning information available, affecting an individual address or geographical area in which the property is located. It is not a substitute for an on-site inspection or review of other available reports and records. It is not intended to be, and should not be taken to be, a rating or assessment of the desirability or market value of the property or its features.
You should obtain independent advice before you make any decision based on the information within the report.
The detailed terms applicable to use of this report are set out at the end of this report.

Table of Contents

Location Confidences

Where Lotsearch has had to georeference features from supplied addresses, a location confidence has been assigned to the data record. This indicates a confidence to the positional accuracy of the feature. Where applicable, a confidence is given under the field heading "LocConf" or "Location Confidence".

Location Confidence	Description
Premise Match	Georeferenced to the site location / premise or part of site
Area Match	Georeferenced with the confidence of the general/approximate area
Road Match	Georeferenced to the road or rail
Road Intersection	Georeferenced to the road intersection
Buffered Point	Feature is a buffered point
Network of Features	Georeferenced to a network of features

Dataset Listing

Datasets contained within this report, detailing their source and data currency:

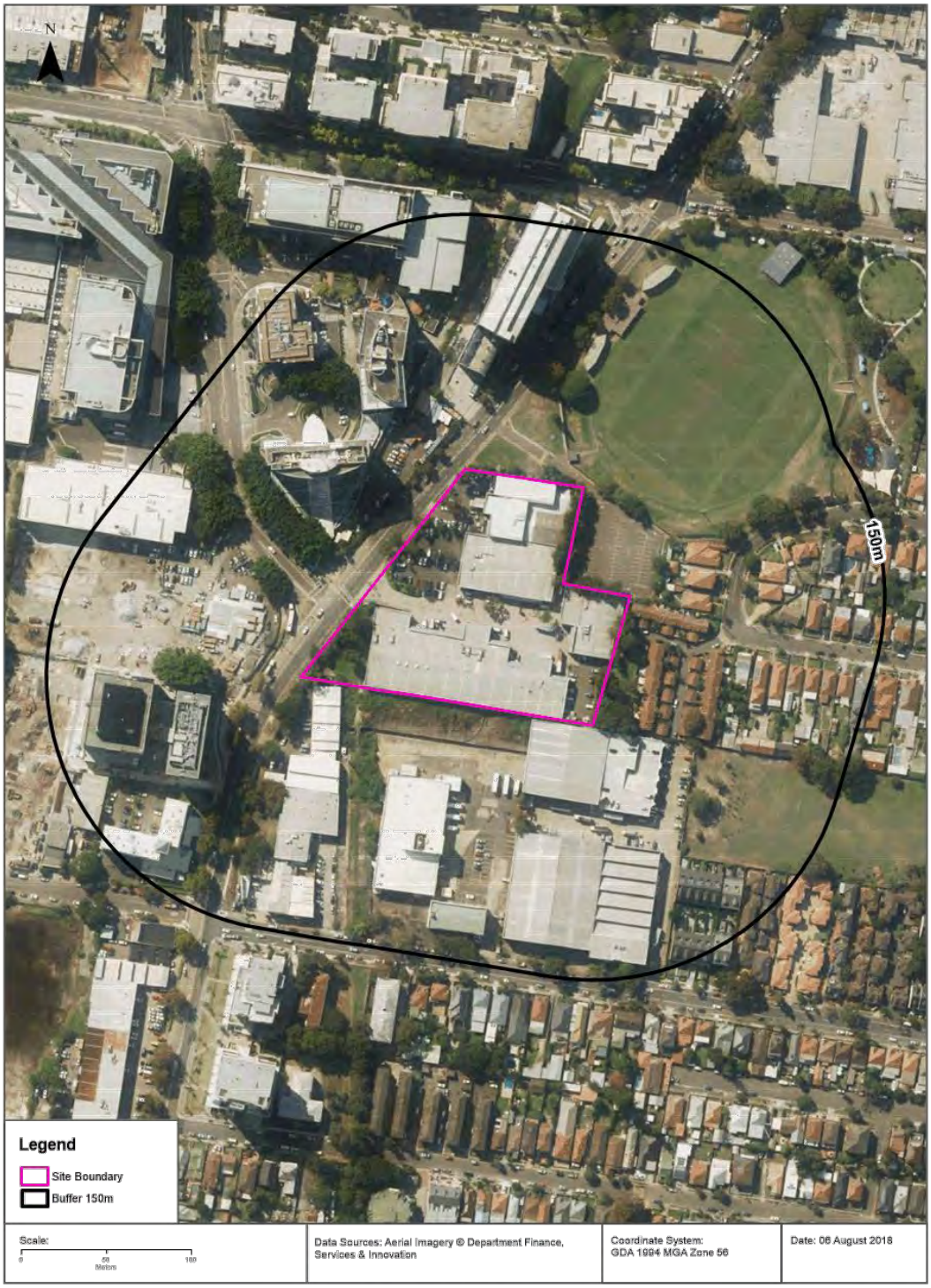
Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	Dept. Finance, Services & Innovation	06/08/2018	06/08/2018	Daily	-	-	-	-
Topographic Data	Dept. Finance, Services & Innovation	17/07/2018	17/07/2018	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	01/08/2018	02/07/2018	Monthly	1000	0	1	11
Contaminated Land Records of Notice	Environment Protection Authority	01/08/2018	01/08/2018	Monthly	1000	0	0	3
Former Gasworks	Environment Protection Authority	01/08/2018	11/10/2017	Monthly	1000	0	0	0
National Waste Management Site Database	Geoscience Australia	04/07/2018	07/03/2017	Quarterly	1000	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	04/07/2018	04/07/2018	Monthly	2000	0	0	1
EPA Other Sites with Contamination Issues	Environment Protection Authority	11/01/2018	11/01/2018	As required	1000	0	0	8
Licensed Activities under the POEO Act 1997	Environment Protection Authority	02/08/2018	02/08/2018	Monthly	1000	0	1	6
Delicensed POEO Activities still Regulated by the EPA	Environment Protection Authority	02/08/2018	02/08/2018	Monthly	1000	0	0	7
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	02/08/2018	02/08/2018	Monthly	1000	0	0	10
UPSS Environmentally Sensitive Zones	Environment Protection Authority	14/04/2015	12/01/2010	As required	1000	1	1	1
UBD Business to Business Directory 1991 (Premise & Intersection Matches)	Hardie Grant			Not required	150	7	26	35
UBD Business to Business Directory 1991 (Road & Area Matches)	Hardie Grant			Not required	150	-	1	2
UBD Business to Business Directory 1986 (Premise & Intersection Matches)	Hardie Grant			Not required	150	15	33	50
UBD Business to Business Directory 1986 (Road & Area Matches)	Hardie Grant			Not required	150	-	7	37
UBD Business Directory 1982 (Premise & Intersection Matches)	Hardie Grant			Not required	150	1	28	43
UBD Business Directory 1982 (Road & Area Matches)	Hardie Grant			Not required	150	-	2	10
UBD Business Directory 1978 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	31	58
UBD Business Directory 1978 (Road & Area Matches)	Hardie Grant			Not required	150	-	3	12
UBD Business Directory 1975 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	40	66
UBD Business Directory 1975 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	3
UBD Business Directory 1970 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	26	44
UBD Business Directory 1970 (Road & Area Matches)	Hardie Grant			Not required	150	-	1	3
UBD Business Directory 1965 (Premise & Intersection Matches)	Hardie Grant			Not required	150	12	53	73
UBD Business Directory 1965 (Road & Area Matches)	Hardie Grant			Not required	150	-	7	9
UBD Business Directory 1961 (Premise & Intersection Matches)	Hardie Grant			Not required	150	3	41	47
UBD Business Directory 1961 (Road & Area Matches)	Hardie Grant			Not required	150	-	15	19
UBD Business Directory 1950 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	5	5
UBD Business Directory 1950 (Road & Area Matches)	Hardie Grant			Not required	150	-	40	48

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500	0	3	46
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500	-	3	22
Points of Interest	Dept. Finance, Services & Innovation	17/07/2018	17/07/2018	Quarterly	1000	0	1	38
Tanks (Areas)	Dept. Finance, Services & Innovation	17/07/2018	17/07/2018	Quarterly	1000	0	0	0
Tanks (Points)	Dept. Finance, Services & Innovation	17/07/2018	17/07/2018	Quarterly	1000	0	0	0
Major Easements	Dept. Finance, Services & Innovation	17/07/2018	17/07/2018	As required	1000	0	1	5
State Forest	Dept. Finance, Services & Innovation	18/01/2018	18/01/2018	As required	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	18/01/2018	30/09/2017	Annually	1000	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000	1	1	1
Botany Groundwater Management Zones	NSW Department of Primary Industries	15/03/2018	01/10/2005	As required	1000	0	1	1
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	24/07/2018	23/07/2018	Annually	2000	0	1	323
Geological Units 1:100,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	1	-	4
Geological Structures 1:100,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	0	-	0
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000	0	0	0
Soil Landscapes	NSW Office of Environment & Heritage	12/08/2014		None planned	1000	1	-	2
Atlas of Australian Soils	CSIRO	19/05/2017	17/02/2011	As required	1000	1	1	1
Standard Local Environmental Plan Acid Sulfate Soils	NSW Planning and Environment	07/10/2016	07/10/2016	As required	500	1	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000	1	1	3
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000	0	0	0
Dryland Salinity Potential of Western Sydney	NSW Office of Environment & Heritage	12/05/2017	01/01/2002	None planned	1000	-	-	-
Mining Subsidence Districts	Dept. Finance, Services & Innovation	13/07/2017	01/07/2017	As required	1000	0	0	0
SEPP 14 - Coastal Wetlands	NSW Planning and Environment	17/12/2015	24/10/2008	Annually	1000	0	0	0
SEPP 26 - Littoral Rainforest	NSW Planning and Environment	17/12/2015	05/02/1988	Annually	1000	0	0	0
SEPP 71 - Coastal Protection	NSW Planning and Environment	17/12/2015	01/08/2003	Annually	1000	0	0	0
SEPP Major Developments 2005	NSW Planning and Environment	09/03/2013	25/05/2005	Under Review	1000	0	0	0
SEPP Strategic Land Use Areas	NSW Planning and Environment	01/08/2017	28/01/2014	Annually	1000	0	0	0
LEP - Land Zoning	NSW Planning and Environment	11/04/2018	16/03/2018	Quarterly	1000	1	11	72
LEP - Minimum Subdivision Lot Size	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	0		
LEP - Height of Building	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	1	-	-
LEP - Floor Space Ratio	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	1	-	-
LEP - Land Application	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	1	-	-
LEP - Land Reservation Acquisition	NSW Planning and Environment	04/04/2018	09/03/2018	Quarterly	0	0		
State Heritage Items	NSW Office of Environment & Heritage	04/04/2018	30/09/2016	Quarterly	1000	0	0	0

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Local Heritage Items	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	1000	0	2	77
Bush Fire Prone Land	NSW Rural Fire Service	10/05/2018	23/01/2018	Quarterly	1000	0	0	0
Native Vegetation of the Sydney Metropolitan Area	NSW Office of Environment & Heritage	01/03/2017	16/12/2016	As required	1000	1	1	2
RAMSAR Wetlands	Commonwealth of Australia Department of the Environment	08/10/2014	24/06/2011	As required	1000	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	0	0
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	0	0
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	02/08/2018	02/08/2018	Daily	10000			

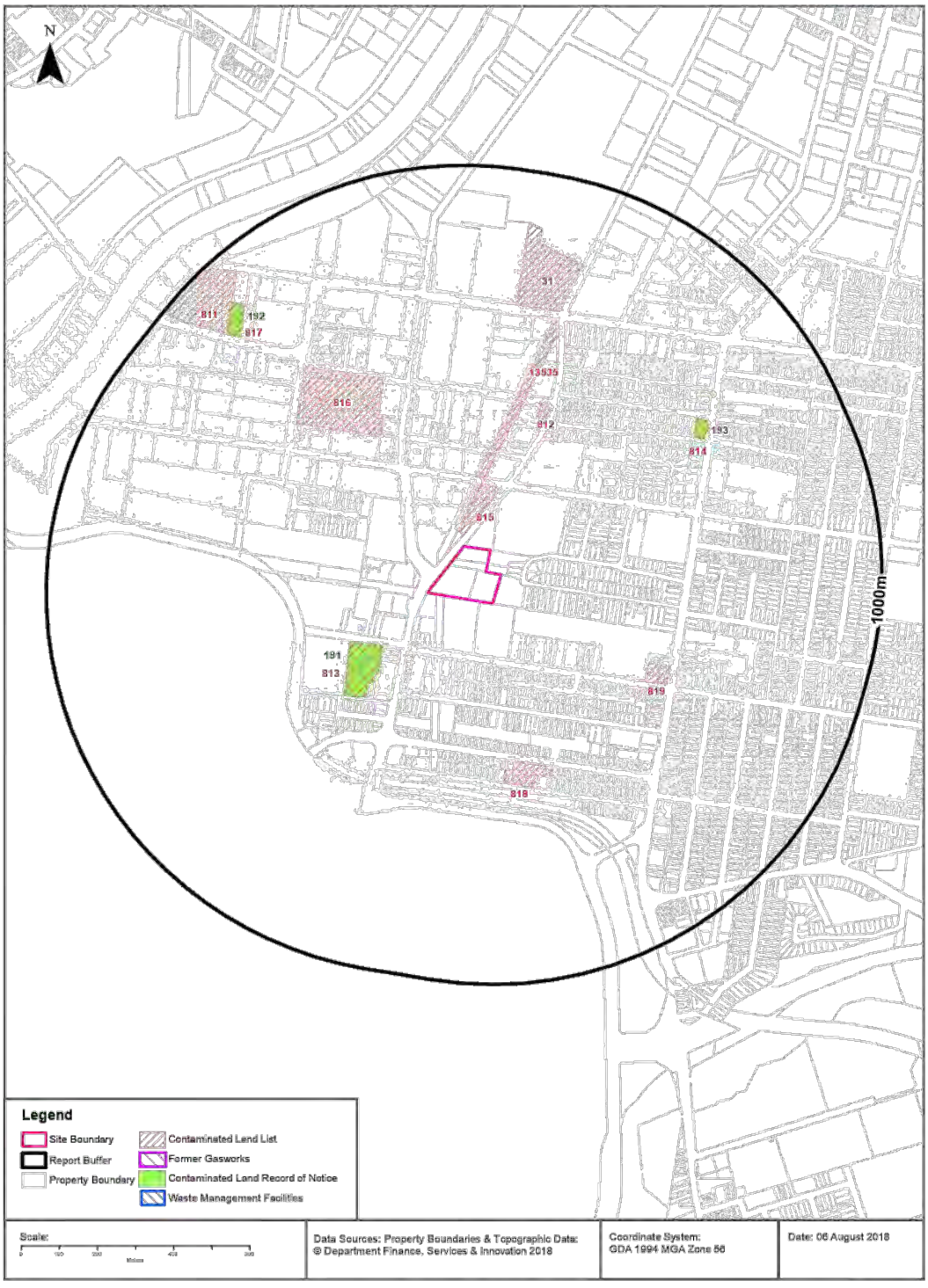
Aerial Imagery 2016

146-154 O'Riordan Street, Mascot, NSW 2020



Contaminated Land & Waste Management Facilities

146-154 O'Riordan Street, Mascot, NSW 2020



Lotsearch Pty Ltd ABN 89 600 168 018 7

Contaminated Land & Waste Management Facilities

146-154 O'Riordan Street, Mascot, NSW 2020

List of NSW contaminated sites notified to EPA

Records from the NSW EPA Contaminated Land list within the dataset buffer:

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist. (m)	Direction
815	Former Zinc Smelter and Paint Manufacturing Facility	163 O'Riordan Street	Mascot	Metal Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	30m	North
813	Former Mascot Galvanising	336-348 King Street	Mascot	Metal Industry	Contamination currently regulated under CLM Act	Current EPA List	Premise Match	183m	South West
13535	Linear Park	Lot 2, 3, 4 & 5 in DP 85917	MASCOT	Landfill	Regulation under CLM Act not required	Current EPA List	Premise Match	186m	North
812	Caltex Service Station	125 O'Riordan Street	Mascot	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	357m	North East
816	Ing Industrial Fund (unoccupied Land and General Parking)	19-33 Kent Road	Mascot	Landfill	Regulation under CLM Act not required	Current EPA List	Premise Match	361m	North West
818	Sokol Corporation	50-56 Robey Street	Mascot	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	419m	South
819	Telstra Exchange	904-922 Botany Road	Mascot	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	439m	South East
814	Former Shell Service Station Mascot	746 Botany Road	Mascot	Service Station	Contamination currently regulated under CLM Act	Current EPA List	Premise Match	612m	North East
31	Mascot Developments	494-504 Gardeners Road	Alexandria	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	647m	North
817	Mascot Pioneer Plating	26-29 Ricketty Street	Mascot	Metal Industry	Contamination currently regulated under CLM Act	Current EPA List	Premise Match	804m	North West
811	Heritage Business Centre	5-9 Ricketty Street	Mascot	Unclassified	Regulation under CLM Act not required	Current EPA List	Premise Match	836m	North West

The values within the EPA site management class in the table above, are given more detailed explanations in the table below:

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.

EPA site management class	Explanation
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the Protection of the Environment Operations Act 1997 (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the Environmental Planning and Assessment Act 1979 (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

Contaminated Land & Waste Management Facilities

146-154 O'Riordan Street, Mascot, NSW 2020

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
191	Former Mascot Galvanising	336-348 King Street	Mascot	5 current and 2 former	3125	Premise Match	183m	South West
193	Former Shell Service Station Mascot	746 Botany Road	Mascot	6 current and 1 former	3192	Premise Match	612m	North East
192	Mascot Pioneer Plating	25-29 Ricketty Street	Mascot	1 current	3347	Premise Match	804m	North West

Contaminated Land Records of Notice Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority
Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit
http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm

Former Gasworks

Former Gasworks within the dataset buffer:

Map Id	Location	Council	Further Info	Location Confidence	Distance	Direction
N/A	No records in buffer					

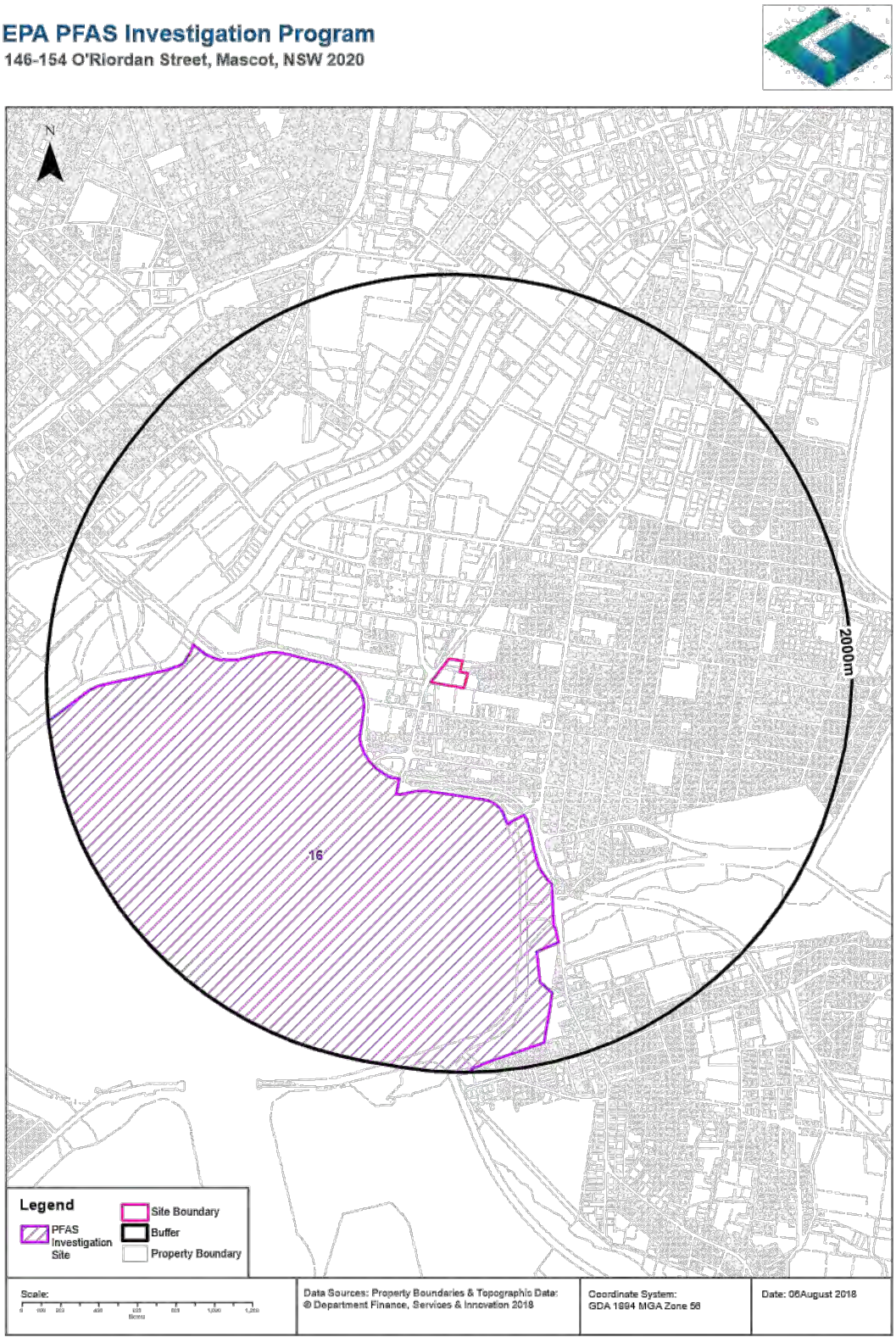
Former Gasworks Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

National Waste Management Site Database

Sites on the National Waste Management Site Database within the dataset buffer:

Site Id	Owner	Name	Address	Suburb	Class	Landfill	Reprocess	Transfer	Comments	Loc Conf	Dist (m)	Direction
N/A	No records in buffer											

Waste Management Facilities Data Source: Geoscience Australia
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en


EPA PFAS Investigation Program
146-154 O'Riordan Street, Mascot, NSW 2020
N
2000m
16
Legend
Site Boundary
PFAS Investigation Site
Buffer
Property Boundary
Scale:
Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2018
Coordinate System: GDA 1994 MGA Zone 56
Date: 06August 2018
Lotsearch Pty Ltd ABN 89 600 168 018
11

EPA PFAS Investigation Program

146-154 O'Riordan Street, Mascot, NSW 2020

EPA PFAS Investigation Program

Sites that are part of the EPA PFAS investigation program, within the dataset buffer:

Id	Site	Address	Location Confidence	Distance	Direction
16	Botany Bay area & Georges River	Botany Bay area & Georges River	General Area/ Suburb Match	361m	South

EPA PFAS Investigation Program: Environment Protection Authority

EPA Other Sites with Contamination Issues

146-154 O'Riordan Street, Mascot, NSW 2020

EPA Other Sites with Contamination Issues

This dataset contains other sites identified on the EPA website as having contamination issues. This dataset currently includes:

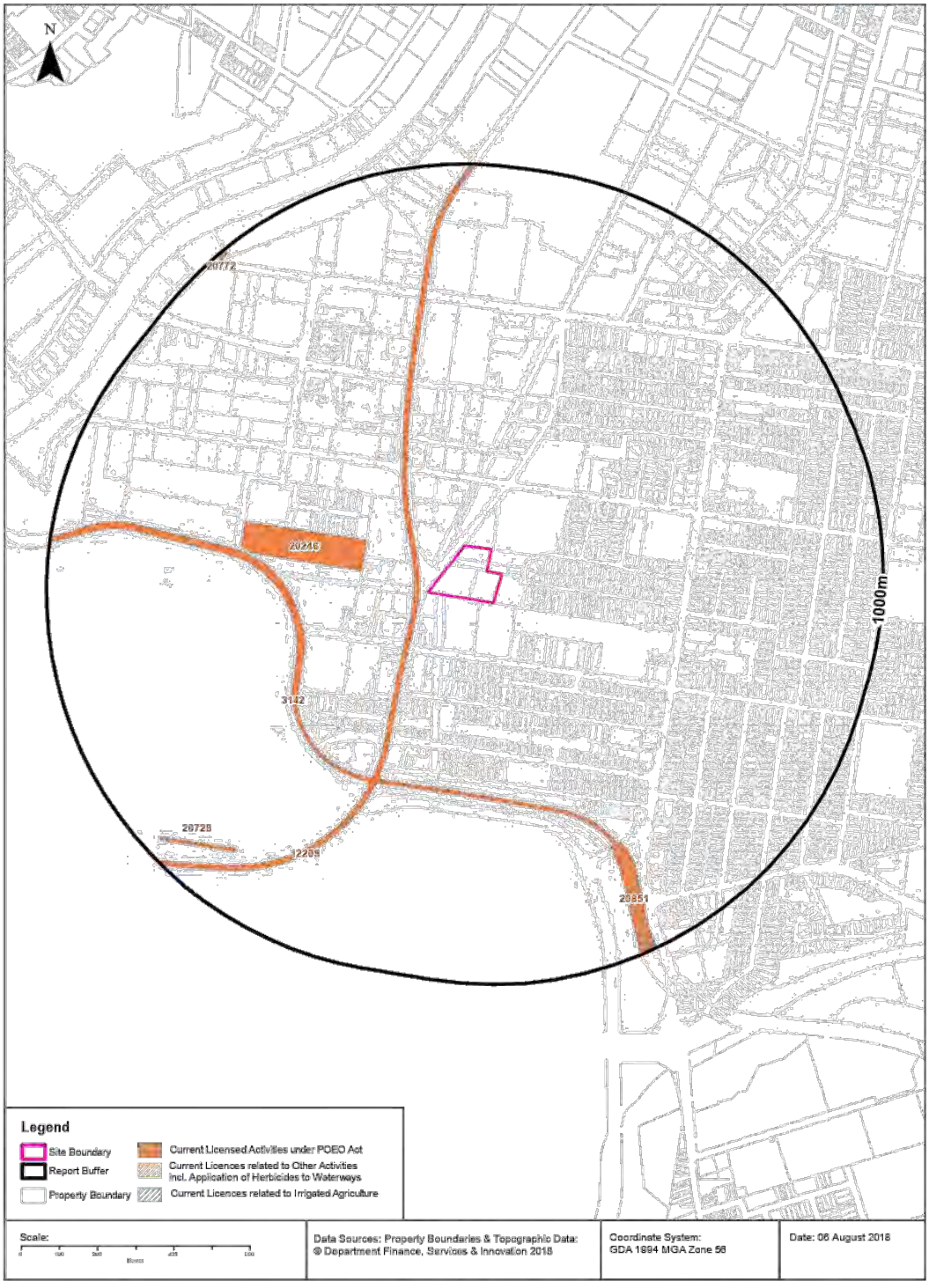
- James Hardie asbestos manufacturing and waste disposal sites
- Radiological investigation sites in Hunter's Hill

Sites within the dataset buffer:

Site Id	Site Name	Site Address	Dataset	Comments	Location Confidence	Distance	Direction
N/A	No records in buffer						

Current EPA Licensed Activities

146-154 O'Riordan Street, Mascot, NSW 2020



EPA Activities

146-154 O'Riordan Street, Mascot, NSW 2020

Licensed Activities under the POEO Act 1997

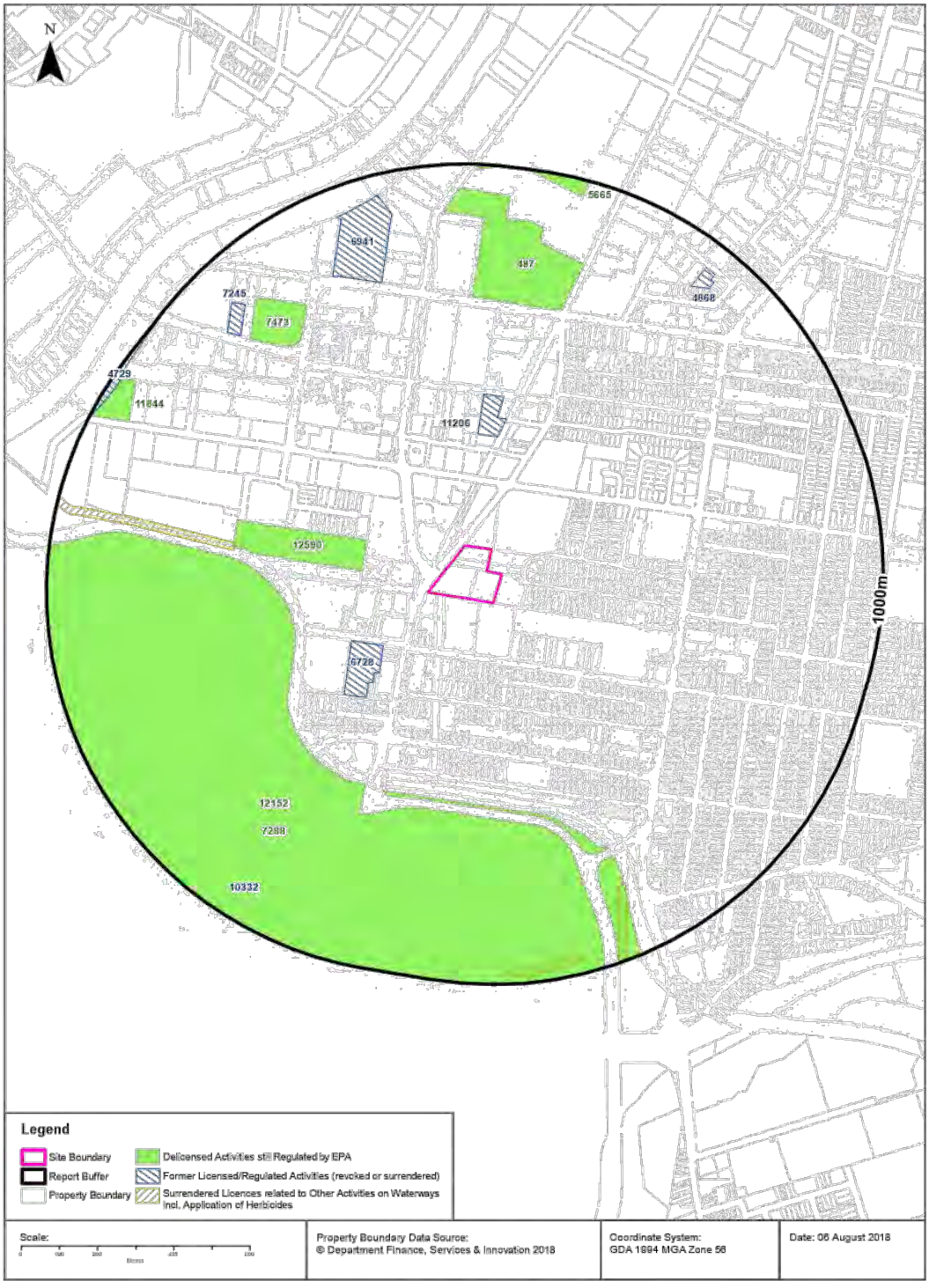
Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
12208	SYDNEY TRAINS		PO BOX K349, HAYMARKET, NSW 1238		Railway systems activities	Road Match	22m	West
20246	ENWAVE MASCOT PTY LTD	GridX Power Pty Ltd	10 Bourke Road	MASCOT	Generation of electrical power from gas	Premise Match	181m	West
3142	AUSTRALIAN RAIL TRACK CORPORATION LIMITED		GPO BOX 14, SYDNEY, NSW 2001		Railway systems activities	Network of Features	280m	South West
20851	JOHN HOLLAND PTY LTD		Port Botany Freight Rail Corridor at General Holmes Dr, MASCOT, NSW 2020		Railway systems activities	Road Match	710m	South East
20728	ENWAVE MASCOT PTY LTD		Shiers Avenue, MASCOT, NSW 2020	MASCOT, NSW 2020	Generation of Electrical Power from Gas	Road Match	839m	South West
20772	CPB CONTRACTORS PTY LIMITED	WESTCONNEX NEW M5	Between Beverly Hills and St Peters, BEVERLY HILLS, NSW 2209		Road construction	Road Match	981m	North West

POEO Licence Data Source: Environment Protection Authority

Delicensed & Former Licensed EPA Activities

146-154 O'Riordan Street, Mascot, NSW 2020



EPA Activities

146-154 O'Riordan Street, Mascot, NSW 2020

Delicensed Activities still regulated by the EPA

Delicensed activities still regulated by the EPA, within the dataset buffer:

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
12590	QANTAS FLIGHT CATERING LIMITED	Qantas Flight Catering Centre	Qantas Jet Base (Kingsford Smith)	MASCOT	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	181m	West
12152	QANTAS AIRWAYS LIMITED	Qantas Jet Base	Sydney Airport	MASCOT	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	361m	South West
7288	SYDNEY AIRPORT CORPORATION LIMITED	SYDNEY AIRPORT	241 O'RIODAN STREET	MASCOT	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	361m	South West
487	GOODMAN FIELDER CONSUMER FOODS PTY LIMITED	GOODMAN FIELDER COMMERCIAL	198 Bourke Road	MASCOT	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	647m	North
7473	EATON ELECTRIC SYSTEMS PTY LTD	EATON ELECTRIC SYSTEMS PTY LTD	10 KENT ROAD	MASCOT	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	687m	North West
11844	HY-TEC INDUSTRIES PTY LTD	HY-TEC INDUSTRIES PTY LTD	296 COWARD STREET	MASCOT	Concrete works	Premise Match	901m	North West
5665	HANNANPRINT NSW PTY LIMITED	HANNANPRINT NSW	55 DOODY STREET	ALEXANDRIA	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	956m	North

Delicensed Activities Data Source: Environment Protection Authority

Former Licensed Activities under the POEO Act 1997, now revoked or surrendered

Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

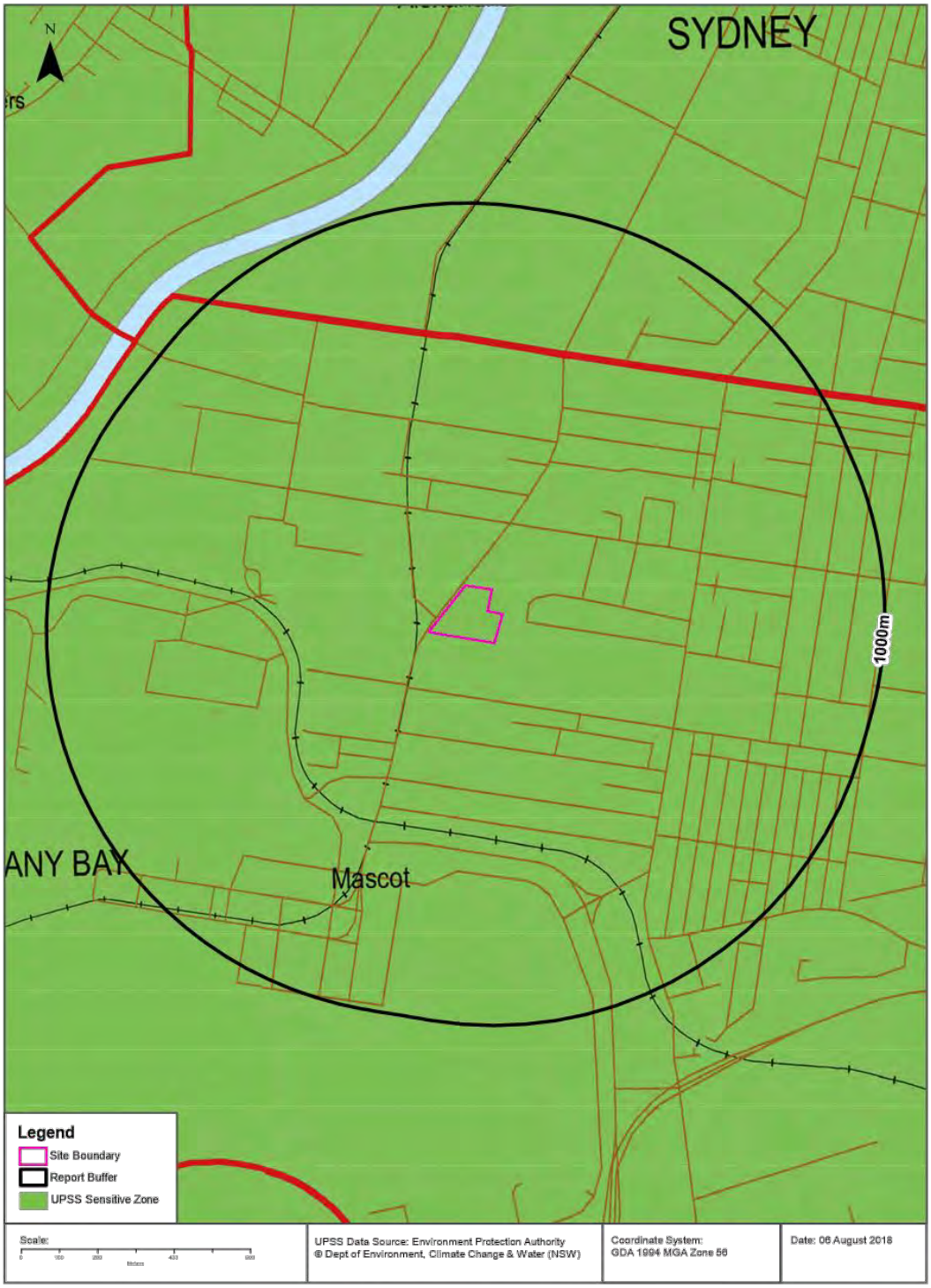
Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
6728	INDUSTRIAL GALVANIZERS CORPORATION PTY LTD	342 KING STREET, MASCOT, NSW 2020	Surrendered	30/08/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	183m	South West
11206	EMILY SULLIVAN	7 CHURCH AVENUE, MASCOT, NSW 2020	Surrendered	23/08/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	294m	North
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	520m	-
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	520m	-

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	520m	-
6941	FUJI XEROX AUSTRALIA PTY LIMITED	546 GARDENERS ROAD, ALEXANDRIA, NSW 2015	Surrendered	26/06/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	722m	North
7245	PLATING 'R US PTY LTD	25-29 RICKETTY STREET, MASCOT, NSW 2020	Surrendered	26/06/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	804m	North West
4868	CON DIONYS	1 BRADFORD STREET, BEACONSFIELD, NSW 2015	Revoked	30/04/2012	Waste Storage, Transfer, Separating or Processing	Premise Match	867m	North East
10332	GATE GOURMET AUSTRALIA PTY LTD	KEITH SMITH AVE & SIXTH ST, MASCOT, NSW 2020	Revoked	11/01/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Road Intersection	896m	South West
4729	Q CATERING RIVERSIDE PTY LIMITED	300 COWARD STREET, MASCOT, NSW 2020	Surrendered	22/12/2000	Non-thermal treatment of hazardous and other waste; Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste	Premise Match	979m	North West

Former Licensed Activities Data Source: Environment Protection Authority

UPSS Sensitive Zones

146-154 O'Riordan Street, Mascot, NSW 2020



Lotsearch Pty Ltd ABN 89 600 168 018 19

1991 Historical Business Directory Records

146-154 O'Riordan Street, Mascot, NSW 2020

Historical Business Directories

146-154 O'Riordan Street, Mascot, NSW 2020

1991 Business to Business Directory Records
Premise or Road Intersection Matches

Records from the 1991 UBD Business to Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
Freight Forwarders	C.T. Freight Pty Ltd, 146 O'Riordan St Mascot 2020	46459	Premise Match	0m	Onsite
Freight Forwarders	Nippon Express Pty Ltd, 1/154 O'Riordan St Mascot 2020	46509	Premise Match	0m	Onsite
Freight Forwarders	Rainers Customs & Transport Services Pty Ltd, 4/154 O'Riordan St Mascot 2020	46518	Premise Match	0m	Onsite
Freight Forwarders	Tradeair International Freight Forwarding Services Pty Ltd, 2/154 O'Riordan St Mascot 2020	46526	Premise Match	0m	Onsite
Air Cargo Agents	Air Express International Pandair, 6/154 O'Riordan St., Mascot 2020	33678	Premise Match	0m	Onsite
Air Cargo Agents	Ansett International Air Freight 7/154 O'Riordan St Mascot 2020	33682	Premise Match	0m	Onsite
Air Cargo Agents	International Cargo World Australia Pty. Ltd., 7/154 O'Riordan St., Mascot 2020	33715	Premise Match	0m	Onsite
Motor Spare Parts Mfrs &/or Imps &/or W/salers	Dana Ausfield Automotive Parts Distribution, 166 O'Riordan St., Mascot 2020	55063	Premise Match	35m	South West
Air Cargo Agents	John Fletcher International, 166 O' Riordan St., Mascot 2020	33718	Premise Match	35m	South West
Freight Forwarders	Cargo Plan International, 263 King St Mascot 2020	46462	Premise Match	69m	South
Customs Agents	Powerhouse Clearances Pty. Ltd.,. 263 King St., Mascot. 2020	41179	Premise Match	69m	South
Customs Agents	Snodgrass. W. K. & Associates Pty. Ltd, 263 King St, Mascot 2020	41188	Premise Match	69m	South
Caterers	Steels Aviation Services Pty. Ltd.,. 263 King St, Mascot 2020	38612	Premise Match	69m	South
Clothing Mfrs &/or W/salers Industrial	Andrews. A. Pty. Ltd ., 247 King St, Mascot 2020	39307	Premise Match	71m	South East
Freight Forwarders	Asia Pacific Transportation, 247 King St Mascot 2020	46448	Premise Match	71m	South East
Freight Forwarders	Associated Transportation, 247 King St Mascot 2020	46449	Premise Match	71m	South East
Freight Forwarders	Brambles International Freight Pty Ltd, 247 King St Mascot 2020	46456	Premise Match	71m	South East
Freight Forwarders	Cargo Handling, 247 King St Mascot 2020	46461	Premise Match	71m	South East
Freight Forwarders	Hawk Air/Sea Cargo, 247 King St Mascot 2020	46484	Premise Match	71m	South East
Freight Forwarders	Michell Cotts Pty Ltd, 247 King St Mascot 2020	46502	Premise Match	71m	South East
Freight Forwarders	Qatco Pty Ltd, 247 King St Mascot 2020	46517	Premise Match	71m	South East
Air Cargo Agents	CH International Airfreight Pty. Ltd., 247 King St., Mascot 2020	33693	Premise Match	71m	South East
Air Cargo Agents	Hawk Air/Sea Cargo, 247 King St., Mascot 2020	33711	Premise Match	71m	South East
Air Cargo Agents	Michell Cotts Freight (Aust) Pty Ltd , 247 Kings St Mascot 2020	33726	Premise Match	71m	South East
Freight Forwarders	Strang International Pty Ltd, 185 O'Riordan St Mascot 2020	46524	Premise Match	78m	West
Adhesive Mfrs &/or Imps &/or Dists	Emhart Australia Pty. Ltd., 191 O' Riordan St., Mascot 2020	33411	Premise Match	93m	West
Aircraft Mfrs &/or Imps &/or Dists	Aeromil, 277 King St, Mascot 2020	34229	Premise Match	125m	South West
Air Cargo Agents	Australian Air Freight Forwarders Pty Ltd , 279 Kings St , Mascot 2020	33685	Premise Match	125m	South West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
Air Cargo Agents	Hency (Australia) Pty. Ltd., 279 King St., Mascot 2020	33712	Premise Match	125m	South West
Gear Cutters &/or Mfrs	Austral Engineering Products Pty Ltd, 205-213 O'Riordan St Mascot 2020	47545	Premise Match	127m	South West
Gear Cutters &/or Mfrs	Austral Engineering Products Pty Ltd, 209 O'Riordan St Mascot 2020	47546	Premise Match	127m	South West
Engineers Fabricating	A E P Sheet Metal Pty Ltd, 205 O'Riordan St Mascot 2020	43676	Premise Match	127m	South West
Engineers General	Austral Engineering Products Pty Ltd, 205-213 O'Riordan St Mascot 2020	43892	Premise Match	127m	South West
Engineers General	Austral Engineering Products Pty Ltd, 209 O'Riordan St Mascot 2020	43893	Premise Match	127m	South West
Aircraft Mfrs &/or Imps &/or Dists	British Aerospace (Commercial Aircraft), Level 1 Sydney Airport Centre, 15 Bourke Rd, Mascot 2020	34232	Premise Match	133m	North West

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1991 Business to Business Directory Records
Road or Area Matches

Records from the 1991 UBD Business to Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
Golf Equipment & Supplies	Zimmerer A J Pty. Ltd., 128 O'Riordan St Mascot 2020	47918	Road Match	0m
Galvanising &/or Tinning	Mascot Galvanising Works Pty Ltd, 342 King St Mascot 2020	47415	Road Match	140m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1986 Historical Business Directory Records

146-154 O'Riordan Street, Mascot, NSW 2020

Historical Business Directories

146-154 O'Riordan Street, Mascot, NSW 2020

1986 Business to Business Directory Records
Premise or Road Intersection Matches

Records from the 1986 UBD Business to Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
CONTAINER TRANSPORT SERVICES.	Pacific Austral Container Services, 154 O'Riordan St., Mascot.	20213	Premise Match	0m	Onsite
SHIPPING COMPANIES &/OR OWNERS.	Peace Line, 154 O'Riordan St., Mascot.	86376	Premise Match	0m	Onsite
FREIGHT FORWARDERS.	Hawkair Cargo Pty. Ltd., 164 O'Riordan St, Mascot	35417	Premise Match	0m	Onsite
FREIGHT FORWARDERS.	Helm Freight Company, 154 O'Riordan St., Mascot.	35418	Premise Match	0m	Onsite
FREIGHT FORWARDERS.	Nippon Express, 154 O'Riordan St., Mascot.	35445	Premise Match	0m	Onsite
FREIGHT FORWARDERS.	Pacific-Austral Pty. Ltd., 154 O'Riordan St., Mascot.	35449	Premise Match	0m	Onsite
FREIGHT FORWARDERS.	Wards Express, 146 O'Riordan St., Mascot.	35482	Premise Match	0m	Onsite
AIR CARGO AGENTS	Co-Load Incorporated Pty. Ltd., 154 O'Riordan St., Mascot.	1833	Premise Match	0m	Onsite
AIR CARGO AGENTS.	Hawke Cargo Pty. Ltd., 154 O'Riorden St, Mascot	1855	Premise Match	0m	Onsite
AIR CARGO AGENTS	Helm Freight Company, 154 O'Riordan St., Mascot.	1856	Premise Match	0m	Onsite
AIR CARGO AGENTS.	Nippon Express, 154 O'Riordan St., Mascot.	1873	Premise Match	0m	Onsite
BOND &/OR FREE STORES.	Nippon Express, 154 O'Riordan St., Mascot.	6772	Premise Match	0m	Onsite
AIR CARGO AGENTS.	Pacific-Austral Pty. Ltd., 154 O'Riordan St., Mascot.	1875	Premise Match	0m	Onsite
AIR CARGO AGENTS.	Pandair International Airfreight, 154 O'Riordan St., Mascot.	1877	Premise Match	0m	Onsite
AIR CARGO AGENTS.	Wards Express, 146 O'Riordan St., Mascot.	1899	Premise Match	0m	Onsite
FREIGHT FORWARDERS.	A.F.A. Meadows, 263 King St, Mascot.	35356	Premise Match	69m	South
STORAGE & DISTRIBUTION CENTRES.	A.F.A. Meadows, 263 King St., Mascot.	89547	Premise Match	69m	South
BOND &/OR FREE STORES.	A.F.A. Meadows, 263 King St, Mascot.	6749	Premise Match	69m	South
AIR CARGO AGENTS.	A.F.A. Meadows, 263 King St, Mascot	1807	Premise Match	69m	South
CUSTOMS AGENTS	A.F.A. Meadows, 263 King St., Mascot	20905	Premise Match	69m	South
CUSTOMS-TARIFF CONCESSION CONSULTANTS.	A.F.A. Meadows, 263 King St., Mascot.	21049	Premise Match	69m	South
CARRIERS &/OR CARTAGE CONTRACTORS.	McRae, H. & D. Carriers Pty. Ltd., 247 King St., Mascot.	12918	Premise Match	71m	South East
HAULAGE CONTRACTORS.	McRae, H. & D. Carriers Pty. Ltd., 247 King St., Mascot.	44951	Premise Match	71m	South East
STORAGE & DISTRIBUTION CENTRES	McRae, H. & D. Carriers Pty. Ltd., 247 King St., Mascot.	89590	Premise Match	71m	South East
BOND &/OR FREE STORES.	McRae, H. & D. Carriers Pty. Ltd., 247 King St., Mascot.	6767	Premise Match	71m	South East

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
AIR CARGO AGENTS.	C.F. Air Freight Pty. Ltd., 177 O'Riordan St., Mascot.	1826	Premise Match	72m	North West
CONTAINER TRANSPORT SERVICES.	Tradex Transport Pty. Ltd., 185 O'Riordan St., Mascot.	20224	Premise Match	78m	West
CONTAINER-CARGO-REPAIR & STORAGE	Tradex Transport Pty. Ltd., 185 O'Riordan St., Mascot.	20186	Premise Match	78m	West
FREIGHT FORWARDERS.	Tradex Transport Pty. Ltd, 185 O'Riordan St., Mascot.	35471	Premise Match	78m	West
CUSTOMS AGENTS.	Tradex Transport Pty. Ltd., 185 O'Riordan St., Mascot.	21036	Premise Match	78m	West
AIR CARGO AGENTS.	Tradex Transport Pty. Ltd., 185 O'Riordan St., Mascot.	1895	Premise Match	78m	West
ADHESIVES MFRS. &/OR DISTS.	Emhart Australia Pty. Ltd. Bostik Division, 191 O'Riordan St. Mascot.	1347	Premise Match	93m	West
SEALING COMPOUNDS.	Emhart Australia Pty. Ltd. Bostik Division, 191 O'Riordan St., Mascot.	85336	Premise Match	93m	West
MERCHANTS-GENERAL.	Makucha, 277 King St., Mascot.	58601	Premise Match	125m	South West
AIR CARGO AGENTS.	Australian Air Freight Forwarders Pty. Ltd., 279 King St., Mascot.	1821	Premise Match	125m	South West
CHAIN-HEAVY MFRS. &/OR IMPS. &/OR DISTS.	A.E.P. Engineering Sales Pty. Ltd., 209 O'Riordan St., Mascot.	13426	Premise Match	127m	South West
STEEL FABRICATORS.	A.E.P. Sheet Metal Pty. Ltd., 205 011iordan St., Mascot.	88846	Premise Match	127m	South West
GEAR CUTTERS &/OR MFRS.	Austral Engineering Products Pty. Ltd. 205-213 O'Riordan Street, Mascot	38627	Premise Match	127m	South West
CHAIN SPROCKETS MFRS. &/OR DISTS.	Austral Engineering Products Pty. Ltd., 209 °Riordan St., Mascot	13486	Premise Match	127m	South West
GEAR CUTTERS &/OR MFRS.	Austral Engineering Products Pty. Ltd. 209 O'Riordan St., Mascot	38632	Premise Match	127m	South West
MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Kewin, G. K , 283 King St., Mascot.	66454	Premise Match	127m	South West
PNEUMATIC TOOLS MFRS. &/OR DISTS.	A.E.P. Engineering Sakes Pty. Ltd., 209 O'Riordan St., Mascot.	75330	Premise Match	127m	South West
PNEUMATIC TOOLS MFRS. &/OR DISTS.	A.E.P. Engineering Sales Pty. Ltd. 205-213 O'Riordan St., Mascot.	75328	Premise Match	127m	South West
AIR EQUIPMENT MFRS. &/OR DISTS.	A.E.P. Engineering Sales Pty. Ltd., 209 O'Riordan St., Mascot	2507	Premise Match	127m	South West
CHAIN DRIVE SPECIALISTS.	A.E.P. Engineering Sales Pty. Ltd., 209 O'Riordan St., Mascot.	13411	Premise Match	127m	South West
SHEET METAL WORKERS.	A.E.P. Sheet Metal Pty. Ltd., 205 O'Riordan St. Mascot.	85949	Premise Match	127m	South West
ENGINEERS – FABRICATING.	A.E.P. Sheet Metal Pty. Ltd., 205 O'Riordan St., Mascot.	29327	Premise Match	127m	South West
CONTAINER TRANSPORT SERVICES.	A.F.A. Meadows, 283 King St., Mascot.	20188	Premise Match	127m	South West
ENGINEERS – GENERAL &/ OR MANUFACTURING &/ OR MECHANICAL.	Austral Engineering Products Pty. Ltd. 205-213 O'Riordan St., Mascot.	29661	Premise Match	127m	South West
ENGINEERS – GENERAL &/ OR MANUFACTURING &/ OR MECHANICAL.	Austral Engineering Products Pty. Ltd. 209 O'Riordan St., Mascot.	29746	Premise Match	127m	South West

1986 Business to Business Directory Records Road or Area Matches

Records from the 1986 UBD Business to Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
LEASING COMPANIES.	Hertz Rent A Car, 188 O'Riordan St., Mascot.	51473	Road Match	0m
IMPORTERS.	Kangaroo Golf Ltd 128 O'Riordan St. Mascot	47728	Road Match	0m
MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Kewin, G. H Smash Repairs, 184 O'Riordan St , Mascot.	66453	Road Match	0m
BUILDERS SUPPLIERS.	Winnapine Products Pty Ltd., 181 O'Riordan St., Mascot.	8826	Road Match	0m
TIMBER MERCHANTS.	Winnapine Products Pty. Ltd., 181 O'Riordan St., Mascot.	93648	Road Match	0m
FLOOR MATERIAL SPECIALISTS.	Winnapine Products Pty. Ltd., 181 O'Riordan St., Mascot.	33528	Road Match	0m
PACKERS &/OR PACKING SERVICES.	World Wide Packers Pty. Ltd., 181 O'Riordan St., Mascot	71333	Road Match	0m
ARTISTS-COMMERCIAL & INDUSTRIAL	A.S. Promotion King St., Mascot.	3829	Road Match	140m
FREIGHT FORWARDERS.	Australian Air Freight Forwarders Pty. Ltd., King St., Mascot,	35374	Road Match	140m
AIR CARGO AGENTS	Australian Air Freight Forwarders Pty. Ltd., King St., Mascot	1820	Road Match	140m
BOILER REPAIRERS &/OR SERVICEMEN.	Burner Combustion & Engineering Pty. Limited, 342 King St., Mascot.	6572	Road Match	140m
FURNACE & COMBUSTION EQUIPMENT MFRS. &/OR IMPS. &/OR DISTS.	Burner Combustion & Engineering Pty. Ltd., 342 King St. Mascot	36569	Road Match	140m
GAS BURNERS-INDUSTRIAL-MFRS. &/OR DISTS.	Burner Combustion & Engineering Pty. Ltd., 342 King St, Mascot.	38441	Road Match	140m
ENGINEERS – FURNACES &/ OR COMBUSTION	Burner Combustion & Engineering Pty. Ltd., 342 King St., Mascot.	29642	Road Match	140m
ENGINEERS-COMBUSTION.	Burner Combustion & Engineering Pty. Ltd., 342 King St., Mascot.	28700	Road Match	140m
OIL BURNER MFRS. &/OR IMPS. &/OR DISTS.	Burner Combustion & Engineering Pty. Ltd., 342 King St., Mascot.	70504	Road Match	140m
HEAT EXCHANGER MFRS. &/OR DISTS.	Burner Combustion & Engineering Pty. Ltd., 342 King St., Mascot.	45443	Road Match	140m
OIL BURNER MFRS. &/OR IMPS. &/OR DISTS.	Carmichael Steam Boilers Pty. Ltd., 342 King St. Mascot	70505	Road Match	140m
DRYING ROOM SYSTEMS MFRS. &/OR INSTALLERS.	Carmichael Steam Boilers Pty. Ltd , 342 King St, Mascot.	25586	Road Match	140m
BOILER REPAIRERS &/OR SERVICEMEN.	Carmichael Steam Boilers Pty. Ltd., 342 King St. Mascot.	6573	Road Match	140m
STEAM GENERATOR MFRS. &/OR DISTS.	Carmichael Steam Boilers Pty. Ltd., 342 King St, Mascot.	88772	Road Match	140m
STEAM PLANT &/OR EQUIPMENT MFRS. &/OR DISTS.	Carmichael Steam Boilers Pty. Ltd., 342 King St. Mascot	88779	Road Match	140m
BOILER PLANT MFRS. &/OR IMPS. &/OR DISTS.	Carmichael Steam Boilers Pty. Ltd., 342 King St., Mascot	6548	Road Match	140m
CONCRETE HANDLING EQUIPMENT & MACHINERY MFRS. &/OR IMPS. &/OR DISTS.	Carmichael Steam Boilers Pty. Ltd., 342 King St., Mascot	19808	Road Match	140m
BOILERMAKERS.	Carmichael Steam Boilers Pty. Ltd., 342 King St., Mascot.	6596	Road Match	140m
ENGINEERS-COMBUSTION.	Carmichael Steam Boilers Pty. Ltd., 342 King St., Mascot	28701	Road Match	140m
GAS BURNERS-INDUSTRIAL-MFRS. &/OR DISTS.	Carmichael Steam Boilers Pty. Ltd., 342 King St., Mascot.	38445	Road Match	140m
PRESSURE VESSEL MFRS.	Carmichael Steam Boilers Pty. Ltd., 342 King St., Mascot.	75826	Road Match	140m
STEAM PLANT INSTALLATION SPECIALISTS.	Carmichael Steam Boilers Pty. Ltd., 342 King St., Mascot.	88791	Road Match	140m
TIMBER TREATMENT SPECIALISTS.	Carmichael Steam Boilers Pty. Ltd., 342 King St., Mascot.	93652	Road Match	140m
MOTOR GARAGES & SERVICE STATIONS.	Kings Street Auto Port, King St., Mascot.	64949	Road Match	140m

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
GALVANISING &/OR TINNING.	Mascot Galvanising Works Pty. Ltd. 342 King St. Mascot	38180	Road Match	140m
MOTOR BODY BUILDERS.	Sweetings Service Station, King St., Mascot,.	61439	Road Match	140m
ENGINEERS – GENERAL &/ OR MANUFACTURING &/ OR MECHANICAL	Sweetings Service Station, King St., Mascot.	30359	Road Match	140m
MOTOR ACCESSORIES – RETAIL .	Sweetings Service Station, King St., Mascot.	61205	Road Match	140m
MOTOR GARAGES & SERVICE STATIONS	Sweetings Service Station, King St., Mascot.	65543	Road Match	140m
MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Sweetings Service Station, King St., Mascot.	66808	Road Match	140m

1982 Historical Business Directory Records

146-154 O'Riordan Street, Mascot, NSW 2020

Historical Business Directories

146-154 O'Riordan Street, Mascot, NSW 2020

1982 Business Directory Records
Premise or Road Intersection Matches

Records from the 1982 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
AIR CARGO AGENTS. (A3240)	Ward's Air Cargo, 146 O'Riordan St., Mascot. 2020.	1759	Premise Match	0m	Onsite
CRANES -MOBILE- MFRS. &/OR IMPS. &/OR DISTS. (C8775)	Transmodac Liftslack Equipment Pty. Ltd., 263 King St. Mascot 2020.	19411	Premise Match	69m	South
CONTAINER TRANSPORT SERVICES. (C7485)	A.M.A. Meadows, 263 King St., Mascot. 2020.	17876	Premise Match	69m	South
ICING SUGAR MFRS. (I0550)	Industrial Sugar Mills Pty. Ltd., 259 King St., Mascot. 2020.	41375	Premise Match	69m	South
STORAGE & DISTRIBUTIONCENTRES. (S7310)	A. M.A. Meadows, 263 King St., Mascot. 2020.	77481	Premise Match	69m	South
FREIGHT FORWARDERS. (F6185)	A.M.A. Meadows, 263 King St, Mascot 2020.	32965	Premise Match	69m	South
CUSTOMS AGENTS. (C9165)	A.M.A. Meadows, 263 King St, Mascot 2020.	18598	Premise Match	69m	South
AIR CARGO AGENTS. (A3240)	A.M.A. Meadows, 263 King St., Mascot. 2020.	1678	Premise Match	69m	South
BOND &/OR FREE STORES. (B4280)	A.M.A. Meadows, 263 King St., Mascot. 2020.	7600	Premise Match	69m	South
ROAD TRANSPORT SERVICES - INTERSTATE. (R5845)	Cook, A. & Sons Pty. Ltd., 247 King St. Mascot 2020	72135	Premise Match	71m	South East
HAULAGE CONTRACTORS. (H2750)	Cook, A. & Sons Pty. Ltd., 247 King St, Mascot. 2020.	39412	Premise Match	71m	South East
CARRIERS &/OR CARTAGE CONTRACTORS. (C2115)	Cook, A. & Sons Pty. Ltd., 247 King St., Mascot. 2020.	13634	Premise Match	71m	South East
ROAD TRANSPORT SERVICES - INTERSTATE, (R5810)	Cook, A. & Sons Pty. Ltd., 247 King St., Mascot. 2020.	72028	Premise Match	71m	South East
CRANES - MOBILE & TRAVEL TOWER - PROPRIETORS &/OR HIRERS. (C8790)	Cook, A. & Sons Pty. Ltd., 247 King St. Mascot 2020.	18426	Premise Match	71m	South East
FREIGHT FORWARDERS. (F6185)	Cook, A. & Sons Pty. Ltd., 247 King St, Mascot 2020.	32996	Premise Match	71m	South East
STORAGE & DISTRIBUTIONCENTRES. (S7310)	Cook, A. & Sons Pty. Ltd., 247 King St. Mascot. 2020.	77495	Premise Match	71m	South East
BOND &/OR FREE STORES. (B4280)	Cook, A. & Son Pty. Ltd., 247 King St, Mascot. 2020.	7607	Premise Match	71m	South East
RAIL FORWARDING AGENTS. (R1750)	Cook, A. & Sons Pty. Ltd. 247 King St, Mascot 2020	68450	Premise Match	71m	South East
TALLOW MERCHANTS &/OR REFINERS. (T0275)	Gearin O'Riordan Pty. Ltd., 177 O'Riordan St., Mascot 2020.	79022	Premise Match	72m	North West
SUGAR REFINERS. (S7740)	Industrial Sugar Mills Pty. Ltd., 259 King St Mascot. 2020.	77544	Premise Match	72m	South East
STOCK FOODS MFRS. &/OR DISTS. (S7065)	Gearin O'Riordan Pty. Ltd., 177 O'Riordan St., Mascot. 2020.	77307	Premise Match	77m	North West
FREIGHT FORWARDERS. (F6185)	Tradex Transport Pty. Ltd., 185 O'Riordan St., Mascot. 2020.	33061	Premise Match	78m	West
AIR CARGO AGENTS. (A3240)	Tradex Transport Pty. Ltd., 185 O'Riordan St., Mascot. 2020.	1753	Premise Match	78m	West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
CUSTOMS AGENTS (C9165)	Tradex Transport Pty. Ltd., 185 O'Riordan St., Mascot. 2020.	18720	Premise Match	78m	West
WAX MFRS. &/OR IMPORTERS.(W2360)	Bostik Australia Pty. Ltd., 191 O'Riordan St., Mascot. 2020.	83994	Premise Match	93m	West
ADHESIVES MFRS. &/OR DISTS.(A1110)	Bostik Australia Pty. Ltd., 191 O'Riordan St., Mascot. 2020.	1203	Premise Match	93m	West
POLISH MFRS. &/OR DISTS. (P6980)	Bostik Australia Pty. Ltd., 191 O'Riordan St., Mascot. 2020.	65528	Premise Match	93m	West
INSULATING MATERIALS MFRS.&/OR DISTS. &/OR SUPPLIERS (I3660)	Bostik Australia Pty. Ltd., 191 O'Riordan St., Mascot. 2020.	42448	Premise Match	93m	West
ZINC MFRS. &/OR MERCHANTS.(Z0050)	Lysaght Durham Chemical Co. Pty. Ltd., 163 O'Riordan St., Mascot.2020.	85575	Premise Match	115m	North
ZINC OXIDE MFRS. &/OR DISTS.(Z0100)	Lysaght Durham Chemical Co. Pty. Ltd., 163 O'Riordan St., Mascot.2020.	85580	Premise Match	115m	North
CHAIN - HEAVY - MFRS. &/OR IMPS. &/OR DISTS. (C3435)	A.E.P. Engineering Sales Pty. Ltd., 209 O'Riordan St., Mascot.2020.	14206	Premise Match	127m	South West
STEEL FABRICATORS. (S6105)	A.E.P. Sheet Metal Pty. Ltd., 205 O'Riordan St., Mascot 2020 Ph 667-1175	76815	Premise Match	127m	South West
CHAIN SPROCKETS MFRS. &/OR DISTS. (C3585)	Austral Engineering Products Pty. Ltd., 209 O'Riordan St,Mascot. 2020.	14250	Premise Match	127m	South West
GEAR CUTTERS &/OR MFRS.(G2250)	Austral Engineering Products Pty. Ltd., 209 O'Riordan St,Mascot. 2020.	35934	Premise Match	127m	South West
FAN &/OR BLOWER MFRS. &/OR DISTS. (F0225)	Industrial Air Handling Equipment Pty. Ltd., 205 O'Riordan St.,Mascot. 2020.	29941	Premise Match	127m	South West
MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Kewin, G. H., 283 King St., Mascot. 2020.	58436	Premise Match	127m	South West
AIR EQUIPMENT MFRS. &/OR DISTS. (A3870)	A.E.P. Engineering Sales Pty. Ltd., 209 O'Riordan St, Mascot2020.	2188	Premise Match	127m	South West
PNEUMATIC TOOLS MFRS. &/OR DISTS. (P6920)	A.E.P. Engineering Sales Pty. Ltd., 209 O'Riordan St, Mascot2020.	65495	Premise Match	127m	South West
CHAIN DRIVE SPECIALISTS. (C3420)	A.E.P. Engineering Sales Ry. Ltd., 209 O'Riordan St., Mascot.2020.	14189	Premise Match	127m	South West
ENGINEERS - FABRICATING (E6870)	A.E.P. Sheet Metal Pty. Ltd., 205 ORiordan St, Mascot 2020.	27450	Premise Match	127m	South West
SHEET METAL WORKERS. (S2595)	A.E.P. Sheet Metal Pty. Ltd., 205 ORiordan St, Mascot. 2020.	74213	Premise Match	127m	South West
ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL (E7140)	Austral Engineering Products Pty. Ltd., 209 O'Riordan St,Mascot. 2020.	27817	Premise Match	127m	South West
CUSTOMS BY-LAW CONSULTANTS. (C9180)	A.M.A. Meadows, 283 King St., Mascot. 2020.	18734	Premise Match	127m	South West

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1982 Business Directory Records
Road or Area Matches

Records from the 1982 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
BOX & CASE MFRS. &/OR MERCHANTS. (B5390)	Winna Box Factory Pty. Ltd., 181 O'Riordan St., Mascot. 2020.	8366	Road Match	0m
PACKERS &/OR PACKING SERVICES. (P0120)	World Wide Packers Pty. Ltd., 181 O'Riordan St., Mascot. 2020.	62253	Road Match	0m

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
ARTISTS - COMMERCIAL &INDUSTRIAL. (A7385)	A.S, Promotion, King St., Mascot. 2020,	3415	Road Match	140m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Kings Street Auto Port, King St., Mascot. 2020.	57051	Road Match	140m
GALVANISING &/OR TINNING.(G0200)	Mascot Galvanising Works Pty. Ltd., 342 King St., Mascot. 2020.	35590	Road Match	140m
ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL. (E7140)	Sweetings Service Station, King St., Mascot. 2020.	28403	Road Match	140m
MOTOR ACCESSORIES DEALERS.(M4690)	Sweetings Service Station, King St., Mascot. 2020.	53981	Road Match	140m
MOTOR BODY REPAIRS &/OR CONVERTERS. (M5140)	Sweetings Service Station, King St., Mascot. 2020.	54329	Road Match	140m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Sweetings Service Station, King St., Mascot. 2020.	57664	Road Match	140m
MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Sweetings Service Station, King St., Mascot. 2020.	58766	Road Match	140m

1978 Historical Business Directory Records

146-154 O'Riordan Street, Mascot, NSW 2020

Historical Business Directories

146-154 O'Riordan Street, Mascot, NSW 2020

1978 Business Directory Records
Premise or Road Intersection Matches

Records from the 1978 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
FURNITURE MFRS. &/OR W/SALERS. -OFFICE.	Bendix Furniture Pty. Ltd., 70 Macintosh St., Mascot.	32006	Premise Match	33m	East
FURNITURE-TUBULAR STEEL MFRS. &/OR W/SALERS	Bendix Furniture Pty. Ltd., 70 Macintosh St., Mascot.	32271	Premise Match	33m	East
HOSPITAL SUPPLIES & EQUIPMENT MFRS. &/OR DISTS.	Bendix Furniture Pty. Ltd., 70 Macintosh St., Mascot.	35768	Premise Match	33m	East
CHAIR MFRS.	Bendix Furniture Pty. Ltd., 70 Macintosh St., Mascot.	12381	Premise Match	33m	East
HOTEL &/OR MOTEL EQUIPMENT SUPPLIES.	Bendix Furniture Pty. Ltd., 70 Macintosh St., Mascot.	35903	Premise Match	33m	East
CAFE EQUIPMENT &/OR SUPPLIES.	Bendix Furniture Pty. Ltd., 70 Macintosh St., Mascot.	10362	Premise Match	33m	East
CONTAINER REPAIR & STORAGE.	Aust Forwarding Agency Group, 263 King St, Mascot	16138	Premise Match	69m	South
FREIGHT FORWARDERS.	Aust Forwarding Agency Group, 263 King St. Mascot	29868	Premise Match	69m	South
FREIGHT FORWARDERS.	Australian Forwarding Agency 263-273 King St. Mascot,	29851	Premise Match	69m	South
CUSTOMS AGENTS.	Aust Forwarding Agency Group, 263 King St. Mascot	16825	Premise Match	69m	South
BOND &/OR FREE STORES.	Aust Forwarding Agency Group, 263 King St, Mascot	6628	Premise Match	69m	South
AIR CARGO AGENTS	Aust Forwarding Agency Group, 263 King St. Mascot	1692	Premise Match	69m	South
CUSTOMS BY-LAW CONSULTANTS.	Aust Forwarding Agency Group, 263 King St, Mascot	16954	Premise Match	69m	South
CUSTOMS AGENTS.	Australian Forwarding Agency Pty. Ltd. 263-273 King St. Mascot,	16798	Premise Match	69m	South
MOTOR PAINTERS.	Kewin, G. H., 273 King St., Mascot.	51491	Premise Match	70m	South West
MOTOR PANEL BEATERS	Kewin, G. H., 273 King St., Mascot	52134	Premise Match	70m	South West
HAULAGE CONTRACTORS.	Cook, A. & Sons Pty. Ltd., 247 King St., Mascot,	35131	Premise Match	71m	South East
CARRIERS &/OR CARTAGE CONTRACTORS - MASTER.	Cook, A. & Sons Pty. Ltd., 247 King St., Mascot.	11987	Premise Match	71m	South East
CRANES-MOBILE-PROPRIETORS &/OR HIRERS.	Cook, A. & Sons Pty. Ltd., 247 King St., Mascot,.	16664	Premise Match	71m	South East
BOND &/OR FREE STORES.	Cook, A. & Sons Pty. Ltd., 247 King St., Mascot.	6633	Premise Match	71m	South East
TALLOW MERCHANTS &/OR REFINERS.	Gearin O'Riordan Pty. Limited 177 O'Riordan St., Mascot,	69554	Premise Match	72m	North West
STOCK FOODS MFRS. &/OR DISTS.	Gearin O'Riordan Pty. Limited 177 O'Riordan St., Mascot.	58502	Premise Match	72m	North West
TALLOW MERCHANTS &/OR REFINERS.	Gearin O'Riordan Pty. Ltd., 177 O'Riordan St, Mascot	69560	Premise Match	77m	North West
STOCK FOODS MFRS. &/OR DISTS.	Gearin O'Riordan Pty. Ltd., 177 O'Riordan St, Mascot	58524	Premise Match	77m	North West
EXPORTERS.	Gearin O'Riordan Pty. Ltd., 177 O'Riordan St, Mascot	26869	Premise Match	77m	North West
FREIGHT FORWARDERS.	Tradex Transport Pty. Ltd., 185 O'Riordan St., Mascot	29970	Premise Match	78m	West
CUSTOMS AGENTS.	Tradex Transport Pty. Ltd., 185 O'Riordan St., Mascot.	16937	Premise Match	78m	West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
ADHESIVES MFRS. &/OR DISTS.	Bostik Australia Pty. Ltd., 191 O'Riordan St., Mascot	1100	Premise Match	93m	West
POLISH MFRS. &/OR DISTS	Bostik Australia Pty. Ltd., 191 O'Riordan St., Mascot.	58522	Premise Match	93m	West
WAX MFRS. &/OR IMPORTERS.	Bostik Australia Pty. Ltd., 191 O'Riordan St., Mascot.	74042	Premise Match	93m	West
INSULATING MATERIALS MFRS. &/OR DISTS. &/OR SUPPLIERS.	Bostik Australia Pty. Ltd., 191 O'Riordan St., Mascot.	37793	Premise Match	93m	West
ZINC MFRS.&/OR MERCHANTS.	Lysaght Durham Chemical Co. Pty. Ltd., 163 O'Riordan St., Mascot	75442	Premise Match	115m	North
ZINC OXIDE MFRS.	Lysaght Durham Chemical Co. Pty. Ltd., 163 O'Riordan St., Mascot.	75446	Premise Match	115m	North
TYRE &/OR TUBE MFRS. &/OR DISTS.	Gwynne, R. L. Pty. Ltd., 279 King St., Mascot	73023	Premise Match	125m	South West
AIR CARGO AGENTS.	Manton Customs Services Pty. Ltd., 279 King St., Mascot.	1724	Premise Match	125m	South West
ELECTRICAL METER BOX &/OR SURROUNDS MFRS.	A.E.P. Sheet Metal Pty. Ltd., 205 O'Riordan St, Mascot	22599	Premise Match	127m	South West
STEEL FABRICATORS.	A.E.P. Sheet Metal Pty. Ltd., 205 O'Riordan St, Mascot	68037	Premise Match	127m	South West
ELECTRICAL SWITCHBOARD MFRS. &/OR DISTS. SWITCHBOARD	A.E.P. Sheet Metal Pty. Ltd., 205 O'Riordan St, Mascot	23008	Premise Match	127m	South West
CHAIN SPROCKET MFRS.	Austral Engineering Products Pty. Ltd, 209 O'Riordan St, Mascot	12377	Premise Match	127m	South West
CHAIN SPROCKET MFRS.	Austral Engineering Products Pty. Ltd. 205-213 O'Riordan St., Mascot	12376	Premise Match	127m	South West
GEAR CUTTERS &/OR MFRS.	Austral Engineering Products Pty. Ltd. 205-213 O'Riordan St., Mascot	32580	Premise Match	127m	South West
GEAR CUTTERS &/OR MFRS.	Austral Engineering Products Pty. Ltd., 209 O'Riordan St, Mascot	32586	Premise Match	127m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Viscount Service Centre, 283 King St., Mascot.	51041	Premise Match	127m	South West
CHAIN DRIVE SPECIALISTS	A.E.P. Engineering Sales Pty. Ltd. 205-213 O'Riordan St., Mascot	12328	Premise Match	127m	South West
CHAIN DRIVE SPECIALISTS.	A.E.P. Engineering Sales Pty. Ltd, 209 O'Riordan St, Mascot	12330	Premise Match	127m	South West
AIR EQUIPMENT MFRS. &/OR DISTS.	A.E.P. Engineering Sales Pty. Ltd. 205-213 O'Riordan St., Mascot	2092	Premise Match	127m	South West
PNEUMATIC TOOLS MFRS. &/OR DISTS.	A.E.P. Engineering Sales Pty. Ltd. 205-213 O'Riordan St., Mascot,	58482	Premise Match	127m	South West
PNEUMATIC TOOLS MFRS. &/OR DISTS.	A.E.P. Engineering Sales Pty. Ltd., 209 O'Riordan St, Mascot	58486	Premise Match	127m	South West
SHEET METAL WORKERS.	A.E.P. Sheet Metal Pty. Ltd, 205 O'Riordan St, Mascot	65678	Premise Match	127m	South West
SHEET METAL WORKERS.	A.E.P. Sheet Metal Pty. Ltd. 205 O'Riordan St, Mascot	65667	Premise Match	127m	South West
ENGINEERS-FABRICATING.	A.E.P. Sheet Metal Pty. Ltd., 205 O'Riordan St, Mascot	24515	Premise Match	127m	South West
ENGINEERS-HOT WATER-HEATING &/OR VENTILATING.	A.E.P. Sheet Metal Pty. Ltd., 205 O'Riordan St, Mascot	25575	Premise Match	127m	South West
AIR EQUIPMENT MFRS. &/OR DISTS.	A.E.P. Engineering Sales Pty. Ltd., 209 O'Riordan St, Mascot	2094	Premise Match	127m	South West
STORAGE & DELIVERY DEPOT.	Aust Forwarding Agency Group, 283 King St, Mascot	88694	Premise Match	127m	South West
ENGINEERS- GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Austral Engineering Products Pty. Ltd. 205-213 O'Riordan St., Mascot	24820	Premise Match	127m	South West
ENGINEERS- GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Austral Engineering Products Pty. Ltd., 209 O'Riordan St, Mascot	24893	Premise Match	127m	South West
AIR CARGO AGENTS.	Wathen Curnow & Cocks (Sydney) Pty. Ltd., 209 O'Riordan St., Mascot.	1750	Premise Match	127m	South West
CHAIN-HEAVY MFRS. &/OR IMPS. &/OR DISTS.	A.E.P. Engineering Sales Pty. Ltd., 209 O'Riordan St, Mascot	12342	Premise Match	129m	South West

1978 Business Directory Records
Road or Area Matches

Records from the 1978 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
SCRAP METAL MERCHANTS.	Major Metals & Disposal Pty. Ltd., 183 O'Riordan St., Mascot.	65181	Road Match	0m
BOX & CASE MFRS. &/OR MERCHANTS.	Winna Box Factory Pty. Ltd., 181 O'Riordan St., Mascot.	7284	Road Match	0m
CARRIERS &/OR CARTAGE CONTRACTORS - MASTER.	Ferns R.S..Pty. Ltd., Bourke Rd., Mascot.	11995	Road Match	40m
ARTISTS-COMMERCIAL & INDUSTRIAL.	A.S. Promotion, King St., Mascot.	3251	Road Match	140m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Kings Street Auto Port, King St., Mascot.	50334	Road Match	140m
GALVANISING &/OR TINNING.	Mascot Galvanising Works Pty. Ltd., 342 King St., Mascot.	32332	Road Match	140m
MOTOR PAINTERS.	Sweetings Service Station, King St- Mascot.	51712	Road Match	140m
ENGINEERS GENERAL &/OR MANUFACTURING &/OR MECHANICAL.	Sweetings Service Station, King St., Mascot.	25448	Road Match	140m
MOTOR BODY REPAIRS &/OR CONVERTERS.	Sweetings Service Station, King St., Mascot.	47873	Road Match	140m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sweetings Service Station, King St., Mascot.	50915	Road Match	140m
MOTOR PANEL BEATERS	Sweetings Service Station, King St., Mascot.	52406	Road Match	140m
MOTOR ACCESSORIES DEALERS.	Sweetings Service Station, King St., Mascot.	47516	Road Match	140m

1975 Historical Business Directory Records

146-154 O'Riordan Street, Mascot, NSW 2020

Historical Business Directories

146-154 O'Riordan Street, Mascot, NSW 2020

1975 Business Directory Records
Premise or Road Intersection Matches

Records from the 1975 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
HOSPITAL SUPPLIES & EQUIPMENT MFRS. &/OR DISTS.	Bendix Consolidated Industries Ltd., 70 Macintosh St., Mascot	42465	Premise Match	33m	East
CHAIR MFRS.	Bendix Consolidated Industries Ltd., 70 Macintosh St., Mascot.	14309	Premise Match	33m	East
FURNITURE MFRS. &/OR W/SALERS. - OFFICE	Bendix Consolidated Industries Ltd., 70 Macintosh St., Mascot.	37150	Premise Match	33m	East
FURNITURE-TUBULAR STEEL MFRS. &/OR W/SALERS.	Bendix Consolidated Industries Ltd., 70 Macintosh St., Mascot.	37458	Premise Match	33m	East
HOTEL &/OR MOTEL EQUIPMENT SUPPLIES.	Bendix Consolidated Industries Ltd., 70 Macintosh St,	42624	Premise Match	33m	East
CAFE EQUIPMENT &/OR SUPPLIES.	Bendix Consolidated Industries Ltd., 70 Macintosh St., Mascot.	11740	Premise Match	33m	East
SCRAP METAL MERCHANTS.	R. & G. Trading, 183 O'Riordan St., Mascot.	76157	Premise Match	39m	North West
HOTEL &/OR MOTEL EQUIPMENT SUPPLIES.	Accommodation Accessories Pty. Ltd., 269 King St., Mascot	42613	Premise Match	69m	South
SHIPPING &/OR FORWARDING AGENTS.	A.F.A. Australia Forwarding Agency Group 263., 273 King St. Mascot	77096	Premise Match	69m	South
PUMP HIRERS.	Ardec, 267 King St, Mascot	71212	Premise Match	69m	South
CARRIERS &/OR CARTAGE CONTRACTORS - MASTER.	Aust Forwarding Agency Group, 263 King St, Mascot	13816	Premise Match	71m	South
CONTAINER TRANSPORT SERVICES.	Aust Forwarding Agency Group, 263 King St, Mascot.	18703	Premise Match	71m	South
CARRIERS DEPOTS-RECEIVING &/OR DESPATCH.	Aust Forwarding Agency Group, 263 King St, Mascot	13926	Premise Match	71m	South
CUSTOMS AGENTS.	A.F.A. Australian Forwarding Agency Group, 263-273 King St., Mascot.	19440	Premise Match	71m	South
CUSTOMS BY-LAW CONSULTANTS	A.F.A. Australian Forwarding Agency Group, 263-273 King St., Mascot.	19569	Premise Match	71m	South
FURNITURE REMOVALS &/OR STORAGE	Aust Forwarding Agency Group, 263 King St, Mascot	37346	Premise Match	71m	South
BOND &/OR FREE STORES.	Aust Forwarding Agency Group, 263 King St, Mascot	7090	Premise Match	71m	South
CUSTOMS AGENTS.	Aust Forwarding Agency Group, 263 King St, Mascot	19468	Premise Match	71m	South
CUSTOMS BY-LAW CONSULTANTS	Aust Forwarding Agency Group, 263 King St, Mascot.	19575	Premise Match	71m	South
CUSTOMS AGENTS.	Australian Meadows Aircargo Pty. Ltd., 263 King St, Mascot.	19469	Premise Match	71m	South
PARCEL DELIVERY SPECIALISTS.	Australian Meadows Aircargo Pty. Ltd, 263 King St. Mascot	66117	Premise Match	71m	South
AIR CARGO AGENTS.	Australian Meadows Aircargo Pty. Ltd. 263 King St, Mascot	1447	Premise Match	71m	South
BOND &/OR FREE STORES.	Australian Meadows Aircargo Pty. Ltd., 263 King St, Mascot	7091	Premise Match	71m	South
AIR CARGO AGENTS.	Australian Meadows Aircargo Pty. Ltd. 263 King St. Mascot	1460	Premise Match	71m	South
AIR CARGO AGENTS.	Aust Forwarding Agency Group, 263 King St, Mascot	1459	Premise Match	71m	South
SHIPPING &/OR FORWARDING AGENTS.	Aust. Forwarding Agency Group, 253 King St. Mascot	77111	Premise Match	71m	South East

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
SHIPPING &/OR FORWARDING AGENTS.	Australian Meadows Aircargo Pty. Ltd., 253 King St. Mascot	77112	Premise Match	71m	South East
HAULAGE CONTRACTORS.	Cook, A. & Sons Pty. Ltd., 247 King St., Mascot	41547	Premise Match	72m	South East
CRANES-MOBILE-PROPRIETORS &/OR HIRERS.	Cook, A. & Sons Pty. Ltd., 247 King St., Mascot.	19290	Premise Match	72m	South East
BOND &/OR FREE STORES.	Cook, A. & Sons Pty. Ltd., 247 King St., Mascot	7099	Premise Match	72m	South East
TALLOW MERCHANTS &/OR REFINERS.	Gearin O'Riordan Pty. Limited 177 O'Riordan St, Mascot,	82068	Premise Match	77m	North West
TALLOW MERCHANTS &/OR REFINERS.	Gearin O'Riordan Pty. Ltd. 177 O'Riordan St, Mascot	82077	Premise Match	77m	North West
STOCK FOODS MFRS. &/OR DISTS.	Gearin O'Riordan Pty. Limited,177 O'Riordan St, Mascot.	80967	Premise Match	77m	North West
STOCK FOODS MFRS. &/OR DISTS.	Gearin O'Riordan Pty. Ltd. 177 O'Riordan St, Mascot	80991	Premise Match	77m	North West
EXPORTERS.	Gearin O'Riordan Pty. Ltd, 177 O'Riordan St, Mascot	31024	Premise Match	77m	North West
BOX & CASE MFRS. &/OR MERCHANTS.	Winna Box Factory Pty. Ltd., 181 O'Riordan St., Mascot	8027	Premise Match	89m	North
WAX MFRS. &/OR IMPORTERS.	Bostik Australia Pty, Ltd., 191 O'Riordan St. Mascot.	86687	Premise Match	93m	West
INSULATING MATERIALS MFRS. &/OR DISTS. &/OR SUPPLIERS.	Bostik Australia Pty. Ltd., 191 O'Riordan St., Mascot	44707	Premise Match	93m	West
POLISH MFRS. &/OR DISTS.	Bostik Australia Pty. Ltd., 191 O'Riordan St., Mascot	68880	Premise Match	93m	West
ADHESIVES MFRS. &/OR DISTS.	Bostik Australia Pty. Ltd., 191 O'Riordan St., Mascot	831	Premise Match	93m	West
ZINC OXIDE MFRS.	Durham Chemicals Australia Pty. Ltd. 163 O'Riordan St. Mascot	88079	Premise Match	115m	North
ZINC MFRS. &/OR MERCHANTS.	Durham Chemicals Australia Pty. Ltd., 163 O'Riordan St. Mascot	88074	Premise Match	115m	North
TYRE &/OR TUBE MFRS. &/OR DISTS.	Gwynne. R. L. Pty. Ltd., 279 King St., Mascot.	85694	Premise Match	126m	South West
CHAIN-HEAVY-MFRS. &/OR IMPS. &/OR DISTS.	A.E.P. Engineering Sales Pty. Ltd. 209 O'Riordan St., Mascot	14275	Premise Match	127m	South West
GEAR CUTTERS &/OR MFRS.	Austral Engineering Products Pty. Ltd., 209 O'Riordan St, Mascot	37849	Premise Match	127m	South West
MOTOR PANEL BEATERS.	Kewin, G. H., 283 King St., Mascot.	60891	Premise Match	127m	South West
MOTOR PAINTERS.	Kewin. G. H 283 King St., Mascot.	60225	Premise Match	127m	South West
MOTOR GARAGES &/OR ENGINEERS.	Viscount Service Station, 283 King St., Mascot.	59725	Premise Match	127m	South West
CHAIN DRIVE SPECIALISTS.	A.E.P. Engineering Sales Pty. Ltd, 209 O'Riordan St, Mascot	14259	Premise Match	127m	South West
PNEUMATIC TOOLS MFRS. &/OR DISTS.	A.E.P. Engineering Sales Pty. Ltd., 209 O'Riordan St. Mascot	88850	Premise Match	127m	South West
ENGINEERS - GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Austral Engineering Products Pty. Ltd., 209 O'Riordan St, Mascot	28786	Premise Match	127m	South West
CHAIN-HEAVY-MFRS. &/OR IMPS. &/OR DISTS.	A. E. P. Engineering Sales Pty. Ltd. 205-213 O'Riordan St., Mascot	14274	Premise Match	129m	South West
ELECTRICAL SWITCHBOARD MFRS. &/OR DISTS	A.E.P. Sheet Metal Pty. Ltd. 205 O'Riordan St, Mascot	26652	Premise Match	129m	South West
ELECTRICAL METER BOX &/OR SURROUNDS MFRS.	A.E.P. Sheet Metal Pty. Ltd. 205 O'Riordan St, Mascot	26109	Premise Match	129m	South West
STEEL FABRICATORS.	A.E.P. Sheet Metal Pty. Ltd., 205 O'Riordan St, Mascot	80444	Premise Match	129m	South West
CHAIN SPROCKET MFRS.	Austral Engineering Products Pty. Ltd. 205-213 O'Riordan St., Mascot.	14303	Premise Match	129m	South West
GEAR CUTTERS &/OR MFRS.	Austral Engineering Products Pty. Ltd., 205-213 O'Riordan St., Mascot	37841	Premise Match	129m	South West
CHAIN DRIVE SPECIALISTS.	A. E. P. Engineering Sales Pty. Ltd. 205-213 O'Riordan St., Mascot	14257	Premise Match	129m	South West
AIR EQUIPMENT MFRS. &/OR DISTS.	A.E.P. Engineering Sales Pty. Ltd. 205-213 O'Riordan St.,	1808	Premise Match	129m	South West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
PNEUMATIC TOOLS MFRS. &/OR DISTS.	A.E.P. Engineering Sales. Pty. Ltd. 205-213 O'Riordan St, Mascot	88846	Premise Match	129m	South West
ENGINEERS-HOT WATER "HEATING &/OR VENTILATING.	A.E.P. Sheet Metal Pty. Ltd, 205 O'Riordan St, Mascot	29544	Premise Match	129m	South West
SHEET METAL WORKERS.	A.E.P. Sheet Metal Pty. Ltd, 205 O'Riordan St, Mascot	76746	Premise Match	129m	South West
SHEET METAL WORKERS.	A.E.P. Sheet Metal Pty. Ltd. 205 O'Riordan St., Mascot,	76730	Premise Match	129m	South West
WELDERS , Electric &/OR OXY.	A.E.P. Sheet Metal Pty. Ltd., 205 ORiordan St, Mascot	86755	Premise Match	129m	South West
ENGNEERS-FABRICATING	A.E.P. Sheet Metal Pty. Ltd., 205 ORiordan St, Mascot	28366	Premise Match	129m	South West
ENGINEERS - GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Austral Engineering Products Pty. Ltd. 205-213 O'Riordan St , Mascot	28707	Premise Match	129m	South West

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1975 Business Directory Records
Road or Area Matches

Records from the 1975 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
SUGAR REFINERS.	Industrial Sugar Mills Pty. Ltd., 389 King St, Mascot.	81276	Road Match	140m
MOTOR SERVICE STATIONS - PETROL, OIL	Kings Street Auto Port, King St., Mascot. 2020	51836	Road Match	140m
GALVANISING &/OR TINNING.	Mascot Galvanising Works Pty. Ltd., 342 King St., Mascot.	37549	Road Match	140m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1970 Historical Business Directory Records

146-154 O'Riordan Street, Mascot, NSW 2020

Historical Business Directories

146-154 O'Riordan Street, Mascot, NSW 2020

1970 Business Directory Records
Premise or Road Intersection Matches

Records from the 1970 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
PLYWOOD MFRS./MERCHANTS (P622)	Bretts Timber Agencies Pty. Ltd., 263 King St., Mascot	350886	Premise Match	69m	South
DOOR MANUFACTURERS (D480)	Bretts Timber Agencies Pty Ltd., 263 King St., Mascot	290106	Premise Match	69m	South
TIMBER MERCHANTS (T385)	Bretts Timber Agencies Pty.Ltd., 263 King St., Mascot	368913	Premise Match	69m	South
BUILDERS' SUPPLIERS (B814)	Bretts Timber Agencies Pty. Ltd., 263 King St., Mascot	271251	Premise Match	69m	South
FURNITURE/CABINET MAKERS'SUPPLIES (F695)	Bretts Timber Agencies Pty.Ltd., 263 King St., Mascot	308939	Premise Match	69m	South
TIMBER IMPORTERS &/OR DISTRIBUTORS (T380)	Bretts Timber Agencies Pty Ltd., 263 King St., Mascot	368822	Premise Match	69m	South
CARRIERS & CARTAGE CONTRACTORS (C150)	Cook, A. & Sons Pty. Ltd., 247-261 King St., Mascot	278015	Premise Match	71m	South East
CARRIERS & CARTAGE CONTRACTORS-MASTER (C147)	Cook, A. & Sons Pty. Ltd., 247-261 King St., Mascot	278456	Premise Match	71m	South East
HAULAGE CONTRACTORS (H323)	Cook, A. & Sons Pty. Ltd., 247-261 King St., Mascot	315631	Premise Match	71m	South East
CRANES -MOBILE-PROPRIETORS &/OR HIRERS (C737)	Cook, A. & Sons Pty. Ltd., 247-261 King St., Mascot	286272	Premise Match	71m	South East
BOND & FREE STORES (B525)	Cook, A. & Sons Pty. Ltd., 247-261 King St., Mascot	268106	Premise Match	71m	South East
TALLOW MERCHANTS &/OR REFINERS (T040)	Gearin O'Riordan Pty.Ltd., 177 O'Riordan St., Mascot.	367052	Premise Match	72m	North West
STOCK FOODS MANUFACTURERS&/OR DISTRIBUTORS (S757)	Gearin O'Riordan Pty.Ltd., 177 O'Riordan St,Mascot	365881	Premise Match	72m	North West
EXPORTERS (E835)	Gearin O'Riordan Pty.Ltd., 177 O'Riordan St., Mascot	301611	Premise Match	72m	North West
HOLDING COMPANIES (H470)	Gearin O'Riordan Pty. Ltd., 177 O'Riordan St., Mascot	316423	Premise Match	72m	North West
EARTH MOVING EQUIP.MFRS.,IMPORTERS &/OR DISTS (E020)	American Heavy Equipment Co.Pty Ltd., 185 O'RiordanSt., Mascot	292922	Premise Match	78m	West
MOTOR SPARE PARTS MFRS. &/OR WHOLESALERS (M732)	Thiess (Sales) Pty. Ltd., 185 O'Riordan St., Alexandria, 2015	342225	Premise Match	78m	West
COAL MINING CONTRACTORS-OPEN CUT (C500)	Thiess Bros Pty. Ltd., 185-189 O'Riordan St., Mascot	284805	Premise Match	78m	West
MOTOR CAR/TRUCK IMPORTERS/DISTRIBUTORS (M524)	Thiess (Sales) Pty. Ltd., 185 O'Riordan St., Alexandria, 2015	336399	Premise Match	78m	West
MOTOR CAR/TRUCK DEALERS-NEW/USED (M520)	Thiess (Sales) Pty. Ltd., 185 O'Riordan St., Alexandria, 2015	336311	Premise Match	78m	West
MOTOR SPARE PARTS DEALERS-RETAIL (M728)	Thiess (Sales) Pty. Ltd., 185 O'Riordan St., Alexandria, 2015	342049	Premise Match	78m	West
BRIDGE BUILDERS & CONTRACTORS (B728)	Thiess Bros Pty. Ltd., 185-189 O'Riordan St., Mascot	269687	Premise Match	78m	West
POLISH MFRS./DISTRIBUTORS (P638)	Bostik Aust. Pty. Ltd.,191-203 O'Riordan St.,Mascot	351040	Premise Match	93m	West
WAX MANUFACTURERS &/OR IMPORTERS (W115)	Bostik Aust.Pty.Ltd., 191-203 O'Riordan St.,Mascot	373322	Premise Match	93m	West
ADHESIVE MFRS &/OR DISTS (A120)	Bostik AustPty. Ltd., 191-203 O'Riordan St, Mascot	259708	Premise Match	93m	West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
INSULATING MATERIAL MFRS (I470)	Bostik Australia Pty. Ltd ,191-203 O'Riordan St, Mascot	319806	Premise Match	93m	West
ZINC MFRS.&/OR MERCHANTS (Z010)	Durham Chemicals A/asia Pty.Ltd., 163-173 O'Riordan St., Mascot	375640	Premise Match	116m	North
ZINC OXIDE MFRS.(Z020)	Durham Chemicals A/asia Pty.Ltd., 163-173 O'Riordan St., Mascot	375644	Premise Match	116m	North
EARTH MOVING EQUIP.MFRS.,IMPORTERS &/OR DISTS.(E020)	Ateco Pty.Ltd., 279 King St., Mascot	292926	Premise Match	125m	South West
TRAILER & SEMI-TRAILER SPARE PARTS-MFRS.&/OR DISTS.(T590)	Gwynne R.L.Pty.Ltd., 279 King St., Mascot	370710	Premise Match	125m	South West
WINCH MANUFACTURERS &/OR DISTRIBUTORS (W220)	McKee Sales Pty.Ltd, 279 King St, Mascot	374281	Premise Match	125m	South West
STEEL FABRICATORS (S673)	A.E.P. Sheet Metal Pty. Ltd., 205 O'Riordan St., Mascot, 2020	365148	Premise Match	127m	South West
ELECTRICAL METER BOX & SURROUNDS-MFRS.(E318)	A.E.P.Sheet Metal Pty.Ltd., 205 O'Riordan St., Mascot, 2020	295494	Premise Match	127m	South West
ELECTRICAL SWITCHBOARD MANUFACTURERS (E335)	A.E.P.Sheet Metal Pty.Ltd., 205 O'Riordan St., Mascot, 2020	296188	Premise Match	127m	South West
MOTOR PANEL BEATERS (M680)	Kewin,G. H., 283 King St., Mascot	340168	Premise Match	127m	South West
MOTOR PAINTERS (M672)	Kewin,G. H., 283 King St., Mascot	339414	Premise Match	127m	South West
MOTOR GARAGES & ENGINEERS(M6S6)	Viscount Service Station, 283 King St. MASCOT	338828	Premise Match	127m	South West
ENGINEERS-HOT WATER,VENTILATING (E640)	A. E. P. Sheet Metal Pty. Ltd., 205 O'Riordan St., Mascot, 2020	299841	Premise Match	127m	South West
SHEET METAL WORKERS (S230)	A. E. P. Sheet Metal Pty. Ltd., 205 O'Riordan St., Mascot, 2020	360516	Premise Match	127m	South West
ENGINEERS-FABRICATING (E580)	A.E.P. Sheet Metal Pty. Ltd., 205 O'Riordan St., Mascot, 2020	298398	Premise Match	127m	South West
ENGINEERS-AIR CONDITIONING (E490)	A.E.P.Air Conditioning Pty.Ltd., 205 O'Riordan St., Mascot	297316	Premise Match	127m	South West
VENTILATING EQUIPMENT MFRS &/OR DISTRIBUTORS (V120)	A.E.P.Sheet Metal Pty.Ltd., 205 O'Riordan St., Mascot, 2020	372516	Premise Match	127m	South West
WELDERS-ELECTRIC &/OR OXY (W145)	A.E.P.Sheet Metal Pty.Ltd., 205 O'Riordan St., Mascot, 2020	373411	Premise Match	127m	South West
AIR CONDITIONING UNITS &MACHINERY MFRS(A250)	A.E.P. Air Conditioning Pty. Ltd., 205 O'Riordan St., Mascot	260779	Premise Match	127m	South West

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1970 Business Directory Records
Road or Area Matches

Records from the 1970 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
BOX & CASE MERCHANTS &/OR MANUFACTURERS (B645)	Winna Box Factory Pty. Ltd., 181 O'Riordan St., Mascot	269485	Road Match	0m
MOTOR SERVICE STATIONS-PETROL,OIL,Etc (M710)	King Street Auto Port,King St. MASCOT	341250	Road Match	140m
GALVANISING & TINNING (G030)	Mascot Galvanising Works Pty.Ltd., 342 King St., Mascot	310215	Road Match	140m

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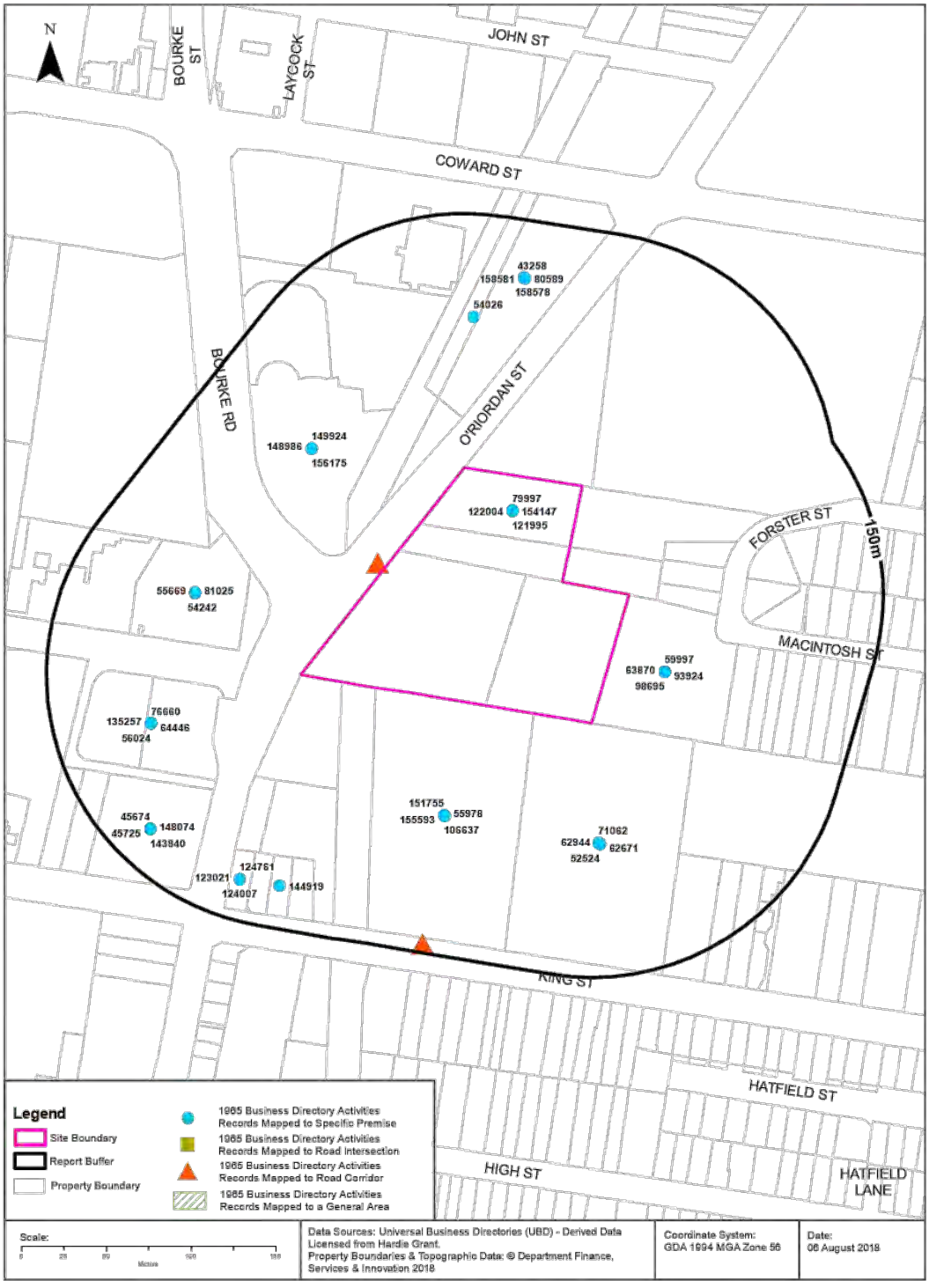
1965 Historical Business Directory Records

146-154 O'Riordan Street, Mascot, NSW 2020



Historical Business Directories

146-154 O'Riordan Street, Mascot, NSW 2020

1965 Business Directory Records
Premise or Road Intersection Matches

Records from the 1965 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
Fork-Lift Truck Manufacturers	Apac Industries Limited, 146 O'Riordan St., Mascot	89276	Premise Match	0m	Onsite
Trucks & Trolleys - Industrial - Imports. &/or Mfrs.	Apac Industries Limited, 146 O'Riordan St., Mascot	154147	Premise Match	0m	Onsite
Electronic Equipment Mfrs. &/or Dists.	Crypton A/asia Pty. Limited, , 146 O'Riordan St., Mascot	79997	Premise Match	0m	Onsite
Motor Garage Equipment/Tool Mfrs./Distributors	Crypton A/asia Pty. Ltd., 146 O'Riordan St., Mascot	122004	Premise Match	0m	Onsite
Motor Foundation Hard Trim	Apac Industries Limited, 146 O'Riordan St., Mascot	121995	Premise Match	0m	Onsite
SPRAYING EQUIPMENT MFRS &/OR DISTRIBUTORS	Apac Industries Ltd., 146 O'Riordan St., Mascot	146796	Premise Match	0m	Onsite
Lawn Mowers - Motor Powered - Importers, Distributors &/or Manufacturers	Apac Industries Ltd., 146 O'Riordan St., Mascot	107229	Premise Match	0m	Onsite
Lubricating Equipment Manufacturers	Apac Industries Ltd., 146 O'Riordan St., Mascot	108469	Premise Match	0m	Onsite
Material-Handling Equip. Manufacturers	Apac Industries Ltd., 146 O'Riordan St., Mascot	110380	Premise Match	0m	Onsite
Conveyors & Conveying Equip. Manufacturers	Apac Industries Ltd., 146 O'Riordan St., Mascot	70393	Premise Match	0m	Onsite
Motor Testing/Tuning Equipment Mfrs./Distributors	Crypton A'asia Pty. Limited, 146 O'Riordan St., Mascot	126960	Premise Match	0m	Onsite
Battery Charging & Testing Equipment Distributors	Crypton A'asia Pty. Ltd., 146 O'Riordan St., Mascot	50009	Premise Match	0m	Onsite
Furniture - Office - Mfrs. &/or Wholesalers	Bendix Industries (N.S.W.) Pty. Ltd. , 70 Macintosh St., Mascot	93924	Premise Match	33m	East
Furniture - Tubular Steel - Mfrs &/or W'Salers	Bendix Industries (N.S.W.) Pty. Ltd., 70 Macintosh St., Mascot	94251	Premise Match	33m	East
Chair Manufacturers	Bendix Industries (N.S.W.) Pty. Ltd., 70 Macintosh St., Mascot	63870	Premise Match	33m	East
Hospital Equipment Mfrs. &/or Suppliers	Bendix Industries (N.S.W.) Pty. Ltd., 70 Macintosh St., Mascot	100746	Premise Match	33m	East
Hotel Equipment/Supplies	Bendix Industries (N.S.W.) Pty. Ltd., 70 Macintosh St., Mascot	101295	Premise Match	33m	East
Hairdressers' Supplies	Bendix Industries (N.S.W.) Pty. Ltd., 70 Macintosh St., Mascot	98695	Premise Match	33m	East
Café Equipment & Supplies	Bendix Industries (N.S.W.) Pty. Ltd. , 70 Macintosh St., Mascot	59997	Premise Match	33m	East
Pump Manufacturers &/or Distributors	Royle, Arlan Pty. Ltd., 267 King St., Mascot	137566	Premise Match	69m	South
TIMBER MERCHANTS	Bretts Timber Agencies Pty. Ltd. , 263 King St., Mascot	151755	Premise Match	69m	South
Wallboard Mfrs	Bretts Timber Agencies Pty. Ltd., 263 King St., Mascot	155593	Premise Match	69m	South
Joinery Merchants	Bretts Timber Agencies Pty. Ltd., 263 King St., Mascot	106637	Premise Match	69m	South
Builders' Suppliers	Ashfield Plywood & Timber Pty. Ltd., 263 King St., Mascot	55978	Premise Match	69m	South
Cranes - Mobile - Proprietors & Hirers	Cook, A. & Sons Pty. Ltd. , 247 King St., Mascot	71062	Premise Match	71m	South East
Carriers & Cartage Contractors - Master	Cook, A. & Sons Pty. Ltd., 247-261 King St., Mascot	62671	Premise Match	72m	South East

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
Carriers & Cartage Contractors	Cook, A. & Sons Pty. Ltd., 247-261 King St., Mascot	62944	Premise Match	72m	South East
BOND & FREE STORES	Cook, A. & Sons Pty. Ltd., 247 King St., Mascot, 67 4946	52524	Premise Match	72m	South East
TALLOW MERCHANTS &/OR REFINERS	Gearin O'Riordan Pty. Ltd. , 177 O'Riordan St., Mascot	149924	Premise Match	77m	North West
STOCK FOODS MANUFACTURERS &/OR DISTRIBUTORS	Gearin, O'Riordan Pty. Limited , 177 O'Riordan St. Mascot	148986	Premise Match	77m	North West
Weighbridges	Gearin O'Riordan Pty. Limited , 177 O'Riordan St., Mascot	156175	Premise Match	77m	North West
Earth Moving Equipment - Mfrs. Importers &/or Dists.	American Heavy Equipment Co. Pty. Ltd., 185 O'Riordan St., Mascot	76888	Premise Match	78m	West
Coal Mining Contractors - Open Cut	Thiess Bros. Pty. Ltd., 185-189 O'Riordan St., Mascot	69457	Premise Match	78m	West
Engineers - Civil	Thiess Bros. Pty. Limited, , 185-189 O'Riordan St., Mascot	80895	Premise Match	78m	West
Earth-Moving Contractors	Thiess Bros. Pty. Limited, 185-189 O'Riordan St., Mascot	76818	Premise Match	78m	West
Engineers - Constructional	Thiess Bros. Pty. Ltd., 185-189 O'Riordan St., Mascot	81025	Premise Match	78m	West
Bride Builders & Contractors	Thiess Bros. Pty. Ltd. , 185-189 O'Riordan St., Mascot	54242	Premise Match	78m	West
Builders & Contractors	Thiess Bros. Pty. Limited , 185-189 O'Riordan St. Mascot	55669	Premise Match	78m	West
Road - Making Contractors	Thiess Bros. Pty. Limited , 185-189 O'Riordan St., Mascot	140749	Premise Match	78m	West
Contractors - General	Thiess Bros. Pty. Limited, 185-189 O'Riordan St., Mascot	70303	Premise Match	78m	West
Box & Case Merchants &/or Mfrs.	Winne Box Factory Pty, Ltd. , 181 O'Riordan St., Mascot	54026	Premise Match	89m	North
Chemists - Manufacturing &/or Wholesale	B. B. Chemical of Aust. Pty. Ltd., 191 O'Riordan St., Alexandria	64446	Premise Match	93m	West
Dye & Bleach Manufacturers Imports. &/or Dists.	B.B. Chemical Co. of Aust. Pty. Ltd., 191 O'Riordan St., Alexandria	76660	Premise Match	93m	West
Adhesive Mfrs. &/or Dists.	Bostik Aust. Pty. Ltd., 191-203 O'Riordan St., Mascot	44588	Premise Match	93m	West
Polish Manufacturers/Distributors	Bostik Aust. Pty. Ltd. , 191-203 O'Riordan St., Mascot	135257	Premise Match	93m	West
Wax Mfrs. &/or Importers	Bostik Aust. Pty. Ltd., , 191-203 O'Riordan St., Mascot	156078	Premise Match	93m	West
Sealing Compounds	Bostik Australia Pty. Ltd., 191-203 O'Riordan St., Mascot	143423	Premise Match	93m	West
Insulating Material Mfrs.	Bostik Australia Pty. Ltd., 191-203 O'Riordan St. Mascot	103950	Premise Match	93m	West
Motor Painters	Kabble & Abbey Pty. Ltd., 191 O'Riordan St., Mascot	124001	Premise Match	93m	West
Motor Body Repairs/Conveniers	Kable & Abbey Pty. Ltd., 191 O'Riordan St., Mascot	120171	Premise Match	93m	West
Motor Trimmers	Hyde, Frank, 191 O'Riordan St., Mascot	127233	Premise Match	93m	West
Builders' Suppliers	Bostik Australia Pty. Limited , 191-203 O'Riordan St., Mascot	56024	Premise Match	93m	West
Milk Vendors	Taylor, J, W., 191 O'Riordan St., Mascot	115933	Premise Match	93m	West
Engineers - Abbattoirs	Keith Engineering (Aust) Pty. Ltd., 163 O'Riordan St. Mascot	80589	Premise Match	115m	North
ABATTOIRS' MACHINERY SUPPLIES - MFRS.	Keith Engineering Sales Pty. Ltd, 163 O'Riordan St., Mascot	43258	Premise Match	115m	North
Zinc Mfrs.	Durham Chemicals A/asia Pty. Ltd., 163-173 O'Riordan St., Mascot	158578	Premise Match	116m	North
Zinc Oxide	Durham Chemicals A/asia Pty. Ltd. , 163-173 O'Riordan St., Mascot	158581	Premise Match	116m	North
SIGNWRITERS	Taylor, R., 279 King St., Mascot	144919	Premise Match	125m	South West
STEEL FABRICATORS	Austral Engineering Products Pty. Ltd. , 205 O'Riordan St., Mascot	148074	Premise Match	127m	South West
Electrical Meter Box & Surrounds - Mfrs.	Austral Engineering Products Pty. Ltd., 205 O'Riordan St., Mascot	79152	Premise Match	127m	South West
Electrical Switchboard Mfrs.	Austral Engineering Products Pty. Ltd. , 205 O'Riordan St., Mascot	79868	Premise Match	127m	South West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
Motor Painters	Kewin, G. H., 283 King St., Mascot	124007	Premise Match	127m	South West
Motor Panel Beaters	Kewin, G. H., 283 King St., Mascot	124761	Premise Match	127m	South West
Motor Garages & Engineers	Viscount Service Station, 283 King St. Mascot	123021	Premise Match	127m	South West
Air Equipment Mfrs. &/or Dists.	A.E.P. Air Conditioning Pty. Ltd. , 205 O'Riordan St., Mascot	45725	Premise Match	127m	South West
Air Conditioning Units & Machinery Mfrs	A.E.P. Air Conditioning Pty. Ltd. 205 O'Riordan St. Mascot	45674	Premise Match	127m	South West
Air Conditioning Units & Machinery Mfrs.	Austral Engineering Products Pty. Ltd. , 205 O'Riordan St., Mascot	45679	Premise Match	127m	South West
Engineers - Air Conditioning	Austral Engineering Products Pty. Ltd. , 205 O'Riordan St., Mascot	80658	Premise Match	127m	South West
Engineers - Fabricating	Austral Engineering Products Pty. Ltd. , 205 O'Riordan St., Mascot	81677	Premise Match	127m	South West
Sheet Metal Workers	Austral Engineering Products Pty. Ltd. 205 O'Riordan St., Mascot	143840	Premise Match	127m	South West
Welders - Electric &/or Oxy	Austral Engineering Products Pty. Ltd. , 205 O'Riordan St., Mascot	156232	Premise Match	127m	South West
Ventilating Equipment Mfrs. &/or Distributors	Austral Engineering Products Pty. Ltd. , 205 O'Riordan St., Mascot	155361	Premise Match	127m	South West
Engineers - Hot Water, Heating/Ventilating	Austral Engineering. Products Pty. Ltd. , 205 O'Riordan St., Mascot	83102	Premise Match	127m	South West

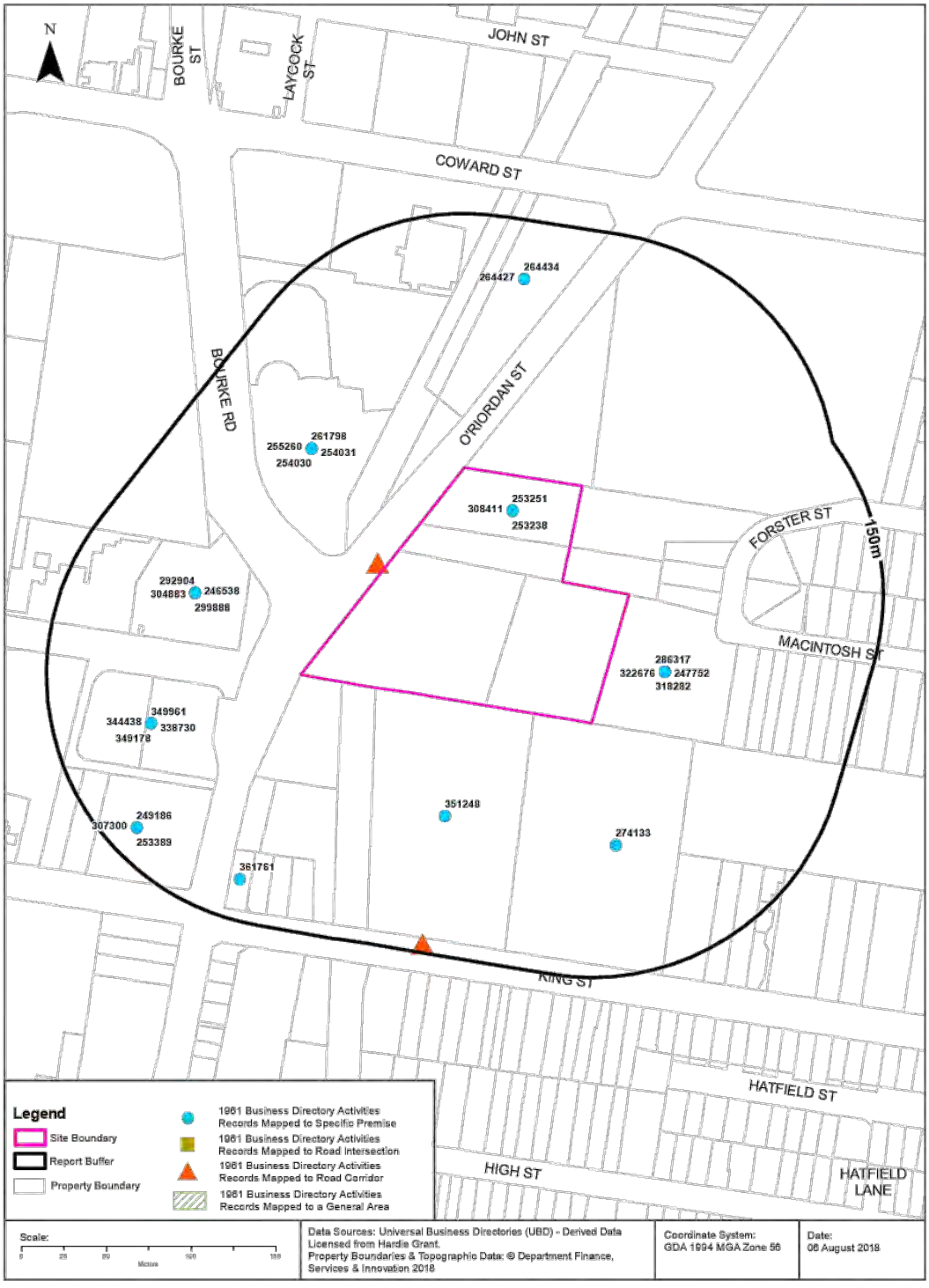
1965 Business Directory Records
Road or Area Matches

Records from the 1965 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
Engineers General &/or Mfrg. &/or Mechanical	Lekod Pty. Ltd. , 210 O'Riordan St., Mascot	82567	Road Match	0m
Motor Car Spring Mfrs.	Lewis, A. H. Pty. Ltd., O'Riordan St., Mascot	121212	Road Match	0m
Engineers - Repitition	Standfield, R. A, Pty. Ltd. , 210 O'Riordan St., Mascot	84103	Road Match	0m
Plastic Manufacturers &/or Moulders	Standfield, R. A. Pty. Ltd., 210 O'Riordan St., Mascot	134149	Road Match	0m
Engineers General &/or Mfrg. &/or Mechanical	Standfield, R. A. Pty. Ltd. , 210 O'Riordan St., Mascot	82888	Road Match	0m
Condiment Mfrs. &/or Dists.	Standfield, R. A. Pty. Ltd., 210 O'Riordan St., Mascot	70019	Road Match	0m
Metal Pressers/Stampers	Standfield, R. A. Pty. Ltd., 210 O'Riordan St., Mascot	114520	Road Match	0m
Galvanising & Tining	Mascot Galvanising Works Pty. Ltd. , 342 King St., Mascot	94410	Road Match	140m
Irrigation Systems & Equipment Mfrs. &/or Dists.	McCarey Irrigation Pty. Ltd., 338a King St., Mascot	105407	Road Match	140m

1961 Historical Business Directory Records

146-154 O'Riordan Street, Mascot, NSW 2020



Historical Business Directories

146-154 O'Riordan Street, Mascot, NSW 2020

1961 Business Directory Records
Premise or Road Intersection Matches

Records from the 1961 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
STEAM GENERATOR MFRS.	Clayton Manufacturing (Aust.) Pty. Ltd., 146 O'Riordan St., Mascot	253251	Premise Match	0m	Onsite
STEAM CLEANING EQUIP. MFRS.	Clayton Manufacturing (Aust.) Pty. Ltd., 146 O'Riordan St., Mascot	253238	Premise Match	0m	Onsite
ENGINEERS-STEAM	Clayton Manufacturing (Aust.) Pty. Ltd., 146 O'Riordan St., Mascot	308411	Premise Match	0m	Onsite
FURNITURE-OFFICE-MFRS	Bendix Industries (N.S.W.) Pty. Ltd., 70 Macintosh St., Mascot	318124	Premise Match	33m	East
FURNITURE-TUBULAR STEEL-MFRS. &/OR W'SALERS	Bendix Industries (N.S.W.) Pty. Ltd., 70 Macintosh St., Mascot	318281	Premise Match	33m	East
BEDSTEAD MANUFACTURERS	Bendix Industries (N.S.W.) Pty. Ltd., 70 Macintosh St., Mascot	272953	Premise Match	33m	East
CHAIR MANUFACTURERS	Bendix Industries (N.S.W.) Pty. Ltd., 70 Macintosh St., Mascot	286317	Premise Match	33m	East
HAIRDRESSERS' EQUIP. MFRS.	Bendix Industries (N.S.W.) Pty. Ltd., 70 Macintosh St., Mascot	322663	Premise Match	33m	East
HOSPITAL EQUIPMENT MFRS. &/OR SUPPLIERS	Bendix Industries (N.S.W.) Pty. Ltd., 70 Macintosh St., Mascot	324669	Premise Match	33m	East
HOTEL EQUIPMENT/SUPPLIES	Bendix Industries (N.S.W.) Pty. Ltd., 70 Macintosh St. Mascot	325058	Premise Match	33m	East
FURNITURE-TUBULAR STEEL-MFRS. &/OR W'SALERS	Bendix Industries (NSW) Pty Ltd 70 Macintosh St., Mascot	318282	Premise Match	33m	East
HAIRDRESSERS' SUPPLIES	Bendix Industries (N.S.W.) Pty. Ltd., 70 Macintosh St., Mascot	322676	Premise Match	33m	East
SANITARYWARE IMPORTERS	Bendix Industries (N.S.W.) Pty. Ltd., 70 Macintosh St., Mascot	247752	Premise Match	33m	East
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Viscount Service Station, 273b King St MASCOT	351248	Premise Match	69m	South
BOND & FREE STORES	Cook A & Sons Pty Ltd 247-261 King St., Mascot	274133	Premise Match	74m	South East
TALLOW MERCHANTS &/OR REFINERS	Gearin O'Riordan Pty Limited 177 O'Riordan St., Mascot	255259	Premise Match	77m	North West
TALLOW MERCHANTS &/OR REFINERS	Gearin O'Riordan Pty. Ltd., 177 O'Riordan St., Mascot	255260	Premise Match	77m	North West
STOCK FOODS MANUFACTURERS &/OR DISTRIBUTORS	Gearin O'Riordan Pty Limited 177 O'Riordan St., Mascot	254030	Premise Match	77m	North West
STOCK FOODS MANUFACTURERS &/OR DISTRIBUTORS	Gearin, O'Riordan Pty. Limited, 177 O'Riordan St., Mascot	254031	Premise Match	77m	North West
WEIGHBRIDGES	Gearin, O'Riordan Pty. Limited, 177 O'Riordan St., Mascot	261798	Premise Match	77m	North West
EARTH MOVING MACHINERY PARTS-MFRS. &/OR DISTS.	American Heavy Equipment Co. Pty. Ltd., 185 O'Riordan St., Mascot	299708	Premise Match	78m	West
EARTH-MOVING EQUIPMENT MFRS., IMPORTERS	American Heavy Equipment Co. Pty. Ltd., 185 O'Riordan St., Mascot	299888	Premise Match	78m	West
CRUSHING MACHINE MFRS. &/OR DISTRIBUTORS	American Heavy Equipment Company Pty. Ltd., 185 O'Riordan St., Mascot	293838	Premise Match	78m	West
MOTOR CAR/TRUCK DEALERS—NEW/USED	American Heavy Equipment Co. Pty. Ltd., 185 O'Riordan St., Mascot	344831	Premise Match	78m	West
MOTOR CAR/TRUCK IMPORTERS/DISTRIBUTORS	Thiess (Sales) Pty. Ltd., 185 O'Riordan St., Mascot	345552	Premise Match	78m	West
EARTH-MOVING CONTRACTORS	Thiess Bros Pty Limited 185-189 O'Riordan St., Mascot	299864	Premise Match	78m	West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
ENGINEERS-CIVIL	Thiess Bros Pty Limited 185-189 O'Riordan St., Mascot P.O. Box 98-Mascot	304883	Premise Match	78m	West
ENGINEERS-CIVIL	Thiess Bros. Pty. Limited, 185-189 O'Riordan St. Mascot	304884	Premise Match	78m	West
MOTOR CAR/TRUCK DEALERS—NEW/USED	Thiess (Sales) Pty. Ltd., 185 O'Riordan St., Mascot	345423	Premise Match	78m	West
EARTH-MOVING CONTRACTORS	Thiess Bros. Pty. Limited, 185-189 O'Riordan St., Mascot	299865	Premise Match	78m	West
BUILDERS & CONTRACTORS	Thiess Bros Pty Limited 185-189 O'riordan St., Mascot	276677	Premise Match	78m	West
BUILDERS & CONTRACTORS	Thiess Bros. Pty. Limited, 185-189 O'Riordan St., Mascot	276678	Premise Match	78m	West
CONTRACTORS-GENERAL	Thiess Bros Pty Limited 185-189 O'Riordan St., Mascot	292903	Premise Match	78m	West
ROAD-MAKING CONTRACTORS	Thiess Bros Pty Limited 185-189 O'Riordan St., Mascot	246538	Premise Match	78m	West
ROAD-MAKING CONTRACTORS	Thiess Bros. Pty. Limited, 185-189 O'Riordan St., Mascot	246539	Premise Match	78m	West
CONTRACTORS-GENERAL	Thiess Bros. Pty. Limited, 185-189 O'Riordan St. Mascot	292904	Premise Match	78m	West
MOTOR PAINTERS	Smith & Bassett Pty. Ltd., 191 O'Riordan St., Mascot	349178	Premise Match	93m	West
MOTOR PANEL BEATERS	Smith & Bassett Pty. Ltd., 191 O'Riordan St., Mascot	349961	Premise Match	93m	West
MOTOR BODY REPAIRS/CONVERTERS	Smith & Bassett Pty. Ltd., 191 O'Riordan St., Mascot	344438	Premise Match	93m	West
MOTOR TRIMMERS	Hyde, Frank, 191 O'Riordan St., Mascot	352284	Premise Match	93m	West
MILK VENDORS	Taylor, J. W., 191 ORiordan St., Mascot	338730	Premise Match	93m	West
ZINC MERCHANTS	Durham Chemicals Aust. Pty. Ltd., 163-173 O'Riordan St., Mascot	264427	Premise Match	115m	North
ZINC OXIDE MFRS.	Durham Chemicals Aust. Pty. Ltd., 163-173 O'Riordan St., Mascot	264434	Premise Match	115m	North
PRESSURE VESSEL MFRS.	Byrne & Thomas Pty. Ltd., 283 King St., Mascot	361761	Premise Match	127m	South West
STEEL FABRICATORS	Austral Engineering Products Pty. Ltd., 205 O'Riordan St., Mascot	253389	Premise Match	133m	South West
SHEET METAL WORKERS	Austral Engineering Products Pty. Ltd., 205 O'Riordan St., Mascot	249186	Premise Match	133m	South West
ENGINEERS-HOT WATER, HEATING/VENTILATING	Austral Engrg. Products Pty. Ltd., 205 O'Riordan St., Mascot	307300	Premise Match	133m	South West

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1961 Business Directory Records
Road or Area Matches

Records from the 1961 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
CRANES-MOBILE-IMPORTERS &/OR DISTRIBUTORS	American Heavy Equipment Company Pty. Ltd., 183 O'Riordan St., Mascot	293666	Road Match	0m
MOTOR GARAGE EQUIPMENT/TOOL MFRS./DISTRIBUTORS	Clayton (Aust.) Pty. Ltd., O'Riordan St., Mascot	346420	Road Match	0m
STEAM PLANT EQUIPMENT MFRS. &/OR DISTS.	Clayton Industries (Aust.) Pty. Ltd., O'Riordan St., Mascot	253263	Road Match	0m
MOTOR GARAGES & ENGINEERS	Clayton Manufacturing Pty. Ltd., O'Riordan St. MASCOT	346898	Road Match	0m
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Lewis, A. H. Pty. Ltd., O'Riordan St. MASCOT	350787	Road Match	0m
MOTOR CAR SPRING MFRS.	Lewis, A. H. Pty. Ltd., O'Riordan St., Mascot	344797	Road Match	0m

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
WELDING ARC SET MFRS.	Samson Arcwell Electrical Pty. Ltd., 4-6 Old Botany Rd., Mascot	262606	Road Match	0m
WELDING MACHINE MFRS	Samson Arcwell Electrical Pty. Ltd., 4-6 Old Botany Rd., Mascot	262675	Road Match	0m
ELECTRODES (WELDERS') - MANUFACTURERS	Samson Arcwell Electrical Pty. Ltd., 6 Old Botany Rd., Mascot	303704	Road Match	0m
PENCIL SHARPENER MFRS	Standfield R A Pty Ltd 210 O'Riordan St Mascot	357308	Road Match	0m
CONDIMENT MFRS. &/OR DISTS.	Standfield, R. A. Pty. Ltd., 210 O'Riordan St., Mascot	292560	Road Match	0m
ENGINEERS-GENERAL/MFRG / MECHANICAL	Standfield, R. A. Pty. Ltd., 210 O'Riordan St., Mascot	307055	Road Match	0m
ENGINEERS-REPETITION	Standfield, R. A. Pty. Ltd., 210 O'Riordan St., Mascot	308330	Road Match	0m
METAL PRESSERS/STAMPERS	Standfield, R. A. Pty. Ltd., 210 O'Riordan St., Mascot	338319	Road Match	0m
BOX & CASE MERCHANTS &/OR MANUFACTURERS	Winna Box Factory Pty. Ltd., 181 O'Riordan St., Mascot	275586	Road Match	0m
BOND & FREE STORES	Cook, A. & Sons Pty. Ltd., 747-761 King St., Mascot	274114	Road Match	140m
GALVANISING & TINNING	Mascot Galvanising Works Pty. Ltd., 342 King St., Mascot	318453	Road Match	140m
ENGINEERS-GENERAL/MFRG / MECHANICAL	McCarey Irrigation & Engineering, King St., Mascot	306747	Road Match	140m
IRRIGATION SYSTEMS & EQUIPMENT MFRS. &/OR DISTS.	McCarey Irrigation & Engineering, King St., Mascot	328757	Road Match	140m

1950 Historical Business Directory Records

146-154 O'Riordan Street, Mascot, NSW 2020

Historical Business Directories

146-154 O'Riordan Street, Mascot, NSW 2020

1950 Business Directory Records
Premise or Road Intersection Matches

Records from the 1950 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
PAINT, VARNISH & STAIN MANUFACTURERS	Campbell, W. F. Pty. Ltd., 70 Macintosh St., Mascot	90618	Premise Match	33m	East
MOTOR GARAGES &/OR ENGINEERS	Quartly, A., 273 King St., Mascot	84245	Premise Match	70m	South West
MOTOR PAINTERS	Quartly, A., 273 King St., Mascot	84985	Premise Match	70m	South West
MOTOR PANEL BEATERS	Quartly, A., 273 King St., Mascot	85459	Premise Match	70m	South West
MOTOR GARAGES &/OR ENGINEERS	Stevens, W. H., 265 King St., Mascot	84428	Premise Match	70m	South West

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1950 Business Directory Records
Road or Area Matches

Records from the 1950 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
STEAM CLEANING EQUIPMENT MANUFACTURERS	Andersen Engineering Pty. Ltd., 29-35 Old Botany Rd., Mascot	105132	Road Match	0m
CHEMICAL MANUFACTURERS	Andersen Products Pty. Ltd., 29 Old Botany Rd., Mascot	20985	Road Match	0m
MACHINERY MERCHANTS &/OR IMPORTERS	Andersen Products Pty. Ltd., 29 Old Botany Rd., Mascot	70007	Road Match	0m
MANUFACTURERS' AGENTS	Andersen Products Pty. Ltd., 29-35 Old Botany Rd., Mascot	70749	Road Match	0m
ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Andersen, P. M. Eng. Pty. Ltd., 29-35 Old Botany Rd., Mascot	40398	Road Match	0m
CHEMISTS-MANUFACTURING & WHOLESALE	Andersol Chemicals Pty. Ltd., 20-35 Old Botany Rd., Mascot	70405	Road Match	0m
CHEMICAL MANUFACTURERS	Andersol Chemicals Pty. Ltd., 29 Old Botany Rd., Mascot	20986	Road Match	0m
CLEANSER & CLEANING PREPARATIONS MFRS. &/OR DISTRIBUTORS	Andersol Chemicals Pty. Ltd., 29-35 Old Botany Rd., Mascot	23005	Road Match	0m
DETERGENT MFRS. &/OR DISTRIBUTORS	Andersol Chemicals Pty. Ltd., 29-35 Old Botany Rd., Mascot	32554	Road Match	0m
ENGINEERS-STEAM	Anderson, P. M. Engineering Pty. Ltd., 29 Old Botany Rd., Mascot	42349	Road Match	0m
FOUNDERS-FERROUS	Cole Bros., 42 Old Botany Rd., Mascot	47651	Road Match	0m
CARRIERS & CARTAGE CONTRACTORS (MASTER)	Corfield, E. G. Estate of the Late, "Aliceville," Old Botany Rd., Mascot	20153	Road Match	0m
BUILDERS' SUPPLIERS	Corfield, E. G., 124 Old Botany Rd., Mascot	11741	Road Match	0m

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
GRAVEL, SAND & SOIL SUPPLIES	Cottrell, E. G., 174 Old Botany Rd., Mascot	55127	Road Match	0m
ZINC MERCHANTS	Durham Chemicals Australia Pty. Ltd., 58-66 Old Botany Rd., Mascot	114769	Road Match	0m
ZINC MERCHANTS	Gearin, M. and Sons Pty. Ltd., 58-60 Old Botany Rd., Mascot	114771	Road Match	0m
STOCK FOODS MFRS. &/OR DISTRIBUTORS	Gearin, O'Riordan Ltd., 41 Old Botany Rd., Mascot	105678	Road Match	0m
FERTILIZER MANUFACTURERS & SUPPLIERS	Gearin, O'Riordan Ltd., Old Botany Rd., Mascot	43769	Road Match	0m
TALLOW MERCHANTS & REFINERS	Gearin, O'Riordan Ltd.,. 70 Old Botany Rd., Mascot	106922	Road Match	0m
DOG FOOD &/OR MEDICINE MANUFACTURERS	Gearin, O'Riordan, 70 Old Botany Rd., Mascot	33195	Road Match	0m
POULTRY FOOD MFRS. &/OR DISTRIBUTORS	Gearin, O'Riordan Ltd., Old Botany Rd., Mascot	94423	Road Match	0m
BISCUIT MFRS. &/OR DISTRIBUTORS	Hackshall's Ltd., 4-18 Old Botany Rd., Mascot	8222	Road Match	0m
CARRIERS & CARTAGE CONTRACTORS	Jarvie, A., 38 Old Botany Rd., Mascot	19097	Road Match	0m
HAULAGE CONTRACTORS-HEAVY	Jarvie, A., 38 Old Botany Rd., Mascot	51877	Road Match	0m
TRANSPORT SERVICES-INTERSTATE	Jarvie, A., 38 Old Botany Rd., Mascot	110248	Road Match	0m
MOTOR CAR SPRING MANUFACTURERS	Lewis, A. H., 11 Old Botany Rd., Mascot	82767	Road Match	0m
SPRING MANUFACTURERS	Lewis, A. H., 11 Old Botany Rd., Mascot	104794	Road Match	0m
AGRICULTURAL MACHINERY PARTS MFRS.	Paterson, J., 144 Old Botany Rd., Mascot	1419	Road Match	0m
ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Paterson, J., 144 Old Botany Rd., Mascot	41096	Road Match	0m
ENGINEERS-STRUCTURAL	Paterson, J., 144 Old Botany Rd., Mascot	42484	Road Match	0m
SHEET METAL WORKERS	Paterson, J., 144 Old Botany Rd., Mascot	101795	Road Match	0m
WELDERS-ELECTRIC &/OR OXY	Paterson, J., 144 Old Botany Rd., Mascot	112989	Road Match	0m
WIREWORKERS-GENERAL	Salwey, G. H., 13 Old Botany Rd., Mascot	113959	Road Match	0m
DISPLAY FITTINGS MFRS. &/OR SUPPLIERS	Salwey, G. H., 13 Old Botany Rd., Mascot	33065	Road Match	0m
MILK BARS & CONFECTIONERS	Shearer, A. A., 142 Old Botany Rd., Mascot	77348	Road Match	0m
ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Stiff, C. J., 48 Old Botany Rd., Mascot	41291	Road Match	0m
MOTOR GARAGES &/OR ENGINEERS	Stiff, C. J., 48 Old Botany Rd., Mascot	84432	Road Match	0m
MILK VENDORS	Taylor, J. W., Old Botany Rd., Mascot	77946	Road Match	0m
LIVERY STABLES	Vallely, H., 104 Old Botany Rd., Mascot	69668	Road Match	0m
RIDING SCHOOLS	Vallely, H., 104 Old Botany Rd., Mascot	99545	Road Match	0m
BUTCHERS-RETAIL	Ball, A., King St., Mascot	13093	Road Match	140m
GROCERS-RETAIL	Bastow, J. E., King St., Mascot	56393	Road Match	140m
BEAUTY SALONS &/OR LADIES' HAIRDRESSERS	Betty's Beauty Box, King St., Mascot	6890	Road Match	140m
GROCERS-RETAIL	Bray, W., King St. East, Mascot	56525	Road Match	140m
PAINT, VARNISH & STAIN MANUFACTURERS	Consolidated Paints and Products Co., 358 King St., Mascot	90625	Road Match	140m
GROCERS-RETAIL	Jerome, B. W., King St., Mascot	57888	Road Match	140m
GALVANISING	Mascot Galvanising Works, 342 King St., Mascot	53925	Road Match	140m
GROCERS-RETAIL	Murphy's Corner, King and Sharp Sts., Mascot	58513	Road Match	140m

Historical Business Directories

146-154 O'Riordan Street, Mascot, NSW 2020

Dry Cleaners, Motor Garages & Service Stations Premise or Road Intersection Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Feature Point	Direction
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Viscount Service Station, 273b King St. MASCOT	351248	1961	Premise Match	69m	South
MOTOR GARAGES &/OR ENGINEERS	Quartly, A., 271 King St., Mascot	84245	1950	Premise Match	70m	South West
MOTOR GARAGES &/OR ENGINEERS	Stevens, W. H., 265 King St., Mascot	84428	1950	Premise Match	70m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Viscount Service Centre, 283 King St., Mascot.	51041	1978	Premise Match	127m	South West
MOTOR GARAGES &/OR ENGINEERS.	Viscount Service Station, 283 King St., Mascot.	59725	1975	Premise Match	127m	South West
MOTOR GARAGES & ENGINEERS(M6S6)	Viscount Service Station, 283 King St. MASCOT	338828	1970	Premise Match	127m	South West
Motor Garages & Engineers	Viscount Service Station, 283 King St. Mascot	123021	1965	Premise Match	127m	South West
MOTOR SERVICE STATIONS-PETROL, Etc.	Quartleys Garage, Cnr. King St. and Old Botany Rd., Mascot	86311	1950	Road Intersection	154m	South West
MOTOR GARAGES & ENGINEERS	Smalley, W. J. Pty. Ltd., 50 Macintosh St. MASCOT	348145	1961	Premise Match	176m	East
MOTOR GARAGES &/OR ENGINEERS	Smalley, W. J., 50 Macintosh St., Mascot	84380	1950	Premise Match	176m	East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Quartly's Service Station, 322 King St., Mascot.	50702	1978	Premise Match	180m	South West
MOTOR GARAGES &/OR ENGINEERS.	Quartly's Service Station, 322 King St., Mascot.	59427	1975	Premise Match	180m	South West
Motor Garages & Engineers	Quartly's Service Station, 322 King St. Mascot	123014	1965	Premise Match	180m	South West
MOTOR GARAGES & ENGINEERS	Quartly's Service Station, 322 King St. Mascot	347961	1961	Premise Match	180m	South West
MOTOR GARAGES & ENGINEERS(M6S6)	Quartly's Service Station, 322 King St. MASCOT	338461	1970	Premise Match	213m	South West
MOTOR GARAGES & ENGINEERS(M6S6)	Geary,K. R. (Mascot) Pty. Ltd., 149 O'Riordan St. MASCOT	337853	1970	Premise Match	216m	North
MOTOR GARAGES &/OR ENGINEERS.	Cook, W. H. & Son, 276a King St., Mascot.	58692	1975	Premise Match	221m	South East
MOTOR GARAGES & ENGINEERS(M6S6)	Rex-Press, 295 King St. MASCOT, 2020	338507	1970	Premise Match	228m	West
Motor Service Stations - Petrol, Oil, Etc.	Golden Fleece Service Station, 131-133 O'Riordan St. Alexandria	125357	1965	Premise Match	316m	North
MOTOR GARAGES & ENGINEERS	Golden Fleece Service Station, 131-133 O'Riordan St. City of Sydney	347247	1961	Premise Match	316m	North
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Golden Fleece Service Station, 131-133 O'Riordan St. MASCOT	350613	1961	Premise Match	316m	North
MOTOR SERVICE STATIONS - PETROL, OIL	Airport Service Station, 239 O'Riordan St., Mascot.	61362	1975	Premise Match	330m	South West
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Airport Service Station, 239 O'Riordan St. MASCOT	350295	1961	Premise Match	330m	South West
Motor Garages & Service Stations	Ampol Mascot Self Serve, 239 O'Riordan St Mascot 2020	53481	1991	Premise Match	338m	South West
MOTOR GARAGES & SERVICE STATIONS.	Airport Service Station, 239 O'Riordan St., Mascot.	63866	1982	Premise Match	338m	South West

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance To Feature Point	Direction
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Airport Service Station, 239 O'Riordan St., Mascot. 2020	55937	[illegible]	Premise Match	338m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Airport Service Station, 239 O'Riordan St., Mascot.	49216	1978	Premise Match	338m	South West
Motor Garages & Engineers	Truck Sales & Service Pty. Ltd., 200 O'Riordan St. Mascot	123019	[illegible]	Premise Match	341m	South
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Airport Service Station, 239 O'Riordan St. MASCOT	340739	1970	Premise Match	371m	South West
Motor Service Stations - Petrol, Oil, Etc.	Airport Service Station, 239 O'Riordan St. Mascot	125904	[illegible]	Premise Match	371m	South West
MOTOR GARAGES & SERVICE STATIONS.	Caltex Mascot Service Station, 125 O'Riordan St., Mascot.	64360	[illegible]	Premise Match	382m	North East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Golden Fleece Mascot Service Station, 125 O'Riordan St Mascot2020	56851	[illegible]	Premise Match	382m	North East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Service Station, 125 O'Riordan St., Mascot.	50173	1978	Premise Match	382m	North East
MOTOR GARAGES & ENGINEERS(M6S6)	Robey Auto Repairs & Towing Service, 64 Robey St. MASCOT	338523	1970	Premise Match	427m	South
Motor Garages & Engineers	Hambly, W., 127 Baxter Rd. Mascot	123006	1985	Premise Match	446m	South
Motor Garages & Engineers	Haynes, L. G., 127 Baxter Rd. Mascot	123007	[illegible]	Premise Match	446m	South
MOTOR GARAGES & ENGINEERS	Haynes, L. G., 127 Baxter Rd. MASCOT	347348	1961	Premise Match	446m	South
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Smith, S. H., 844 Botany Rd. Mascot. 2020	57580	[illegible]	Premise Match	456m	East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Smith, S. H., 844 Botany Rd., Mascot.	50846	1978	Premise Match	456m	East
MOTOR GARAGES &/OR ENGINEERS	Smith, S. H., 844 Botany Rd. Mascot	59545	1975	Premise Match	456m	East
MOTOR GARAGES & ENGINEERS(M6S6)	Smith,S. H., 844 Botany Rd.MASCOT	338617	1970	Premise Match	456m	East
Motor Garages & Engineers	Smith, S. H., 844 Botany Rd. Mascot	123017	[illegible]	Premise Match	456m	East
MOTOR GARAGES & ENGINEERS	Smith, S. H., 844 Botany Rd. MASCOT	348153	1961	Premise Match	456m	East
MOTOR GARAGES &/OR ENGINEERS	Smith, S. H., 844 Botany Rd., Mascot	84385	1950	Premise Match	456m	East
MOTOR SERVICE STATIONS-PETROL, Etc.	Smith, S. H., 844 Botany Rd., Mascot	86400	1950	Premise Match	456m	East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS	Right-Way Motor Repairs, 124 O'Riordan St., Mascot	50742	1978	Premise Match	493m	North East

Historical Business Directories

146-154 O'Riordan Street, Mascot, NSW 2020

Dry Cleaners, Motor Garages & Service Stations
Road or Area Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
MOTOR GARAGES & ENGINEERS	Clayton Manufacturing Pty. Ltd., O'Riordan St. MASCOT	346898	1961	Road Match	0m
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Lewis, A. H. Pty. Ltd., O'Riordan St. MASCOT	350787	1961	Road Match	0m
MOTOR GARAGES &/OR ENGINEERS	Stiff, C. J., 48 Old Botany Rd., Mascot	84432	1950	Road Match	0m
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	King Street Auto Port,King St. MASCOT	341250	1970	Road Match	140m
MOTOR GARAGES & SERVICE STATIONS.	Kings Street Auto Port, King St., Mascot.	64949	1980	Road Match	140m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS	Kings Street Auto Port, King St., Mascot.	50334	1978	Road Match	140m
MOTOR SERVICE STATIONS - PETROL, OIL	Kings Street Auto Port, King St., Mascot. 2020	61836	1975	Road Match	140m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Kings Street Auto Port, King St., Mascot. 2020.	57051	1982	Road Match	140m
MOTOR GARAGES & SERVICE STATIONS.	Sweetings Service Station, King St., Mascot.	65543	1986	Road Match	140m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sweetings Service Station, King St., Mascot.	50915	1978	Road Match	140m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Sweetings Service Station, King St., Mascot. 2020.	57664	1982	Road Match	140m
MOTOR GARAGES & ENGINEERS	May & Blake Chalmers Cres. MASCOT	347663	1961	Road Match	262m
MOTOR GARAGES & ENGINEERS(M6S6)	May & Blake Pty. Ltd.,Chalmers Cres.MASCOT	338225	1970	Road Match	262m
Motor Garages & Engineers	May & Blake, Chalmers Cres. Mascot	123011	1965	Road Match	262m
MOTOR GARAGES & ENGINEERS	May & Blake, Chalmers Cres. MASCOT	347664	1961	Road Match	262m
MOTOR SERVICE STATIONS-PETROL, OIL	Golden Fleece Service Station, 131 O'Riordan St. Mascot.	61799	1975	Road Match	341m
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Golden Fleece Service Station,131 O'Riordan St.,Mascot	341150	1970	Road Match	341m
Motor Service Stations - Petrol, Oil, Etc.	Lyndon, Peter & David, 243 O'Riordan St. Mascot	125909	1965	Road Match	463m
MOTOR GARAGES & ENGINEERS	Coggins, W. T. Pty. Ltd., 210 Kent Rd. MASCOT	346911	1961	Road Match	471m
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Coggins, W. T. Pty. Ltd., 210 Kent Rd. MASCOT	350481	1961	Road Match	471m
MOTOR GARAGES &/OR ENGINEERS	Mascot Service Station, Botany Rd., Mascot	83385	1950	Road Match	475m
MOTOR SERVICE STATIONS-PETROL, Etc.	Mascot Super Service Garage, Botany Rd., Mascot	85753	1950	Road Match	475m

Aerial Imagery 2015

146-154 O'Riordan Street, Mascot, NSW 2020

Aerial Imagery 2009

146-154 O'Riordan Street, Mascot, NSW 2020

Aerial Imagery 2000

146-154 O'Riordan Street, Mascot, NSW 2020

Aerial Imagery 1991

146-154 O'Riordan Street, Mascot, NSW 2020

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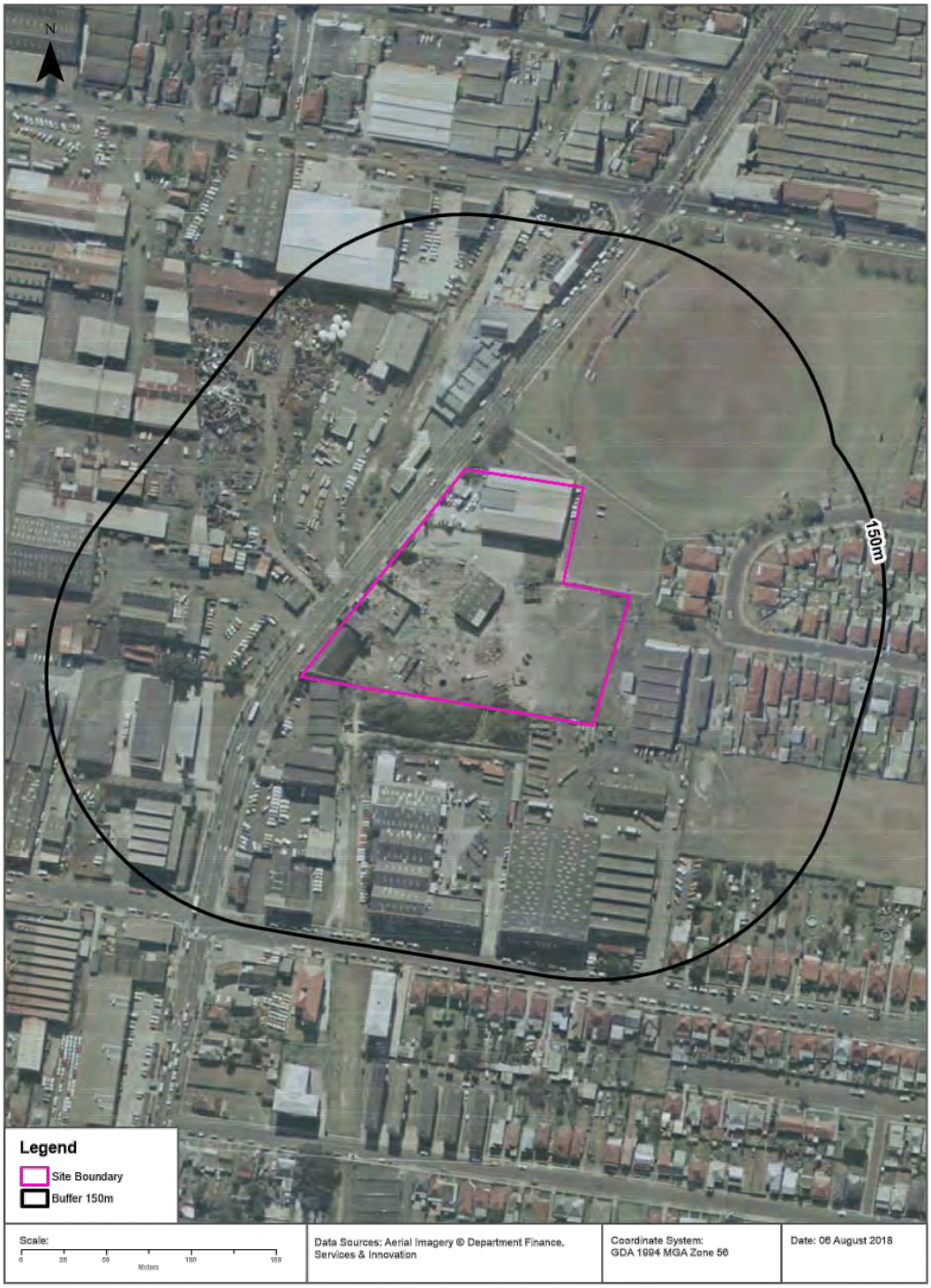
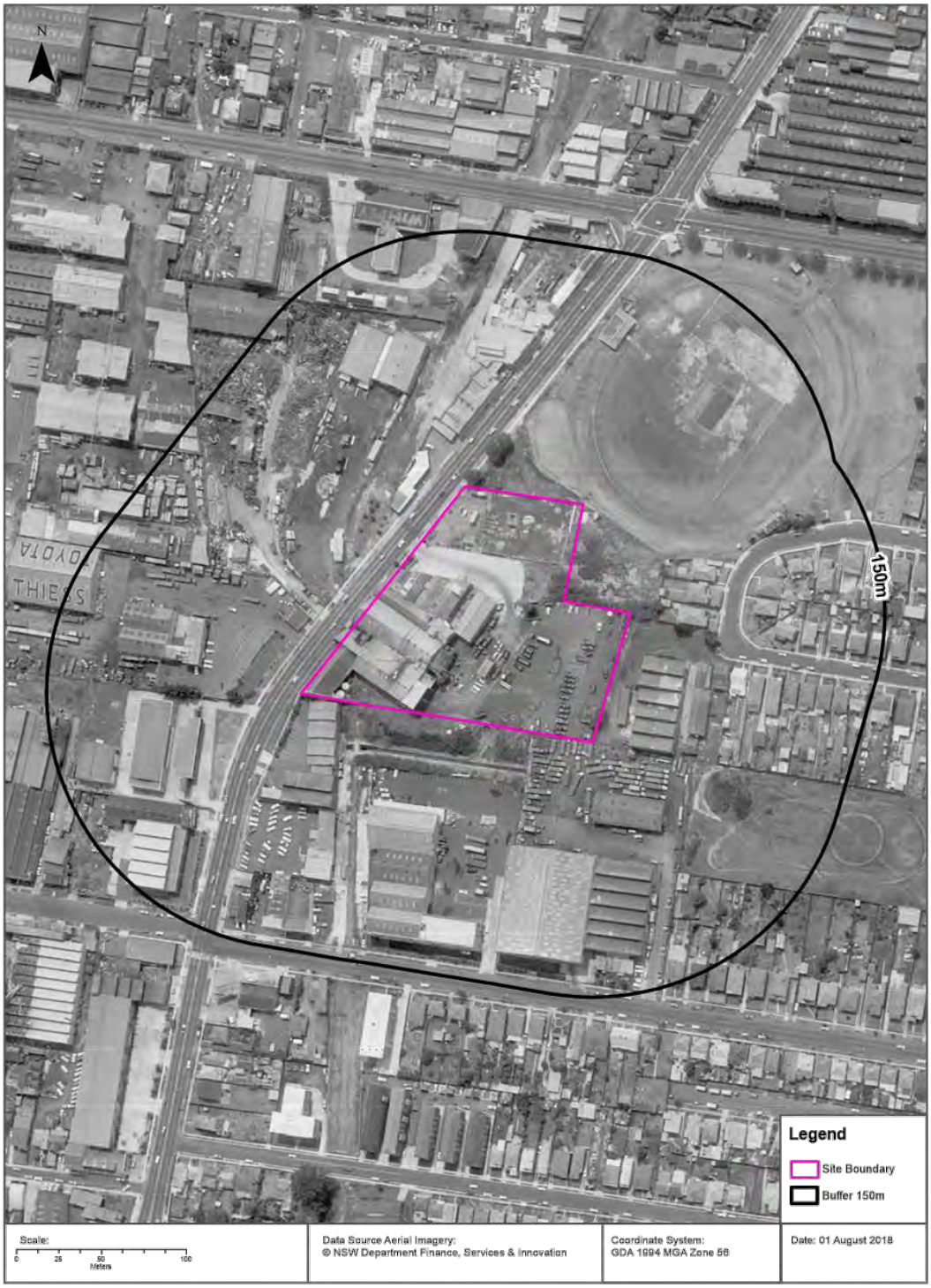
Aerial Imagery 1982

146-154 O'Riordan Street, Mascot, NSW 2020



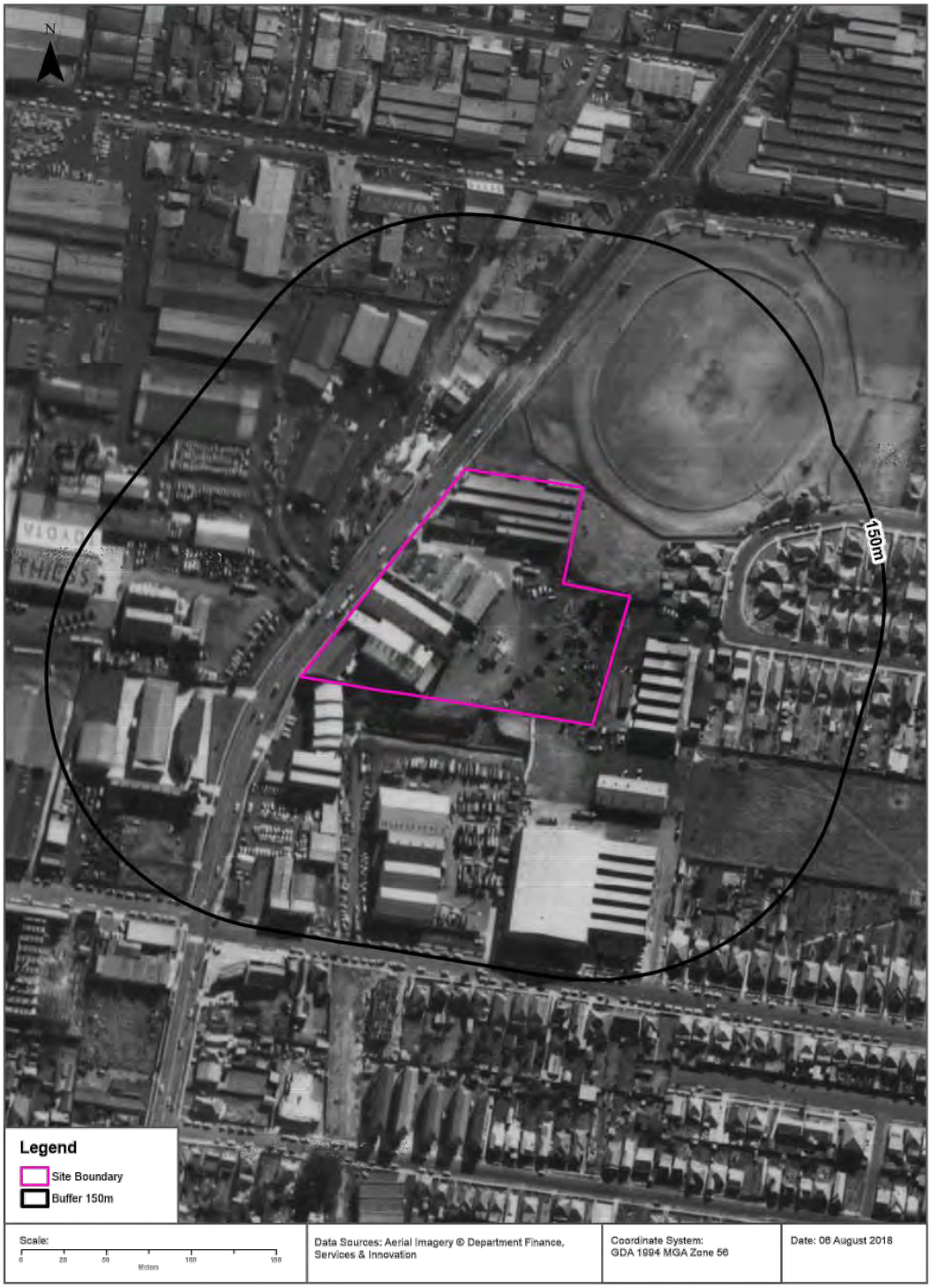
Aerial Imagery 1976

146-154 O'Riordan Street, Mascot, NSW 2020



Aerial Imagery 1970

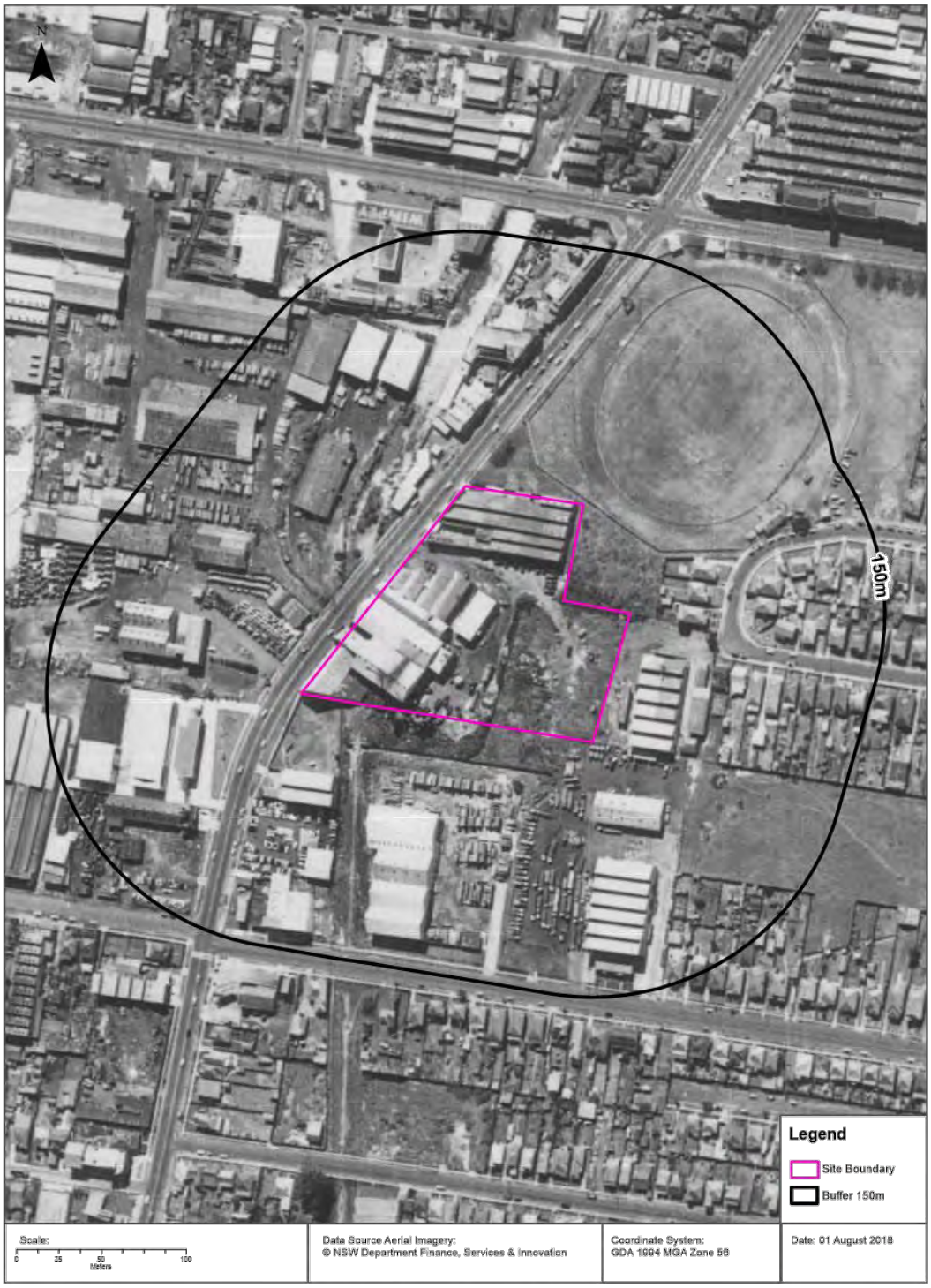
146-154 O'Riordan Street, Mascot, NSW 2020



Lotsearch Pty Ltd ABN 89 600 168 018 63

Aerial Imagery 1965

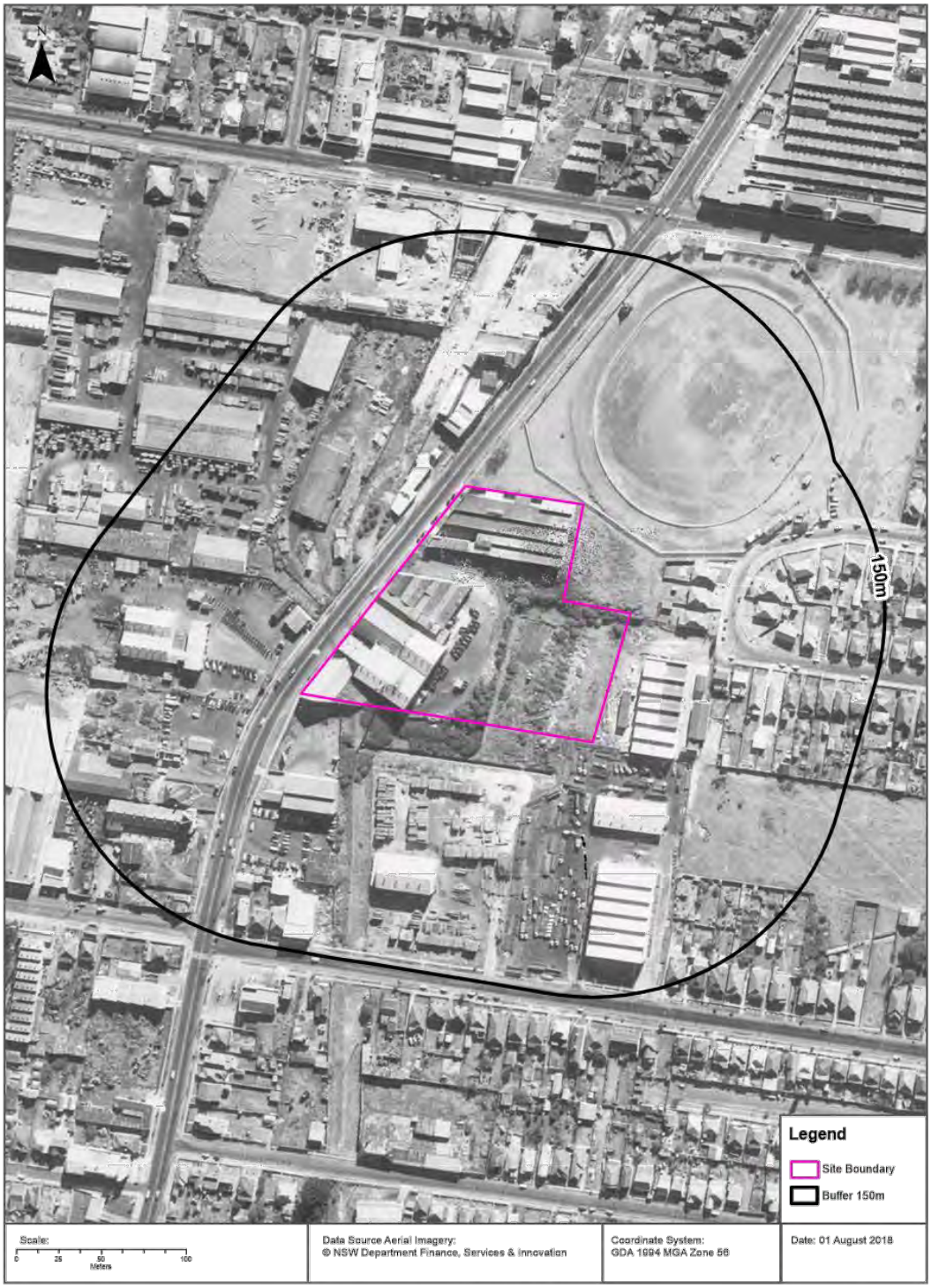
146-154 O'Riordan Street, Mascot, NSW 2020



Lotsearch Pty Ltd ABN 89 600 168 018 64

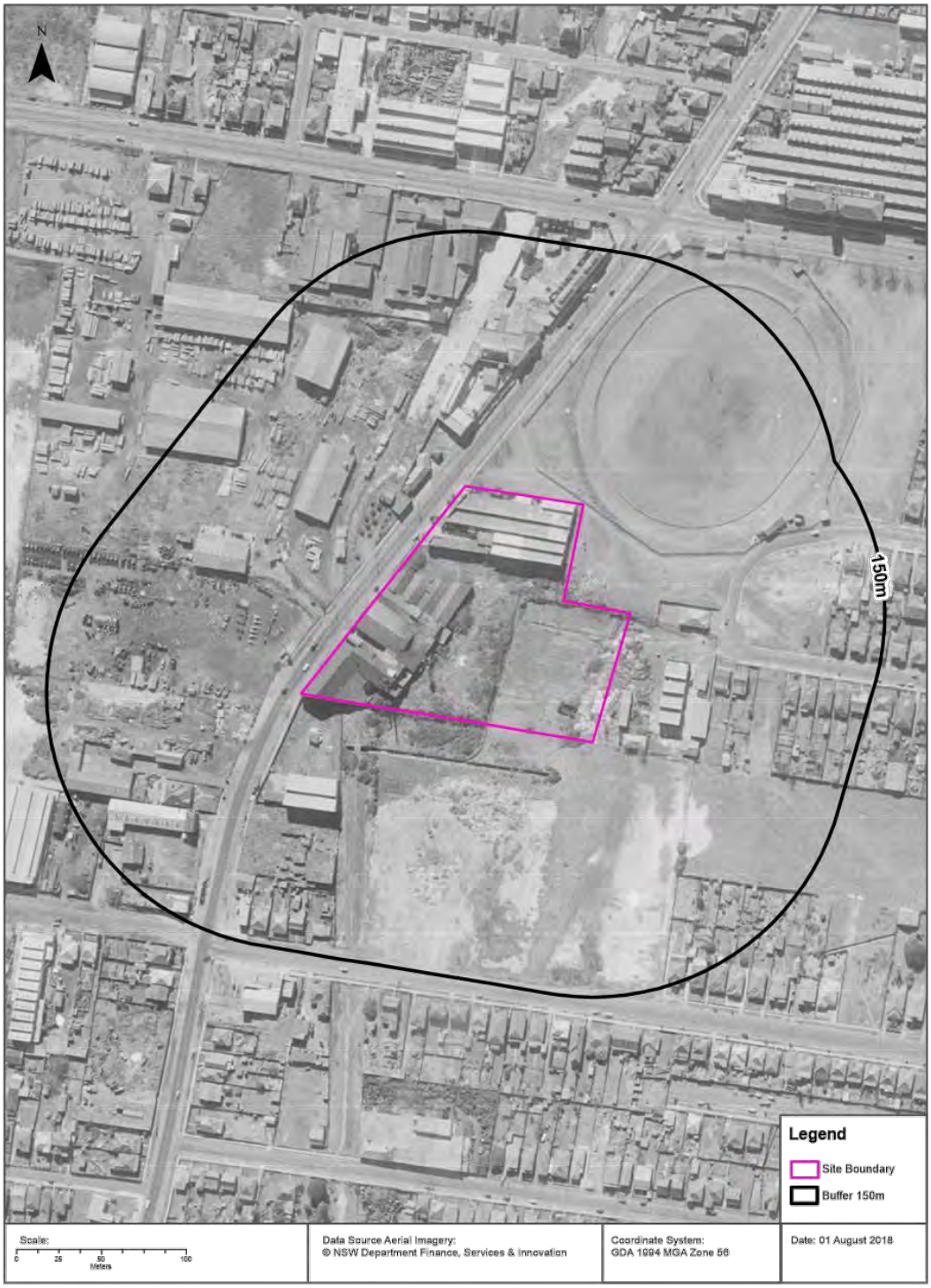
Aerial Imagery 1961

146-154 O'Riordan Street, Mascot, NSW 2020



Aerial Imagery 1955

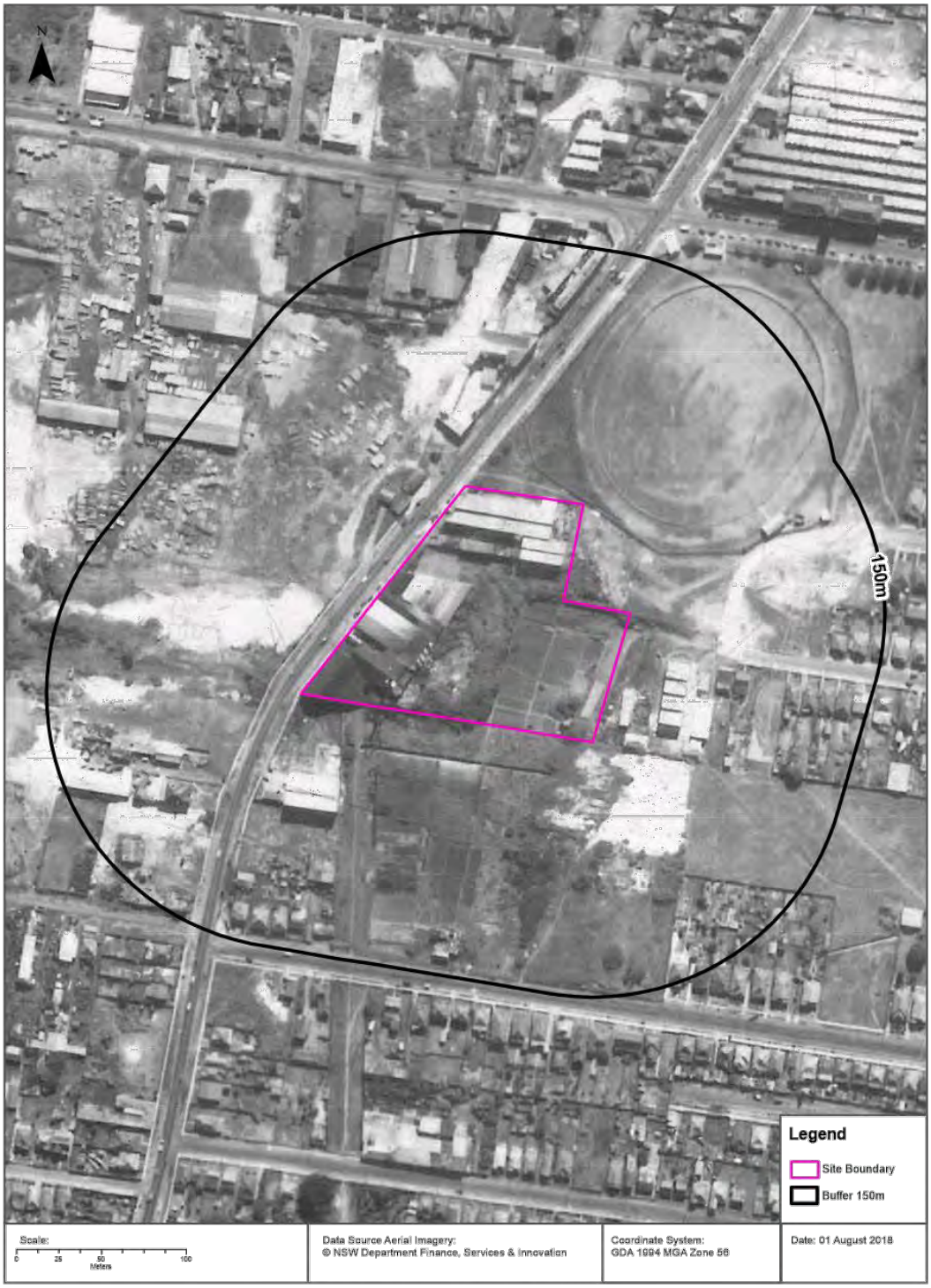
146-154 O'Riordan Street, Mascot, NSW 2020



Lotsearch Pty Ltd ABN 89 600 168 018 65

Aerial Imagery 1951

146-154 O'Riordan Street, Mascot, NSW 2020



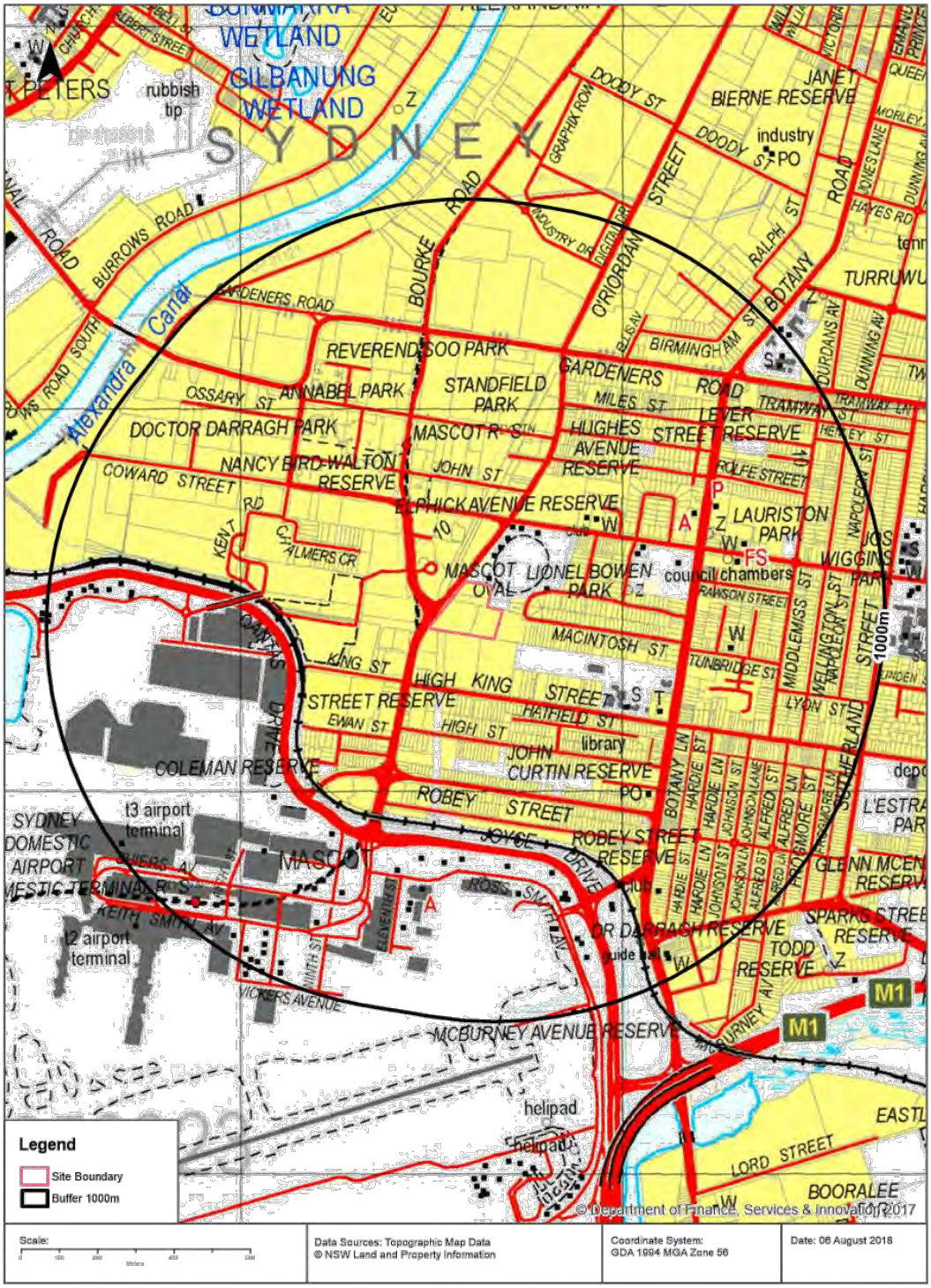
Lotsearch Pty Ltd ABN 89 600 168 018 67

Aerial Imagery 1943

146-154 O'Riordan Street, Mascot, NSW 2020

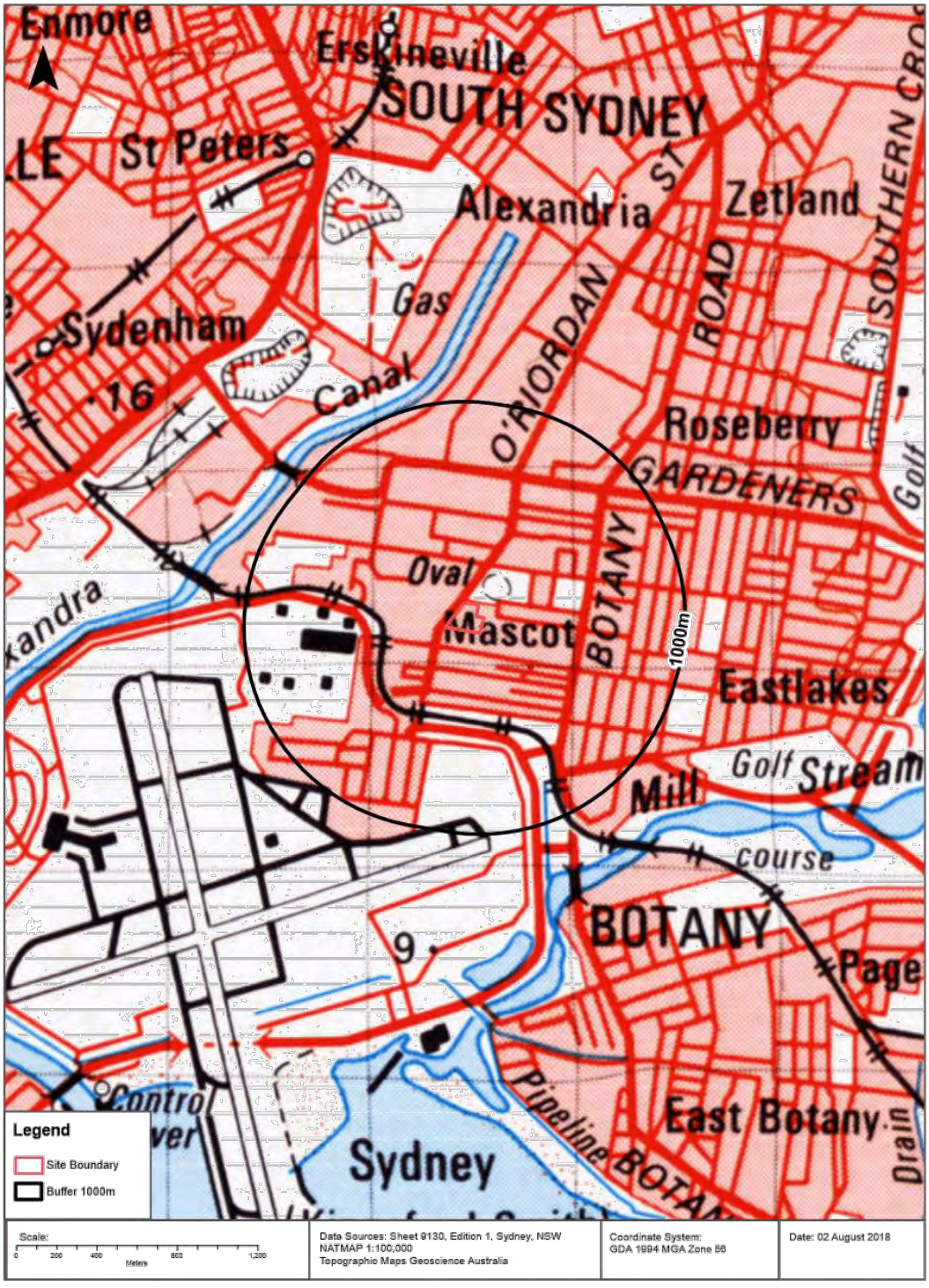
Topographic Map 2015

146-154 O'Riordan Street, Mascot, NSW 2020



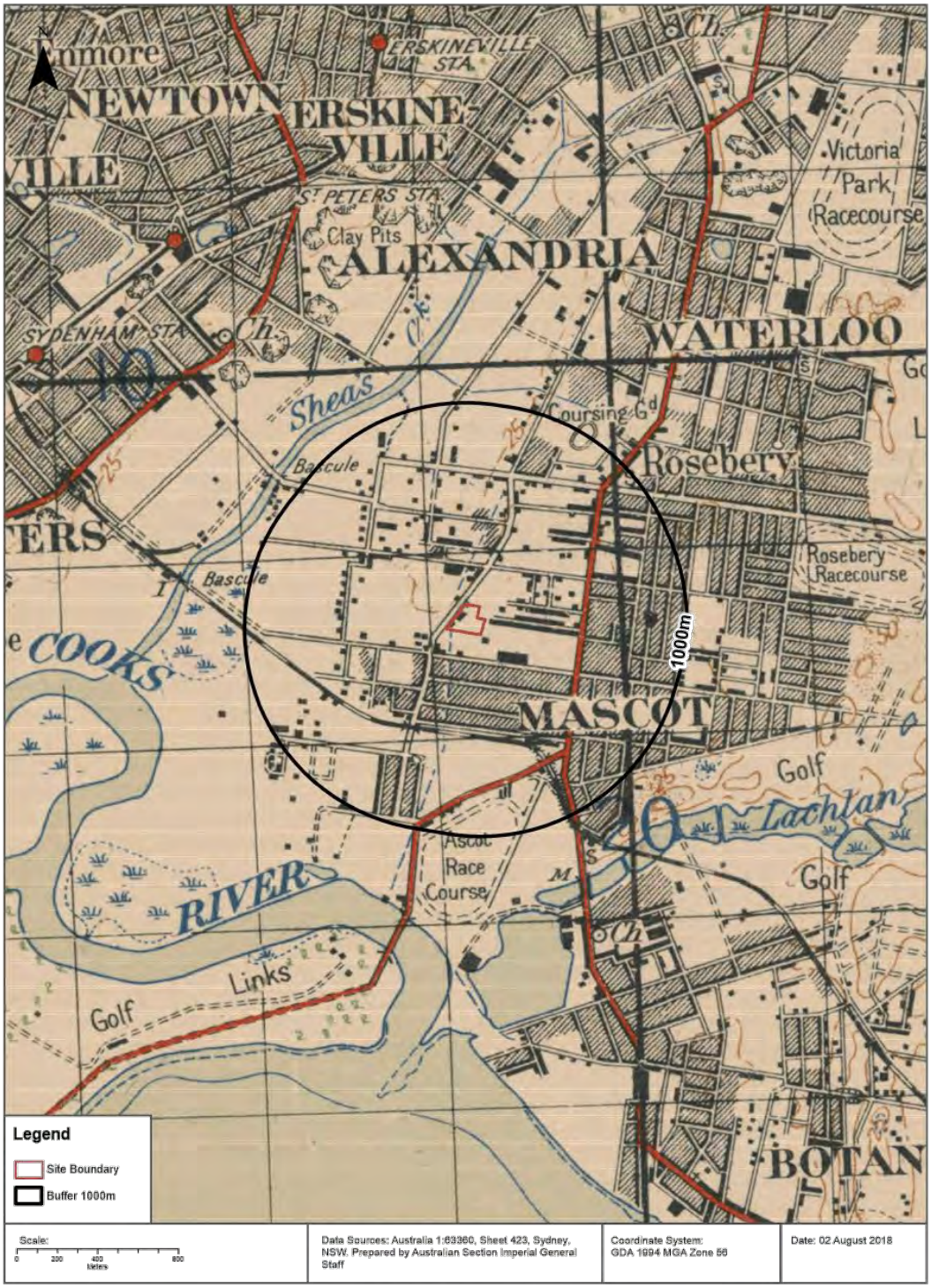
Historical Map 1975

146-154 O'Riordan Street, Mascot, NSW 2020



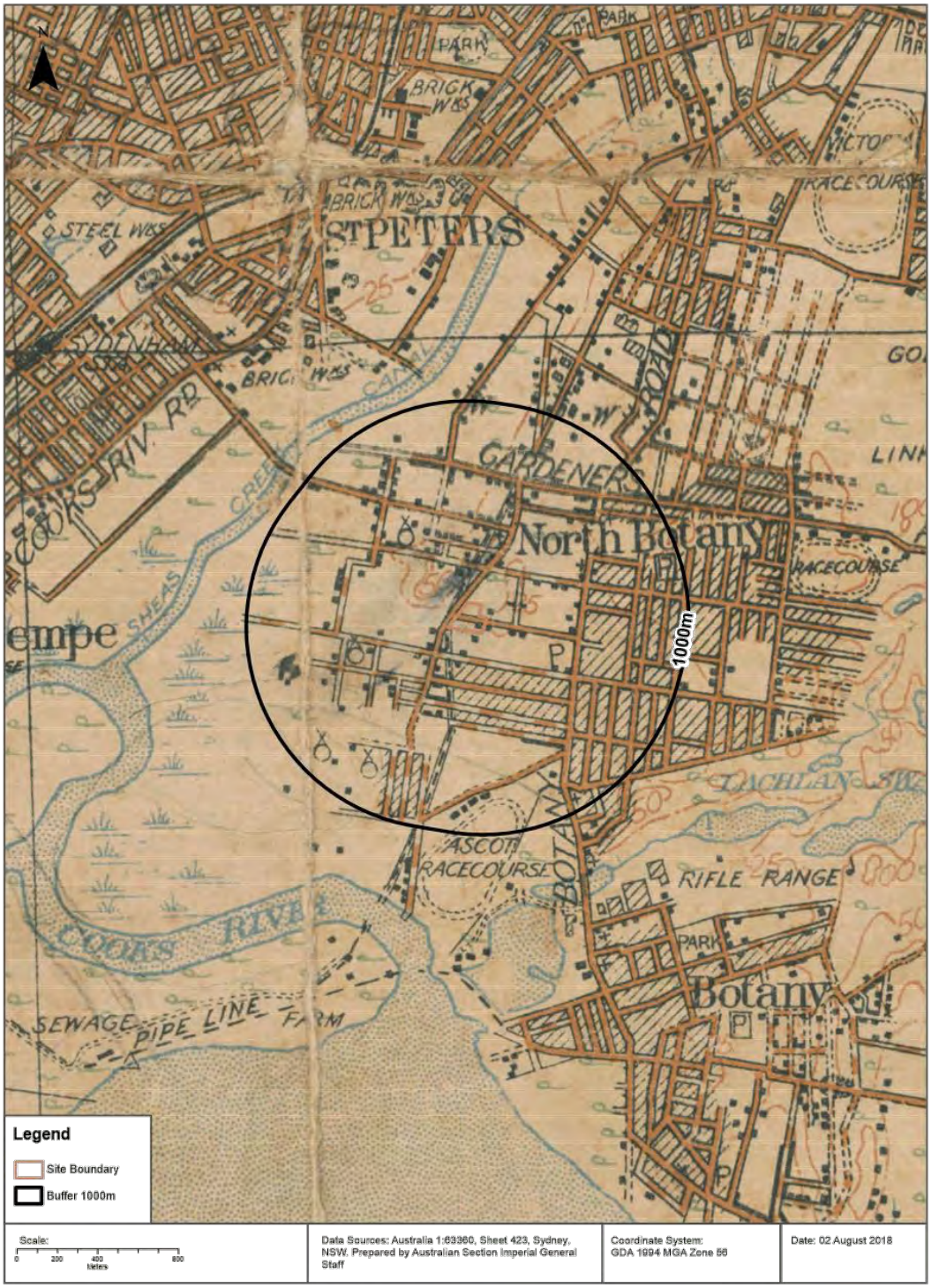
Historical Map 1936

146-154 O'Riordan Street, Mascot, NSW 2020



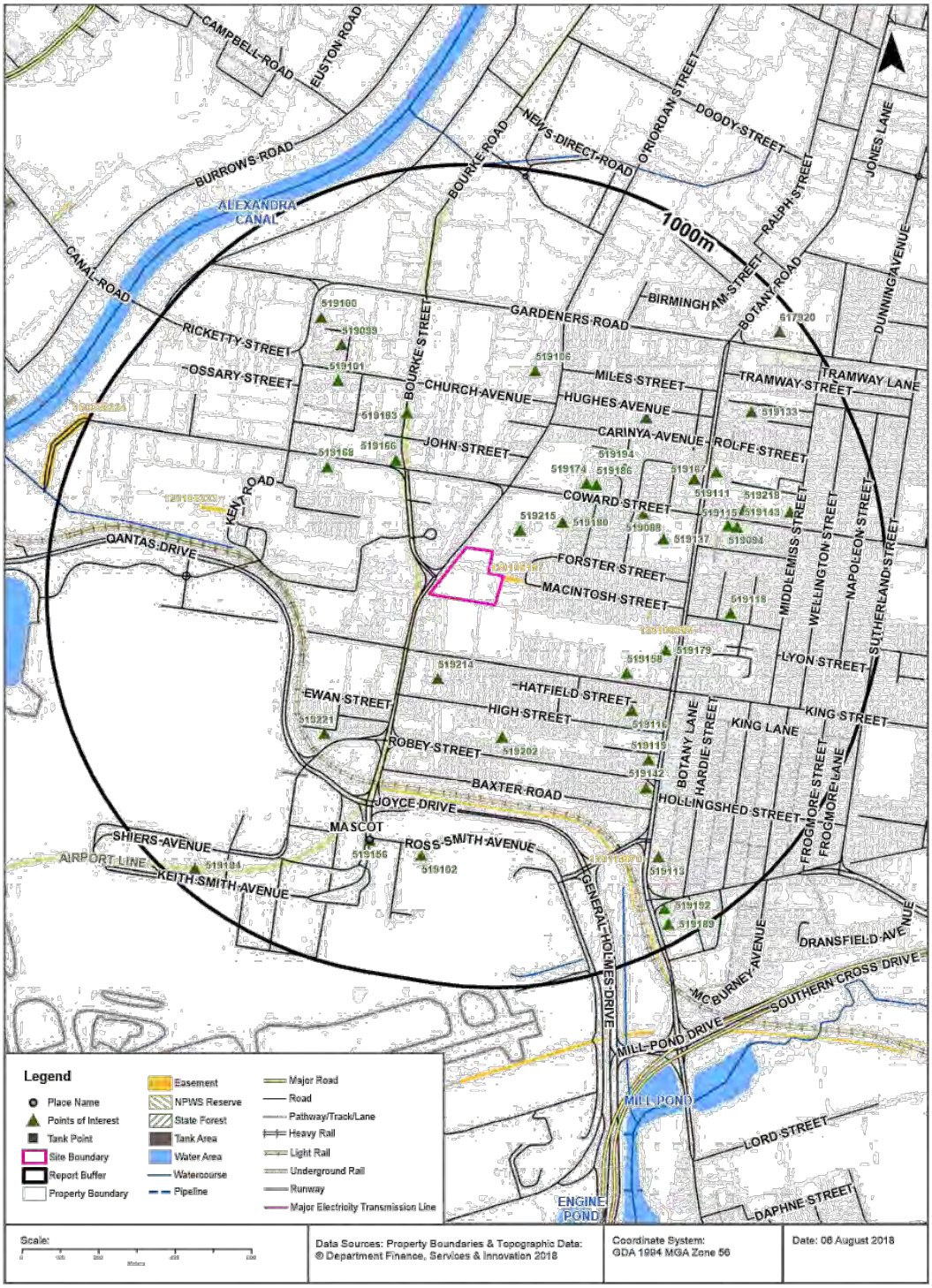
Historical Map 1917

146-154 O'Riordan Street, Mascot, NSW 2020



Topographic Features

146-154 O'Riordan Street, Mascot, NSW 2020



Topographic Features

146-154 O'Riordan Street, Mascot, NSW 2020

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
519215	Sports Field	MASCOT OVAL	92m	North East
519180	Park	LIONEL BOWEN PARK	199m	North East
519214	Park	HIGH STREET RESERVE	214m	South
519166	Park	NANCY BIRD-WALTON RESERVE	291m	North West
519174	Club	GRAPHIC ARTS CLUB MASCOT	305m	North East
519186	Place Of Worship	GREEK ORTHODOX CHURCH OF ST CATHERINE	324m	North East
519202	Park	JOHN CURTIN RESERVE	345m	South
519183	Railway Station	MASCOT RAILWAY STATION	384m	North
519158	Primary School	MASCOT PUBLIC SCHOOL	390m	South East
519088	Community Facility	MASCOT SENIOR CITIZENS CENTRE	403m	East
519194	Park	ELPHICK AVENUE RESERVE	409m	North East
519168	Embassy	CONSULATE OF THE REPUBLIC MOZAMBIQUE	413m	North West
519137	Park	MASCOT MEMORIAL PARK	432m	East
519116	Library	MASCOT LIBRARY	453m	South East
519221	Park	COLEMAN RESERVE	454m	South West
519179	Preschool	MASCOT PUBLIC SCHOOL PRESCHOOL	463m	East
519106	Park	STANDFIELD PARK	485m	North
519130	Park	HUGHES AVENUE RESERVE	534m	North East
519101	Park	DOCTOR DARRAGH PARK	548m	North West
519111	Ambulance Station	MASCOT AMBULANCE STATION	562m	North East
519119	Post Office	MASCOT POST OFFICE	571m	South East
519094	Local Government Chambers	THE COUNCIL OF THE CITY OF BOTANY BAY	604m	East
519118	Place Of Worship	ORTHODOX CHURCH	605m	East
519099	Park	ANNABEL PARK	620m	North West
519167	Police Station	MASCOT POLICE STATION	621m	North East
519142	Park	ROBEY STREET RESERVE	622m	South East
519115	Fire Station	MASCOT FIRE STATION	626m	East
519218	Place Of Worship	ROSEBERY UNITING CHURCH	654m	East
519156	Suburb	MASCOT	660m	South
519102	Ambulance Station	MASCOT AIR AMBULANCE STATION	676m	South

Map Id	Feature Type	Label	Distance	Direction
519100	Park	REVEREND SOO PARK	709m	North West
519143	Park	LAURISTON PARK	770m	East
519133	Park	LEVER STREET RESERVE	770m	North East
519113	Club	MASCOT RSL CLUB	786m	South East
519192	Park	DR DARRAGH RESERVE	909m	South East
519184	Railway Station	DOMESTIC TERMINAL RAILWAY STATION	941m	South West
617920	Primary School	GARDENERS ROAD PUBLIC SCHOOL	946m	North East
519189	Place Of Worship	BECKENHAM MEMORIAL CHURCH	950m	South East

Topographic Features

146-154 O'Riordan Street, Mascot, NSW 2020

Tanks (Areas)

What are the Tank Areas located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
	No records in buffer					

Tanks (Points)

What are the Tank Points located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
	No records in buffer					

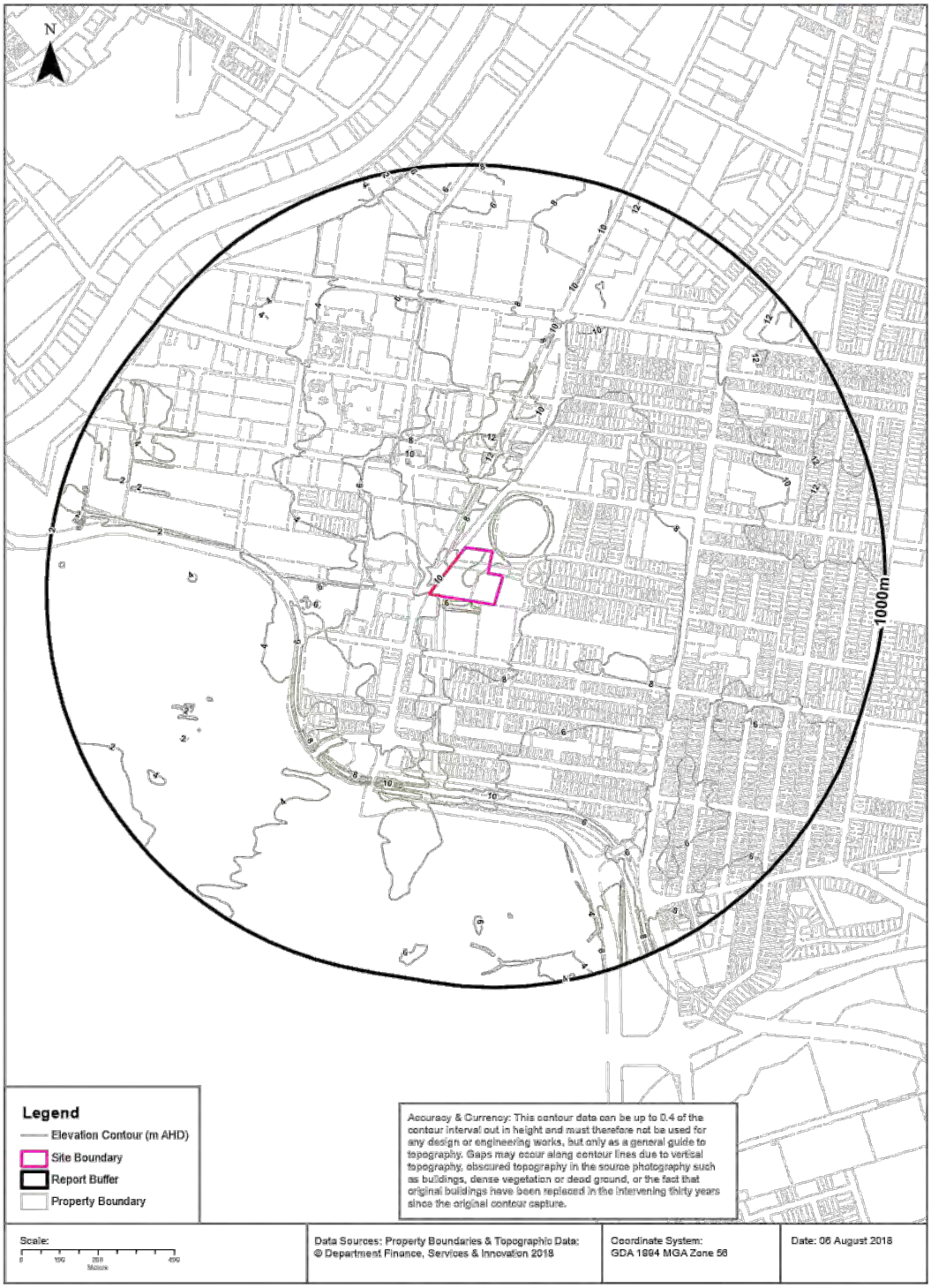
Major Easements

What Major Easements exist within the dataset buffer?
Note. Easements provided by LPI are not at the detail of local governments. They are limited to major easements such as Right of Carriageway, Electrical Lines (66kVa etc.), Easement to drain water & Significant subterranean pipelines (gas, water etc.).

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120108187	Primary	Undefined		0m	East
120108383	Primary	Undefined		394m	East
120119970	Primary	Undefined		520m	South
120108333	Primary	Undefined		536m	West
150038224	Primary	Right of way		997m	West

Elevation Contours (m AHD)

146-154 O'Riordan Street, Mascot, NSW 2020



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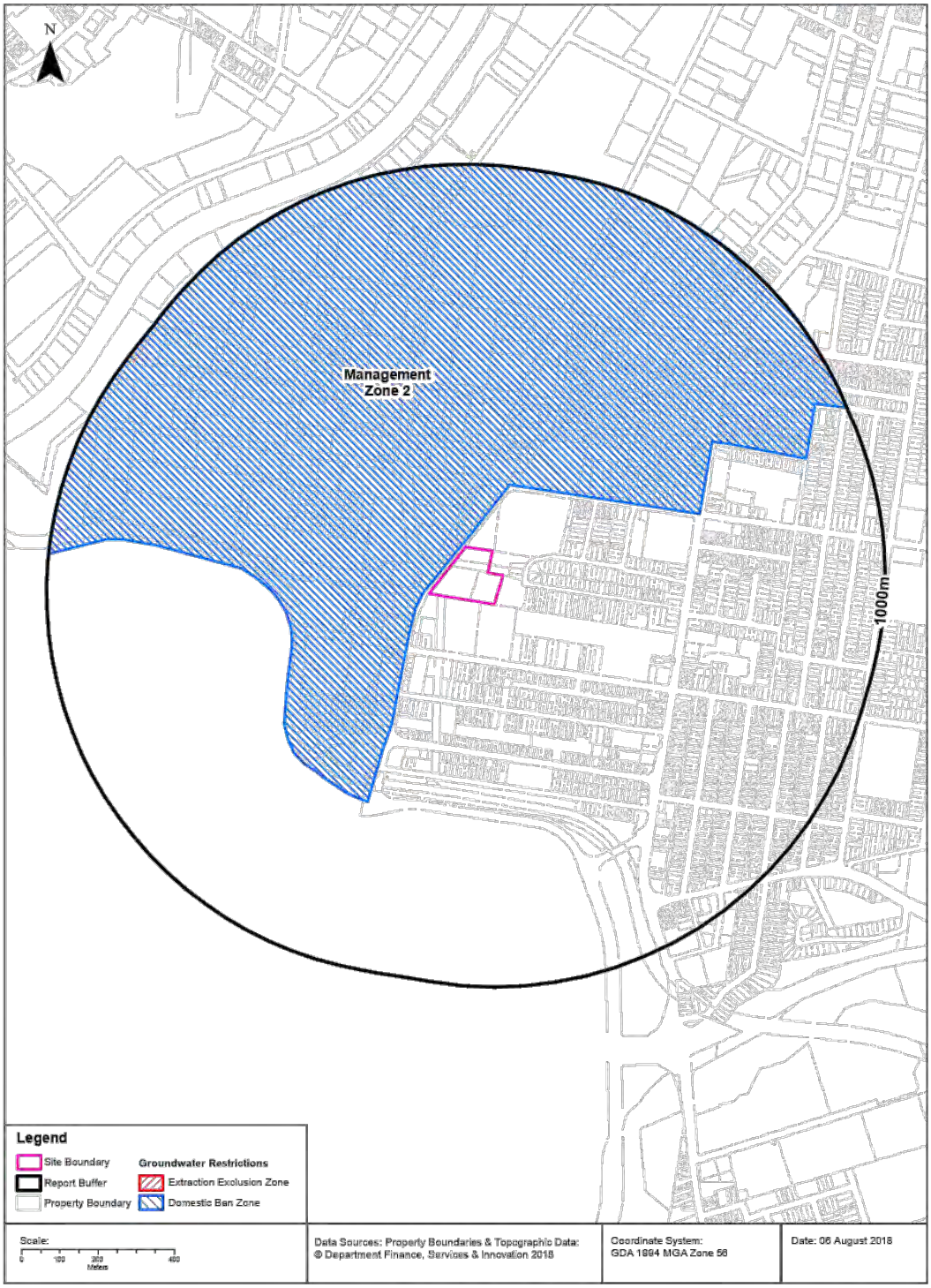
Botany Groundwater Management Zones

146-154 O'Riordan Street, Mascot, NSW 2020



Lotsearch Pty Ltd ABN 89 600 168 018 78

Topographic Features

146-154 O'Riordan Street, Mascot, NSW 2020

State Forest

What State Forest exist within the dataset buffer?

State Forest Number	State Forest Name	Distance	Direction
N/A	No records in buffer		

State Forest Data Source: © Land and Property Information (2015)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the dataset buffer?

Reserve Number	Reserve Type	Reserve Name	Gazetted Date	Distance	Direction
N/A	No records in buffer				

NPWS Data Source: © Land and Property Information (2015)
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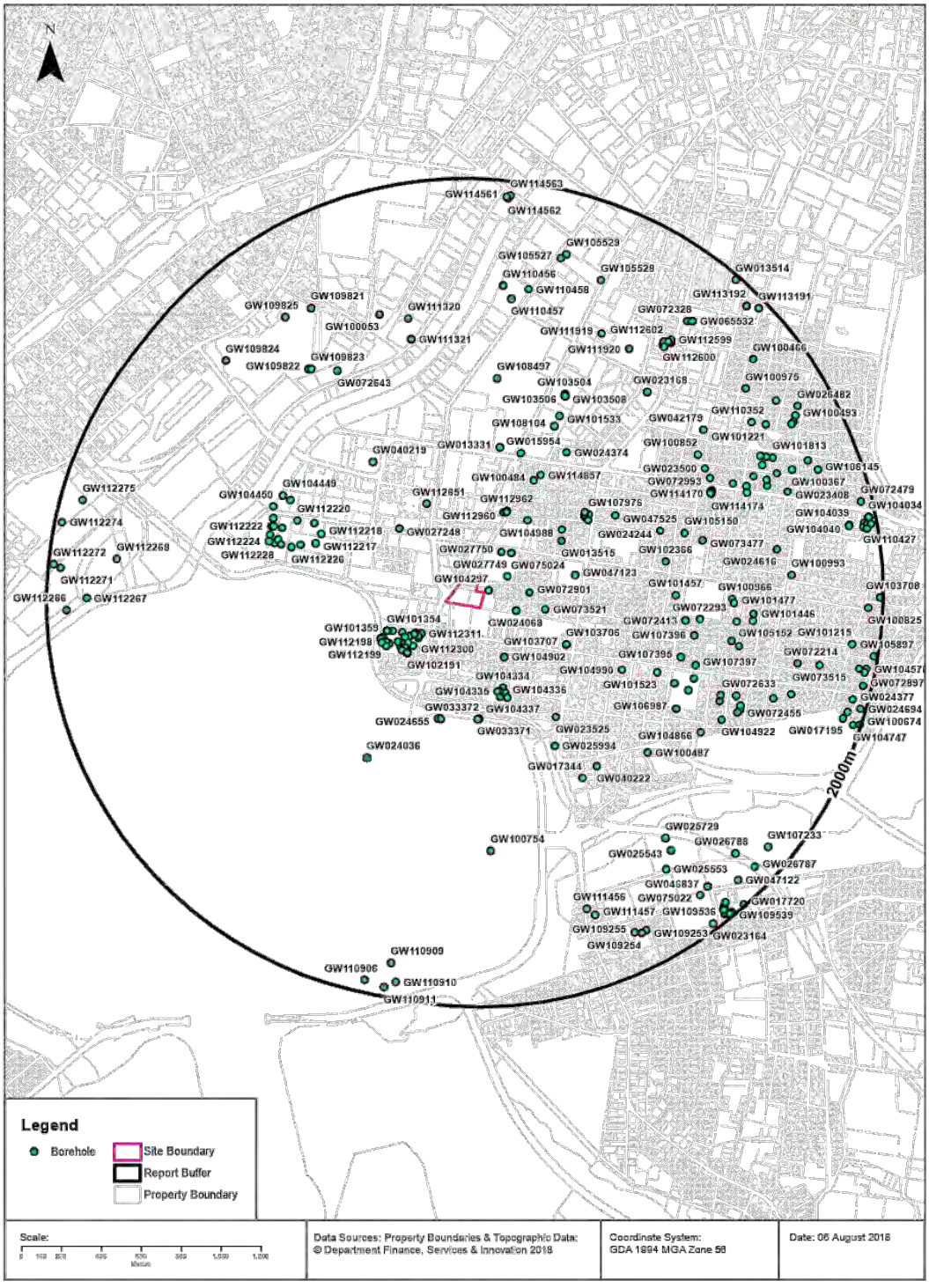
Groundwater Boreholes

146-154 O'Riordan Street, Mascot, NSW 2020



Hydrogeology & Groundwater

146-154 O'Riordan Street, Mascot, NSW 2020

Hydrogeology

Description of aquifers on-site:

Description
Porous, extensive highly productive aquifers

Description of aquifers within the dataset buffer:

Description
Porous, extensive highly productive aquifers

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)
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Botany Groundwater Management Zones

Groundwater management zones relating to the Botany Sand Beds aquifer within the dataset buffer:

Management Zone No.	Restriction	Distance	Direction
2	Domestic ban	11m	North

Botany Groundwater Management Zones Data Source : NSW Department of Primary Industries

Hydrogeology & Groundwater

146-154 O'Riordan Street, Mascot, NSW 2020

Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW104297	10BL156208, 10WA113023	Bore	Private	Domestic	Domestic		20/12/1994		42.00		4.00	0.400		24m	East
GW027749	10BL021267	Bore	Local Govt	Irrigation	Recreation (groundwater)		01/12/1965	16.40	16.50					141m	North East
GW024068	10BL017315, 10WA112890	Spear	Private	Domestic	Domestic		01/05/1966	4.20	4.30					180m	East
GW027750	10BL021266, 10WA114789	Bore	Local Govt	Recreation (groundwater)	Recreation (groundwater)		01/12/1965	17.30	17.40					180m	North East
GW112310	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		23/01/2002	6.00	6.00					198m	South West
GW112311	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		24/01/2002	4.00	4.00					200m	South West
GW075024		Bore	NSW Office of Water		Monitoring Bore	BOTANY BOREFIELD AT MASCOT OVAL	16/07/1998	19.50	20.50		0.76		8.48	211m	North East
GW112298	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		21/01/2002	4.00	4.00					216m	South West
GW112309	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		22/01/2002	4.00	4.00					216m	South West
GW112308	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		23/01/2002	6.00	6.00					216m	South West
GW112307	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		22/01/2002	4.00	4.00					222m	South West
GW112299	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		21/01/2002	4.00	4.00					227m	South West
GW072901		Bore	Private		Domestic		15/11/1994	7.00	7.00					229m	East
GW112291	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		14/01/2002	6.00	6.00					246m	South West
GW112202	10BL156771	Bore	Private	Monitoring Bore	Monitoring Bore		27/05/1998	5.90	5.90					263m	South West
GW112306	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		22/01/2002	4.00	4.00					269m	South West
GW112300	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		21/01/2002	4.00	4.00					273m	South West
GW112302	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		22/01/2002	4.00	4.00					276m	South West
GW104902	10BL157111, 10WA113115	Bore	Private	Domestic	Domestic		27/09/1995	7.10	7.10	Good	1.83	1.000		277m	South East
GW112305	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		21/01/2002	4.00	4.00					289m	South West
GW112304	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		22/01/2002	4.00	4.00					292m	South West
GW112301	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		22/01/2002	6.00	6.00					294m	South West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW112303	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		22/01/2001	4.00	4.00					295m	South West
GW112292	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		21/01/2002	4.00	4.00					297m	South West
GW112203	10BL156771	Bore	Private	Monitoring Bore	Monitoring Bore		27/05/1996	6.00	6.00					300m	South West
GW112293	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		21/01/2002	4.00	4.00					302m	South West
GW112294	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		21/01/2002	4.00	4.00					303m	South West
GW112295	10BL160586	Bore	Private	Monitoring Bore	Monitoring Bore		21/01/2001	4.00	4.00					307m	South West
GW112196	10BL156771	Bore	Private	Monitoring Bore	Monitoring Bore		27/07/1996	5.05	5.05					309m	South West
GW102193	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		22/03/1999	3.90	3.90					317m	South West
GW102191	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		18/03/1999	4.00	4.00					317m	South West
GW102197	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		22/03/1999	3.60	3.60					317m	South West
GW102192	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		19/03/1999	4.00	4.00					317m	South West
GW102178	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		22/03/1999	4.40	4.40					317m	South West
GW102169	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		07/01/1999	4.50	4.50					317m	South West
GW102186	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		22/03/1999	4.20	4.20					317m	South West
GW102198	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		22/03/1999	3.50	3.50					317m	South West
GW102190	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		18/03/1999	4.00	4.00					317m	South West
GW102184	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		18/03/1999	4.20	4.20					317m	South West
GW102205	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		22/03/1999	3.30	3.30					317m	South West
GW102173	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		06/01/1999	4.50	4.50					317m	South West
GW102171	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		07/01/1999	6.00	6.00					317m	South West
GW102188	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		22/03/1999	4.00	4.00					317m	South West
GW102194	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		22/03/1999	3.70	3.70					317m	South West
GW102189	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		22/03/1999	4.00	4.00					318m	South West
GW102172	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		06/01/1999	4.50	4.50					318m	South West
GW102164	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		07/01/1999	5.00	5.00					318m	South West
GW102160	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		07/01/1999	5.00	5.00					318m	South West
GW102168	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		07/01/1999	5.00	5.00					318m	South West
GW102203	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		18/03/1999	3.50	3.50					318m	South West
GW102199	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		22/03/1999	3.50	3.50					318m	South West
GW102200	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		19/03/1999	3.50	3.50					318m	South West
GW102196	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		22/03/1999	3.60	3.60					318m	South West
GW102162	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		07/01/1999	5.00	5.00					318m	South West
GW102201	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		18/03/1999	3.50	3.50					318m	South West
GW102165	10BL159044	Bore	Private	Monitoring Bore	Monitoring Bore		07/01/1999	5.00	5.00					318m	South West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW102 185	10BL159 044	Bore	Private	Monitoring Bore	Monitoring Bore		18/03/1999	4.20	4.20					318m	South West
GW102 176	10BL159 044	Bore	Private	Monitoring Bore	Monitoring Bore		08/01/1999	4.50	4.50					318m	South West
GW102 187	10BL159 044	Bore	Private	Monitoring Bore	Monitoring Bore		22/03/1999	4.20	4.20					318m	South West
GW102 204	10BL159 044	Bore	Private	Monitoring Bore	Monitoring Bore		22/03/1999	3.30	3.30					318m	South West
GW112 201	10BL156 771	Bore	Private	Monitoring Bore	Monitoring Bore		27/05/1996	5.60	5.60					318m	South West
GW102 195	10BL159 044	Bore	Private	Monitoring Bore	Monitoring Bore		22/03/1999	3.60	3.60					318m	South West
GW073 521		Spear	Private		Domestic		29/10/1995	3.00	3.00					320m	East
GW112 296	10BL160 586	Bore	Private	Monitoring Bore	Monitoring Bore		21/01/2002	6.00	6.00					324m	South West
GW112 297	10BL160 586	Bore	Private	Monitoring Bore	Monitoring Bore		21/01/2002	6.00	6.00					325m	South West
GW101 358	10BL157 307	Bore	Private	Monitoring Bore	Monitoring Bore		22/11/1995	6.00	6.00					326m	South West
GW101 360	10BL157 307	Bore	Private	Monitoring Bore	Monitoring Bore		22/11/1995	6.00	6.00					326m	South West
GW101 354	10BL157 307	Bore	Private	Monitoring Bore	Monitoring Bore		22/11/1995	6.00	6.00					326m	South West
GW101 361	10BL157 307	Bore	Private	Monitoring Bore	Monitoring Bore		22/11/1995	4.30	4.30					326m	South West
GW101 352	10BL157 307	Bore	Private	Monitoring Bore	Monitoring Bore		22/11/1995	5.70	5.70					326m	South West
GW101 359	10BL157 307	Bore	Private	Monitoring Bore	Monitoring Bore		22/11/1995	6.00	6.00					326m	South West
GW101 350	10BL157 307	Bore	Private	Monitoring Bore	Monitoring Bore		22/11/1995	5.90	5.90					326m	South West
GW101 362	10BL157 307	Bore	Private	Monitoring Bore	Monitoring Bore		22/11/1995	5.90	5.90					326m	South West
GW101 357	10BL157 307	Bore	Private	Monitoring Bore	Monitoring Bore		22/11/1995	5.90	5.90					326m	South West
GW101 353	10BL157 307	Bore	Private	Monitoring Bore	Monitoring Bore		22/11/1995	6.00	6.00					326m	South West
GW101 355	10BL157 307	Bore	Private	Monitoring Bore	Monitoring Bore		22/11/1995	6.00	6.00					326m	South West
GW101 356	10BL157 307	Bore	Private	Monitoring Bore	Monitoring Bore		22/11/1995	5.60	5.60					326m	South West
GW101 351	10BL157 307	Bore	Private	Monitoring Bore	Monitoring Bore		22/11/1995	5.05	5.05					326m	South West
GW112 197	10BL156 771	Bore	Private	Monitoring Bore	Monitoring Bore		27/05/1996	5.70	5.70					350m	South West
GW112 195	10BL156 771	Bore	Private	Monitoring Bore	Monitoring Bore		27/05/1996	5.90						357m	South West
GW112 960	10BL602 812	Bore	Private	Monitoring Bore	Monitoring Bore	Caltex - Mascot	17/11/2008	5.50	5.50					359m	North East
GW112 204	10BL156 771	Bore	Private	Monitoring Bore	Monitoring Bore		27/05/1996	6.00	6.00					361m	South West
GW112 961	10BL602 812	Bore	Private	Monitoring Bore	Monitoring Bore	Caltex - Mascot	17/11/2008	5.00	5.00					367m	North East
GW112 200	10BL156 771	Bore	Private	Monitoring Bore	Monitoring Bore		27/05/1996	6.00	6.00					370m	South West
GW112 198	10BL156 771	Bore	Private	Monitoring Bore	Monitoring Bore		27/05/1996	6.00	6.00					372m	South West
GW112 962	10BL602 812	Bore	Private	Monitoring Bore	Monitoring Bore	Caltex Mascot	17/11/2008	5.00	5.00					373m	North East
GW112 199	10BL156 771	Bore	Private	Monitoring Bore	Monitoring Bore		27/05/1996	6.00	6.00					379m	South West
GW103 588	10BL160 017 10WA11 3300	Bore		Domestic	Domestic		18/02/2001	7.00	7.00					386m	North East
GW027 248	10BL020 568	Spear	Private	Industrial	Industrial		01/11/1965	4.80	4.90					408m	North West

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GW112651	10BL604737	Bore	Private	Dewatering (groundwater)	Dewatering (groundwater)		23/12/2011	6.00	6.00					416m	North West
GW104334	10BL160591	Bore	Private	Monitoring Bore	Monitoring Bore		05/04/2002	3.50	3.50		0.90			420m	South
GW104335	10BL160591	Bore	Private	Monitoring Bore	Monitoring Bore		05/04/2002	3.50	3.50		1.40			430m	South
GW104333	10BL160591	Bore	Private	Monitoring Bore	Monitoring Bore		05/04/2002	3.50	3.50		1.20			430m	South
GW104336	10BL160591	Bore	Private	Monitoring Bore	Monitoring Bore		05/04/2002	3.50	3.50		1.00			445m	South
GW104337	10BL160591	Bore	Private	Monitoring Bore	Monitoring Bore		05/04/2002	3.50	3.50		1.40			457m	South
GW013515	10BL008626, 10WA112796	Spear	Private	Domestic	Domestic		01/01/1958	8.20	8.20					460m	North East
GW047123	10BL105637, 10WA114669	Bore	Local Govt	Recreation (groundwater)	Recreation (groundwater)		01/07/1973	18.90	18.90					465m	East
GW104338	10BL160591	Bore	Private	Monitoring Bore	Monitoring Bore		05/04/2002	3.50	3.50		1.20			471m	South
GW103706	10BL160099	Bore		Monitoring Bore	Monitoring Bore		02/11/2000	4.30	4.30					471m	South East
GW103707	10BL160099	Bore		Monitoring Bore	Monitoring Bore		03/11/2000	4.20	4.20					471m	South East
GW103705	10BL160099	Bore		Monitoring Bore	Monitoring Bore		02/11/2000	4.70	4.70					471m	South East
GW104988	10BL160392, 10WA113311	Bore	Private	Domestic	Domestic		15/12/2001	7.00	7.00		4.00	1.000		488m	North East
GW033372	10BL024741	Bore	Federal Govt	Industrial	Industrial		01/03/1970	11.80	11.90					558m	South
GW033371	10BL024740	Bore	Federal Govt	Industrial	Industrial		01/03/1970	11.80	11.90					559m	South
GW100484	10BL157840	Bore	Private	Monitoring Bore	Monitoring Bore		19/12/1996	4.00	4.00		0.00			569m	North East
GW031808	10BL024739	(Unknown)	P W D	Test Bore	G'water Xplore		01/06/1969	18.20	18.30					581m	South
GW024655	10BL018264	Bore	Private	Industrial	General Use		01/06/1966	9.10	9.10					582m	South
GW114857	10BL605586	Bore	Private	Monitoring Bore	Monitoring Bore		15/05/2014	6.00	6.00					609m	North East
GW112403	10BL602019, 10WA114432	Well	Private	Groundwater Remediation	Groundwater Remediation		29/11/2007	0.90	0.90					619m	North East
GW112404	10BL602019, 10WA114432	Well	Private	Groundwater Remediation	Groundwater Remediation		29/11/2007	1.30	1.30					622m	North East
GW113311	10BL160868	Bore	Private	Monitoring Bore	Monitoring Bore	Shell	01/01/2002	4.00	4.00		1.78			624m	North East
GW112405	10BL602019, 10WA114432	Well	Private	Groundwater Remediation	Groundwater Remediation		29/11/2007	1.30	1.30					633m	North East
GW107976	10BL164933	Spear	Private	Dewatering (groundwater)	Dewatering (groundwater)		05/10/2004	3.50	3.50					642m	North East
GW015954	10BL006808	Bore	Private	Industrial	Industrial		01/05/1957	20.10	20.10					667m	North
GW023525	10BL016753	Spear	Private	Domestic	General Use		01/11/1965	5.90	5.90					669m	South East
GW013331	10BL006748	Bore	Private	General Use, Industrial	Industrial		01/08/1954	14.90	14.90					670m	North
GW112218	10BL160943	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2002	4.00	4.00					708m	West

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GW112217	10BL160943	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2002	4.10	4.10					712m	West
GW040219		Spear	Private		Industrial			6.30	6.30				3.89	740m	North West
GW047525	10BL105640, 10WA114683	Bore	Local Govt	Recreation (groundwater)	Recreation (groundwater)		01/05/1975	17.10	19.40					756m	North East
GW112219	10BL160943	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2002	4.00	4.00					764m	North West
GW024374	10BL016571	Spear	Private	Irrigation	General Use		01/12/1965	5.10	5.20	Poor				775m	North East
GW112227	10BL160943	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2002	3.50	3.50					779m	West
GW104990	10BL160430, 10WA113313	Bore	Private	Domestic	Domestic		22/01/2002	6.00	6.00		3.50	1.000		779m	South East
GW025994	10BL016721	Bore	Private	Not Known	General Use		01/03/1966	13.20	13.30	Good				789m	South East
GW112226	10BL160943	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2002	4.40	4.40					819m	West
GW112220	10BL160943	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2002	4.00	4.00					845m	North West
GW108104	10BL160615	Bore		Industrial	Industrial		10/05/2007		70.00			13.000		858m	North East
GW112225	10BL160943	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2002	4.10	4.10					871m	West
GW024036	10BL017949	Spear	Private	Industrial	General Use		01/01/1966	6.00	6.10					873m	South West
GW112229	10BL160943	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2002	4.00	4.00					895m	West
GW112231	10BL160943	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2002	4.00	4.00					897m	West
GW112228	10BL160943	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2002	4.00	4.00					905m	West
GW101533	10BL157298	Bore	Private	Industrial	Industrial		06/11/1997	20.00	20.00	Good	4.40	1.000		915m	North East
GW102366	10BL159184, 10WA113281	Bore		Domestic	Domestic		23/05/1999	7.00	7.00					925m	East
GW104448	10BL160854	Bore	Private	Monitoring Bore	Monitoring Bore		25/11/2002	3.50	3.50			1.000		928m	North West
GW112224	10BL160943	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2002	4.10	4.10					935m	West
GW024244	10BL018810, 10WA112967	Spear	Private	Domestic	General Use		01/11/1965	3.00	3.00	Fair				936m	East
GW112230	10BL160943	Bore	Private	Monitoring Bore			03/12/2002	4.00	4.00					940m	West
GW112223	10BL160943	Bore	Private	Monitoring Bore	Monitoring Bore		31/12/2002	4.20	4.20					940m	West
GW101523	10BL158689, 10WA113260	Bore	Private	Domestic	Domestic		01/06/1998	6.10	6.10	Good	1.52	1.000		949m	East
GW112222	10BL160943	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2002	4.20	4.20					950m	West
GW112221	10BL160943	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2002	4.20	4.20					958m	West
GW101457	10BL158490, 10WA113250	Spear	Private	Domestic	Domestic		02/03/1998	6.00	6.00					962m	East
GW104449	10BL160854	Bore	Private	Monitoring Bore	Monitoring Bore		01/01/2002	3.50	3.50			1.000		973m	North West
GW104450	10BL160854	Bore	Private	Monitoring Bore	Monitoring Bore		01/01/2002	3.50	3.50			0.500		985m	North West

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GW040 222		Well	Private		Industrial			7.00	7.00				8.69	989m	South East
GW017 344	10BL008 344	Bore	Private	Not Known	Industrial		01/02/1955	13.80	13.80					999m	South East
GW108 497	10BL161 956, 10WA11 4717	Bore	Private	Recreation (groundwater)			16/01/2008	8.00				3.000		1011m	North
GW103 507	10BL159 488	Bore		Monitoring Bore	Monitoring Bore		14/10/1999	6.00	6.00					1016m	North East
GW103 508	10BL159 488	Bore		Monitoring Bore	Monitoring Bore		15/10/1999	6.00	6.00					1016m	North East
GW103 506	10BL159 488	Bore		Monitoring Bore	Monitoring Bore		13/10/1999	6.00	6.00					1016m	North East
GW103 505	10BL159 488	Bore		Monitoring Bore	Monitoring Bore		14/10/1999	6.00	6.00					1016m	North East
GW072 413	10BL156 159, 10WA11 3021	Spear	Private	Domestic	Domestic		31/10/1994	6.00	6.00					1020m	East
GW103 504	10BL159 488	Bore		Monitoring Bore	Monitoring Bore		13/10/1999	6.10	6.10					1025m	North East
GW107 395	10BL163 147	Bore		Monitoring Bore	Monitoring Bore		22/07/2003	3.60	3.60					1037m	East
GW075 023		Bore	NSW Office of Water		Monitoring Bore	BOTANY BOREFIELD AT LESTRANGE PARK	15/07/1998	18.50	26.00				8.44	1048m	South East
GW105 150	10BL157 080, 10WA11 3111	Bore	Private	Domestic	Domestic		20/09/1995	5.00	5.00					1049m	East
GW107 396	10BL163 147	Bore		Monitoring Bore	Monitoring Bore		22/07/2003	3.50	3.50					1076m	East
GW072 293		Spear	Private		Domestic		29/11/1994	6.60						1092m	East
GW106 987	10BL161 311, 10WA11 3334	Spear	Private	Domestic	Domestic		10/04/2005	7.00	7.00					1108m	South East
GW100 487	10BL157 229	Bore		Domestic			01/01/1996	5.00			4.00			1112m	South East
GW107 397	10BL163 147	Bore		Monitoring Bore	Monitoring Bore		27/07/2003	3.60	3.60					1120m	East
GW073 477	10BL157 226, 10WA11 3127	Bore		Domestic	Domestic		20/10/1995	5.00						1125m	East
GW023 605	10BL017 288, 10WA11 2883	Spear	Private	Domestic	General Use		01/01/1966	4.50	4.60	Good				1127m	South East
GW105 117	10BL160 666, 10WA11 4711	Bore	Private	Recreation (groundwater)	Recreation (groundwate r)		12/12/2012	14.00	14.00	220	1.30	5.000		1132m	East
GW072 643	10BL156 189	Bore	Local Govt	Test Bore	Test Bore		25/09/1996	12.00	12.00					1215m	North West
GW100 754	10BL156 761, 10WA11 4629	Bore	Private	Industrial	Industrial		21/06/1995	148.00	148.00	560	6.00	9.200		1220m	South
GW111 321	10BL601 845	Bore	Private	Monitoring Bore	Monitoring Bore		09/01/2007	5.00	5.00		2.63			1222m	North
GW114 173	10BL604 101	Bore	Private	Monitoring Bore	Monitoring Bore		05/10/2010	4.00	4.00					1240m	East
GW114 174	10BL604 101	Bore	Private	Monitoring Bore	Monitoring Bore		05/10/2010	4.00	4.00					1243m	East
GW114 172	10BL604 101	Bore	Private	Monitoring Bore	Monitoring Bore		05/10/2010	4.00	4.00					1243m	North East

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GW100 966	10BL156 935, 10WA11 3086	Spear	Private	Domestic	Domestic		23/08/1995	5.50	5.50	Good	1.83	1.000		1245m	East
GW114 171	10BL604 101	Bore	Private	Monitoring Bore	Monitoring Bore		05/10/2010	4.00	4.00					1248m	North East
GW114 170	10BL604 101	Bore	Private	Monitoring Bore	Monitoring Bore		05/10/2010	4.00	4.00					1251m	North East
GW101 477	10BL158 449 10WA11 3241	Spear	Private	Domestic	Domestic		05/01/1998	6.00	6.00					1255m	East
GW026 070	10BL017 804, 10WA11 2932	Spear	Private	Domestic	Domestic		01/01/1966	3.60	3.70					1263m	East
GW023 508	10BL017 646, 10WA11 2923	Spear	Private	Domestic	General Use		01/01/1966	5.40	5.50	Good				1265m	North East
GW023 168	10BL017 001	Spear	Private	Domestic	General Use		01/01/1966	4.50	4.60					1265m	North East
GW100 852	10BL157 549, 10WA11 3165	Spear	Private	Domestic	Domestic		14/03/1996	6.10	6.10	Good	1.83	1.000		1266m	North East
GW072 993	10BL156 242, 10WA11 3026	Bore		Domestic			01/01/1995	48.77	48.76			0.667		1268m	North East
GW104 866	10BL161 625, 10WA11 3339	Bore	Private	Domestic	Domestic		17/03/2003	6.71	6.71		3.66	1.190		1273m	South East
GW101 475	10BL158 448, 10WA11 3240	Spear	Private	Domestic	Domestic		04/02/1998	6.00	6.00					1275m	East
GW072 632		Bore	Private		Domestic		02/12/1994	5.00	5.00					1285m	East
GW101 787	10BL157 379, 10WA11 3154	Bore		Domestic	Domestic		18/12/1995	5.80	5.80	Good	1.83	1.000		1291m	South East
GW109 821	10BL164 967	Bore	Private	Monitoring Bore	Monitoring Bore		23/10/2000	29.00	29.00	10.6	12.50	0.100		1298m	North West
GW109 822	10BL164 967	Bore	Private	Monitoring Bore	Monitoring Bore		04/04/1997	10.45	10.45	958	3.00			1305m	North West
GW023 472	10BL017 260, 10WA11 2877	Spear	Private	Domestic	General Use		01/03/1966	3.60	3.70	Good				1307m	East
GW111 320	10BL601 845	Bore	Private	Monitoring Bore	Monitoring Bore		09/01/2007	5.20	5.20		2.52			1327m	North
GW104 922	10BL160 557, 10WA11 3318	Bore	Private	Domestic	Domestic		09/03/2002	7.00	7.00		3.50	1.000		1338m	South East
GW105 152	10BL157 076, 10WA11 3110	Bore	Private	Domestic	Domestic		20/09/1995	5.00	5.00					1354m	East
GW042 179		Well	Private		Not Known			24.00	24.00				12.26	1355m	North East
GW101 446	10BL158 458, 10WA11 3243	Spear	Private	Domestic	Domestic		04/01/1998	6.00	6.00					1356m	East
GW072 633		Bore	Private		Domestic		03/12/1994	5.00	5.00					1360m	East
GW023 162	10BL016 979	Spear	Private	Domestic	General Use		01/01/1966	4.80	4.90	Good				1363m	North East

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW111 919	10BL602 004	Spear	Private	Monitoring Bore	Monitoring Bore		01/01/2007	7.00	7.00		90.0 0	0.200		1377m	North East
GW111 920	10BL602 005	Spear	Private	Monitoring Bore	Monitoring Bore		01/01/2007	6.00	6.00		9.00	0.200		1380m	North East
GW100 053	10BL154 407 10WA11 4697	Spear	Local Govt	Recreation (groundwater)	Recreation (groundwate r)		20/04/1994	7.00	7.00		1.00	1.800		1385m	North
GW072 634		Spear	Private		Domestic		24/10/1994	6.10	6.10					1395m	South East
GW100 803	10BL156 210, 10WA11 3024	Bore		Domestic			31/12/1994	6.00	6.00		2.00			1397m	East
GW072 455	10BL156 142, 10WA11 3019	Bore		Domestic	Domestic		24/10/1994	5.80	5.80					1402m	South East
GW023 561	10BL017 493, 10WA11 2901	Spear	Private	Domestic	General Use		01/01/1966	5.40	5.50	Good				1409m	East
GW110 457	10BL603 007	Well	Private	Monitoring Bore	Monitoring Bore		01/05/2009	3.60	3.60		1.70			1415m	North
GW023 968		Spear	Private		General Use		01/01/1966	4.50	4.50	Good				1419m	East
GW100 575	10BL158 007, 10WA11 3192	Spear	Private	Domestic	Domestic		20/04/1997	5.00	5.00					1471m	East
GW110 456	10BL603 007	Well	Private	Monitoring Bore	Monitoring Bore		01/05/2009	3.20	3.60		2.30			1474m	North
GW110 458	10BL603 007	Well	Private	Monitoring Bore	Monitoring Bore		01/05/2009	2.80	2.80		2.30			1475m	North
GW024 616	10BL019 001, 10WA11 2979	Spear	Private	Domestic	Domestic		01/09/1966	5.60	5.60					1484m	East
GW025 729	10BL016 155	(Unkn own)	Private	Industrial	Industrial		01/01/1940	21.30						1485m	South East
GW112 603	10BL604 110	Bore	Private	Monitoring Bore	Monitoring Bore	Shell - Alexandria	13/07/2010	5.00	5.00		4.00			1493m	North East
GW112 600	10BL604 110	Bore	Private	Monitoring Bore	Monitoring Bore	Shell - Alexandria	13/07/2010	4.60	4.60		3.30			1495m	North East
GW112 602	10BL604 110	Bore	Private	Monitoring Bore	Monitoring Bore	Shell - Alexandria	13/07/2010	5.00	5.00		3.80			1512m	North East
GW101 231	10BL158 390, 10WA11 3225	Spear	Private	Domestic	Domestic		21/12/1997	7.00	7.00					1516m	East
GW112 598	10BL604 110	Bore	Private	Monitoring Bore	Monitoring Bore	Shell - Alexandria	13/07/2010	5.00	5.00					1525m	North East
GW101 161	10BL157 031, 10WA11 3100	Spear	Private	Domestic	Domestic		06/09/1995	6.10	6.10	Good	3.50	1.000		1526m	East
GW112 599	10BL604 110	Bore	Private	Monitoring Bore	Monitoring Bore	Shell - Alexandria	13/07/2010	4.50	4.50		3.60			1529m	North East
GW100 945	10BL156 905, 10WA11 3083	Spear	Private	Domestic	Domestic		14/08/1995	7.10	7.10	Good	2.13	1.000		1533m	North East
GW112 601	10BL604 110	Bore	Private	Monitoring Bore	Monitoring Bore	Shell - Alexandria	13/07/2010	5.00	5.00		4.20			1535m	North East
GW102 800	10BL159 567, 10WA11 3293	Bore		Domestic	Domestic		12/01/2000	6.10	6.10	Good				1539m	East
GW112 597	10BL604 110	Bore	Private	Monitoring Bore	Monitoring Bore	Shell - Alexandria	13/07/2010	5.00	5.00		3.90			1543m	North East

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW103193	10BL159777, 10WA113296	Bore		Domestic	Domestic		01/01/1985	6.70	6.70		2.00	0.378		1543m	North East
GW100993	10BL156957, 10WA113091	Spear	Private	Domestic	Domestic		29/08/1995	5.49	5.49	Good	2.13	1.000		1544m	East
GW025543	10BL016154	Bore	Private	Industrial	Industrial		01/01/1963	18.50	18.60	Good			7.05	1550m	South East
GW109821	10BL164967	Bore	Private	Monitoring Bore	Monitoring Bore		03/04/1997	35.00	35.00	4400	14.50			1554m	North West
GW100997	10BL158173, 10WA113201	Spear	Private	Domestic	Domestic		01/10/1997	8.23	8.24	Good		1.000		1568m	North East
GW110352	10BL602743, 10WA114783	Bore	Local Govt	Recreation (groundwater)	Recreation (groundwater)		01/01/1975	40.00	40.00		10.00	2.000		1579m	North East
GW109825	10BL164967	Bore	Private	Monitoring Bore	Monitoring Bore		10/02/2005	22.00	22.00		14.90			1584m	North West
GW023967	10BL017821, 10WA112935	Spear	Private	Domestic	General Use		01/05/1966	2.70	2.70	Good				1585m	East
GW101813	10BL157317, 10WA113139	Bore		Domestic	Domestic		16/11/1995	8.54	8.54	Good	2.75	1.000		1597m	North East
GW111456	10BL604566	Bore	Private	Monitoring Bore	Monitoring Bore		14/04/2011	6.20	6.20		2.77			1603m	South
GW023408	10BL016677	Spear	Private	Domestic	General Use		01/12/1965	7.00	7.00					1603m	East
GW025553	10BL016153	(Unknown)	Private	Industrial	Industrial		01/01/1940	17.00						1610m	South East
GW072214		Bore	Private		Domestic		01/03/1995	5.00	5.00					1612m	East
GW109824	10BL164967	Bore	Private	Monitoring Bore	Monitoring Bore		05/04/2005	20.70	20.70		4.51			1615m	North West
GW105528	10BL160254	Bore		Monitoring Bore	Monitoring Bore		02/12/1993	5.00	5.00					1620m	North East
GW023600	10BL017286, 10WA112881	Spear	Private	Domestic	General Use		01/01/1966	7.30	7.30	Good				1622m	East
GW101221	10BL158317, 10WA113219	Spear	Private	Domestic	Domestic		12/12/1997	6.10	6.10	Good	2.13	1.000		1637m	North East
GW100975	10BL156944, 10WA113087	Spear	Private	Domestic	Domestic		10/05/1993	6.10	6.10	Good	2.74	1.000		1645m	North East
GW111457	10BL604566	Bore	Private	Monitoring Bore	Monitoring Bore		14/04/2011	6.20	6.20		2.77			1645m	South
GW112268	10BL161855	Bore	Private	Monitoring Bore	Monitoring Bore		21/03/2003	12.35	12.35					1659m	West
GW105527	10BL160254	Bore		Monitoring Bore	Monitoring Bore		15/12/2000	5.00	5.00					1661m	North
GW100367	10BL157662, 10WA113172	Spear	Private	Domestic	Domestic		30/05/1995	6.00	6.00	Good	2.90	0.500		1662m	East
GW017782	10BL009960	Bore	Private	Industrial (low Security)	Industrial		01/09/1959	15.50	15.50					1665m	North East
GW072328	10BL155241	Bore	Private	Industrial	Industrial		18/06/1994	13.00	14.00					1681m	North East
GW065532		Bore	Private		Industrial		01/11/1990	18.00						1681m	North East
GW105529	10BL160254	Bore		Monitoring Bore	Monitoring Bore		07/02/2001	5.00	5.00					1688m	North

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW073515	10BL157331, 10WA113143	Spear	Private	Domestic	Domestic		23/11/1995	7.00	7.00					1722m	East
GW101037	10BL158242, 10WA113209	Spear	Private	Domestic	Domestic		24/11/1997	4.88	4.88	Good		1.000		1741m	North East
GW101226	10BL158322, 10WA113223	Spear	Private	Domestic	Domestic		09/12/1997	5.30	5.30	Good	3.36	0.500		1751m	East
GW024023	10BL018142	Spear	Private	Domestic	General Use		01/05/1966	8.20	8.20	Good				1752m	North East
GW100466	10BL157947, 10WA113186	Spear	Private	Domestic	Domestic		12/03/1997	5.00	5.00					1765m	North East
GW100813	10BL156314, 10WA113035	Spear	Private	Domestic	Domestic		25/11/1994	10.98	10.98	Good	7.93	0.800		1767m	North East
GW026788	10BL016246	Spear	Private	Industrial	Industrial		01/11/1965	20.40	20.40					1777m	South East
GW106146	10BL157073, 10WA113108	Spear	Private	Domestic	Domestic		14/09/1995	5.79	5.79	Good		0.800		1782m	East
GW100493	10BL157767, 10WA113175	Spear	Private	Domestic	Domestic		08/11/1996	9.75	9.75	Fresh	5.80			1788m	North East
GW112267	10BL161855	Bore	Private	Monitoring Bore	Monitoring Bore		20/03/2003	12.12	12.12					1798m	West
GW109255	10BL602488	Bore	Private	Monitoring Bore	Monitoring Bore		21/08/2008	7.30	7.30	Fresh	0.72			1803m	South East
GW046837	10BL107198	Bore	Local Govt	Test Bore	Recreation (groundwater)		01/11/1976	14.80	14.80					1806m	South East
GW075022		Bore	NSW Office of Water		Monitoring Bore	BOTANY BOREFIELD AT BORALEE PARK	14/07/1998	15.75	16.75		1.77		8.45	1816m	South East
GW026482	10BL018808	Spear	Private	Domestic	General Use		01/01/1966	5.40	5.50	Good				1819m	North East
GW109253	10BL602488	Bore	Private	Monitoring Bore	Monitoring Bore		21/08/2008	10.30	10.30	Fresh	1.42			1820m	South East
GW109254	10BL602488	Bore	Private	Monitoring Bore	Monitoring Bore		21/08/2008	9.70	9.70	Fresh	1.03			1822m	South East
GW110909	10BL603566	Well	Private	Monitoring Bore	Monitoring Bore		19/01/2010	5.80	5.80		2.50			1829m	South
GW104040	10BL159958	Bore		Monitoring Bore	Monitoring Bore		10/11/2000	7.00	7.00		2.80			1859m	East
GW101215	10BL158280, 10WA113217	Spear	Private	Domestic	Domestic		24/11/1997	7.62	7.62	Good		1.000		1862m	East
GW104039	10BL159958	Bore		Monitoring Bore	Monitoring Bore		10/11/2000	7.00	7.00		2.80			1864m	East
GW107233	10BL161832, 10CA114693	Bore		Irrigation, Recreation (groundwater)	Irrigation, Recreation (groundwater)		28/06/2005	21.50	21.50		0.37	11.000		1879m	South East
GW047122	10BL105636, 10WA114677	Bore	Local Govt	Recreation (groundwater)	Recreation (groundwater)		01/11/1978	19.50	19.50					1882m	South East
GW112275	10BL161855	Bore	Private	Monitoring Bore	Monitoring Bore		27/02/2003	16.50	16.50					1888m	West
GW026787	10BL016247	Spear	Private	Industrial	Industrial		01/10/1965	24.80	24.80					1895m	South East

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW112266	10BL161855	Bore	Private	Monitoring Bore	Monitoring Bore		19/03/2003	10.37	10.37					1897m	West
GW017195	10BL008550, 10WA112795	Spear	Private	Domestic	General Use		01/12/1957	3.30	3.40	Good				1904m	East
GW114562	10BL605489	Bore	Other Govt	Monitoring Bore	Monitoring Bore	SCA	06/12/2013	4.00	2.70	448	2.51			1912m	North
GW114561	10BL605489	Bore	Other Govt	Monitoring Bore	Monitoring Bore	SCA	06/12/2013	4.00	4.00	529	2.92			1917m	North
GW102741	10BL159434, 10WA113288	Bore		Domestic	Domestic		28/10/1999	7.00	7.00					1919m	East
GW072958		Bore	Private		Domestic		14/08/1995	5.00	5.00					1920m	East
GW113192	10BL605409	Bore	Private	Monitoring Bore	Monitoring Bore		05/07/2013	5.30	5.30					1920m	North East
GW110910	10BL603566	Well	Private	Monitoring Bore	Monitoring Bore		19/01/2010	6.00	6.00		3.00			1921m	South
GW109542	10BL601927	Bore	Private	Monitoring Bore	Monitoring Bore		20/07/2007	6.00						1923m	South East
GW024377	10BL018538, 10WA112954	(Unknown)	Private	Domestic	General Use		01/07/1966	4.50	4.60					1925m	East
GW100825	10BL157608, 10WA113169	Spear	Private	Domestic	Domestic		23/04/1996	7.01	7.02	Good	4.88	1.000		1927m	East
GW114563	10BL605489	Bore	Other Govt	Monitoring Bore	Monitoring Bore	SCA	06/12/2013	4.00	3.90	591				1928m	North
GW110427	10BL160571	Bore	Private	Monitoring Bore	Monitoring Bore		13/02/2002	7.00	7.00					1929m	East
GW109541	10BL601927	Bore	Private	Monitoring Bore	Monitoring Bore		20/07/2007	6.00						1934m	South East
GW112271	10BL161855	Bore	Private	Monitoring Bore	Monitoring Bore		07/03/2003	19.51	19.51					1935m	West
GW110428	10BL160571	Bore	Private	Monitoring Bore	Monitoring Bore		12/02/2002	4.00	4.00					1937m	East
GW110906	10BL603567	Well	Private	Monitoring Bore	Monitoring Bore		19/01/2010	5.80	5.80		3.50			1938m	South
GW109540	10BL601927	Bore	Private	Monitoring Bore	Monitoring Bore		20/07/2007	6.00						1939m	South East
GW109538	10BL601927	Bore	Private	Monitoring Bore	Monitoring Bore		20/07/2007	6.00						1942m	South East
GW072479	10BL156278, 10WA113028	Bore	Private	Domestic	Domestic		21/11/1994	5.80	5.80		2.60	1.000		1943m	East
GW110430	10BL160571	Bore	Private	Monitoring Bore	Monitoring Bore		12/02/2002	4.00	4.00					1944m	East
GW110429	10BL160571	Bore	Private	Monitoring Bore	Monitoring Bore		12/02/2002	4.00	4.00					1946m	East
GW109537	10BL601927	Bore	Private	Monitoring Bore	Monitoring Bore		08/02/2006	6.00						1948m	South East
GW101445	10BL158450, 10WA113242	Spear	Private	Domestic	Domestic		08/01/1998	6.00	6.00					1950m	East
GW110431	10BL160571	Bore	Private	Monitoring Bore	Monitoring Bore		12/02/2002	5.00	5.00					1952m	East
GW110911	10BL603566	Well	Private	Monitoring Bore	Monitoring Bore		19/01/2010	6.00	6.00		3.20			1954m	South
GW113191	10BL605409	Bore	Private	Monitoring Bore	Monitoring Bore		05/07/2013	8.00	8.00					1954m	North East
GW104570	10BL161119, 10WA113327	Bore		Domestic	Domestic		09/12/2002	6.50	6.50					1955m	East

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW109536	10BL601927	Bore	Private	Monitoring Bore	Monitoring Bore		24/01/2006	6.00						1955m	South East
GW072897		Spear	Private		Domestic		10/12/1994	5.80	5.80	Good				1956m	East
GW109535	10BL601927	Bore	Private	Monitoring Bore	Monitoring Bore		25/01/2006	6.00						1961m	South East
GW112274	10BL161855	Bore	Private	Monitoring Bore	Monitoring Bore		26/02/2003	13.70	13.70					1962m	West
GW104747	10BL156760, 10WA113076	Bore	Private	Domestic	Domestic		01/01/1995	5.49	5.48					1963m	East
GW104032	10BL159958	Bore		Monitoring Bore	Monitoring Bore		08/11/2000	7.00	7.00		2.00			1965m	East
GW104031	10BL159958	Bore		Monitoring Bore	Monitoring Bore		08/11/2000	7.00	7.00		2.00			1965m	East
GW104035	10BL159958	Bore		Monitoring Bore	Monitoring Bore		09/11/2000	7.00	7.00		2.00			1965m	East
GW104034	10BL159958	Bore		Monitoring Bore	Monitoring Bore		09/11/2000	7.00	7.00		2.00			1965m	East
GW104033	10BL159958	Bore		Monitoring Bore	Monitoring Bore		08/11/2000	4.00	4.00		2.00			1965m	East
GW104038	10BL159958	Bore		Monitoring Bore	Monitoring Bore		10/11/2000	4.00	4.00		2.00			1965m	East
GW104036	10BL159958	Bore		Monitoring Bore	Monitoring Bore		09/11/2000	7.00	7.00		2.00			1965m	East
GW104037	10BL159958	Bore		Monitoring Bore	Monitoring Bore		09/11/2000	4.00	4.00		2.00			1965m	East
GW109534	10BL601927	Bore	Private	Monitoring Bore	Monitoring Bore		27/01/2006	6.00						1967m	South East
GW023164	10BL016801, 10WA112846	Bore	Private	Domestic	General Use		01/01/1960	3.60	3.70	Good				1969m	South East
GW110414	10BL160571	Bore	Private	Monitoring Bore	Monitoring Bore		13/02/2002	4.00	4.00					1971m	East
GW112272	10BL161855	Bore	Private	Monitoring Bore	Monitoring Bore		03/03/2003	14.84	14.84					1973m	West
GW024694	10BL018847 10WA112970	Bore	Private	Domestic	General Use		01/08/1966	3.00	3.00	Good				1976m	East
GW013514	10BL008711	Spear	Private	Industrial	Industrial		01/03/1958	9.10	9.10	Good				1978m	North East
GW105897	10BL162078 10WA113346	Bore		Domestic			12/05/2005							1980m	East
GW109539	10BL601927	Bore	Private	Monitoring Bore	Monitoring Bore		06/11/2008	6.00						1981m	South East
GW109533	10BL601927	Bore	Private	Monitoring Bore	Monitoring Bore		30/01/2006	6.00						1982m	South East
GW103708	10BL160084, 10WA113301	Bore		Domestic	Domestic		26/04/2001	6.00	6.00					1985m	East
GW017720	10BL008578	Bore	Private	Industrial	Industrial		01/10/1956	20.40	20.40					1991m	South East
GW100674	10BL156858, 10WA113079	Spear	Private	Domestic	Domestic		21/08/1995	5.49	5.49	Good		1.000		1995m	East

Hydrogeology & Groundwater

146-154 O'Riordan Street, Mascot, NSW 2020

Driller's Logs

Drill log data relevant to the boreholes within the dataset buffer:

Groundwater No	Drillers Log	Distance	Direction
GW027749	0.00m-2.43m Sand 2.43m-5.18m Sand Peaty 5.18m-5.79m Peat Sandy 5.79m-8.22m Sand Very Dirty Peaty 8.22m-10.97m Peat Small 8.22m-10.97m Clay 10.97m-16.15m Sand White Water Supply 16.15m-16.45m Clay White Puggy	141m	North East
GW024068	0.00m-1.52m Loam Light Sandy 1.52m-2.13m Loam Dark Brown 2.13m-2.74m Loam Sandy Water Supply 2.74m-3.35m Loam Dark Brown 3.35m-4.26m Sand	180m	East
GW027750	0.00m-4.57m Sand Dry 4.57m-10.97m Sand Water Supply 10.97m-11.28m Clay Sandy Pete 11.28m-12.80m Sand Grey Slightly Peaty Water Supply 12.80m-14.63m Sand Very Dirty Pete Water Supply 14.63m-15.84m Sand Peaty Water Supply 15.84m-17.37m Sand Grey Clay Pete Water Supply 17.37m-17.38m Clay Sandy	180m	North East
GW075024	0.00m-4.00m PEATY SAND,BLACK 4.00m-9.00m SAND,FINE COFFEE BROWN 9.00m-11.00m PEATY SAND,DARK BROWN 11.00m-15.50m SILTY SAND,MED GRAINED,GREY 15.50m-19.00m SANDY CLAY,DARK GREY	211m	North East
GW072901	0.00m-7.00m Peaty Sand Fine To Medium	229m	East
GW104902	0.00m-7.10m UNCONSOLIDATED ALL SANDS	277m	South East
GW102169	0.00m-0.10m Fill: Light brown/red Silty Sand, dry 0.10m-1.80m Fill: Dark brown Clayey Sand, moist, with plastic, wire, steel fragments 1.80m-2.50m Light Grey Clayey Sand, wet 2.50m-3.50m Dark grey Clayey Sand, wet, some Silt and Peat 3.50m-4.50m Dark brown Sand, wet, with Silt and Peat	317m	South West
GW102171	0.00m-0.30m Fill: Brown/red Sand, some Silt 0.30m-0.80m Fill: Dark brown Sand, some Silt, wire, Clay, pipe and metal fragments 0.80m-1.70m Fill: Grey Clayey Sand, moist 1.70m-3.70m Dark grey/brown Silty Sand, wet, some Clay and Silt 3.70m-6.00m Dark Grey Silty Sand, some Peat	317m	South West
GW102173	0.00m-0.70m Fill: Brown/red Silty Sand, dry, steel, rock and glass fragments 0.70m-1.00m Dark brown Sand, moist, some Silt and Peat 1.00m-2.20m Light brown Sand, moist, some Silt and Peat 2.20m-3.40m Dark grey Clayey Sand, some Silt and Clay 3.40m-4.50m Dark grey Sand, wet, some Silt and Peat	317m	South West
GW102178	0.00m-0.17m Concrete 0.17m-2.70m Fill: Dark grey/black Sand, concrete fragments, timber and sandstone fragments 2.70m-3.50m Dark brown/grey Clayey Sand, moist, with Silt and Peat. 3.50m-4.40m Dark brown/grey Sand, wet, some Silt and Peat	317m	South West
GW102184	0.00m-2.40m Fill: Dark grey/black Sand, moist, some rock, glass asbestos fragments 2.40m-3.40m Dark brown/red Clayey Sand, moist, some Silt and Peat 3.40m-4.20m Dark grey/black Sand, wet, some Silt and Peat	317m	South West
GW102186	0.00m-0.19m Concrete 0.19m-2.70m Fill: Dark brown/red Sand, moist, concrete, brick and asbestos fragments 2.70m-3.70m Dark brown/black Sand, wet, some Silt and Peat 3.70m-4.20m Light brown Sand, wet, some Silt and Peat	317m	South West

Groundwater No	Drillers Log	Distance	Direction
GW102188	0.00m-0.20m Concrete 0.20m-2.70m Fill: Dark brown/red Sand, moist, rock fragments 2.70m-4.00m Dark grey/black Sand, moist, some Silt and Peat	317m	South West
GW102190	0.00m-0.17m Concrete 0.17m-2.70m Fill: Dark brown/grey Sand, moist, glass and Sandstone fragments 2.70m-3.60m Black Peaty Clay, moist, some Sand 3.60m-4.00m Dark brown Sand, wet, some Silt and Peat.	317m	South West
GW102191	0.00m-0.22m Concrete 0.22m-2.70m Fill: Dark gre/black Sand, moist, rock and metal fragments 2.70m-4.00m Dark brown/grey Sand, some Silt and Peat	317m	South West
GW102192	0.00m-0.22m Concrete 0.22m-2.50m Fill: Brown/grey Sand, moist, rocks and steel fragments 2.50m-3.20m Black Peaty Clay, moist, some Sand 3.20m-4.00m Brown/black Sand, wet, some Silt and Peat	317m	South West
GW102193	0.00m-0.17m Concrete 0.17m-2.60m Fill: Dark brown Sand, moist, rocks and concrete fragments 2.60m-3.90m Dark brown/black Sand, moist, some Silt and Peat	317m	South West
GW102194	0.00m-0.19m Concrete 0.19m-2.40m Fill: Dark brown Sand, rock and concrete fragments 2.40m-3.00m Dark grey/black Clayey Sand, moist, some Silt and Peat 3.00m-3.70m Dark brown Sand, wet, some Silt and Peat	317m	South West
GW102197	0.00m-0.16m Concrete 0.16m-2.30m Fill: Light and dark brown Sand, moist, concrete and rock fragments 2.30m-3.60m Dark brown/grey Sand, moist, some Silt and Peat	317m	South West
GW102198	0.00m-0.15m Concrete 0.15m-2.30m Fill: Dark brown/black Sand, moist, some Clay and rubble 2.30m-3.10m Dark brown/grey Sand, moist, some Silt, Clay and Peat 3.10m-3.50m Black Peaty Clay, moist, some Sand	317m	South West
GW102205	0.00m-2.20m Fill: Dark brown Sand, moist, wire, timber, and metal fragments 2.20m-3.30m Dark brown/grey Sand, moist, some Silt and Peat	317m	South West
GW102160	0.00m-0.15m Concrete 0.15m-1.50m Fill: dark brown/grey, moist Sand, tile and metal fragments 1.50m-2.60m Fill: Klinker ash, dark grey, moist, loose 2.60m-3.80m Dark brown/grey Sandy Clay, moist, some ash 3.80m-5.00m Dark brown Sand, wet, some peat	318m	South West
GW102162	0.00m-0.15m Concrete 0.15m-2.50m Fill: Dark grey/black Sand, Silt, and Concrete fragments 2.50m-3.70m Dark brown/grey Clayey Sand, with Silt 3.70m-5.00m Dark brown/grey Sand, wet, some Silt and Peat	318m	South West
GW102164	0.00m-0.15m Concrete 0.15m-2.60m Fill: Dark brown/grey Sand, some metal, rock, brick 2.60m-3.80m Dark brown/grey Clayey Sand, wet, some Silt and Clay 3.80m-5.00m Dark brown/black Sand, wet, some Silt and Peat	318m	South West
GW102165	0.00m-0.10m Concrete 0.10m-0.70m Fill: Dark brown/grey Sand, moist, glass fragments 0.70m-2.60m Fill: Light brown/red Sand, moist, some Sandstone 2.60m-4.20m Black Peaty Clay, moist, some Sand 4.20m-5.00m Dark brown Sand, wet, some Silt and Peat	318m	South West
GW102168	0.00m-0.10m Concrete 0.10m-0.80m Fill: Dark brown/grey Sandy Clay, moist, some brick and rock fragments 0.80m-2.40m Fill: Sandstone boulders 2.40m-3.20m Black Peaty Clay, moist 3.20m-5.00m Brown/black Sand, wet, some Silt and Peat	318m	South West
GW102172	0.00m-0.70m Fill: Dark brown/grey Sandy Clay, moist, rock fragments 0.70m-1.80m Dark brown/grey Silty Sand, moist 1.80m-2.80m Light brown Sand, some Silt and Peat 2.80m-4.50m Dark grey/brown Sand, wet, some Silt and Peat	318m	South West
GW102176	0.00m-0.10m Fill: Light brown/grey Sand, dry, some Silt 0.10m-0.70m Fill: Dark brown Sand, dry, steel, broken concrete 0.70m-2.20m Dark brown Sand, some Silt 2.20m-2.90m Light brown Sand, moist, some Peat 2.90m-3.40m Dark grey Clayey Sand, wet, some Silt and Peat 3.40m-4.50m Dark grey Sand, wet, some Silt and Peat	318m	South West
GW102185	0.00m-0.16m Concrete 0.16m-2.70m Fill: Dark grey Sand,moist, rock and brick fragments 2.70m-3.60m Dark grey/black Sand, moist, some Silt and Peat 3.60m-4.20m Light brown Sand, wet, some Silt and Peat	318m	South West

Groundwater No	Drillers Log	Distance	Direction
GW102187	0.00m-0.22m Concrete 0.22m-2.80m Fill: Grey/brown Sand, moist, Sandstone fragments and timber 2.80m-3.70m Dark brown/black Sand, moist, some Silt and Peat 3.70m-4.20m Light brown Sand, wet, some Silt and Peat	318m	South West
GW102189	0.00m-0.20m Concrete 0.20m-2.70m Fill: Dark brown/red Sand, moist, brick and rock fragments 2.70m-3.50m Dark brown/black Clayey Sand, moist, some Silt and Peat 3.50m-4.00m Dark brown/black Sand, wet, some Silt and Peat.	318m	South West
GW102195	0.00m-0.15m Concrete 0.15m-2.40m Fill: Light and dark brown Sandy Clay, rubble 2.40m-3.60m Dark grey/black Sandy Clay, wet, sheen on soil	318m	South West
GW102196	0.00m-0.12m Concrete 0.12m-2.40m Fill: Dark brown/grey Sand, moist, brick and concrete fragments 2.40m-3.60m Dark brown Sand, wet, some Clay, Silt and Peat	318m	South West
GW102199	0.00m-0.15m Concrete 0.15m-2.30m Fill: Dark brown/grey Sand, moist, clay, brick, and rock fragments 2.30m-3.00m Dark brown Clayey Sand, moist, some Silt and Peat 3.00m-3.50m Dark grey/brown Sand, wet, some Silt and Peat	318m	South West
GW102200	0.00m-0.16m Concrete 0.16m-1.50m Fill: Ripped Sandstone with metal and brick fragments 1.50m-2.30m Dark brown/black Sand, moist, some Silt and Peat 2.30m-3.50m Light brown/grey Sand, wet, some Silt and Peat	318m	South West
GW102201	0.00m-1.20m Fill: Dark brown/grey Sandy Clay, moist, rock fragments 1.20m-2.70m Light brown Sand, moist, some Silt and Peat 2.70m-3.50m Brown/grey Sand, wet, some Silt and Peat	318m	South West
GW102203	0.00m-1.20m Fill: Dark brown Sand, brick and metal fragments 1.20m-2.70m Light brown Sand, moist, some Silt and Peat 2.70m-3.50m Dark brown/grey Sand, wet, some Silt and Peat	318m	South West
GW102204	0.00m-2.20m Fill: Dark brown/red Sand, moist, metal, wire, and Sandstone fragments 2.20m-3.30m Dark brown/grey Sand, moist, some Silt and Peat	318m	South West
GW101350	0.00m-5.90m SAND. FINE TO MEDIUM GRAINED	326m	South West
GW101351	0.00m-5.05m SAND. SILTY,PEATY, WITH TRACES OF CLAY	326m	South West
GW101352	0.00m-5.70m SAND. SILTY, PEATY	326m	South West
GW101353	0.00m-6.00m SAND,FINE TO MEDIUM GRAINED, TRACE OF SILT	326m	South West
GW101354	0.00m-6.00m SAND. FINE TO MEDIUM GRAINED WITH SOME SILT	326m	South West
GW101355	0.00m-6.00m SAND, SILTY,PEATY WITH TRACE OF CLAY	326m	South West
GW101356	0.00m-5.60m SAND.silty, peaty with traces of clay and some thin peat lenses	326m	South West
GW101357	0.00m-5.90m SAND. FINE TO MEDIUM GRAINED, TRACE OF SILT	326m	South West
GW101358	0.00m-6.00m SAND. FINE TO MEDIUM GRAINED	326m	South West
GW101359	0.00m-6.00m SAND.FIE TO MEDIUM GRAINED WITH SOME SILT. SOME PEAT LENSES	326m	South West
GW101360	0.00m-6.00m SAND.FINE TO MEDIUM GRAINED, TRACE OF SILT SOME PEAT LENSES	326m	South West
GW101361	0.00m-4.30m SAND. FINE TO MEDIUM GRAINED WITH SOME SILT	326m	South West
GW101362	0.00m-5.90m SAND. FINE TO MEDIUM GRAINED	326m	South West
GW103588	0.00m-7.00m SAND	386m	North East
GW027248	0.00m-1.21m Topsoil 0.00m-1.21m Loam Sandy 1.21m-3.04m Sand 3.04m-4.87m Sand Slightly Silty Water Supply	408m	North West
GW112651	0.00m-6.00m SAND LIGHT M/GRAIN	416m	North West
GW104334	0.00m-0.30m TOPSOIL:SILTY SAND 0.30m-3.50m SAND	420m	South

Groundwater No	Drillers Log	Distance	Direction
GW104333	0.00m-0.20m TOPSOIL/SILTY SAND 0.20m-0.90m FILL:GRAVELLY SAND 0.90m-3.50m SAND: CLAYEY PEATY SAND	430m	South
GW104335	0.00m-0.10m PAVEMENT: CONCRETE 0.10m-0.80m FILL:SILKTY SAND 0.80m-1.80m BOTANY SAND:SILTY SAND 1.80m-3.50m BOTANY SAND:SAND	430m	South
GW104336	0.00m-0.10m PAVEMENT: CONCRETE 0.10m-0.60m FILL:GRAVELLY CLAYEY SAND 0.60m-1.00m BOTANY SAND :SAND 1.00m-2.80m BOTANY SAND:CLAY/PEAT 2.80m-3.50m BOTANY SAND :SAND	445m	South
GW104337	0.00m-0.10m PAVEMENT:CONCRETE AND BRICK 0.10m-3.50m BOTANY SAND:SAND	457m	South
GW013515	0.00m-8.22m Sand	469m	North East
GW047123	0.00m-1.52m Soil Black Sandy 1.52m-10.06m Sand Peat Water Supply 10.06m-10.67m Peat Sand 10.67m-14.94m Sand Some Peat Water Supply, Traces Clay 14.94m-15.24m Peat Sand 15.24m-18.29m Sand Some Peat Water Supply 18.29m-18.90m Peat Sand 18.90m-18.91m Clay Grey	465m	East
GW103705	0.00m-0.15m CONCRETE PAVEMENT 0.15m-0.70m SAND:MEDIUM BROWN /ROCKS AND GLASS 0.70m-1.60m SAND:WHITE NATURAL MATERIAL 1.60m-4.70m SAND:VERY DARK BROWN	471m	South East
GW103706	0.00m-0.11m CONCRETE SLAB 0.11m-0.26m FILL 0.26m-0.36m CONCRETE SLAB 0.36m-0.50m SAND:BROWN 0.50m-1.60m SAND:YELLOW-BROWN 1.60m-2.40m LOAMY SAND:DARK BROWN 2.40m-3.40m SANDY LOAM:VERY DARK BROWN 3.40m-4.30m SANDY LOAM:DARK GREY	471m	South East
GW103707	0.00m-0.90m SAND ORANGE-BROWN 0.90m-1.20m SAND:RED 1.20m-1.50m SAND:SHARP BOUNDARY PALE IN COLOUR 1.50m-1.70m SAND:GREY 1.70m-2.10m SAND.WHITE 2.10m-2.30m LOAMY SAND 2.30m-2.80m LOAMY SAND:PALER RED-BROWN 2.80m-4.20m SAND:YELLOW-GREY	471m	South East
GW104338	0.00m-0.10m PAVEMENT:CONCRETE 0.10m-0.80m FILL:GRAVELLY SAND 0.80m-1.60m BOTANY SAND:SAND 1.60m-3.50m BOTANY SAND:CLAYEY PEATY SAND	471m	South
GW104988	0.00m-7.00m SAND	488m	North East
GW033372	0.00m-0.91m Made Ground 0.91m-3.04m Sand 3.04m-4.57m Sand Wet 4.57m-5.18m Peat 5.18m-5.79m Sand Peaty Water Supply 5.79m-6.70m Sand Grey Clay Seams 6.70m-9.14m Sand Peat 9.14m-9.60m Sand Water Supply 9.60m-11.58m Sand Peat Water Supply 11.58m-11.88m Clay Stiff Peaty	558m	South
GW033371	0.00m-0.91m Made Ground 0.91m-4.26m Sand 4.26m-4.41m Sand Peat Water Supply 4.41m-5.02m Clay Peaty 5.02m-6.09m Sand Peat Water Supply 6.09m-8.83m Sand Water Supply 8.83m-9.75m Clay Yellow Sandy 9.75m-10.97m Sand Water Supply Peat Fine 10.97m-11.58m Peat Sandy 11.58m-11.88m Clay Peaty	559m	South
GW100484	0.00m-0.30m CONCRETE 0.30m-2.50m FILL 2.50m-4.00m NATURAL SANDS	569m	North East

Groundwater No	Drillers Log	Distance	Direction
GW031808	0.00m-0.15m Sand Dark Brown Light Brown 0.15m-5.63m Sand Yellow Fine 0.15m-5.63m Clay Yellow 5.63m-6.55m Sand 5.63m-6.55m Clay Black Silty 6.55m-6.85m Sand Black 6.55m-6.85m Clay Black 6.85m-8.38m Sand 8.38m-9.14m Clay 9.14m-9.90m Sand Yellow Fine Water Supply 9.90m-11.12m Sand Grey 9.90m-11.12m Clay Grey Fossils wood Water Supply 11.12m-11.43m Sand Black 11.12m-11.43m Clay Black 11.43m-11.58m Clay Black 11.58m-11.88m Sand Grey Clayey 11.88m-12.80m Sand 11.88m-12.80m Clay Water Supply 12.80m-12.95m Clay Grey Dry 12.80m-12.95m Sand Grey 12.95m-14.17m Clay White Light Grey Sandy 14.17m-16.15m Clay Grey Yellow Red 16.15m-18.28m Clay Dark Grey Stiff	581m	South
GW024655	0.00m-1.21m Ash Rubble 1.21m-2.43m Sand Peaty 2.43m-5.48m Peat Black 5.48m-7.92m Sand Peaty 5.48m-7.92m Clay Seams Water Supply 7.92m-9.14m Sand Grey Clean Water Supply	582m	South
GW114857	0.00m-0.21m CONCRETE 0.21m-2.20m FILL CLAYEY SILTY SAND DARK BROWN,TRACE OF SANDSTONE 2.20m-2.80m SAND, FINE TO MED. GRAINED 2.80m-4.20m CLAYEY SILTY SAND, FINE GRAINED 4.20m-6.00m SAND,FINE TO MEDIUM GRAINED YELLOW AND GREY BROWN	609m	North East
GW107976	0.00m-0.70m topsoil, fill 0.70m-2.00m sand, loose 2.00m-2.50m sandy, coarse 2.50m-3.50m sand, peaty	642m	North East
GW015954	0.00m-0.30m Made Ground 0.30m-1.82m Sand White Fine 1.82m-5.10m Sand Fine 5.10m-5.18m Peat 5.18m-6.70m Sand Fine 6.70m-6.78m Peat 6.78m-8.22m Sand Fine Water Supply 8.22m-8.61m Peat 8.61m-10.97m Sand Dark Brown Fine Water Supply 10.97m-11.12m Peat 11.12m-12.80m Sand Dark Brown Fine Water Supply 12.80m-13.71m Sand Fine Water Supply 13.71m-13.79m Peat 13.79m-16.15m Sand Dark Grey Fine Water Supply 16.15m-17.98m Sand Dark Brown Fine Water Supply 17.98m-19.20m Sand Dark Grey Water Supply 19.20m-19.50m Clay Dark Grey 19.50m-19.81m Sand Clay 19.81m-20.11m Clay	667m	North
GW023525	0.00m-2.43m Sand 2.43m-3.04m Sand Hard Cemented 3.04m-5.94m Sand Water Supply	669m	South East
GW013331	0.00m-1.52m Sand Yellow Loamy 1.52m-7.92m Sand Peaty Dirty 7.92m-10.36m Sand Dirty Water Supply 10.36m-10.66m Wood Peaty 10.66m-12.19m Sand Peaty Water Supply 12.19m-12.49m Clay Sandy 12.49m-14.94m Sand Dark Pete Water Supply	670m	North
GW047525	0.00m-0.61m Peat Sandy 0.61m-1.52m Sand Peaty 1.52m-4.27m Sand Dirty Water Supply 4.27m-6.25m Sand Indurated Water Supply 6.25m-12.65m Sand Dirty Water Supply 12.65m-12.95m Clay Soft Sandy Water Supply 12.95m-13.87m Sand Grey Some Clay Water Supply 13.87m-17.07m Sand Grey Dirty Water Supply Wood Decomposed 17.07m-19.20m Clay Grey Peaty Sandy 19.20m-19.35m Sandstone	756m	North East

Groundwater No	Drillers Log	Distance	Direction
GW024374	0.00m-5.18m Sand Water Supply	775m	North East
GW104990	0.00m-6.00m SAND	779m	South East
GW025994	0.00m-0.30m Made Ground 0.30m-4.41m Sand Yellow Moist 4.41m-10.51m Sand Grey Water Supply 10.51m-13.25m Sand Grey White Water Supply	789m	South East
GW024036	0.00m-6.09m Sand	873m	South West
GW101133	0.00m-2.00m FILL, CONCRETE BLOCKS 2.00m-11.00m SAND, BROWN, PEATY 11.00m-13.50m SAND, BLACK, PEATY 13.50m-18.00m SAND, BROWN, W.B. 18.00m-19.50m SAND BROWN WITH GREY CLAY SEAMS 19.50m-20.00m CLAY,DARK BROWN	916m	North East
GW102366	0.00m-7.00m SAND	925m	East
GW024244	0.00m-1.52m Soil 1.52m-3.04m Water Supply	936m	East
GW101523	0.00m-6.10m UNCONSOLIDATED SAND	949m	East
GW101457	0.00m-6.00m sand	962m	East
GW017344	0.00m-0.76m Made Ground 0.76m-2.43m Sand Grey 2.43m-3.65m Sand Water Supply 3.65m-4.87m Sand Grey 4.87m-7.01m Sand Greasy 7.01m-7.92m Sand Water Supply 7.92m-8.53m Sand Grey Peaty 8.53m-9.29m Sand Clay 9.29m-10.05m Sand Peat Clay 10.05m-10.36m Sand Water Supply 10.36m-11.58m Sand Peaty 11.58m-11.88m Sand 11.88m-12.34m Clay Grey Peaty 12.34m-13.71m Sand Grey Peaty Water Supply 13.71m-13.80m Peat	999m	South East
GW103505	0.00m-0.16m CONCRETE 0.16m-0.80m FILL (SILTY SAND) SILT AND GRAVEL 0.80m-1.80m FILL(SILTY SAND) SILT AND SHELLS 1.80m-2.70m SAND: BROWN/ORANGE WITH SILT 2.70m-3.30m SAND: GREY,BROWN,MOIST WITH SILT 3.30m-6.00m SAND: BROWN/ORANGE,SOME SILT	1016m	North East
GW103506	0.00m-0.17m CONCRETE 0.17m-1.00m FILL (SILTY SAND) SANDSTONE FRAG. 1.00m-1.30m SAND: GREYMOIST WITH SOME SILT 1.30m-1.80m SAND: BROWN,RED, MOIST,SOME SILT 1.80m-2.30m SAND:WHITE,MOIST 2.30m-3.30m SAND: GREY/BROWN,MOIST SOME SILT 3.30m-6.00m SAND: YELLOW/BROWN,MOIST WITH SILT	1016m	North East
GW103507	0.00m-0.16m CONCRETE 0.16m-1.20m FILL(SILTY SAND),SOME GRAVEL,SHELLS 1.20m-1.80m SAND: BROWN AND GREY,SOME SILT 1.80m-2.30m SAND: WHITE MOIST,FINE GRAINED 2.30m-2.80m SANDY PEAT:DARK BROWN,MOIST,SILT 2.80m-6.00m SILTY SAND:BROWN/ORANGE,WITH SILT	1016m	North East
GW103508	0.00m-0.16m CONCRETE 0.16m-0.70m FILL(SILTY SAND)DARK BROWN,MOIST/GRAVEL 0.70m-1.60m FILL(SILTY SAND)SOME CLAY/SANDSTONE 1.60m-3.40m SAND:RED/BROWN,WITH SILT 3.40m-3.80m SAND:YELLOW/BROWN/MOIST WITH SILT 3.80m-6.00m SILTY SAND:DARK BROWN/GREY/SILT	1016m	North East
GW072413	0.00m-6.00m SAND	1020m	East
GW103504	0.00m-0.50m BITUMEN 0.50m-0.60m FILL(SILTY SAND)/GRAVEL/SANDSTONE 0.60m-2.00m FILL (SAND),GRAVEL,SOME ASH AND CLAY 2.00m-2.80m SANDY LOAM: DARK BROWN WITH SILT 2.80m-6.10m SAND:YELLOW,ORANGE,MOIST	1025m	North East
GW107395	0.00m-0.40m MOSTLY ASH 0.40m-1.00m SILTY SAND 1.00m-3.60m GRADES TO PALE GREY	1037m	East

Groundwater No	Drillers Log	Distance	Direction
GW075023	0.00m-2.00m PEATY SAND 2.00m-8.00m SAND,FINE GRAINED,YELLOW 8.00m-9.50m SAND,DENSE,FINE,OLIVE GREY 9.50m-11.00m PEATY SAND,DARK BROWN 11.00m-12.00m SAND,GREY 12.00m-14.00m PEATY SAND,DARK BROWN 14.00m-15.00m SANDY PEAT,BLACK 15.00m-19.00m CLAYEY SAND,BROWN 19.00m-26.00m CLAY,DARK GREY	1048m	South East
GW105150	0.00m-5.00m SAND	1049m	East
GW107396	0.00m-0.30m SILTY SAND 0.30m-1.00m SILTY SAND,MEDIUM DENSITY 1.00m-3.50m GRADES TO PALE GREY BROWN SAT.	1076m	East
GW106987	0.00m-7.00m Sand	1108m	South East
GW107397	0.00m-0.50m SILTY SAND 0.50m-2.50m SILTY SAND,MEDIUM DENSITY 2.50m-3.60m GRADES TO YELLO/GREY	1120m	East
GW023605	0.00m-0.60m Sand Grey 0.60m-4.57m Sand White Water Supply	1127m	South East
GW105117	0.00m-0.60m GREY SAND 0.60m-0.80m ROCK 0.80m-3.50m SAND LIGHT BROWN 3.50m-6.30m YELLOW SAND 6.30m-9.80m WHITE SAND 9.80m-9.90m GREY CLAY 9.90m-13.30m GREY SAND 13.30m-14.00m PEATY SAND	1132m	East
GW072643	0.00m-2.00m FILL 2.00m-6.50m MEDIUM SANDY GRAVEL 6.50m-7.20m GREY SILTY CLAY WB 7.20m-8.50m MEDIUM SAND WB 8.50m-10.00m BROWN SILTY SAND WB 10.00m-12.00m GREY SHALE CLAY	1215m	North West
GW100754	0.00m-1.30m FILL 1.30m-13.90m LAYERED SANDS 13.90m-15.40m PEAT 15.40m-18.60m LAYERED SANDS 18.60m-24.80m GREY MARINE CLAY 24.80m-38.20m GREY F/G SANDSTONE CLAY MATRIX 38.20m-47.30m MOIST WHITE F/G S/STONE 47.30m-51.70m YELLOW M/G S/S- CLAY MATRIX 51.70m-54.90m FRACTURE WHITE S/STONE 54.90m-63.70m SHALE 63.70m-66.80m SHALE/QUARTZ/S/S CROSS BED 66.80m-93.20m WHITE M/G S/STONE 93.20m-96.50m SILSTONE 96.50m-101.80m WHITE M/G S/STONE 101.80m-117.20m DARK GREY SHALE 117.20m-130.10m WHITE M/G S/STONE 130.10m-135.00m WHITE M/G S-S QUARTZ MATRIX 135.00m-136.30m SHALE 136.30m-139.50m WHITE M/G S/STONE 139.50m-142.00m FRACTURED GREY S/STONE 142.00m-148.00m GREY M/G S/STONE	1220m	South
GW111321	0.00m-0.18m CONCRETE 0.18m-0.90m GRAVELLY CLAYEY SAND,DENSE,MOIST 0.90m-1.60m GRAVEL SILTY,DENSE,VERY MOIST 1.60m-2.00m SAND,CLAYEY SAND,GREY,FINE GRAINED 2.00m-5.00m CLAY,SANDY,SOFT,L/PLASTICITY,SAND FINE GRAINED	1222m	North
GW100966	0.00m-5.50m UNCONSOLIDATEDALL SANDS	1245m	East
GW101477	0.00m-6.00m SAND	1255m	East
GW026070	0.00m-3.65m Sand	1263m	East
GW023168	0.00m-4.57m Sand White Water Supply	1265m	North East
GW023500	0.00m-5.48m Sand Water Supply	1265m	North East
GW100852	0.00m-6.10m UNCONSOLIDATED ALL SAND	1266m	North East

Groundwater No	Drillers Log	Distance	Direction
GW104866	0.00m-6.71m UNCONSOLIDATED ALL SAND	1273m	South East
GW101475	0.00m-6.00m SAND	1275m	East
GW072632		1285m	East
GW101787	0.00m-5.79m Unconsolidated Sand	1291m	South East
GW109823	0.00m-3.00m FILL 3.00m-6.00m CLAYEY SAND 6.00m-8.11m SAND 8.11m-11.50m SANDY CLAY 11.50m-29.00m SHALE	1298m	North West
GW109822	0.00m-2.60m FILL 2.60m-3.80m CLAYEY SAND 3.80m-8.20m SAND 8.20m-10.45m CLAY	1305m	North West
GW023472	0.00m-0.60m Sand Grey 0.60m-1.52m Sand White 1.52m-1.82m Sand Hard Cemented 1.82m-3.65m Sand Yellow Water Supply	1307m	East
GW111320	0.00m-0.18m CONCRETE 0.18m-0.33m SAND,GRAVELLY,CLAYEY,M/DENSE 0.33m-0.70m SAND,VERY LOOSE,MOIST 0.70m-1.50m SAND,CLAYEY,MEDIUM DENSE,MOIST,DARK BROWN 1.50m-4.00m SAND,LOOSE, VERY MOIST,BROWN 4.00m-4.50m SAND CLAYEY,MEDIUM DENSE,GREY/BROWN 4.50m-5.20m CLAY SANDY,SOFT,SATURATED,L/PLASTICITY	1327m	North
GW104922	0.00m-7.00m SAND	1338m	South East
GW105152	0.00m-5.00m SAND	1354m	East
GW101446	0.00m-6.00m SAND	1356m	East
GW072633		1360m	East
GW023162	0.00m-2.43m Sand White 2.43m-4.87m Loam Water Supply	1363m	North East
GW100053	0.00m-0.95m FILL 0.95m-2.12m BROWN PEAT & SAND 2.12m-6.00m WHITESAND (WB) 6.00m-7.00m DARK GREY CLAY	1385m	North
GW072634	0.00m-6.10m Unconsolidated Sand	1395m	South East
GW072455	0.00m-5.80m UNCONSOLIDATED ALL SAND	1402m	South East
GW023561	0.00m-0.91m Sand Black 0.91m-5.48m Sand White Water Supply	1409m	East
GW110457	0.00m-0.25m CONCRETE 0.25m-0.90m FILL 0.90m-1.70m SANDY SILT,SILT 1.70m-3.60m SAND	1415m	North
GW023968	0.00m-2.43m Sand White 2.43m-4.57m Loam Water Supply	1419m	East
GW100575	0.00m-5.00m SAND	1471m	East
GW110456	0.00m-0.30m CONCRETE 0.30m-0.50m FILL 0.50m-0.60m CONCRETE 0.60m-1.80m SILTY SAND 1.80m-3.60m SAND	1474m	North
GW110458	0.00m-0.70m FILL 0.70m-2.80m SANDS	1475m	North
GW024616	0.00m-5.63m Sand Water Supply	1484m	East
GW112603	0.00m-1.30m FILL, SANDY , GRAVELLY, GRAVEL 1.30m-4.00m SILTY SAND, BROWN,M/GRAINED,WELL GRADED 4.00m-5.00m SILTY SAND,DARK BROWN,FINE TO MED, GRAINED	1493m	North East
GW112600	0.00m-0.30m CONCRETE 0.30m-4.60m (Unknown)	1495m	North East

Groundwater No	Drillers Log	Distance	Direction
GW112602	0.00m-1.50m FILL, CLAYEY,GRAVELLY,BROWN,DRY TO MOIST 1.50m-5.00m SILTY SAND,BROWN TO D/BROWN,WET	1512m	North East
GW101231	0.00m-7.00m Sand	1516m	East
GW112598	0.00m-0.30m CONCRETE 0.30m-1.30m SANDSTONE CRUSHED 1.30m-3.50m SAND,DARK BROWN,FINE TO MEDIUM GRAINED 3.50m-4.50m SAND MOIST TO WET 4.50m-5.00m SAND BROWN TO LIGHT BROWN , WET	1525m	North East
GW101161	0.00m-6.10m UNCONSOLIDATED, ALL SAND	1526m	East
GW112599	0.00m-0.30m CONCRETE 0.30m-0.80m GRAVELLY SAND,FILO,DARK BROWN 0.80m-1.60m SAND GREY FINE TO MED. GRAINED 1.60m-3.50m SAND TO DARK BROWN 3.50m-4.50m SAND WET	1529m	North East
GW100945	0.00m-7.10m ALL SAND UNCONSOLIDATED	1533m	North East
GW112601	0.00m-0.30m CONCRETE 0.30m-1.30m FILL SANDY BROWN,SOME SANDSTONE 1.30m-5.00m FILL,SANDY,BROWN COARSE,MOIST WET	1535m	North East
GW102800	0.00m-6.10m CONSOLIDATED ALL SANDS	1539m	East
GW112597	0.00m-0.80m FILL, CLAYEY, SANDY GRAVELLY SANDSTONE 0.80m-1.10m SAND, LIGHT GREY,FINE GRAINED,MOIST 1.10m-3.00m SAND TO DARK BROWN 3.00m-3.90m SAMD TO LIGHT BROWN 3.90m-5.00m SAND WET STRONG HYDROCARBON ODOUR	1543m	North East
GW100993	0.00m-5.49m UNCONSOLIDATED ALL SANDS	1544m	East
GW025543	0.00m-0.09m Made Ground 0.09m-2.74m Sand Coarse 2.74m-7.62m Sand 7.62m-7.77m Clay Grey 7.77m-9.44m Sand 9.44m-12.49m Sand Grey Water Supply 12.49m-12.80m Wood Peat 12.80m-14.02m Sand Water Supply 14.02m-14.63m Clay Peaty 14.63m-18.28m Sand Water Supply 18.28m-18.59m Clay Peaty	1550m	South East
GW109821	0.00m-2.20m FILL 2.20m-35.00m ASHFIELD SHALE	1554m	North West
GW100997	0.00m-8.23m UNCONSOLIDATED SAND	1568m	North East
GW109825	0.00m-4.50m FILL 4.50m-22.00m SHALE	1584m	North West
GW023967	0.00m-1.82m Sand White 1.82m-2.43m Sand Grey Water Supply 2.43m-2.74m Mud Black	1585m	East
GW101813	0.00m-8.54m UNCONSOLIDATED SAND	1597m	North East
GW023408	0.00m-1.52m Soil Black Hard 1.52m-7.01m Sand Water Supply	1603m	East
GW111456	0.00m-0.60m SAND SILTY 0.60m-6.20m SAND	1603m	South
GW072214		1612m	East
GW109824	0.00m-4.50m FILL 4.50m-9.00m LAMINITE 9.00m-17.00m SHALE 17.00m-20.70m SANDSTONE	1615m	North West
GW105528	0.00m-1.00m SAND,GREY,SOME GRAVEL,CLAY WET 1.00m-1.50m GRAVELLY CLAY,YELLOW BROWN 1.50m-2.50m SANDY SILT,BLACK 2.50m-4.00m SAND,L/BROWN,GREY 4.00m-5.00m SAND GREY,L/BROWN	1620m	North East

Groundwater No	Drillers Log	Distance	Direction
GW023600	0.00m-0.60m Sand Grey 0.60m-7.31m Sand Yellow Water Supply	1622m	East
GW101221	0.00m-6.10m Unconsolidated - all sand	1637m	North East
GW100975	0.00m-6.10m UNCONSOLIDATED ALL SANDS	1645m	North East
GW111457	0.00m-0.09m ASPHALT 0.09m-0.20m BASE COURSE 0.20m-0.60m SAND FILLING 0.60m-1.30m SAND 1.30m-2.00m COFFEE ROCK 2.00m-6.20m SAND	1645m	South
GW105527	0.00m-0.80m FILL,SANDY GRAVEL 0.80m-2.10m SAND,MEDIUM GRAINED,BROWN/YELLOW 2.10m-5.00m SAND,MEDIUM GRAINED,YELLOW/WHITE	1661m	North
GW100367	0.00m-6.00m ALL SAND - UNCONSOLIDATED	1662m	East
GW017782	0.00m-1.82m Made Ground 1.82m-4.26m Peat 4.26m-4.87m Sand Peaty 4.87m-9.44m Sand 9.44m-10.36m Clay Sandy 10.36m-11.88m Sand Clay 11.88m-14.63m Sand 14.63m-15.54m Sand Clay	1665m	North East
GW072328	0.00m-1.00m FELT 1.00m-8.00m PEATY WHITE SAND 8.00m-9.50m BROWN PEATY SAND 9.50m-10.80m PEAT ON CLAY 10.80m-13.00m BROWN PEATY SAND 13.00m-14.00m SHALEY GREY CLAY	1681m	North East
GW105529	0.00m-2.00m FILL,SILTY SAND/GRAVEL 2.00m-5.00m SAND,BEIGE/BROWN/YELLOW MOT.	1688m	North
GW073515	0.00m-7.00m SAND	1722m	East
GW101037	0.00m-4.88m UNCONSOLIDATED. ALL SAND	1741m	North East
GW101226	0.00m-5.30m Unconsolidated - all sand	1751m	East
GW024023	0.00m-0.30m Sand White 0.30m-2.13m Sand Hard Cemented 2.13m-8.22m Sand Yellow Water Supply	1752m	North East
GW100466	0.00m-5.00m SAND	1765m	North East
GW100813	0.00m-10.98m UNCONSOLIDATED ALL SANDS	1767m	North East
GW026788	0.00m-1.21m Sand White 1.21m-10.36m Sand 10.36m-10.97m Peat 10.97m-12.19m Sand 12.19m-12.49m Peat 12.49m-13.72m Sand Dirty Peta 13.72m-15.84m Sand Dirty 15.84m-17.67m Sand Yellow 17.67m-18.89m Sand Grey Clayey 18.89m-20.42m Clay Grey Pete	1777m	South East
GW106145	0.00m-5.79m sand, unconsolidated	1782m	East
GW100493	0.00m-0.35m SANDY, GRAVELLY FILL 0.35m-0.60m SAND, GREY, FIND-MED, DRY 0.60m-4.00m SAND, ORANGE, FINE-MED 4.00m-5.80m SAND, LIGHT ORANGE, MOIST 5.80m-9.50m SAND, LIGHT GREY, FINE, WET	1788m	North East
GW109255	0.00m-0.30m FILL, SAND AND GRAVEL 0.30m-2.90m SILTY SAND,WET @ 1.55m BGL 2.90m-7.30m SAND	1803m	South East

Groundwater No	Drillers Log	Distance	Direction
GW046837	0.00m-2.44m Sand Dark Brown 2.44m-5.79m Sand 5.79m-7.01m Sand Peaty 7.01m-7.62m Peat 7.62m-9.14m Sand Dirty 9.14m-9.30m Clay 9.30m-12.19m Sand Dirty 12.19m-12.50m Sand Soak 12.50m-12.80m Sand Water Bearing Water Supply 12.80m-14.02m Peat 14.02m-14.78m Sandstone	1806m	South East
GW075022	0.00m-2.00m SILTY SAND 2.00m-5.00m SAND,YELLOW BROWN 5.00m-6.00m PEATY SAND 6.00m-6.50m SAND,YELLOW 6.50m-8.00m PEATY SAND,GREY 8.00m-9.00m PEAT,FIRM,BLACK 9.00m-13.00m SAND,FINE TO MED GRAINED,BROWN 13.00m-14.00m PEATY SAND.BROWN 14.00m-14.50m PEAT,MED,BLACK 14.50m-15.00m CLAY,GREY 15.00m-15.75m SANDY CLAY,WHITE GREY 15.75m-16.75m BED ROCK	1816m	South East
GW026482	0.00m-5.48m Sand Water Supply	1819m	North East
GW109253	0.00m-0.60m FILL, SAND 0.60m-2.80m SILTY SAND 2.80m-10.30m SAND WET BELOW 1.4 m	1820m	South East
GW109254	0.00m-0.30m FILL ,SAND AND GRAVEL 0.30m-2.60m SILTY SAND WET @ 1.0 m 2.60m-9.70m SAND	1822m	South East
GW110909	0.00m-0.30m ROADBASE GREY 0.30m-1.00m SAND WITH GRAVEL,BROWN-GREY 1.00m-2.00m SAND WITH GRAVEL DARK GREY 2.00m-3.80m SAND LIGHT BROWN 3.80m-5.80m SAND GREY	1829m	South
GW104040	0.00m-0.10m CONCRETE 0.10m-2.00m FILL,SAND YELLOWISH 2.00m-6.50m SAND,MEDIUM BROWN 6.50m-7.00m SAND,LIGHT BROWN	1859m	East
GW101215	0.00m-7.62m Unconsolidated - all sand.	1862m	East
GW104039	0.00m-0.10m CONCRETE 0.10m-2.00m SAND,DARK BROWN 2.00m-7.00m SAND MEDIUM LIGHT BROWN	1864m	East
GW107233	0.00m-0.30m TOPSOIL 0.30m-1.50m GREY SAND 1.50m-6.50m YELLOW SAND 6.50m-12.20m BROWN SILTY SAND 12.20m-12.60m BLACK PEAT 12.60m-13.10m BLACK PEATY SAND 13.10m-16.70m BROWN PEATY SAND 16.70m-16.90m BLACK PEAT 16.90m-18.40m BROWN SAND 18.40m-18.80m BLACK PEAT 18.80m-21.30m BROWN SAND 21.30m-21.50m BLACK PEAT	1879m	South East
GW047122	0.00m-1.52m Made Ground 1.52m-4.57m Sand Dirty 4.57m-8.23m Sand 8.23m-8.53m Peat 8.53m-9.14m Sand 9.14m-9.45m Peat 9.45m-12.19m Sand Peaty 12.19m-16.46m Sand Water Supply 16.46m-17.68m Sand Peaty Wood Water Supply 17.68m-18.29m Sand Dirty Water Supply 18.29m-19.51m Sand Grey Clay Bands 19.51m-19.52m Clay Stiff Peaty	1882m	South East

Groundwater No	Drillers Log	Distance	Direction
GW026787	0.00m-3.96m Sand Dry 3.96m-6.09m Sand Clean Water Supply 6.09m-8.53m Sand Peaty 8.53m-9.44m Sand Clean Peaty 9.44m-16.45m Sand Peaty 16.45m-18.59m Sand Clean Water Supply 18.59m-21.03m Sand Water Supply 21.03m-21.33m Sand Grey Clayey 21.33m-22.55m Sand Peaty 22.55m-24.84m Clay Dark Grey Stiff	1895m	South East
GW017195	0.00m-3.35m Sand Water Supply	1904m	East
GW114562	0.00m-0.05m ASPHALT 0.05m-0.18m CONCRETE 0.18m-0.58m SILTY SAND DARK BROWN MG.SOFT 0.58m-0.75m SAND, LIGHT BROWN, soft 0.75m-0.95m SILTY SAND DARK BROWN MG.SOFT 0.95m-1.05m SAND,WHITE ORANGE MOTTLED,SOFT 1.05m-1.55m GRAVELLY SAND, LIGHT BEOWN SOFT 1.55m-1.75m SAND ORANGE SOFT 1.75m-2.25m CLAY DARK BROWN FG, SOFT 2.25m-2.70m SILTY CLAY DARK BROWN FG SOFT	1912m	North
GW114561	0.00m-0.15m ASPHALT 0.15m-0.21m CONCRETE 0.22m-0.50m SILTY SAND BLACK ,GG,SOFT 0.50m-1.00m SAND GREY BROWN CG BROWN 1.00m-1.50m SAND WHITE CG SOFT 1.50m-1.60m SANDY CLAY BLACK SOFT 1.60m-2.15m SAND GREY CG SOFT 2.15m-2.70m SAND BROWN,CG,SOFT	1917m	North
GW102741	0.00m-7.00m SAND	1919m	East
GW072958		1920m	East
GW110910	0.00m-0.30m ROADBASE,GREY 0.30m-1.00m SAND SILTY WITH GRAVEL,GREY,BROWN 1.00m-3.00m SAND BROWN 3.00m-4.50m SAND WITH SHELLS GREY 4.50m-6.00m SAND WITH GRAVELS BLACK.	1921m	South
GW024377	0.00m-4.57m Sand Water Supply	1925m	East
GW100825	0.00m-7.01m UNCONSOLIDATED ALL SANDS	1927m	East
GW114563	0.00m-0.08m ASPHALT 0.08m-0.21m CONCRETE 0.21m-0.31m SAND LIGHT BROWN, SOFT 0.31m-0.99m SILTY SAND,DARK BROWN MG SOFT 0.99m-1.23m SANDY CLAY BROWN SOFT FG 1.23m-1.31m SANDY CLAY BROWN SOFT FG 1.31m-1.95m SAND LIGHT BROWN SOFT 1.95m-2.52m CLAYEY SAND DARK BROWN SOFT 2.52m-2.80m CLAY DARK BROWN SOFT 2.80m-3.34m CLAYEY SAND, DADRK BROWN SOFT 3.34m-3.54m CLAY, DARK BROWN SOFT 3.54m-3.90m CLAY, DARK BROWN SOFT	1928m	North
GW110427	0.00m-0.10m GRASS 0.10m-1.00m SAND,YELLOW ORANGE,M/GRAINED 1.00m-2.00m SAND GREY BROWN,M/GRAINED,DRY 2.00m-3.00m SAND AS ABOVE ,WET 3.00m-4.00m SAND AS ABOVE ,WET 4.00m-5.00m SAND LIGHT BROWN,M/GRAINED,SATURATED 5.00m-6.00m SAND AS ABOVE ,SATURATED 6.00m-7.00m SAND AS ABOVE	1929m	East
GW110428	0.00m-0.10m BITUMEN 0.10m-0.50m SAND,GREY/BROWN,M/GRAINED,DRY 0.50m-2.00m SAND,YELLOW/ORANGE,M/GRAINED 2.00m-3.00m SAND,L/BROWN M/GRAINED DAMP 3.00m-3.80m SAND AS ABOVE ,WET 3.80m-4.00m SAND AS ABOVE ,SATURATED	1937m	East
GW110906	0.00m-1.00m ROADBASE GREY 1.00m-2.80m SAND GREY 2.80m-5.80m SAND BROWN	1938m	South
GW072479	0.00m-5.80m UNCONSOLIDATED SANDS	1943m	East

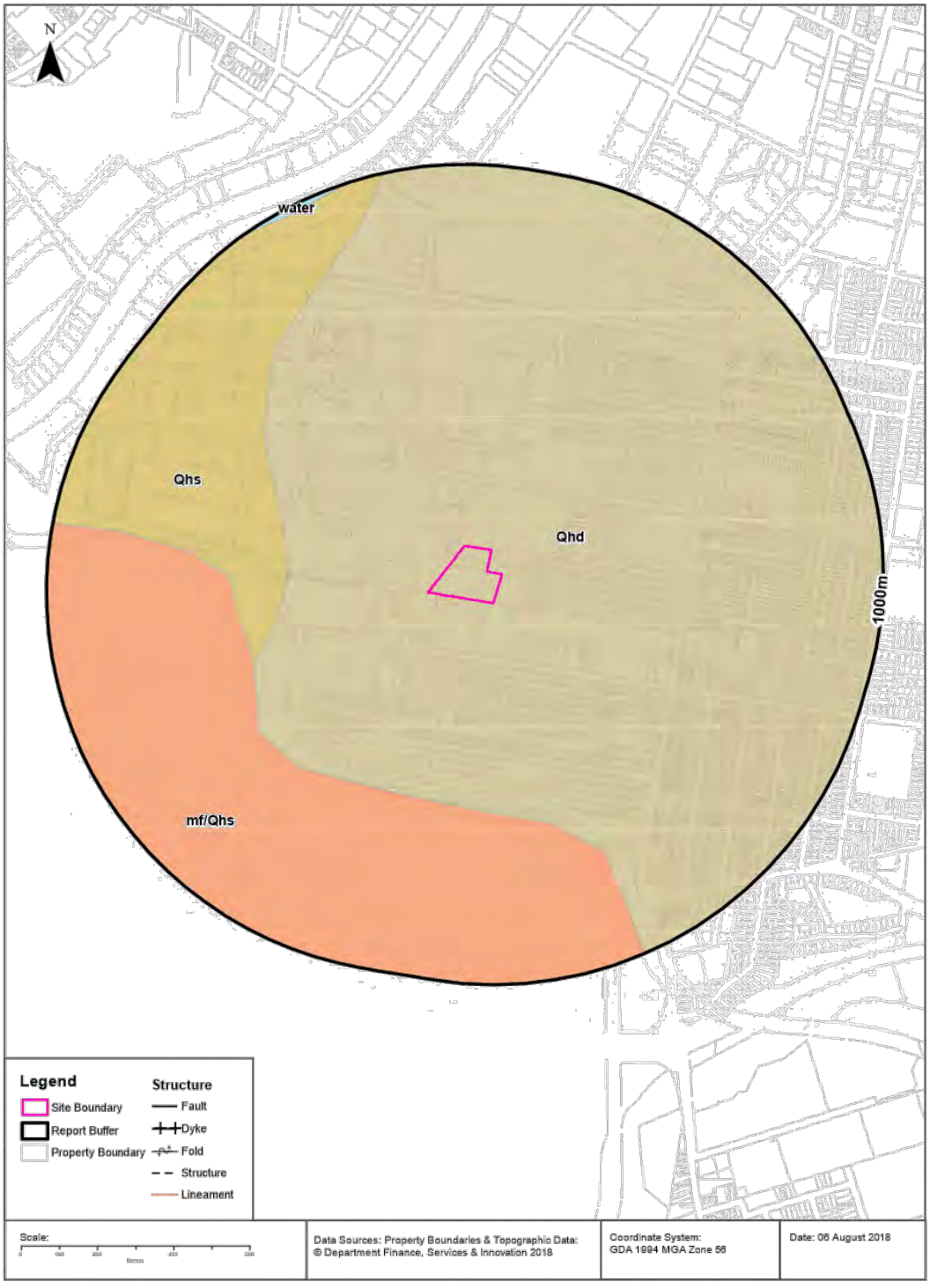
Groundwater No	Drillers Log	Distance	Direction
GW110430	0.00m-0.10m BITUMEN 0.10m-1.00m SAND, ORANGE/BROWN,FINE M/GRAINED 1.00m-2.00m SAND,WHITE/GREY,WELL SORTED F/M/GRAINED 2.00m-3.00m SAND,BROWN/GREY,WET,M/GRAINED 3.00m-3.80m SAND,AS ABOVE 3.80m-4.00m SAND AS ABOVE ,SATURATED	1944m	East
GW110429	0.00m-0.10m BITUMEN 0.10m-1.00m SAND,GREY/BROWN,FINE M/GRAINED 1.00m-2.00m SAND AS ABOVE 2.00m-3.00m SAND L/BROWN,M/GRAINED,WET M/DENSE 3.00m-3.80m SAND AS ABOVE 3.80m-4.00m SAND AS ABOVE ,SATURATED	1946m	East
GW101445	0.00m-6.00m SAND	1950m	East
GW110431	0.00m-0.10m BITUMEN 0.10m-1.00m SAND,GREY BROWN 1.00m-2.00m SAND,GREY BROWN,M/GRAINED,DRY 2.00m-3.00m SAND,L/BROWN,DAMP,WELL SORTED 3.00m-4.00m SAND AS ABOVE,WET 4.00m-4.80m SAND,L/BROWN,WET M/GRAINED 4.80m-5.00m SAND AS ABOVE	1952m	East
GW110911	0.00m-0.30m ROADBASE GREY 0.30m-2.20m SAND SILTY WITH GRAVEL GREY 2.20m-3.50m SAND WITH SHELLS GREY 3.50m-6.00m SAND WITH SHELLS DARK GREY/BLACK	1954m	South
GW104570	0.00m-6.50m SAND	1955m	East
GW072897	0.00m-5.80m Unconsolidated Sand	1956m	East
GW104031	0.00m-0.10m GRASS 0.10m-2.00m SAND,MEDIUM BROWN 2.00m-3.00m SAND,LIGHT MED. BROWN 3.00m-4.00m SAND:LIGHT BROWN 4.00m-5.00m AS ABOVE 5.00m-6.00m AS ABOVE,SATURED 6.00m-7.00m AS ABOVE	1965m	East
GW104032	0.00m-0.10m GRASS 0.10m-2.00m FILL,SAND,LIGHT ORANGE 2.00m-5.00m SAND,MEDIUM BROWN 5.00m-7.00m SAND,LIGHT BROWN,MED. GRAINED	1965m	East
GW104033	0.00m-2.00m FILL SAND DARK BROWN,YELLOW 2.00m-4.00m SAND,MEDIUM BROWN,SATURED	1965m	East
GW104034	0.00m-2.00m FILL,SAND,GREY,DARK ORANGEY BROWN 2.00m-4.00m SAND,MEDIUM BROWN,NO ODOUR 4.00m-5.00m AS ABOVE,DENSE SAND 5.00m-7.00m SAND,LIGHT BROWN	1965m	East
GW104035	0.00m-2.00m FILL SAND MEDIUM DARK BROWN,GREYISH 2.00m-3.00m SAND,LIGHT BROWN,WET 3.00m-7.00m SAND AS ABOVE,SATURED,DARK BROWN	1965m	East
GW104036	0.00m-1.00m fill 1.00m-2.00m peat 2.00m-7.00m sand	1965m	East
GW104037	0.00m-0.10m GRASS 0.10m-4.00m SAND,MEDIUM GRAINED	1965m	East
GW104038	0.00m-0.10m GRASS 0.10m-4.00m SAND:LIGHT BROWN	1965m	East
GW023164	0.00m-3.65m Sand Water Supply	1969m	South East
GW110414	0.00m-0.10m GRASS 0.10m-1.00m SAND,ORANGE,BROWN,M/GRAINED,DRY 1.00m-2.00m SAND, AS ABOVE 2.00m-3.00m SAND,LIGHT BROWN,M/GRAINED,WELL SORTED 3.00m-4.00m SAND AS ABOVE,SATURATED	1971m	East
GW024694	0.00m-3.04m Sand Water Supply	1976m	East
GW013514	0.00m-9.14m Sand Water Supply	1978m	North East
GW103708	0.00m-6.00m SAND	1985m	East

Groundwater No	Drillers Log	Distance	Direction
GW017720	0.00m-0.76m Topsoil 0.76m-1.06m Sand White 1.06m-1.37m Sand Peaty Water Supply 1.37m-3.65m Sand Water Supply 3.65m-7.92m Sand Light Brown Water Supply 7.92m-8.07m Peat 8.07m-17.06m Sand Dirty Water Supply 17.06m-17.37m Peat 17.37m-18.89m Clay Grey 18.89m-20.42m Sand Grey Fossils:shell Fragments Water Supply 20.42m-20.43m Clay Grey	1991m	South East
GW100674	0.00m-5.49m SAND	1995m	East

Drill Log Data Source: NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corp
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Geology 1:100,000

146-154 O'Riordan Street, Mascot, NSW 2020



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Geology

146-154 O'Riordan Street, Mascot, NSW 2020

Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Qhd	Medium to fine-grained marine sand with podsols				Quaternary		Sydney	1:100,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
mf/Qhs							Sydney	1:100,000
Qhd	Medium to fine-grained marine sand with podsols				Quaternary		Sydney	1:100,000
Qhs	Peat, sandy peat, and mud.				Quaternary		Sydney	1:100,000
water							Sydney	1:100,000

Geological Structures

What are the Geological Structures onsite?

Feature	Name	Description	Map Sheet	Dataset
No features				1:100,000

What are the Geological Structures within the dataset buffer?

Feature	Name	Description	Map Sheet	Dataset
No features				1:100,000

Naturally Occurring Asbestos Potential

146-154 O'Riordan Street, Mascot, NSW 2020

Naturally Occurring Asbestos Potential

Naturally Occurring Asbestos Potential within the dataset buffer:

Potential	Sym	Strat Name	Group	Formation	Scale	Min Age	Max Age	Rock Type	Dom Lith	Description	Dist	Dir
No records in buffer												

Mining Subsidence District Data Source: © State of New South Wales through NSW Department of Industry, Resources & Energy

Soil Landscapes

146-154 O'Riordan Street, Mascot, NSW 2020

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Soils

146-154 O'Riordan Street, Mascot, NSW 2020

Soil Landscapes

What are the onsite Soil Landscapes?

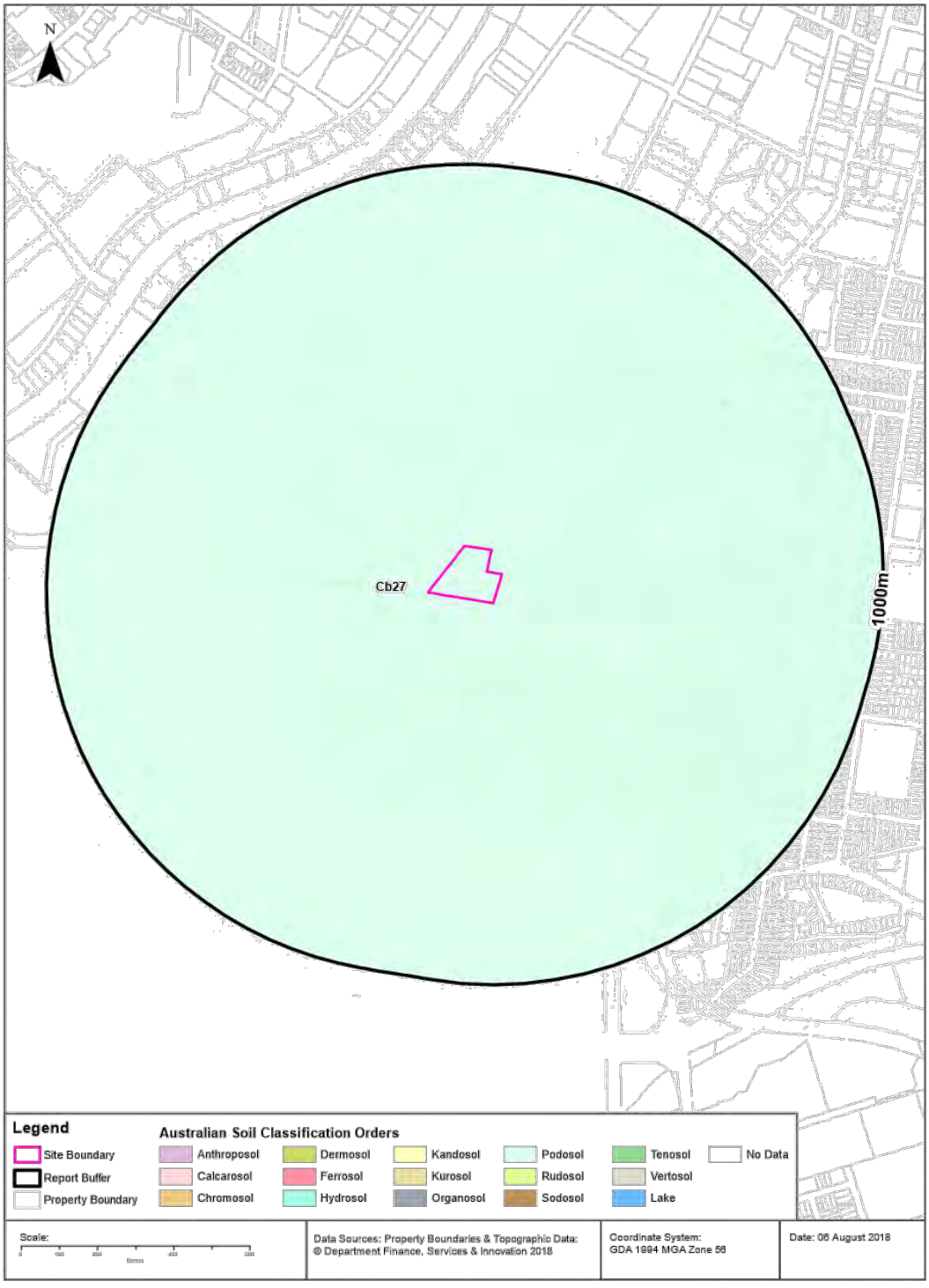
Soil Code	Name	Group	Process	Map Sheet	Scale
AEtg	TUGGERAH		AEOLIAN	Sydney	1:100,000

What are the Soil Landscapes within the dataset buffer?

Soil Code	Name	Group	Process	Map Sheet	Scale
AEtg	TUGGERAH		AEOLIAN	Sydney	1:100,000
DTxx	DISTURBED TERRAIN		DISTURBED TERRAIN	Sydney	1:100,000

Atlas of Australian Soils

146-154 O'Riordan Street, Mascot, NSW 2020



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Soils

146-154 O'Riordan Street, Mascot, NSW 2020

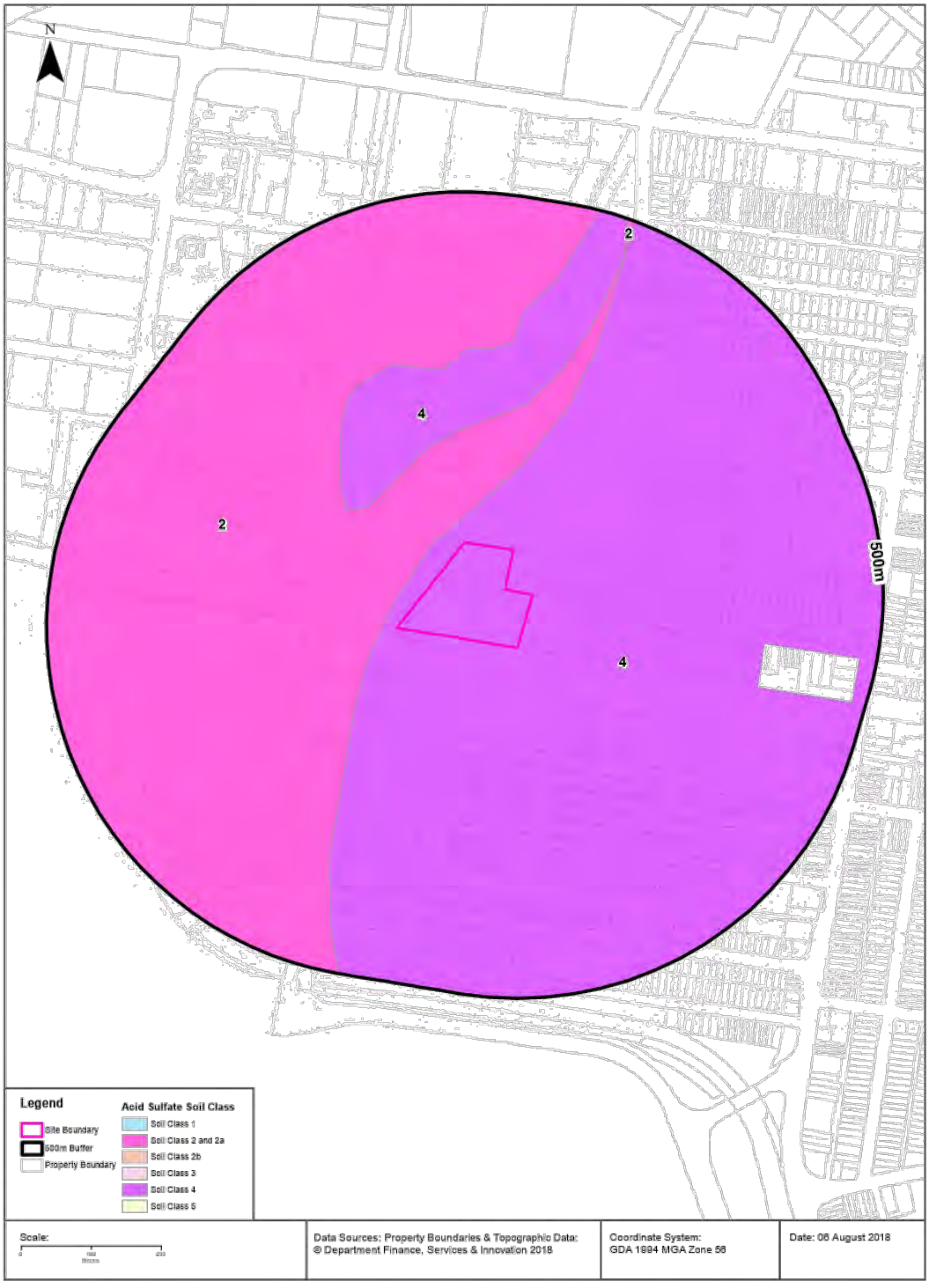
Atlas of Australian Soils

Soil mapping units and Australian Soil Classification orders within the dataset buffer:

Map Unit Code	Soil Order	Map Unit Description	Distance
Cb27	Podosol	Coastal sand plains and dunes, lagoons, and swampy areas: chief soils are leached sands (Uc2.3 and Uc2.2). Associated are dunes of siliceous sands (Uc1.2) and/or calcareous sands (Uc1.l) fringing the coastline; and swampy areas of (Uf6) soils and (Uc1.2) soils with peaty surfaces. Unit Cb27 has similarities with units Cb28 and Ca6.	0m

Acid Sulfate Soils

146-154 O'Riordan Street, Mascot, NSW 2020



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Acid Sulfate Soils

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Standard Local Environmental Plan Acid Sulfate Soils

What is the on-site Acid Sulfate Soil Plan Class that presents the largest environmental risk?

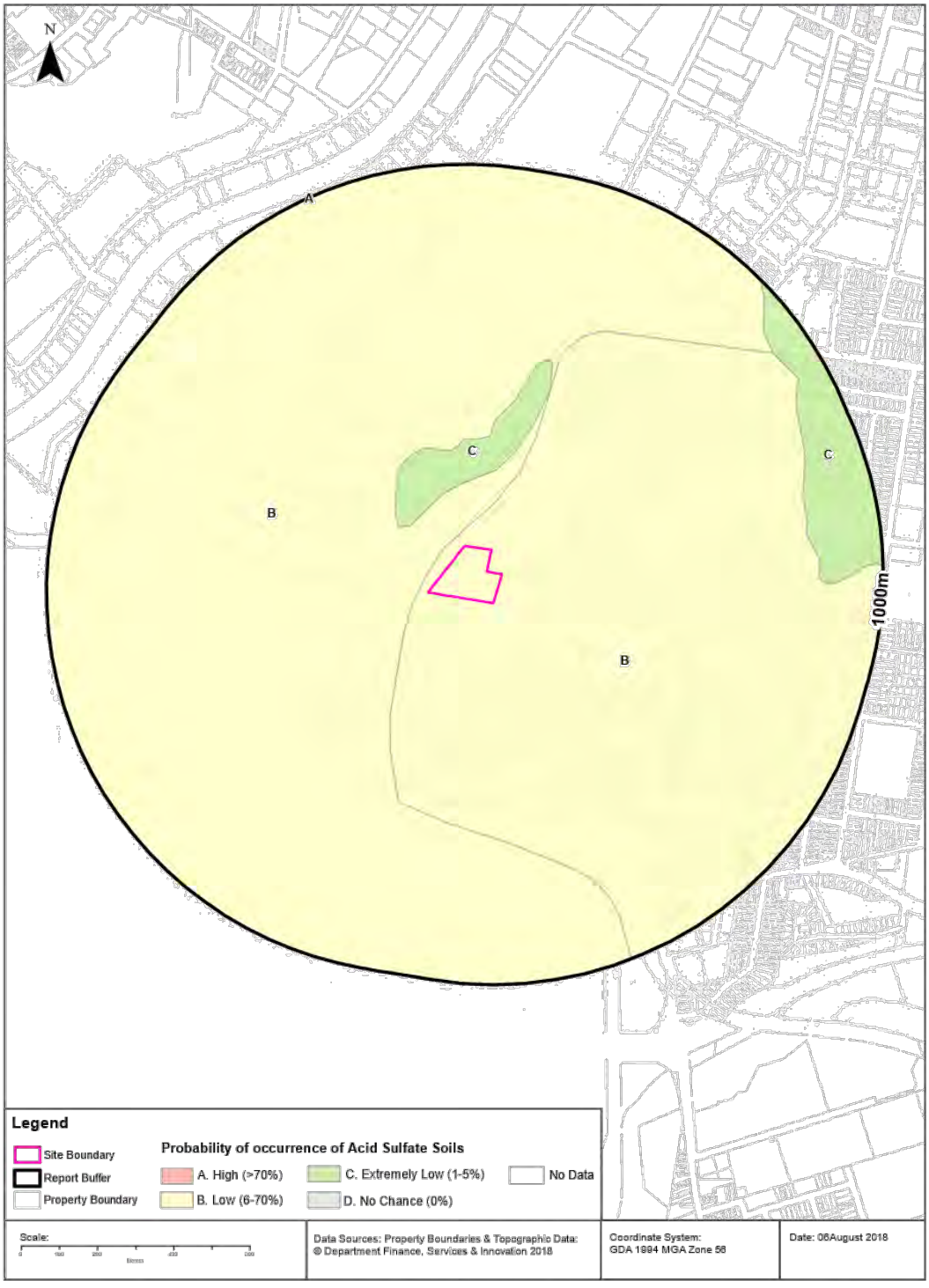
Soil Class	Description	LEP
4	Works more than 2 metres below natural ground surface present an environmental risk; Works by which the watertable is likely to be lowered more than 2 metres below natural ground surface, present an environmental risk	Botany Bay Local Environmental Plan 2013

If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	LEP	Distance	Direction
N/A				

Atlas of Australian Acid Sulfate Soils

146-154 O'Riordan Street, Mascot, NSW 2020



Acid Sulfate Soils

146-154 O'Riordan Street, Mascot, NSW 2020

Atlas of Australian Acid Sulfate Soils

Atlas of Australian Acid Sulfate Soil categories within the dataset buffer:

Class	Description	Distance
B	Low Probability of occurrence. 6-70% chance of occurrence.	0m
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	136m
A	High Probability of occurrence. >70% chance of occurrence.	996m

Dryland Salinity

146-154 O'Riordan Street, Mascot, NSW 2020

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

No

Is there Dryland Salinity - National Assessment data within the dataset buffer?

No

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
N/A	N/A	N/A	N/A	N/A

Dryland Salinity Data Source : National Land and Water Resources Audit
The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.
In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

Dryland Salinity Potential of Western Sydney

Dryland Salinity Potential of Western Sydney within the dataset buffer?

Feature Id	Classification	Description	Distance	Direction
N/A	Outside Data Coverage			

Dryland Salinity Potential of Western Sydney Data Source : NSW Office of Environment and Heritage

Mining Subsidence Districts

146-154 O'Riordan Street, Mascot, NSW 2020

Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

District	Distance	Direction
There are no Mining Subsidence Districts within the report buffer		

Environmental Zoning

146-154 O'Riordan Street, Mascot, NSW 2020

State Environmental Planning Policy Protected Areas

Are there any State Environmental Planning Policy Protected Areas onsite or within the dataset buffer?

Dataset	Onsite	Within Site Buffer	Distance
SEPP14 - Coastal Wetlands	No	No	N/A
SEPP26 - Littoral Rainforests	No	No	N/A
SEPP71 - Coastal Protection Zone	No	No	N/A

SEPP Protected Areas Data Source: NSW Department of Planning & Environment

State Environmental Planning Policy Major Developments (2005)

State Environmental Planning Policy Major Developments within the dataset buffer:

Map Id	Feature	Effective Date	Distance	Direction
N/A	No records within buffer			

SEPP Major Development Data Source: NSW Department of Planning & Environment

State Environmental Planning Policy Strategic Land Use Areas

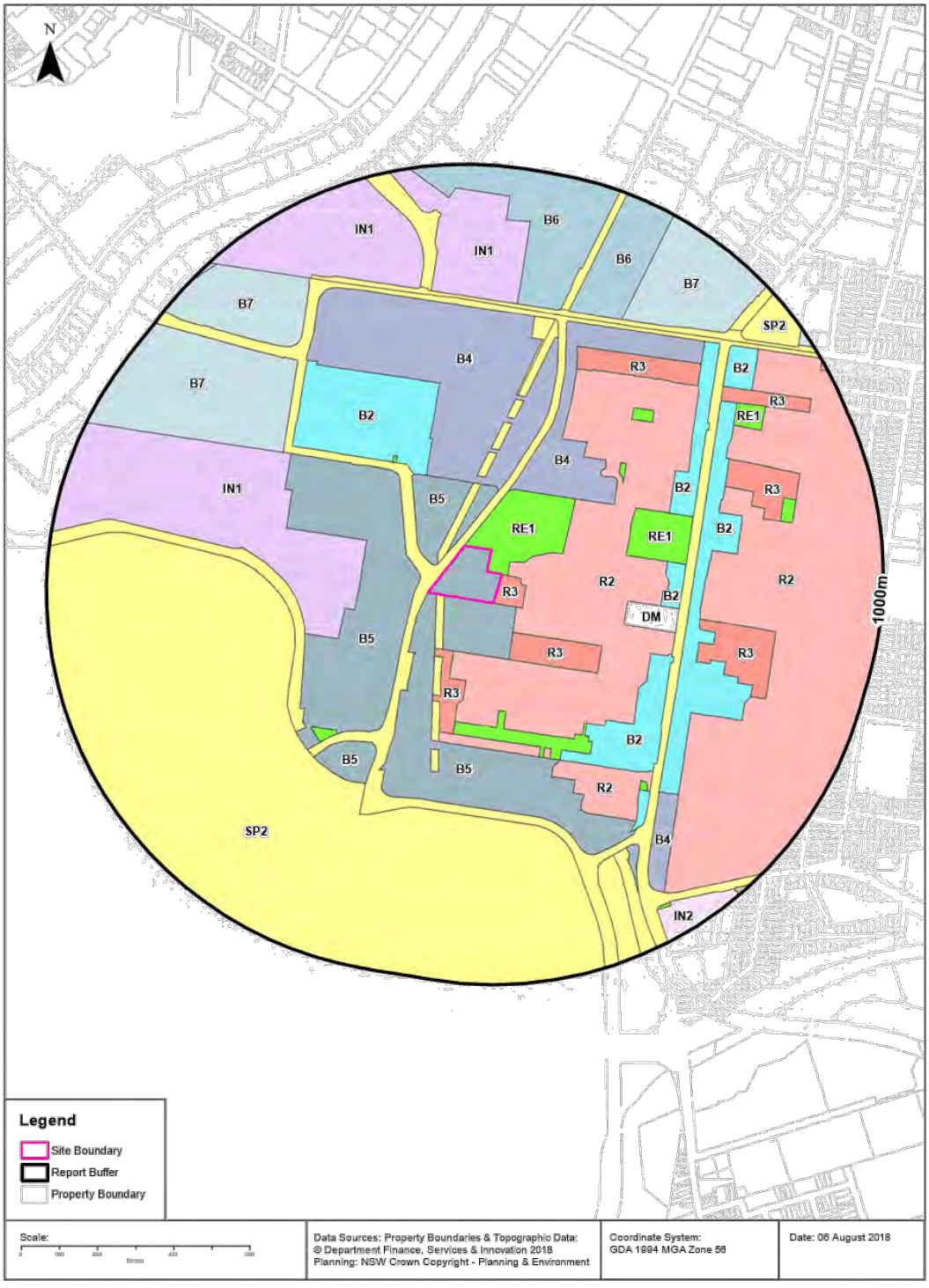
State Environmental Planning Policy Strategic Land Use Areas onsite or within the dataset buffer:

Strategic Land Use	SEPPNo	Effective Date	Amendment	Amendment Year	Distance	Direction
No records within buffer						

SEPP Strategic Land Use Data Source: NSW Department of Planning & Environment

LEP Planning Zones

146-154 O'Riordan Street, Mascot, NSW 2020



Local Environmental Plan

146-154 O'Riordan Street, Mascot, NSW 2020

Land Zoning

What Local Environmental Plan Land Zones exist within the dataset buffer?

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
B5	Business Development		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		0m	Onsite
R3	Medium Density Residential		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		0m	East
RE1	Public Recreation		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		0m	North East
SP2	Infrastructure	Classified Road	Botany Bay Local Environmental Plan 2013	09/10/2015	09/10/2015	19/02/2016	Amendment No 4	0m	South East
SP2	Infrastructure	Sewerage	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		0m	South West
R2	Low Density Residential		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		16m	East
B5	Business Development		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		20m	North
SP2	Infrastructure	Sewerage	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		23m	North
B5	Business Development		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		24m	North West
B5	Business Development		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		32m	West
R3	Medium Density Residential		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		93m	South East
R3	Medium Density Residential	<Null>	Botany Bay Local Environmental Plan 2013	09/10/2015	09/10/2015	19/02/2016		141m	South
B4	Mixed Use		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		155m	North
B4	Mixed Use		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		160m	North East
SP2	Infrastructure	Sewerage	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		162m	South
IN1	General Industrial		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		178m	West
SP2	Infrastructure	Sewerage	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		186m	North
B2	Local Centre		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		209m	North West
SP2	Infrastructure	Sewerage	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		262m	North
SP2	Infrastructure	Sewerage	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		278m	South
RE1	Public Recreation		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		281m	North West
RE1	Public Recreation		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		282m	South
RE1	Public Recreation		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		330m	East
SP2	Infrastructure	Railway	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		334m	West
DM	Deferred Matter		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		339m	East
SP2	Infrastructure	Sewerage	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		350m	North
R2	Low Density Residential		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		355m	South
SP2	Infrastructure	Airport	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		361m	South West

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE1	Public Recreation		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		388m	North East
B2	Local Centre		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		400m	South East
R2	Low Density Residential		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		402m	South East
SP2	Infrastructure	Sewerage	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		403m	South
SP2	Infrastructure	Sewerage	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		411m	North
SP2	Infrastructure	Electricity Substation	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		411m	North
B5	Business Development		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		420m	South West
B2	Local Centre		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		425m	East
RE1	Public Recreation		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		432m	South West
R2	Low Density Residential		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		448m	South East
B2	Local Centre		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		469m	North East
B2	Local Centre		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		500m	East
RE1	Public Recreation		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		503m	North East
B7	Business Park		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		523m	North West
R3	Medium Density Residential		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		525m	North East
R2	Low Density Residential		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		530m	East
R3	Medium Density Residential		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		534m	East
RE1	Public Recreation		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		605m	South East
B2	Local Centre		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	10/02/2017		622m	South East
R3	Medium Density Residential		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		630m	East
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		636m	North East
B6	Enterprise Corridor		Sydney Local Environmental Plan 2012	12/06/2015	12/06/2015	16/12/2016	Amendment No 17	647m	North
IN1	General Industrial		Sydney Local Environmental Plan 2012	12/06/2015	12/06/2015	16/12/2016	Amendment No 17	647m	North
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		656m	North East
B6	Enterprise Corridor		Sydney Local Environmental Plan 2012	12/06/2015	12/06/2015	16/12/2016	Amendment No 17	657m	North East
B4	Mixed Use		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		659m	South East
SP2	Infrastructure		Sydney Local Environmental Plan 2012	12/06/2015	12/06/2015	16/12/2016	Amendment No 17	674m	North
B7	Business Park		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		687m	North West
B7	Business Park		Sydney Local Environmental Plan 2012	12/06/2015	12/06/2015	16/12/2016	Amendment No 17	694m	North East
RE1	Public Recreation		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		716m	North East
R3	Medium Density Residential		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		719m	North East
B5	Business Development		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		730m	South East
SP2	Infrastructure	Railway	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		730m	South East
SP2	Infrastructure	Airport	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		732m	South East

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
B2	Local Centre		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		744m	North East
RE1	Public Recreation		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		744m	East
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		851m	North East
SP2	Infrastructure	Educational Establishment	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		863m	North East
RE1	Public Recreation		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		906m	South East
IN2	Light Industrial		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		910m	South East
B7	Business Park		Sydney Local Environmental Plan 2012	12/06/2015	12/06/2015	16/12/2016	Amendment No 17	969m	North East
R2	Low Density Residential		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		979m	South East
IN1	General Industrial		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		983m	North West
R3	Medium Density Residential		Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	19/02/2016		984m	North East

Local Environmental Plan

146-154 O'Riordan Street, Mascot, NSW 2020

Minimum Subdivision Lot Size

What are the onsite Local Environmental Plan Minimum Subdivision Lot Sizes?

Symbol	Minimum Lot Size	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
No Data							

Maximum Height of Building

What are the onsite Local Environmental Plan Maximum Height of Buildings?

Symbol	Maximum Height of Building	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
18	22.00 m	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015		99.9

Floor Space Ratio

What are the onsite Local Environmental Plan Floor Space Ratios?

Symbol	Floor Space Ratio	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
84	3.00	LEP	21/06/2013	21/06/2013	09/10/2015		99.9

Land Application

What are the onsite Local Environmental Plan Land Applications?

Application Type	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
Included	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	21/06/2013		100

Land Reservation Acquisition

What are the onsite Local Environmental Plan Land Reservation Acquisitions?

Reservation	LEP	Published Date	Commenced Date	Currency Date	Amendment	Comments	Percentage of Site Area
No Data							

Heritage Items

146-154 O'Riordan Street, Mascot, NSW 2020

Heritage

146-154 O'Riordan Street, Mascot, NSW 2020

State Heritage Items

What are the State Heritage Items located within the dataset buffer?

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
N/A	No records in buffer							

Local Heritage Items

What are the Local Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I82	Mascot Park	Item - Landscape	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	0m	North East
I139	Mascot Public School Building Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	61m	South East
I129	House group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	276m	South
I130	Mature Ficus	Item - Landscape	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	278m	South
I131	House - "Daktari"	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	278m	South
I68	Memorial Park	Item - Landscape	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	332m	East
I95	M.B.W.S. Pumping Station	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	332m	North East
I3,I168,I170	Commonwealth Water Pumping Station and Sewerage Pumping Station	Item - General	State	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	359m	South West
I94	Botany Family Day Care	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	386m	East
I27	Mature Ficus	Item - Landscape	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	432m	East
I34	Mature Hoop Pine	Item - Landscape	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	501m	East
I35	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	503m	East
I77	Former Tennyson Hotel	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	518m	South East
I39	Commercial Building Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	526m	South East

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I33	Commercial Building Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	527m	East
I32	Coronation Hall	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	537m	East
I31	Former National Bank of Australasia	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	559m	East
I30	Electricity Substation No 147	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	571m	East
I41	Commercial Building Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	574m	South East
I29	House Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	575m	East
I42	Commercial Building Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	578m	South East
I166	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	579m	East
I43	Commercial Building Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	587m	South East
I44	Commercial Building Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	591m	South East
I148	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	600m	South East
I45	Commercial Building Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	601m	South East
I93	Fire Station	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	609m	East
I88	Uniting Church and Rectory	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	613m	East
I116	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	621m	South East
I46	Commercial Building Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	637m	South East
I152	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	646m	North East
I149	Terrace Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	648m	South East
I117	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	657m	South East
I161	House Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	667m	East
I92	House - "Highhurstwood"	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	683m	East
I85	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	684m	East
I147	House - "Beverley"	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	684m	South East
I91	House - "Orara"	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	697m	East

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I48	Single Storey Terrace Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	703m	South East
I90	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	707m	East
I134	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	708m	South East
I135	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	711m	South East
I89	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	719m	East
I87	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	727m	East
I86	Shop	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	738m	East
I28	Commercial Building Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	744m	North East
I136	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	752m	South East
I118	Corner Store	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	758m	South East
I133	House Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	764m	South East
I145	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	764m	East
I26	Former Bank Building	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	772m	North East
I28	Commercial Building Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	778m	North East
I167	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	780m	East
I110	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	802m	South East
I144	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	810m	East
I76	New Market Hotel	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	814m	North East
I2227	Former H. G. Whittle & Sons Factory	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	825m	North East
I146	House Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	827m	South East
I2229	Former White Way Service Station	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	833m	North East
I137	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	840m	South East
I108	Terrace Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	850m	North East
I143	Terrace Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	854m	South East

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I2225	Former Sil-Ora Dental Products Factory	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	855m	North East
I84	Shop	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	856m	East
I107	Terrace Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	858m	North East
I1373	Gardeners Road Public School	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	863m	North East
I2226	Electricity Substation No. 375	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	878m	North East
I142	House Group	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	884m	South East
I7	Former warehouse 'Boltons Trading Co' (15-25 Birmingham Street)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	888m	North East
I120	House "Verandale"	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	890m	South East
I138	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	907m	South East
I50	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	912m	South East
I51	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	918m	South East
I52	Beckenham Memorial Church	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	930m	South East
I83	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	938m	East
I106	House	Item - General	Local	Botany Bay Local Environmental Plan 2013	21/06/2013	21/06/2013	09/10/2015	989m	North East
I2224	Former Walter Barr Pty Ltd Factory	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	997m	North East

Natural Hazards

146-154 O'Riordan Street, Mascot, NSW 2020

Bush Fire Prone Land

What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
No records within buffer		

Ecological Constraints - Native Vegetation & RAMSAR Wetlands

146-154 O'Riordan Street, Mascot, NSW 2020

Lotsearch Pty Ltd ABN 89 600 168 018 133

Ecological Constraints

146-154 O'Riordan Street, Mascot, NSW 2020

Native Vegetation

What native vegetation exists within the dataset buffer?

Map ID	Map Unit Name	Threatened Ecological Community NSW	Threatened Ecological Community EPBC Act	Understorey	Disturbance	Disturbance Index	Dominant Species	Dist	Direction
Urban_E/N	Urban_E/N: Urban Exotic/Native			00: Not assessed	00: Not assessed	0: Not assessed	Urban Exotic/Native	0m	Onsite
Weed_Ex	Weed_Ex: Weeds and Exotics			00: Not assessed	00: Not assessed	0: Not assessed	Exotic Species >90%cover	724m	South East

RAMSAR Wetlands

What RAMSAR Wetland areas exist within the dataset buffer?

Map Id	RAMSAR Name	Wetland Name	Designation Date	Source	Distance	Direction
N/A	No records in buffer					

Ecological Constraints

146-154 O'Riordan Street, Mascot, NSW 2020

Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
N/A	No records within buffer				

Ecological Constraints

146-154 O'Riordan Street, Mascot, NSW 2020

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
N/A	No records within buffer				

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology

Ecological Constraints

146-154 O'Riordan Street, Mascot, NSW 2020

NSW BioNet Atlas

Species on the NSW BioNet Atlas that have a NSW or federal conservation status, a NSW sensitivity status, or are listed under a migratory species agreement, and are within 10km of the site?

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Crinia tinnula	Wallum Froglet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Anseranas semipalmata	Magpie Goose	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardea ibis	Cattle Egret	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Ardenna carneipes	Flesh-footed Shearwater	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Ardenna pacificus	Wedge-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Arenaria interpres	Ruddy Turnstone	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Burhinus grallarius	Bush Stone-curlew	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris alba	Sanderling	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris bairdii	Baird's Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Calidris canutus	Red Knot	Not Listed	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ferruginea	Curlew Sandpiper	Endangered	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris melanotos	Pectoral Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Calidris ruficollis	Red-necked Stint	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris tenuirostris	Great Knot	Vulnerable	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Calyptorhynchus lathami	Glossy Black-Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Charadrius leschenaultii	Greater Sand-plover	Vulnerable	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Charadrius mongolus	Lesser Sand-plover	Vulnerable	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Charadrius veredus	Oriental Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Chlidonias leucopterus	White-winged Black Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Dasyornis brachypterus	Eastern Bristlebird	Endangered	Category 2	Endangered	
Animalia	Aves	Diomedea exulans	Wandering Albatross	Endangered	Not Sensitive	Endangered	JAMBA
Animalia	Aves	Diomedea gibsoni	Gibson's Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Egretta sacra	Eastern Reef Egret	Not Listed	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Epthianura albifrons	White-fronted Chat	Endangered Population Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Erythrotriorchis radiatus	Red Goshawk	Critically Endangered	Category 2	Vulnerable	
Animalia	Aves	Esacus magnirostris	Beach Stone-curlew	Critically Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Fregata ariel	Lesser Frigatebird	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Gelochelidon nilotica	Gull-billed Tern	Not Listed	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Haematopus fuliginosus	Sooty Oystercatcher	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus longirostris	Pied Oystercatcher	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Hydroprogne caspia	Caspian Tern	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Category 3	Critically Endangered	
Animalia	Aves	Limicola falcinellus	Broad-billed Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Limosa lapponica	Bar-tailed Godwit	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Limosa limosa	Black-tailed Godwit	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Macronectes giganteus	Southern Giant Petrel	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Macronectes halli	Northern Giant-Petrel	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Merops ornatus	Rainbow Bee-eater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Neochmia ruficauda	Star Finch	Presumed Extinct	Not Sensitive	Endangered	
Animalia	Aves	Neophema chrysogaster	Orange-bellied Parrot	Critically Endangered	Category 3	Critically Endangered	
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Numenius madagascariensis	Eastern Curlew	Not Listed	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius minutus	Little Curlew	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Numenius phaeopus	Whimbrel	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Onychoprion fuscata	Sooty Tern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pandion cristatus	Eastern Osprey	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pezoporus wallicus wallicus	Eastern Ground Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Phaethon lepturus	White-tailed Tropicbird	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Pluvialis fulva	Pacific Golden Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Polytelis swainsonii	Superb Parrot	Vulnerable	Category 3	Vulnerable	
Animalia	Aves	Procelsterna cerulea	Grey Ternlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus regina	Rose-crowned Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus superbus	Superb Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Rostratula australis	Australian Painted Snipe	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stercorarius parasiticus	Arctic Jaeger	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Stercorarius pomarinus	Pomarine Jaeger	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Sterna hirundo	Common Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Sternula albifrons	Little Tern	Endangered	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Sula dactylatra	Masked Booby	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Thalassarche cauta	Shy Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Thalassarche chrysostoma	Grey-headed Albatross	Not Listed	Not Sensitive	Endangered	
Animalia	Aves	Thalassarche melanophris	Black-browed Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Tringa brevipes	Grey-tailed Tattler	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa glareola	Wood Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA JAMBA
Animalia	Aves	Tringa incana	Wandering Tattler	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Tringa nebularia	Common Greenshank	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tryngites subruficollis	Buff-breasted Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Xenus cinereus	Terek Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Mammalia	Aepyprymnus rufescens	Rufous Bettong	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Arctocephalus forsteri	New Zealand Fur-seal	Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Mammalia	Arctocephalus pusillus doriferus	Australian Fur-seal	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	Dasyurus viverrinus	Eastern Quoll	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Dugong dugon	Dugong	Endangered	Not Sensitive	Not Listed	
Animalia	Mammalia	Eubalaena australis	Southern Right Whale	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Megaptera novaeangliae	Humpback Whale	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Miniopterus australis	Little Bentwing-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Mormopterus norfolkensis	Eastern Freetail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Perameles nasuta	Long-nosed Bandicoot	Endangered Population	Not Sensitive	Not Listed	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Reptilia	Dermochelys coriacea	Leatherback Turtle	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia gordonii		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Acacia prominens	Gosford Wattle	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Acacia pubescens	Downy Wattle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia terminalis subsp. terminalis	Sunshine Wattle	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Amperea xiphoclada var. pedicellata		Presumed Extinct	Not Sensitive	Extinct	
Plantae	Flora	Caladenia tessellata	Thick Lip Spider Orchid	Endangered	Category 2	Vulnerable	
Plantae	Flora	Callistemon linearifolius	Netted Bottle Brush	Vulnerable	Category 3	Not Listed	
Plantae	Flora	Dichanthium setosum	Bluegrass	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Diuris arenaria	Sand Doubletail	Endangered	Category 2	Not Listed	
Plantae	Flora	Doryanthes palmeri	Giant Spear Lily	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus camfieldii	Camfield's Stringybark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus fracta	Broken Back Ironbark	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus leucoxylon subsp. pruinosa	Yellow Gum	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus pulverulenta	Silver-leafed Gum	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus scoparia	Wallangarra White Gum	Endangered	Not Sensitive	Vulnerable	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Dillwynia tuberula		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Macadamia integrifolia	Macadamia Nut	Not Listed	Not Sensitive	Vulnerable	
Plantae	Flora	Maundia triglochinoides		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Melaleuca deanei	Deane's Paperbark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Persoonia hirsuta	Hairy Geebung	Endangered	Category 3	Endangered	
Plantae	Flora	Pimelea curviflora subsp. curviflora		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Prostanthera marifolia	Seaforth Mintbush	Critically Endangered	Category 3	Critically Endangered	
Plantae	Flora	Senecio spathulatus	Coast Groundsel	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Senna acclinis	Rainforest Cassia	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Tetratheca glandulosa		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Tetratheca juncea	Black-eyed Susan	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Thesium australe	Austral Toadflax	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Wilsonia backhousei	Narrow-leafed Wilsonia	Vulnerable	Not Sensitive	Not Listed	

Data does not include NSW category 1 sensitive species.
NSW BioNet: © State of NSW and Office of Environment and Heritage
Data obtained 05/08/2018

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Appendix C

Certificates of Titles

ADVANCE LEGAL SEARCHERS PTY LTD
(ACN 147 943 842)
ABN 82 147 943 842

18/36 Osborne Road,
Manly NSW 2095

Telephone: +612 9977 6713
Mobile: 0412 169 809
Email: search@alsearchers.com.au

06th August 2018

LOTSEARCH PTY LTD
Level 3, 68 Alfred Street,
MILSONS POINT, NSW 2061

Attention: Howard Waldron,

RE: **146-154 O'Riordan Street,**
Mascot
Job No. LS003932_EP

Note 1:	**Lot 15**	**DP 1232496**	(page 1)
Note 2:	**Lot 14**	**DP 1232496**	(page 5)
Note 3:	**Lot 13**	**DP 1232496**	(page 7)
Note 4:	**Lot A**	**DP 402876**	(page 9)

Note 1:

Current Search

Folio Identifier 15/1232496 (title attached)
DP 1232496 (plan attached)
Dated 02nd August 2018
Registered Proprietor:
JKN PARK PTY LTD

Title Tree
Lot 15 DP 11934

Folio Identifier 15/1232496

Folio Identifier 1/85597

Certificate of Title Volume 12181 Folio 96

Certificate of Title Volume 5565 Folio 36

PA35597

Conveyance Book 1917 No 776

New Trustee Book 1917 No 79

New Trustee Book 1582 No 924

Conveyance Book 151 No 697

****

Subject land within **Part Portion 136 Parish Botany**
Granted to John Roby Hatfield dated 7th April 1838

****

Summary of proprietor(s)
Lot 15 DP 1232496

Year	Proprietor(s)
	(Lot 15 DP 1232496)
2018 – todate	JKN Park Pty Ltd
	(Lot 1 DP 85597)
2013 – 2018	JKN Park Pty Ltd
2003 – 2013	Stead Denton
1994 – 2003	Balfour Grange Pty Limited
(1989 – 2018)	*(various leases shown on Historical Folio 1/85597)*
1988 – 1994	Tohaha Pty Limited
	(Lot 1 DP 85597 – CTVol 12181 Fol 96)
1987 – 1988	Tohaha Pty Limited
1980 – 1987	State Superannuation Board
1973 – 1980	CDL Developments (No.1) Pty Limited
1973 – 1973	J.E.L Developments (Australia) Pty Limited
	(Part Portion 136 Parish Botany – Area 2 Roods 30 ¼ Perches – CT Vol 5565 Fol 36)
1972 – 1973	J.E.L Developments (Australia) Pty Limited
(1968 – 1972)	*(lease to Dowel Industries (NSW) Pty Limited)*
1950 – 1972	Westcott Hazell Engineering & Steel Limited
1946 – 1950	Norge Investments Pty Limited
1946 – 1946	Peder Martin Andersen, mechanical engineer
	(Part Portion 136 Parish Botany – Area 2 Roods 30 ¼ Perches – Conv Bk 1917 No 776)
1942 – 1946	Peder Martin Andersen, mechanical engineer
	(Part Portion 136 Parish Botany – Area 2 Roods 30 ¼ Perches – New Trustee Bk 1917 No 79)
1942 – 1942	William James Lodge, carter / trustee Charles Henry Lodge, retired Gardner / trustee John Lodge, estate

Cont.

Cont.

	(Part Portion 136 Parish Botany – Area 2 Roods 30 ¼ Perches – New Trustee Bk 1582 No 924)
1929 – 1942	Sarah Lodge, widow / administrix William James Lodge / Trustee John Lodge, estate
1907 – 1929	Sarah Lodge, widow / executrix Emma Lodge, executrix John Lodge, estate
1897 – 1907	William James Lodge, executor John Lodge, estate
1879 – 1897	Charlotte Lodge, executrix John Lodge, estate
	(Part Portion 136 Parish Botany – Conv Bk 151 No 697)
1875 – 1879	John Lodge, restaurant keeper

****

Note 2:

Current Search

Folio Identifier 14/1232496 (title attached)
DP 1232496 (plan attached)
Dated 02nd August 2018
Registered Proprietor:
JKN PARK PTY LTD

Title Tree
Lot 14 DP 1232496

Folio Identifier 14/1232496

Folio Identifier A/364217

Certificate of Title Volume 15474 Folio 100

Certificate of Title Volume 6084 Folio 26

Certificate of Title Volume 5826 Folio 128

PA36370

****

Subject land within **Part Portion 136 Parish Botany**
Granted to John Roby Hatfield dated 7th April 1838

Summary of proprietor(s)
Lot 14 DP 1232496

Year	Proprietor(s)
	(Lot 14 DP 1232496)
2018 – todate	JKN Park Pty Ltd
(2018 – todate)	*(various current leases shown on Folio Identifier 14/1232496)*
	(Lot A DP 364217)
2013 – 2018	JKN Park Pty Ltd
2013 – 2013	Dexus Funds Management Limited
2002 – 2013	Perpetual Trustee Company Limited
2002 – 2002	Paladin Australia Limited
1997 – 2002	Trust Company of Australia Limited
1991 – 1997	Fai Life Insurance Society Limited
1989 – 1991	Fai Properties Pty Limited
(1989 – 2018)	*(various leases shown on Historical Folio A/364217)*
	(Lot A DP364217 – CTVol 15474 Fol 100)
1987 – 1989	Fai Properties Pty Limited
(1987 – 1989)	*(various leases shown on CTVol 15474 Fol 100)*
	(Part Portion 136 Parish Botany – Area 1 Rood 30 ¼ Perches – CT Vol 6084 Fol 26)
1982 – 1987	Lexane Pty Limited
1950 – 1982	Gearin O'Riordan Limited
1950 – 1950	Norge Investments Pty Limited
	(Part Portion 136, Parish Botany – Area 1 Acre 1 Rood 20 Perches – CTVol 5826 Fol 128)
1949 – 1950	Norge Investments Pty Limited
1948 – 1949	The Council of the Municipality of Mascot
	(Part Portion 136, Parish Botany – Area 1 Acre 1 Rood 20 Perches)
Prior – 1948	Sarah Emily Forster

****

Note 3:

Current Search

Folio Identifier 13/1232496 (title attached)
DP 1232496 (plan attached)
Dated 02nd August 2018
Registered Proprietor:
JKN PARK PTY LTD

Title Tree
Lot 13 DP 1232496

Folio Identifier 13/1232496

Folio Identifier A/320192

Certificate of Title Volume 15474 Folio 99

Certificate of Title Volume 4142 Folio 133

Certificate of Title Volume 1383 Folio 199

****

Subject land within **Part Portion 136 Parish Botany**
Granted to John Roby Hatfield dated 7th April 1838

****

Summary of proprietor(s)
Lot 13 DP 1232496

Year	Proprietor(s)
	(Lot 13 DP 1232496)
2018 – todate	JKN Park Pty Ltd
(2018 – todate)	*(various current leases shown on Folio Identifier 13/1232496)*
	(Lot A DP 320192)
2013 – 2018	JKN Park Pty Ltd
2013 – 2013	Dexus Funds Management Limited
2002 – 2013	Perpetual Trustee Company Limited
2002 – 2002	Paladin Australia Limited
1997 – 2002	Trust Company of Australia Limited
1991 – 1997	Fai Life Insurance Society Limited
1989 – 1991	Fai Properties Pty Limited
(1989 – 2018)	*(various leases shown on Historical Folio A/364217)*
	(Lot A DP320192 – CTVol 15474 Fol 99)
1987 – 1989	Fai Properties Pty Limited
(1987 – 1989)	*(various leases shown on CTVol 15474 Fol 99)*
	(Part Portion 136, Parish Botany – Area 1 Acre 1 Rood 13 ¼ Perches – CT Vol 4142 Fol 133)
1982 – 1987	Lexane Pty Limited
1967 – 1982	Gearin O'Riordan Pty Limited
1928 – 1967	Gearin-O'Riordan Limited
	(Part Portion 136, Parish Botany – Area 4 Acres 2 Rood 8 Perches – CT Vol 1383 Fol 199)
1922 – 1928	M.Gearin and Sons Limited
1901 – 1922	Michael Gearin, fat extractor

****

Note 4:

Current Search

Folio Identifier A/402876 (title attached)
DP 402876 (plan attached)
Dated 02nd August 2018
Registered Proprietor:
JKN PARK PTY LTD

Title Tree
Lot A DP 402876

Folio Identifier A/402876

Certificate of Title Volume 15474 Folio 101

Certificate of Title Volume 7457Folio 156

Certificate of Title Volume 5565 Folio 144

Certificate of Title Volume 5297 Folio 24

Certificate of Title Volume 1383 Folio 199

****

Subject land within **Part Portion 136 Parish Botany**
Granted to John Roby Hatfield dated 7th April 1838

****

Summary of proprietor(s)
Lot A DP 402876

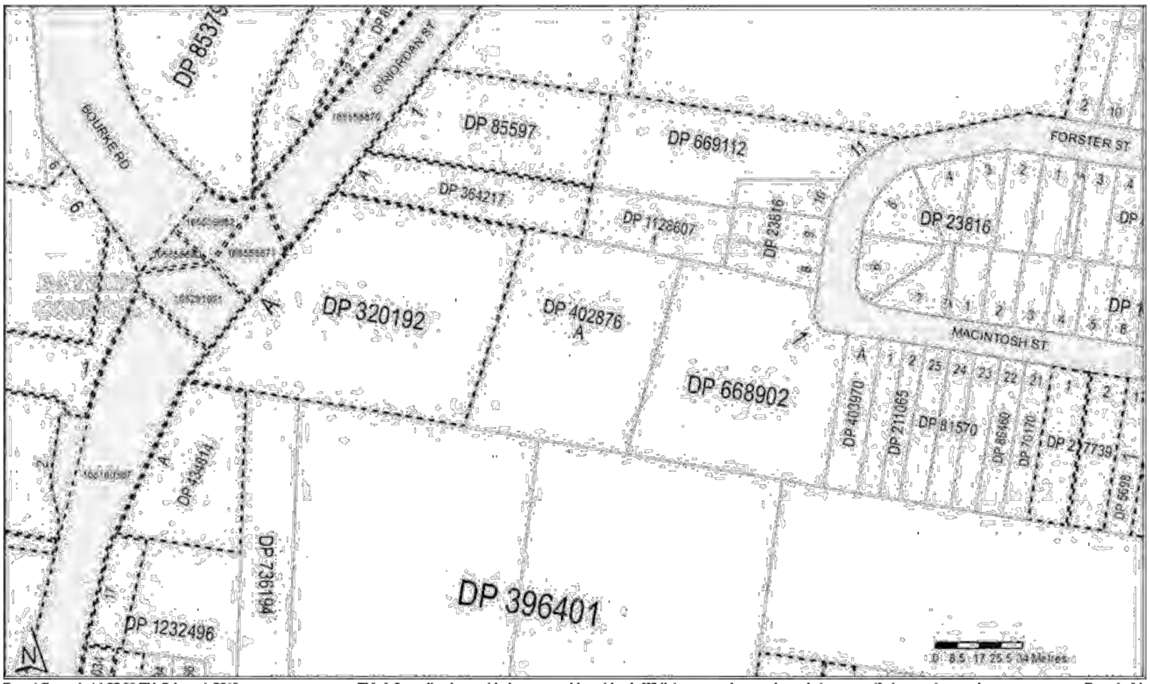
Year	Proprietor(s)
	(Lot A DP 402876)
2015 – todate	JKN Park Pty Ltd
2013 – 2015	Dexus Funds Management Limited
2013 – 2013	Perpetual Trustee Company Limited
(2008 – todate)	*(various current leases shown on Folio Identifier A/402876)*
2002 – 2013	Paladin Australia Limited
2002 – 2002	Trust Company of Australia Limited
1997 – 2002	Fai Life Insurance Society Limited
1991 – 1997	Fai Properties Pty Limited
(1991 – todate)	*(various leases shown on Historical Folio A/402876)*
	(Lot A DP402876 – CTVol 15474 Fol 101)
1987 – 1991	Fai Properties Pty Limited
(1987 – 1989)	*(various leases shown on CTVol 15474 Fol 101)*
	(Part Portion 136 Parish Botany – Area 1 Acre 1 Rood 0 Perches – CT Vol 7457 Fol 156)
1982 – 1987	Lexane Pty Limited
1967 – 1982	Gearin-O'Riordan Pty Limited
1958 – 1967	Gearin-O'Riordan Limited
	(Part Portion 136 Parish Botany – Area 2 Acres 2 Rood 19 Perches – CT Vol 5564 Fol 144)
1946 – 1958	W.F.Campbell Pty Limited
	(Part Portion 136, Parish Botany – Area 2 Acres 2 Rood 33 ¾ Perches – CT Vol 5297 Fol 24)
1942 – 1946	M.Gearin and Sons Limited
	(Part Portion 136, Parish Botany – Area 4 Acres 2 Rood 8 Perches – CT Vol 1383 Fol 199)
1922 – 1942	M.Gearin and Sons Limited
1901 – 1922	Michael Gearin, fat extractor

****

Cadastral Records Enquiry Report : Lot A DP 402876

Ref : NOUSER

Locality : MASCOT
LGA : BAYSIDE
Parish : BOTANY
County : CUMBERLAND



Report Generated 1:20:00 PM, 2 August, 2018

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Page 1 of 4

Cadastral Records Enquiry Report : Lot A DP 402876 **Ref :** NOUSER

Locality : MASCOT **Parish :** BOTANY

LGA : BAYSIDE **County :** CUMBERLAND

	Status	Surv/Comp	Purpose
DP15034			
Lot(s): 5			
DP1015636	REGISTERED	SURVEY	EASEMENT
DP85597			
Lot(s): 1			
DP1232496	REGISTERED	SURVEY	ROADS ACT, 1993
DP217739			
Lot(s): 1			
CA102251 - LOT 1 DP217739			
Lot(s): 2			
CA150394 - LOT 2 DP217739			
DP270981			
Lot(s): 1			
DP270981	REGISTERED	SURVEY	COMMUNITY SUBDIVISION PLAN
DP1236518	REGISTERED	SURVEY	EASEMENT
Lot(s): 1, 2, 6			
DP1213409	HISTORICAL	SURVEY	SUBDIVISION
Lot(s): 1, 6			
DP878949	HISTORICAL	SURVEY	CONSOLIDATION
Lot(s): 1, 2			
DP804703	HISTORICAL	SURVEY	SUBDIVISION
Lot(s): 6			
DP270981	HISTORICAL	SURVEY	COMMUNITY PLAN
DP320192			
Lot(s): A			
DP1232496	REGISTERED	SURVEY	ROADS ACT, 1993
DP364217			
Lot(s): A			
DP1232496	REGISTERED	SURVEY	ROADS ACT, 1993
DP434814			
Lot(s): A			
DP1232496	REGISTERED	SURVEY	ROADS ACT, 1993
DP668903			
Lot(s): 1			
DP930759	HISTORICAL	COMPILATION	UNRESEARCHED
DP800299			
Lot(s): 1			
DP1038735	REGISTERED	SURVEY	EASEMENT
DP1064903	REGISTERED	SURVEY	LEASE
DP853792			
Lot(s): 12			
DP1038735	REGISTERED	SURVEY	EASEMENT
DP1075216			
Lot(s): 16			
CA90714 - LOT 16 DP1075216			
DP1232496			
Lot(s): 10			
DP15034	HISTORICAL	SURVEY	UNRESEARCHED
Lot(s): 17			
LOT 17 IN DP1232496 IS REQUIRED FOR ROAD PURPOSES - SEE AM785926			
Road			
Polygon Id(s): 105160387, 105291921, 165558670, 165558671, 165558680, 165558682			
EX-SUR 60/39 DP445930			
SP79342			
DP10538	HISTORICAL	SURVEY	UNRESEARCHED
DP1101875	HISTORICAL	SURVEY	REDEFINITION
SP88674			
DP10538	HISTORICAL	SURVEY	UNRESEARCHED
DP1186274	HISTORICAL	SURVEY	CONSOLIDATION

Report Generated 1:20:00 PM, 2 August, 2018 Page 2 of 4

Cadastral Records Enquiry Report : Lot A DP 402876 **Ref :** NOUSER

Locality : MASCOT **Parish :** BOTANY

LGA : BAYSIDE **County :** CUMBERLAND

	Status	Surv/Comp	Purpose
Road			
Polygon Id(s): 105160387			
EX-SUR 36/04 DP983203			
EX-SUR 91/26 DP123465			
Polygon Id(s): 105160387, 105291921			
EX-SUR 86/47 DP117137			

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Report Generated 1:20:00 PM, 2 August, 2018 Page 3 of 4

LAND REGISTRY SERVICES NSW

Cadastral Records Enquiry Report : Lot A DP 402876 **Ref :** NOUSER

Locality : MASCOT **Parish :** BOTANY

LGA : BAYSIDE **County :** CUMBERLAND

Plan	Surv/Comp	Purpose
DP5698	COMPILATION	UNRESEARCHED
DP14642	SURVEY	UNRESEARCHED
DP15034	SURVEY	UNRESEARCHED
DP15118	SURVEY	UNRESEARCHED
DP15190	SURVEY	UNRESEARCHED
DP23141	SURVEY	UNRESEARCHED
DP23816	SURVEY	UNRESEARCHED
DP70170	SURVEY	UNRESEARCHED
DP81570	SURVEY	UNRESEARCHED
DP85597	SURVEY	UNRESEARCHED
DP86460	SURVEY	UNRESEARCHED
DP93716	COMPILATION	DEPARTMENTAL
DP211065	SURVEY	SUBDIVISION
DP217739	SURVEY	SUBDIVISION
DP320192	COMPILATION	UNRESEARCHED
DP323956	COMPILATION	UNRESEARCHED
DP364217	COMPILATION	UNRESEARCHED
DP396401	SURVEY	UNRESEARCHED
DP402876	SURVEY	UNRESEARCHED
DP403970	SURVEY	UNRESEARCHED
DP434814	COMPILATION	UNRESEARCHED
DP668902	COMPILATION	DEPARTMENTAL
DP668903	COMPILATION	DEPARTMENTAL
DP669112	COMPILATION	DEPARTMENTAL
DP736194	SURVEY	RESUMPTION OR ACQUISITION
DP792885	SURVEY	SUBDIVISION
DP800299	SURVEY	SUBDIVISION
DP813088	SURVEY	CONSOLIDATION
DP853792	SURVEY	SUBDIVISION
DP1075216	COMPILATION	LIMITED FOLIO CREATION
DP1128607	COMPILATION	DEPARTMENTAL
DP1232496	SURVEY	ROADS ACT, 1993
SP79342	COMPILATION	STRATA PLAN
SP88674	COMPILATION	STRATA PLAN

Report Generated 1:20:00 PM, 2 August, 2018 Page 4 of 4

[redacted]FICATE OF TITLE

NEW SOUTH WALES

[redacted]L PROPERTY ACT, 1900

Vol. 12181 Fol. 96

Appln No. 35597

Prior Title Vol.5565 Fol.36

Edition issued 31-7-1973

N109443

(Page 1) Vol. 12181 Fol. 96

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Registrar General.

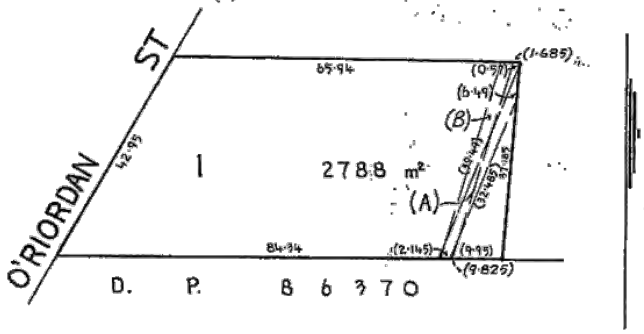
CANCELLED

SEE AUTO FOLIO

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES

(B) EASEMENT FOR STORMWATER DRAINAGE 2 WIDE – R732850



N109449 W.F.

REDUCTION RATIO 1:800

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 1 in Deposited Plan 85597 in the Municipality of Mascot Parish of Botany and County of Cumberland being part of Portion 136 granted to John Roby Hatfield on 7-4-1838.

FIRST SCHEDULE

~~J. B. L. DEVELOPMENTS (AUSTRALIA) PTY. LIMITED.~~

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. ~~Easement for Stormwater Drainage created by notification in Government Gazette No.73 of 28-5-1973 affecting the piece of land designated (A) shown in the plan hereon.~~ Released R732849
3. ~~Mortgage No. M732190 to Mercantile Credits Limited. Entered 31-5-1973~~ Discharged N246569
4. ~~Mortgage No. M745987 to J.B.L. Registered Securities Limited. Entered 25-9-1973.~~ Discharged N246570
5. ~~Caveat No. N32941. Entered 2-1-1973.~~ Withdrawn N78319

Registrar General

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED.

Req:R018819 /Doc:CT 12181-096 CT /Rev:21-Dec-2010 /Sts:OK.SC /Pgs:ALL /Prt:02-Aug-2018 13:16
Ref:advlegs /Src:P

Vol. 12181 Fol. 96

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
~~GDL Developments (No.1) Pty. Limited~~	~~Transfer~~	~~N246571~~	~~3-5-1973~~	~~22-8-1973~~	[signature]
~~State Superannuation Board.~~	~~Transfer~~	~~R781375~~		~~5-5-1980~~	[signature]
Tohaha Pty Limited by Transfer W746001. Registered 16-2-1987.					

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
~~Mortgage~~	~~N246572~~	~~3-5-1973~~	~~to Industrial Acceptance Corporation Limited~~	~~22-8-1973~~	[signature]	Discharged	P390791	[signature]
~~Mortgage~~	~~N255594~~	~~8-5-1973~~	~~to W.C.T. Nominees Pty. Limited~~	~~22-8-1973~~	[signature]	Discharged	N658413	[signature]
~~Mortgage~~	~~N658414~~	~~30-11-1973~~	~~to W.C.T. Nominees Pty. Limited~~	~~27.2.1974~~	[signature]	Discharged	N759037	[signature]
~~Mortgage~~	~~N759038~~	~~7-3-1974~~	~~to Solon Pty. Limited~~	~~3-5-1974~~	[signature]	Discharged	P390790	[signature]
~~Mortgage~~	~~P390792~~		~~to A.G.C. (Advances) Limited~~	~~30-9-1975~~	[signature]	Discharged	Q11828	[signature]
~~Caveat~~	~~P541721~~			~~31-12-1975~~	[signature]	Withdrawn	P833705	[signature]
~~Lease~~	~~P926139~~		~~of premises being 146 O'Riordan Street, Alexandria to Ward's Freight Services Pty. Ltd. Date of expiry 31-5-1982.~~	~~18-10-1976~~	[signature]	Expired	18-11-1983	[signature]
~~Mortgage~~	~~Q11829~~		~~to State Superannuation Board~~	~~22-12-1976~~	[signature]	Discharged	R761374	[signature]
~~Caveat~~	~~Q285031~~		~~by G.D.L. Developments (No.1) Pty. Limited~~ ~~Albuera Holdings Pty. Limited~~	~~22-7-1977~~	[signature]	Withdrawn	R64785	[signature]
~~Caveat~~	~~Q286253~~		~~by First Chicago Australia Limited~~	~~22-7-1977~~	[signature]	Withdrawn	R781373	[signature]
Transfer	R732850	—	Easement for stormwater drainage affecting the part of the land within described shown so burdened in the plan hereon	31-3-1980.	[signature]			
T777027 Lease to Mayne Nickless Limited, together with an Option of Renewal. Expires 31-5-1987. Registered 18-11-1983					[signature]			
W746002 Mortgage to Equity Mortgage Fund N.V. Registered 16-2-1987.								
W746002 Mortgage X832189 Transfer of Mortgage to E.M.F Hortgage. Investments. B.V Registered 5.10.1988								
Y88367 ~~W746002 Mortgage Y88367 Transfer of Mortgage to ... Limited. Registered 17.1.1989~~								

Please code

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

(Page 2 of 2 pages)

[redacted] CATE OF TITLE

15474099

NEW SOUTH WALES PROPERTY ACT, 1900

Vol 15474 Fol. 99

First Title Old System

Prior Title Vol.4142 Fol.133

ISSUED 5 1 1987

I certify that the person named in the First Schedule is the registered proprietor of an estate in fee simple (or such other estate or interest as is set out below) in the land described subject to the recordings appearing in the Second Schedule and to the provisions of the Real Property Act, 1900.

Registrar General.

Vol. 15474 Fol. 99

(Page 1) Vol.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

LAND REFERRED TO

Lot A in DP320192 at Mascot in the Municipality of Botany Parish of Botany County of Cumberland.

Title Diagram: DP320192

FIRST SCHEDULE

~~LEXANE PTY. LIMITED T159136~~

~~BURNS PHILP TRUSTEE COMPANY (CANBERRA) LIMITED by Transfers W678080 and W678084. Registered 9.1.1987.~~

FAI PROPERTIES PTY. LIMITED by Transfer W724441. Registered 9.3.1987.

SECOND SCHEDULE

1. Reservations and conditions in the Crown Grant.
2. C562969P Easement for stormwater channel affecting the part of the land above described shown so burdened in DP187190.
3. F326017P Right of way appurtenant to the land above described affecting the land shown in the plan annexed to F326017.

~~4. T696975 Mortgage to Custom Credit Corporation Limited. W724440.~~

~~5. T963020 Caveat by Profit Freight Systems Pty. Limited as regards part being premises known as Unit 5, 154-166 O'Riordan Street, together with car parking spaces numbered 97-99 & 108-115 inclusive and lessee's truck standing area of approx. 121.42m². W678080.~~

~~6. T988130 Caveat by Burns Philp Trustee Company Limited. W678079.~~

LT 2/64

Req:R018818 /Doc:CT 15474-099 CT /Rev:24-May-2017 /Sts:SC.OK /Pgs:ALL /Prt:02-Aug-2018 13:16
Ref:advlegs /Src:P 2 pages)

Vol 15474 Fol 99

L.O. 55

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR | Registrar General

CANCELLED

SEE AUTO FOLIO

SECOND SCHEDULE (continued)

PARTICULARS	Registrar General	CANCELLATION
~~W678080 Lease to Profit Freight Systems Pty. Limited of Unit 5, 154-166 O'Riordan Street, Mascot together with Car Parking Spaces numbered 97-99 and 108-115 inclusive and Lessee's Truck Standing Area of approximately 121.42 square metres together with and Reserving Rights. Expires: 30.11.1988. With an Option of Renewal for 5 years. Registered 9.1.1987.~~		Y581201
W678081 Lease to Pandair Freight Limited of Unit 6, 154-166 O'Riordan Street, Mascot together with a Car Parking Spaces numbered 75-87 and 125-130 inclusive and the Lessee's Truck Standing Area of approximately 153.6 square metres together with and Reserving Rights. Expires: 20.10.1993. With an Option of Renewal for 5 years. Registered 9.1.1987.		
W678082 Lease to Co-Load Incorporated Pty. Limited of Unit 7, 154-166 O'Riordan Street, Mascot, together with Car Parking Spaces numbered 55-74 inclusive and 116-124 inclusive and Lessee's Truck Standing Area of approximately 201.6 square metres together with and Reserving Rights. Expires: 31.8.1993. With an Option of Renewal for 5 years. Registered 9.1.1987.		
W678086 Lease to Nippon Express (Australia) Pty. Limited of Unit 1, 154-166 O'Riordan Street, Mascot together with Car Parking Spaces numbered 17-46 inclusive and Lessee's Truck Standing Area of approximately 1945.20 square metres together with and Reserving Rights. Expires: 31.3.1990. With an Option of Renewal for 5 years. Registered 9.1.1987.		
~~W678087 Lease to Mayne Nickless Limited of Unit 2, 154-166 O'Riordan Street, Mascot together with and Reserving Rights. Expires: 31.7.1991 With an Option of Renewal for 4 years. Registered 9.1.1987.~~		Expired 2-2-1988
~~W678088 Lease to East West Cargo Pty. Limited of Unit 3, 154-166 O'Riordan Street, Mascot together with and Reserving Rights. Expires: 31.10.1989. With an Option of Renewal for 4 years. Registered 9.1.1987.~~		X929105
~~W678089 Lease to Pacific-Austral Pty. Limited of Unit 4, 154-166 O'Riordan Street, Mascot together with Car Parking Spaces numbered 94-96 and 100-107 inclusive and Lessee's Truck Standing Area approximately 121.45 square metres together with and Reserving Rights. Expires: 30.6.1988. With an Option of Renewal for 5 years. Registered 9.1.1987.~~		Y581201
X341681 Lease to Mayne Nickless Limited of premises known as Unit 2, 154-156 O'Riordan Street, Mascot Expires 31-7-1991 Option of renewal 4 years Registered 2-2-1988		
X932362 Lease to Nippon Express (Australia) Pty. Limited of premises being Unit 3, 154-166 O'Riordan Street, Mascot, together with carspaces numbered 13-16, 47-54 and 91-93 inclusive. Expires 31-3-1990. Option of renewal for 5 years. Registered 14-12-1988		
X341681 Lease. Y78038 Transfer of Lease. Lessee now Tradeair International Freight Forwarding Services Pty. Limited. Registered 6-1-1989.		
Y581201 Lease to Rainers Customs and Transport Services Pty. Ltd. of premises being Units 4 & 5, 154-166 O'Riordan Street, Mascot, together with carspaces Nos. 94-115 inclusive & 2 Lessee's truckstanding areas. Expires 28-2-1994. Registered 11-9-1989		
W678085 Lease to Sydney County Council of premises being substation No5937 with Right of Way and easement for electricity purposes as shown in plan with W678085. Expires 31/12/2035		

NOTATIONS AND UNREGISTERED DEALINGS

W678087 ... W724440 ... X341681 ... X932362 ... X929105 ... Y78038 ... Y581201

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

[redacted] CATE OF TITLE

15474100

NEW SOUTH WALES

PROPERTY ACT, 1900

Vol. 15474 Fol. 100

First Title Old System

Prior Title Vol.6084 Fol.26

EDITION ISSUED 5 1 1987

I certify that the person named in the First Schedule is the registered proprietor of an estate in fee simple (or such other estate or interest as is set out below) in the land described subject to the recordings appearing in the Second Schedule and to the provisions of the Real Property Act, 1900.

Registrar General.

LAND REFERRED TO

Lot A in DP364217 at Mascot in the Municipality of Botany Parish of Botany County of Cumberland.

Title Diagram: DP364217

FIRST SCHEDULE

~~LEXANE PTY.LIMITED~~ ~~T159136~~

~~BURNS PHILP TRUSTEE COMPANY (CANBERRA) LIMITED by Transfers W678083 and W678084.~~
~~Registered 9.1.1987.~~

FAI PROPERTIES PTY. LIMITED by Transfer W724441. Registered 9.3.1987.

SECOND SCHEDULE

1. Land excludes minerals and is subject to reservations and conditions in favour of the Crown - see Crown Grant.

~~2. T696975 Mortgage to Custom Credit Corporation Limited.~~ W724440.

~~3. T963020 Caveat by Profit Freight Systems Pty. Limited as regards part being premises known as Unit 5, 154-166 O'Riordan Street, together with car parking spaces numbered 97-99 & 108-115 inclusive and lessee's truck standing area of approx. 121.42m².~~ W678080.

~~4. T988130 Caveat by Burns Philp Trustee Company Limited.~~ W678079.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON (Page 1) Vol. 15474 Fol. 100

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

LT 2/64

Req:R018814 /Doc:CT 15474-100 CT /Rev:24-May-2017 /Sts:SC.OK /Pgs:ALL /Prt:02-Aug-2018 13:16
Ref:advlegs /Src:P (2 pages)

Vol 15474 Fol 100

L.O. 55

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR — Registrar General

CANCELLED

SEE AUTO FOLIO

SECOND SCHEDULE (continued)

PARTICULARS	Registrar General	CANCELLATION
~~W678080 Lease to Profit Freight Systems Pty. Limited of Unit 5, 154-166 O'Riordan Street, Mascot together with Car Parking Spaces numbered 97-99 and 108-115 inclusive and Lessee's Truck Standing Area of approximately 121.42 square metres together with and Reserving Rights. Expires: 30.11.1988. With an Option of Renewal for 5 years. Registered 9.1.1987.~~		Y581201
W678081P Lease to Pandair Freight Limited of Unit 6, 154-166 O'Riordan Street, Mascot together with a Car Parking Spaces numbered 75-87 and 125-130 inclusive and the Lessee's Truck Standing Area of approximately 153.6 square metres together with and Reserving Rights. Expires: 20.10.1993. With an Option of Renewal for 5 years. Registered 9.1.1987.		
W678082P Lease to Co-Load Incorporated Pty. Limited of Unit 7, 154-166 O'Riordan Street, Mascot, together with Car Parking Spaces numbered 55-74 inclusive and 116-124 inclusive and Lessee's Truck Standing Area of approximately 201.6 square metres together with and Reserving Rights. Expires: 31.8.1993. With an Option of Renewal for 5 years. Registered 9.1.1987.		
W678086P Lease to Nippon Express (Australia) Pty. Limited of Unit 1, 154-166 O'Riordan Street, Mascot together with Car Parking Spaces numbered 17-46 inclusive and Lessee's Truck Standing Area of approximately 1915.20 square metres together with and Reserving Rights. Expires: 31.3.1990. With an Option of Renewal for 5 years. Registered 9.1.1987.		
~~W678087 Lease to Mayne Nickless Limited of Unit 2, 154-166 O'Riordan Street, Mascot together with and Reserving Rights. Expires: 31.7.1987. With an Option of Renewal for 4 years. Registered 9.1.1987.~~		Expired 2-2-1988
~~W678088 Lease to East-West Cargo Pty. Limited of Unit 3, 154-166 O'Riordan Street, Mascot together with and Reserving Rights. Expires: 31.10.1989. With an Option of Renewal for 4 years. Registered 9.1.1987.~~		X929105
~~W678089 Lease to Pacific Austral Pty. Limited of Unit 4, 154-166 O'Riordan Street, Mascot together with Car Parking Spaces numbered 91-96 and 100-107 inclusive and Lessee's Truck Standing Area approximately 121.45 square metres together with and Reserving Rights. Expires: 30.6.1988. With an Option of Renewal for 5 years. Registered 9.1.1987.~~		Y581201
~~W678085P Lease to The Sydney County Council of premises being Substation No.5937 together with Right of Way and Easement for Electricity Purposes shown in Plan with W678085. Expires: 31.12.2035. Registered 9.1.1987.~~	Reg Gen	
X341681P Lease to Mayne Nickless Limited of premises known as Unit 2, 154-156 O'Riordan Street, Mascot Expires 31-7-1991 Option of renewal 4 years Registered 2-2-1988		
X932362P Lease to Nippon Express (Australia) Pty. Limited of premises being Unit 3, 154-166 O'Riordan Street, Mascot, together with carspaces numbered 13-16, 47-54 and 91-93 inclusive. Expires 31-3-1990. Option of renewal for 5 years. Registered 14-12-1988		
X341681P Lease. Y78038 Transfer of Lease. Lessee now Tradeair International Freight Forwarding Services Pty.Limited.. Registered 6-1-1989.		
Y581201P Lease to Rainers Customs and Transport Services Pty. Ltd. of premises being Units 4 & 5, 154-166 O'Riordan Street, Mascot, together with carspaces Nos. 94-115 inclusive & Lessee's truckstanding areas. Expires 28-2-1994. Registered 11-9-1989.		

NOTATIONS AND UNREGISTERED DEALINGS

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

Req:R018815 /Doc:CT 15474-101 CT /Rev:21-Dec-2010 /Sts:OK.SC /Pgs:ALL /Prt:02-Aug-2018 13:16
Ref:advlegs /Src:P

[redacted]CATE OF TITLE

15474101

NEW SOUTH WALES

PROPERTY ACT, 1900

Vol. 15474 Fol. 101

First Title Old System

Prior Title Vol.7457 Fol.156

ISSUED 5 I 1987

I certify that the person named in the First Schedule is the registered proprietor of an estate in fee simple (or such other estate or interest as is set out below) in the land described subject to the recordings appearing in the Second Schedule and to the provisions of the Real Property Act, 1900.

Registrar General.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON (Page 1) Vol. 15474 Fol. 101

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

LAND REFERRED TO

Lot A in DP402876 at Mascot in the Municipality of Botany Parish of Botany County of Cumberland.

Title Diagram: DP402876

FIRST SCHEDULE

~~LEXANE PTY. LIMITED T159136~~

~~BURNS PHILP TRUSTEE COMPANY (CANBERRA) LIMITED by Transfers W678083 and W678084. Registered 9.1.1987.~~

FAI PROPERTIES PTY. LIMITED by Transfer W724441. Registered 9.3.1987.

SECOND SCHEDULE

1. Reservations and conditions in the Crown Grant.
2. C562969 Easement for stormwater channel affecting the part of the land above described shown so burdened in DP187190.

~~3. T696975 Mortgage to Custom Credit Corporation Limited.~~ W724440.

~~4. T962020 Caveat by Profit Freight Systems Pty. Limited as regards part being premises known as Unit 5, 154-166 O'Riordan Street together with car parking spaces numbered 97-99 & 108-115 inclusive and lessee's right to standing area of approx. 121.42m².~~ W678080.

~~5. T988130 Caveat by Burns Philp Trustee Company Limited.~~ W678079.

LT 2/64

Req:R018815 /Doc:CT 15474-101 CT /Rev:21-Dec-2010 /Sts:OK.SC /Pgs:ALL /Prt:02-Aug-2018 13:16
Ref:advlegs /Src:P

(Page 2 of 2 pages)

L.O. 98

Vol. 15474 Fol. 101

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	Registrar General
CANCELLED SEE AUTO FOLIO	

SECOND SCHEDULE (continued)

PARTICULARS	Registrar General	CANCELLATION
~~W678080 Lease to Profit Freight Systems Pty. Limited of Unit 5, 154-166 O'Riordan Street, Mascot together with Car Parking Spaces numbered 97-99 and 108-115 inclusive and Lessee's Truck Standing Area of approximately 121.42 square metres together with and Reserving Rights. Expires: 30.11.1988. With an Option of Renewal for 5 years. Registered 9.1.1987.~~		Y581201
W678081 Lease to Pandair Freight Limited of Unit 6, 154-166 O'Riordan Street, Mascot together with a Car Parking Spaces numbered 75-87 and 125-130 inclusive and the Lessee's Truck Standing Area of approximately 153.6 square metres together with and Reserving Rights. Expires: 20.10.1993. With an Option of Renewal for 5 years. Registered 9.1.1987.		
W678082 Lease to Co-Load Incorporated Pty. Limited of Unit 7, 154-166 O'Riordan Street, Mascot, together with Car Parking Spaces numbered 55-74 inclusive and 116-124 inclusive and Lessee's Truck Standing Area of approximately 201.6 square metres together with and Reserving Rights. Expires: 31.8.1993. With an Option of Renewal for 5 years. Registered 9.1.1987.		
W678086 Lease to Nippon Express (Australia) Pty. Limited of Unit 1, 154-166 O'Riordan Street, Mascot together with Car Parking Spaces numbered 17-46 inclusive and Lessee's Truck Standing Area of approximately 1945.20 square metres together with and Reserving Rights. Expires: 31.3.1990. With an Option of Renewal for 5 years. Registered 9.1.1987.		
~~W678087 Lease to Mayne Nickless Limited of Unit 2, 154-166 O'Riordan Street, Mascot together with and Reserving Rights. Expires: 31.7.1987. With an Option of Renewal for 4 years. Registered 9.1.1987.~~		Expired 2-2-1988
~~W678088 Lease to East-West Cargo Pty. Limited of Unit 3, 154-166 O'Riordan Street, Mascot together with and Reserving Rights. Expires: 31.10.1989. With an Option of Renewal for 4 years. Registered 9.1.1987.~~		X929105
~~W678089 Lease to Pacific-Austral Pty. Limited of Unit 4, 154-166 O'Riordan Street, Mascot together with Car Parking Spaces numbered 94-96 and 100-107 inclusive and Lessee's Truck Standing Area approximately 121.45 square metres together with and Reserving Rights. Expires: 30.6.1988. With an Option of Renewal for 5 years. Registered 9.1.1987.~~		Y581201
X341681 Lease to Mayne Nickless Limited of premises known as Unit 2, 154-156 O'Riordan Street, Mascot Expires 31-7-1991 Option of renewal 4 years Registered 2-2-1988		
X932362 Lease to Nippon Express (Australia) Pty. Limited of premises being Unit 3, 154-166 O'Riordan Street, Mascot, together with carspaces numbered 13-16, 47-54 and 91-93 inclusive. Expires 31-3-1990. Option of renewal for 5 years. Registered 14-12-1988		
X341681 Lease. Y78038 Transfer of Lease. Lessee now Tradeair International Freight Forwarding Services Pty. Limited. Registered 6-1-1989.		
Y581201 Lease to Rainers Customs and Transport Services Pty. Ltd. of premises being Units 4 & 5, 154-166 O'Riordan Street, Mascot, together with carspaces Nos. 94-115 inclusive & 2 Lessee's truckstanding areas. Expires 28-2-1994. Registered 11-5-1989		

NOTATIONS AND UNREGISTERED DEALINGS

Y78038 T
X929105 DL
X932362 L
X341681 L
W724440

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE C

Req:R019850 /Doc:DL 8733196 /Rev:09-Jul-2002 /Sts:NO.OK /Pgs:ALL /Prt:02-Aug-2018 14:50 /Seq:1 of 3
Ref:advlegs /Src:P

Form: 01T
Licence: 98M111
Edition: 0011

TRANSFER

New South Wales
Real Property Act 1900

8733196N

31

PRIVACY NOTE: this information is legally required and will become part of the public record

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY
02-05-2002 0000966482-001
SECTION 54(3)
DUTY $ **********10.00

(A) **TORRENS TITLE**

If appropriate, specify the part transferred

FOR TITLE REFERENCES SEE ANNEXURE A

(B) **LODGED BY**

Delivery Box	Name, Address or DX and Telephone	CODES
74S	ALLENS ARTHUR ROBINSON DX 105, SYDNEY 9230 4000 Reference (optional): 204683098:STMS	T TW (Sheriff)

(C) **TRANSFEROR**

Trust Company of Australia Limited (ACN 005 027 749)

as custodian of the Paladin Industrial Trust (ARSN 088 648 640)

(D) **CONSIDERATION** The transferor ~~acknowledges receipt of the consideration of $~~ ..... ~~and~~ as regards

(E) **ESTATE** the land specified above transfers to the transferee ~~an estate in fee simple~~ as responsible entity

(F) **SHARE TRANSFERRED** of the Paladin Industrial Trust an estate in fee simple .....

.....

(G) Encumbrances (if applicable): 1. ..... 2. ..... 3. .....

(H) **TRANSFEREE**

Paladin Australia Limited (ACN 060 920 783)

(I) **TENANCY:**

DATE 1 / 3 / 2002
dd mm yyyy

(J) I certify that the transferor, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this transfer in my presence.

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

~~Signature of witness:~~ ~~Signature of transferor:~~

Name of witness:

~~Address of witness:~~

FOR EXECUTION SEE ANNEXURE A

I certify that the transferee, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this transfer in my presence.

Certified correct for the purposes of the Real Property Act 1900 by the transferee.

~~Signature of witness:~~ ~~Signature of transferee:~~

Name of witness:

~~Address of witness:~~

If signed on the transferee's behalf by a solicitor, licensed conveyancer or barrister, insert the signatory's full name and capacity below:

Page 1 of 2 number additional pages sequentially

ALL HANDWRITING MUST BE IN BLOCK CAPITALS.

A set of notes on this form (01T-2) is available from Land and Property Information NSW.

Transfer Annexure

Allens Arthur Robinson

THIS IS ANNEXURE "A" TO THE TRANSFER BY TRUST COMPANY OF AUSTRALIA LIMITED (ACN 005 027 749) ("TRANSFEROR") TO PALADIN AUSTRALIA LIMITED (ACN 060 920 783) ("TRANSFEREE") DATED 1 MARCH 2002

TORRENS TITLE	Folio Identifiers 5/579721, 32/589097, 10/617845, ~~1/SP57439~~, A/402876, A/320192, A/364217, ~~84/30454~~, 492/856777, 5/607248, 200/714834, 100/1004156, 221/868300, 11/261439, 7210/635244, 5/219182, 1/619853, 2/855721, 12/617010, ~~64/790579~~, ~~21/846396~~, 33/3082, 432/862103, 1/SP43960, 2/737117, 3/737117, ~~5/706128~~, 41/775473, 102/874888, 181/545640, 20/237731, 431/862103 and 101/874888

EXECUTION BY TRANSFEROR

Signed for **Trust Company of Australia Limited** by its attorney under power of attorney registered book 4279 No 670 in the presence of:

Witness Signature

Alison Ford

Print Name Deutsche Asset Management (Australia) Limited Level 21 88 Clarence Street Sydney NSW

Attorney Signature

MICHAEL JOHN BRITTON

Print Name

EXECUTION BY TRANSFEREE

Signed for **Paladin Australia Limited** by its attorney under power of attorney registered book 4285 No 434 in the presence of:

Witness Signature

BENJAMIN PAUL KEEN

Print Name Deutsche Asset Management (Australia) Limited Level 21 88 Clarence Street Sydney NSW

Attorney Signature

PHILLIP MAHER

Print Name

Bartier Perry

Solicitors

Level 17 167 Macquarie Street
PO Box 2631 Sydney
NSW 2001 Australia
DX 109 Sydney
Tel 61 2 9293 3800
Fax 61 2 9293 3838
bartier@bartier.com.au
ABN: 81 089 478 702

Our Ref: PVC: 022120

3 July 2002

The Director
Land & Property Information NSW
Queens Square
SYDNEY NSW 2000

Dear Director

ENERGY AUSTRALIA'S SUBLEASE OF SUBSTATION PREMISES NO. 6355 AT 3 MONIER SQUARE VILLAWOOD
CAVEAT 7995557 - CAVEATORS CONSENT

We act for Energy Australia and on its behalf lodged Caveat 7995557 to protect Energy Australia's interest under an agreement to the grant of a sublease.

We are instructed by Energy Australia to consent on its behalf to the registration of Transfers affecting the subject property as follows:

- Transfer from Trust Company of Australia Limited to Paladin Australia Limited and;
- Transfer from Paladin Australia Limited to Perpetual Trustee Company Limited.

This consent shall not affect the right for the caveat to remain recorded on title nor does it affect the rights claimed under the caveat.

Yours faithfully
BARTIER PERRY

Peter Cahill
Associate
Direct Line 9293 3872
pcahill@bartier.com.au
Enc

Copy to: Warwick Weekley
CR803

I:\275952.Doc(recept)

Req:R019851 /Doc:DL AH887572 /Rev:25-Jul-2013 /Sts:NO.OK /Pgs:ALL /Prt:02-Aug-2018 14:50 /Seq:1 of 3
Ref:advlegs /Src:P

Form: 01TWC
Release: 4·1

TRANSFER

without monetary consideration

New South Wales
Real Property Act 1900

AH887572Y

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

STAMP DUTY Office of State Revenue use only

PARRAMATTA
10/07/2013 0900 CLASLCN A110787 304300224
DUTIES CN 4136143 APPL ID 7179633
PAYMENT TYPE C $**********0.00

(A) **TORRENS TITLE** A/320192, A/364217 and A/402876

$**********50.00
M $**********0.00

(B) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODES
74S	Allens DX 105 Sydney (02) 9230 4000 LLPN103084W Reference: MJSB:120355472 CSJS*8395	TZ

CHANGE/REFUND $**********0.00
TOTAL PAID $**********50.00

(C) **TRANSFEROR** Perpetual Trustee Company Limited (ABN 42 000 001 007)

(D) **CONSIDERATION** Pursuant to Proper Instruction under Custody Agreement dated 1 March 2002

(E) **ESTATE** and as regards the above land transfers to the transferee an estate in fee simple

(F) **SHARE TRANSFERRED**

(G) Encumbrances (if applicable):

(H) **TRANSFEREE** DEXUS Funds Management Limited (ABN 24 060 920 783)

(I) **TENANCY:**

DATE 27 JUNE 2013

(J) I certify that I am an eligible witness and that the transferor's attorney signed this dealing in my presence. [See note* below].

SEE ANNEXURE A

Signature of witness:

Name of witness:
Address of witness:

Certified correct for the purposes of the Real Property Act 1900 by the transferor's attorney who signed this dealing pursuant to the power of attorney specified.

Signature of attorney:

Attorney's name:
Signing on behalf of:
Power of attorney-Book:
-No:

NEW SOUTH WALES DUTY
10-07-2013 0007179633-002
SECTION 54A(6)
DUTY $ **********50.00

I certify that I am an eligible witness and that the transferee's attorney signed this dealing in my presence. [See note* below].

SEE ANNEXURE A

Signature of witness:

Name of witness:
Address of witness:

Certified correct for the purposes of the Real Property Act 1900 by the transferee's attorney who signed this dealing pursuant to the power of attorney specified.

Signature of attorney:

Attorney's name:
Signing on behalf of:
Power of attorney-Book:
-No.:

(K) The transferee certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. [ ] Full name: Signature:

** s117 RP Act requires that you must have known the signatory for more than 12 months or have sighted identifying documentation.*

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

1303

This is Annexure 'A' to the Transfer of Land Folio Identifiers A/320192, A/364217 and A/402876 between Perpetual Trustee Company Limited (ABN 42 000 001 007) and DEXUS Funds Management Limited (ABN 24 060 920 783)

EXECUTION BY THE TRANSFEROR

Signed for **Perpetual Trustee Company Limited** by its duly authorised attorneys under power of attorney dated 31 March 2009 registered Book 4565 No. 619

I certify that I am an eligible witness and the transferor's attorneys signed this dealing in my presence:

Witness Signature

Mark Callaghan

Print Name

Angel Place
123 Pitt St
Sydney NSW 2000

Address of Witness

Certified correct for the purposes of the Real Property Act 1900 by the transferor's attorneys who signed this dealing pursuant to the power of attorney specified

Attorney Signature

Eugene Tee Senior Client Service Officer

Print Name

Senior Manager

Attorney Signature

Emma Kathryn Tetley

Print Name

EXECUTION BY THE TRANSFEREE

Signed Sealed and Delivered for **DEXUS Funds Management Limited** by its attorneys under registered power of attorney Book 4647 No. 646 dated 11 April 2013 in the presence of:

Witness Signature

Katarina Robinson

Print Name

Level 25, Australia Square
264 George Street

Print Address Sydney NSW 2000

Attorney Signature

SCOTT DOMINIC MAHONY

Print Name

Attorney Signature

BENJAMIN PAUL KEEN

Print Name

Req:R019057 /Doc:DL AH920077 /Rev:12-Aug-2013 /Sts:NO.OK /Pgs:ALL /Prt:02-Aug-2018 13:39 /Seq:1 of 1
Ref:advlegs /Src:P

Form: 01T
Release: 6·1

TRANSFER

New South Wales
Real Property Act 1900

AH920077E

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Reg... by this form for the establishment and maintenance of the Real Property Act... the Register is made available to any person for search upon payment of a fee, if any.

STAMP DUTY Office of State Revenue use only

(NSW) Client No. 1411509 3796 Duty: $10 Trans No 721046 Asst details 1/8/13

(A) **TORRENS TITLE** 1/85597

(B) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODES
1W	Blackstone Waterhouse Lawyers DX 132 SYDNEY (02) 9279 0288 Reference: MF: LC: PS: 13406	T TW

OFFICE OF STATE REVENUE (NSW) 1411509 3796 ALTERATION NOTED

(C) **TRANSFEROR** Stead Denton
~~1603/7 Rockwall Crescent, Potts Point NSW 2011~~

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 7,700,000.00 and as regards

(E) **ESTATE** the abovementioned land transfers to the transferee an estate in fee simple

(F) **SHARE TRANSFERRED** 100%

(G) Encumbrances (if applicable):

(H) **TRANSFEREE** JKN Park Pty Ltd (ACN 163 582 189)

(I) **TENANCY:**

DATE

(J) I certify I am an eligible witness and that the transferor signed this dealing in my presence. [See note* below]

Signature of witness:

Name of witness: Ian Williams
Address of witness: 105 Young St Redfern 2016.

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

Signature of transferor:

Certified correct for the purposes of the Real Property Act 1900 on behalf of the transferee by the person whose signature appears below.

Signature:

Signatory's name: Mark Fitzpatrick
Signatory's capacity: solicitor

(K) The transferee's solicitor certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 452456 Full name: Mark Fitzpatrick Signature:

** s117 RP Act requires that you must have known the signatory for more than 12 months or have sighted identifying documentation.*

ALL HANDWRITING MUST BE IN BLOCK CAPITALS Page 1 of 1 1303

Req:R019056 /Doc:DL U405363 /Rev:24-Mar-2010 /Sts:OK.OK /Pgs:ALL /Prt:02-Aug-2018 13:39 /Seq:1 of 1
Ref:advlegs /Src:P

97-01T

TRANSFER

Real Property Act, 1900

U 405363 C

Office of

$20.00

290694 1021 04 20061224/05

(A) LAND TRANSFERRED
Show no more than 20 References to Title. If appropriate, specify the share transferred.

Folio Identifier 1/85597

(B) LODGED BY

L.T.O. Box	Name, Address or DX and Telephone
41J	MALLESONS STEPHEN JAQUES DX 113 SYDNEY Reference (max. 15 characters): KMJMALL0097-859

(C) TRANSFEROR TOHAHA PTY LIMITED (ACN 000 090 542)

(D) acknowledges receipt of the consideration of $1,600,000
and as regards the land specified above transfers to the transferee an estate in fee simple

(E) subject to the following **ENCUMBRANCES** 1. .... 2. .... 3. ....

(F) TRANSFEREE T — BALFOUR GRANGE PTY LIMITED (ACN 058 457 855)

(G) TENANCY:

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900

DATE 1 JULY 1994

Signed in my presence by the transferor who is personally known to me

THE COMMON SEAL of TOHAHA PTY LTD is hereunto affixed by authority of the Board in the presence of:

~~Signature of Witness~~
~~Name of Witness (BLOCK LETTERS)~~
~~Address of Witness~~

TOHAHA PTY. LIMITED A.C.N. 000 090 542 Common Seal

Director

Secretary

Signature of Transferor

Signed in my presence by the transferee who is personally known to me

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

R V Chadwick
Signature of Transferee's Solicitor
L Y 716197.

Start date re option of renewal Lse Y716197 sighted

OFF

INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

CHECKED BY (office use only)

H. C. MARTYN & SONS (AUST.) PTY. LTD. PH: (02) 699 2499

Req:R019271 /Doc:DL Z975986 /Rev:18-Jun-2010 /Sts:OK.OK /Pgs:ALL /Prt:02-Aug-2018 14:04 /Se
Ref:advlegs /Src:P

RP 13 STAMP DUTY [redacted]

975986 E

(3) $2—

TRANSFER

REAL PROPERTY ACT, 1900

T | of | $ | R

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
DESCRIPTION OF LAND Note (a) FOLIO IDENTIFIERS: A/364217 A/402876 A/320192	WHOLE	MASCOT

TRANSFEROR Note (b) **FAI PROPERTIES PTY LIMITED (A.C.N.** 000 099 927) Level 1, 21 Chandos Street, St Leonards.

ESTATE Note (c) (the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $**6,900,000.00** and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d) **FAI LIFE INSURANCE SOCIETY LIMITED (A.C.N. 000 558 734)** Level 12, 185 Macquarie Street, Sydney.

OFFICE USE ONLY

TENANCY Note (e) ~~as joint tenants/tenants in common~~

PRIOR ENCUMBRANCES Note (f) subject to the following PRIOR ENCUMBRANCES 1. See Annexures 2. ..... 3. .....

DATE

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

EXECUTION Note (g) Signed in my presence by the transferor who is personally known to me

THE COMMON SEAL of FAI PROPERTIES PTY. LIMITED was hereunto affixed by authority of its Board of Directors in the presence of:

COMMON SEAL FAI PROPERTIES PTY. LIMITED A.C.N. 000 099 927

Secretary Director Signature of Transferor

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

Signed in my presence by the transferee who is personally known to me

Note (g)

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

Signature of Transferee

Solicitor for Transferee G.N. Farland

TO BE COMPLETED BY LODGING PARTY Notes (h) and (i)

LODGED BY WEBECK FARLAND PENDER SOLICITORS DX 492 SYDNEY PH: 233 7400 BOX 790P

Ref: GNF/90167

Delivery Box Number

LOCATION OF DOCUMENTS

CT	OTHER	
		Herewith.
		In L.T.O. with
		Produced by

OFFICE USE ONLY

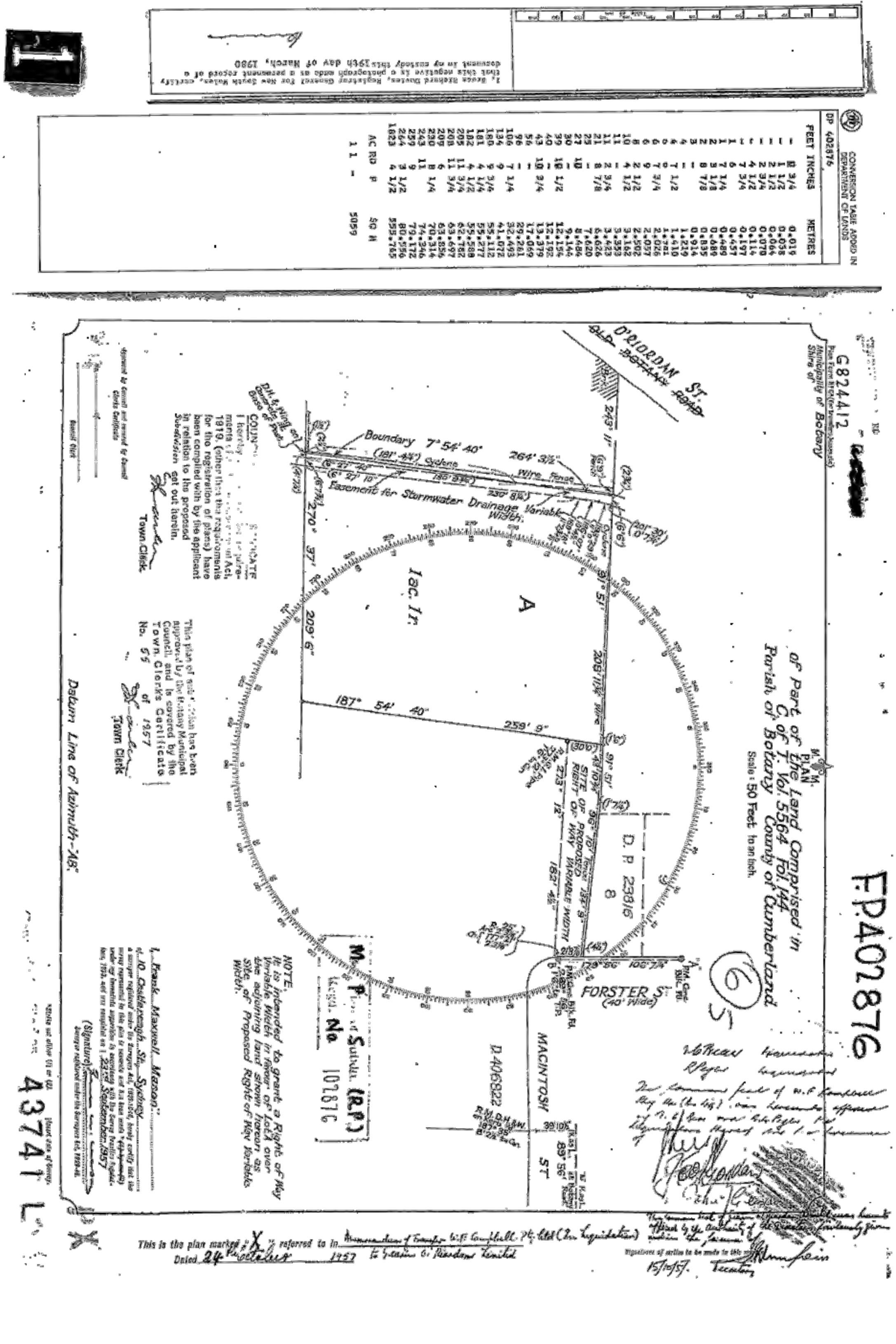
Checked	Passed	REGISTERED - -19	Secondary Directions	
R-12		10 OCT 1991		
Signed	Extra Fee		Delivery Directions	CT 790 P

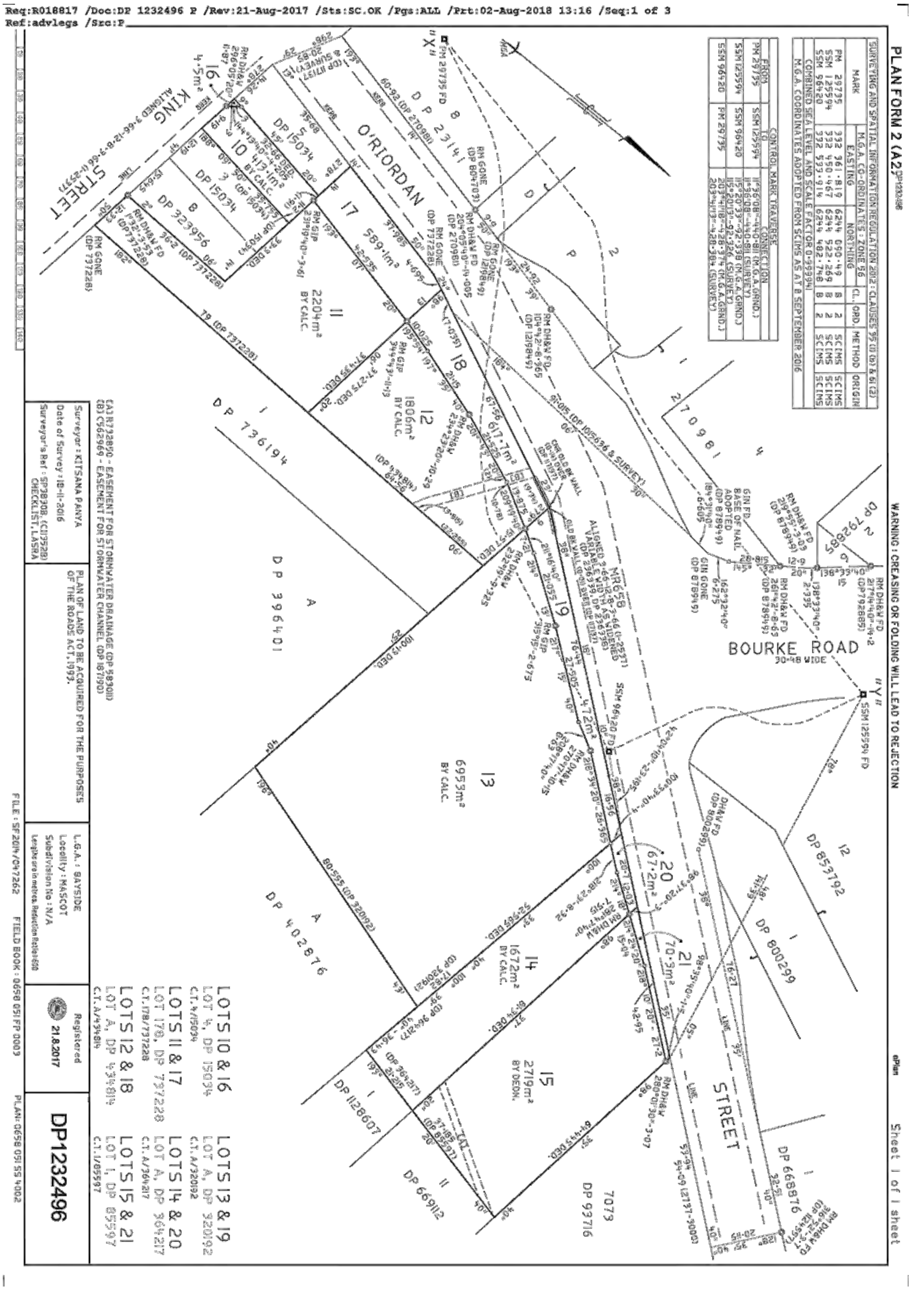
THIS PAGE COMPRISES THE ANNEXURE REFERRED TO IN THE TRANSFER BETWEEN FAI PROPERTIES PTY LIMITED AS TRANSFEROR AND FAI LIFE INSURANCE SOCIETY LIMITED AS TRANSFEREE OF THE LAND COMPRISED IN FOLIO IDENTIFIERS A/364217, A/402876 AND A/320192 AT MASCOT.

B

W678081	LEASE
W678082	LEASE
W678085	LEASE
W678086	LEASE
X341681	LEASE
X932362	LEASE
Z655139	LEASE

Req:R018816 /Doc:DP 0402876 P /Rev:29-Dec-1992 /Sts:OK.OK /Pgs:ALL /Prt:02-Aug-2018 13:16 /Seq:1 of 1
Ref:advlegs /Src:P




Req:R018817 /Doc:DP 1232496 P /Rev:21-Aug-2017 /Sts:SC.OK /Pgs:ALL /Prt:02-Aug-2018 13:16 /Seq:1 of 3
Ref:advlegs /Src:P
PLAN FORM 2 (A2)
WARNING : CREASING OR FOLDING WILL LEAD TO REJECTION
Sheet 1 of 1 sheet
O'RIORDAN
KING STREET
BOURKE ROAD
STREET
DP1232496
PLAN OF LAND TO BE ACQUIRED FOR THE PURPOSES OF THE ROADS ACT, 1993.
L.G.A. : BAYSIDE
Locality : MASCOT
Surveyor : KITSANA PANYA
Registered 21.8.2017

PLAN FORM 6 (2012) WARNING: Creasing or folding will lead to rejection ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 1 of 2 sheets

Office Use Only

Registered: 21.8.2017

Title System: TORRENS

Purpose: ACQUISITION (ROADS ACT,1993)

Office Use Only

DP1232496

PLAN OF LAND TO BE ACQUIRED THE PURPOSES OF THE ROADS ACT, 1993.

LGA: BAYSIDE

Locality: MASCOT

Parish: BOTANY

County: CUMBERLAND

Crown Lands NSW/Western Lands Office Approval

I, ... (Authorised Officer) in approving this plan certify that all necessary approvals in regard to the allocation of the land shown herein have been given.

Signature: .....

Date: .....

File Number: .....

Office: .....

Subdivision Certificate

I, ...

*Authorised Person/*General Manager/*Accredited Certifier, certify that the provisions of s.109J of the *Environmental Planning and Assessment Act 1979* have been satisfied in relation to the proposed subdivision, new road or reserve set out herein.

Signature: .....

Accreditation number: .....

Consent Authority: .....

Date of endorsement: .....

Subdivision Certificate number: .....

File number: .....

*Strike through if inapplicable.

Survey Certificate

I, KITSANA PANYA.....

of ROADS AND MARITIME SERVICES .....

a surveyor registered under the *Surveying and Spatial Information Act 2002*, certify that:

~~*(a) The land shown in the plan was surveyed in accordance with the *Surveying and Spatial Information Regulation 2012*, is accurate and the survey was completed on .....~~

*(b) The part of the land shown in the plan (*being/~~*excluding~~

LOTS 16 TO 21 INCLUSIVE AND CONNECTIONS) was surveyed in accordance with the *Surveying and Spatial Information Regulation 2012*, is accurate and the survey was completed on,...18-11-2016.. the part not surveyed was compiled in accordance with that Regulation.

~~*(c) The land shown in this plan was compiled in accordance with the *Surveying and Spatial Information Regulation 2012*.~~

Signature: ..... Dated: 6.6.17.

Surveyor ID: 8590 .....

Datum Line: "X" – "Y" .....

Type: *Urban

The terrain is *Level-Undulating

*Strike through if inapplicable.

^Specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey.

Statements of intention to dedicate public roads, public reserves and drainage reserves.

LOTS 16 TO 21 INCLUSIVE ARE REQUIRED FOR ROAD AND AFTER CONSTRUCTION WILL BE DEDICATED AS PUBLIC ROAD UNDER SECTION 10 OF THE ROADS ACT, 1993.

Plans used in the preparation of survey.

DP 15034	DP 737228	DP 434814	DP 320192
DP 364217	DP 85597	DP 878949	DP 117137
DP 800299	DP 1124557	DP 792885	DP 270981

If space is insufficient continue on PLAN FORM 6A

Signatures, Seals and Section 88B Statements should appear on PLAN FORM 6A

Surveyor's Reference: SP3830B (CI1352B)CHECKLIST LASRA

FILE : SF2014/047262 FIELD BOOK : 0658 051 FP 0003 PLAN : 0658 051 SS 4002

PLAN FORM 6A (2012) WARNING: Creasing or folding will lead to rejection ePlan

DEPOSITED PLAN ADMINISTRATION SHEET Sheet 2 of 2 sheets

Office Use Only

Registered: 21.8.2017

Office Use Only

DP1232496

PLAN OF PROPOSED EASEMENT TO DRAIN WATER TO BE ACQUIRED WITHIN LOT 101 DP1214543 FOR THE PURPOSES OF THE ROADS ACT, 1993.

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses - See 60(c) *SSI Regulation 2012*
- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919*
- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

Subdivision Certificate number: .....

Date of Endorsement: .....

LOTS 10 & 16 - 279 KING ST, MASCOT
LOTS 11 & 17 - 176 O'RIORDAN ST, MASCOT
LOTS 12 & 18 - 166 O'RIORDAN ST, MASCOT
LOTS 13 & 19 - 154 O'RIORDAN ST, MASCOT
LOTS 14 & 20 - 154 O'RIORDAN ST, MASCOT
LOTS 15 & 21 - 146 O'RIORDAN ST, MASCOT

APPROVED:

.....

A/PRINCIPAL SURVEYOR
ROADS AND MARITIME SERVICES

If space is insufficient use additional annexure sheet

Surveyor's Reference: SP3830B (CI1352B) CHECKLIST LASRA

FILE : SF2014/047262 FIELD BOOK : 0658 051 FP 0003 PLAN : 0658 051 SS 4002

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
2/8/2018 1:16PM

FOLIO: 1/85597

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 12181 FOL 96

Recorded	Number	Type of Instrument	C.T. Issue
21/8/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
8/9/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
24/11/1989	Y716196	SURRENDER OF LEASE	
24/11/1989	Y716197	LEASE	EDITION 1
1/6/1992	E499496	DISCHARGE OF MORTGAGE	
1/6/1992	E499497	MORTGAGE	EDITION 2
1/7/1994	U405362	DISCHARGE OF MORTGAGE	
1/7/1994	U405363	TRANSFER	EDITION 3
1/7/1994	U405364	CAVEAT	
29/8/1994	U561862	MORTGAGE	EDITION 4
6/9/1995	O512591	DISCHARGE OF MORTGAGE	
6/9/1995	O512592	MORTGAGE	EDITION 5
8/3/2001	7461728	DISCHARGE OF MORTGAGE	
8/3/2001	7461729	MORTGAGE	EDITION 6
7/1/2003	9271286	DISCHARGE OF MORTGAGE	
7/1/2003	9271287	TRANSFER	
7/1/2003	9271288	MORTGAGE	EDITION 7
21/5/2013	AH740861	CAVEAT	
1/8/2013	AH920076	DISCHARGE OF MORTGAGE	
1/8/2013	AH920077	TRANSFER	EDITION 8
12/11/2014	AJ11259	MORTGAGE	EDITION 9
21/8/2017	DP1232496	DEPOSITED PLAN	
23/8/2017	AM642879	REQUEST	
1/2/2018	AN78865	DISCHARGE OF MORTGAGE	

END OF PAGE 1 - CONTINUED OVER

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NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
2/8/2018 1:16PM

FOLIO: 1/85597 PAGE 2

Recorded	Number	Type of Instrument	C.T. Issue
1/2/2018	AN78868	TRANSFER	FOLIO CANCELLED

*** END OF SEARCH ***

advlegs PRINTED ON 2/8/2018

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
2/8/2018 1:16PM

FOLIO: A/320192

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 15474 FOL 99

Recorded	Number	Type of Instrument	C.T. Issue
29/7/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
5/10/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
16/5/1991	Z655139	LEASE	EDITION 1
10/10/1991	Z975986	TRANSFER	EDITION 2
8/11/1991	E48207	LEASE	EDITION 3
15/11/1991	E63730	LEASE	EDITION 4
25/2/1993	I145061	SURRENDER OF LEASE	
25/2/1993	I145062	LEASE	
25/2/1993	I145063	SURRENDER OF LEASE	
25/2/1993	I145064	LEASE	EDITION 5
13/8/1993	I563479	LEASE	EDITION 6
2/5/1994	U225139	REQUEST	
2/5/1994	U225140	LEASE	EDITION 7
20/1/1995	U957154	SURRENDER OF LEASE	
20/1/1995	U957155	LEASE	EDITION 8
17/2/1995	O27537	LEASE	EDITION 9
17/11/1995	O697513	LEASE	EDITION 10
27/2/1996	O941951	LEASE	EDITION 11
2/5/1996	2125425	TRANSFER OF LEASE	
6/6/1996	2213640	LEASE	
6/6/1996	2213641	LEASE	EDITION 12
2/7/1997	3197512	LEASE	
2/7/1997	3197513	TRANSFER	EDITION 13

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NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
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FOLIO: A/320192 PAGE 2

Recorded	Number	Type of Instrument	C.T. Issue
3/7/1997	3201253	CAVEAT	
28/7/1997	3271323	WITHDRAWAL OF CAVEAT	
28/7/1997	3271324	MORTGAGE	EDITION 14
24/9/1998	5288996	LEASE	EDITION 15
24/8/1999	6122654	LEASE	
24/8/1999	6122655	LEASE	EDITION 16
24/1/2000	6508813	LEASE	EDITION 17
1/2/2000	6525755	SURRENDER OF LEASE	
1/2/2000	6525756	LEASE	EDITION 18
12/10/2000	7145794	LEASE	
12/10/2000	7145795	LEASE	EDITION 19
20/3/2002	8444881	VARIATION OF LEASE	EDITION 20
4/7/2002	8733194	DISCHARGE OF MORTGAGE	
4/7/2002	8733196	TRANSFER	
4/7/2002	8733197	TRANSFER	EDITION 21
20/12/2002	8981154	MORTGAGE	EDITION 22
22/1/2003	9309004	DEPARTMENTAL DEALING	
23/6/2003	9717763	SUB-LEASE	
25/6/2003	9728140	LEASE	
6/8/2003	9854712	LEASE	
7/4/2004	AA556944	MORTGAGE	
26/5/2005	AB501500	LEASE	
7/7/2005	AB604278	LEASE	
5/1/2006	AC24424	DISCHARGE OF MORTGAGE	
5/1/2006	AC24337	DISCHARGE OF MORTGAGE	

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NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
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FOLIO: A/320192 PAGE 3

Recorded	Number	Type of Instrument	C.T. Issue
8/6/2006	AC363888	LEASE	
26/7/2006	AC481583	LEASE	
2/8/2006	AC498407	LEASE	
8/2/2007	AC920611	LEASE	
21/6/2007	AD194290	LEASE	
13/12/2007	AD627210	LEASE	
25/7/2008	AE107169	LEASE	
26/11/2008	AE348707	LEASE	
27/2/2009	AE526315	LEASE	
26/3/2009	AE574982	LEASE	
7/5/2009	AE656106	LEASE	
4/8/2009	AE875182	VARIATION OF LEASE	
9/12/2010	AF931112	LEASE	
9/2/2011	AG47623	LEASE	
2/6/2011	AG271627	VARIATION OF LEASE	
7/6/2011	AG282228	LEASE	
21/2/2012	AG820508	SURRENDER OF LEASE	
21/2/2012	AG820509	LEASE	
14/5/2012	AG975938	LEASE	
26/2/2013	AH575909	DEPARTMENTAL DEALING	
22/7/2013	AH887572	TRANSFER WITHOUT MONETARY CONSIDERATION	
22/7/2013	AH887573	TRANSFER	EDITION 23

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NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
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FOLIO: A/320192 PAGE 4

Recorded	Number	Type of Instrument	C.T. Issue
13/6/2014	AI657914	VARIATION OF LEASE	
7/7/2014	AI717404	CAVEAT	
3/3/2015	AJ200522	VARIATION OF LEASE	
10/9/2015	AJ802919	WITHDRAWAL OF CAVEAT	
10/9/2015	AJ802920	TRANSFER	
10/9/2015	AJ802921	MORTGAGE	EDITION 24
12/1/2017	AM21175	LEASE	
12/1/2017	AM21176	LEASE	
12/1/2017	AM21177	LEASE	EDITION 25
23/5/2017	AM412643	DEPARTMENTAL DEALING	
21/8/2017	DP1232496	DEPOSITED PLAN	
23/8/2017	AM642879	REQUEST	
1/2/2018	AN78867	DISCHARGE OF MORTGAGE	
1/2/2018	AN78868	TRANSFER	FOLIO CANCELLED

*** END OF SEARCH ***

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NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
2/8/2018 1:16PM

FOLIO: A/364217

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 15474 FOL 100

Recorded	Number	Type of Instrument	C.T. Issue
29/7/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
5/10/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
16/5/1991	Z655139	LEASE	EDITION 1
10/10/1991	Z975986	TRANSFER	EDITION 2
8/11/1991	E48207	LEASE	EDITION 3
15/11/1991	E63730	LEASE	EDITION 4
25/2/1993	I145061	SURRENDER OF LEASE	
25/2/1993	I145062	LEASE	
25/2/1993	I145063	SURRENDER OF LEASE	
25/2/1993	I145064	LEASE	EDITION 5
13/8/1993	I563479	LEASE	EDITION 6
2/5/1994	U225139	REQUEST	
2/5/1994	U225140	LEASE	EDITION 7
20/1/1995	U957154	SURRENDER OF LEASE	
20/1/1995	U957155	LEASE	EDITION 8
17/2/1995	O27537	LEASE	EDITION 9
17/11/1995	O697513	LEASE	EDITION 10
27/2/1996	O941951	LEASE	EDITION 11
2/5/1996	2125425	TRANSFER OF LEASE	
6/6/1996	2213640	LEASE	
6/6/1996	2213641	LEASE	EDITION 12
2/7/1997	3197512	LEASE	
2/7/1997	3197513	TRANSFER	EDITION 13

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NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
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FOLIO: A/364217 PAGE 2

Recorded	Number	Type of Instrument	C.T. Issue
3/7/1997	3201253	CAVEAT	
28/7/1997	3271323	WITHDRAWAL OF CAVEAT	
28/7/1997	3271324	MORTGAGE	EDITION 14
24/9/1998	5288996	LEASE	EDITION 15
24/8/1999	6122654	LEASE	
24/8/1999	6122655	LEASE	EDITION 16
24/1/2000	6508813	LEASE	EDITION 17
1/2/2000	6525755	SURRENDER OF LEASE	
1/2/2000	6525756	LEASE	EDITION 18
12/10/2000	7145794	LEASE	
12/10/2000	7145795	LEASE	EDITION 19
20/3/2002	8444881	VARIATION OF LEASE	EDITION 20
4/7/2002	8733194	DISCHARGE OF MORTGAGE	
4/7/2002	8733196	TRANSFER	
4/7/2002	8733197	TRANSFER	EDITION 21
20/12/2002	8981154	MORTGAGE	EDITION 22
22/1/2003	9309004	DEPARTMENTAL DEALING	
23/6/2003	9717763	SUB-LEASE	
25/6/2003	9728140	LEASE	
6/8/2003	9854712	LEASE	
7/4/2004	AA556944	MORTGAGE	
26/5/2005	AB501500	LEASE	
7/7/2005	AB604278	LEASE	
5/1/2006	AC24424	DISCHARGE OF MORTGAGE	
5/1/2006	AC24337	DISCHARGE OF MORTGAGE	

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NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
2/8/2018 1:16PM

FOLIO: A/364217 PAGE 3

Recorded	Number	Type of Instrument	C.T. Issue
8/6/2006	AC363888	LEASE	
26/7/2006	AC481583	LEASE	
2/8/2006	AC498407	LEASE	
8/2/2007	AC920611	LEASE	
21/6/2007	AD194290	LEASE	
13/12/2007	AD627210	LEASE	
25/7/2008	AE107169	LEASE	
26/11/2008	AE348707	LEASE	
27/2/2009	AE526315	LEASE	
26/3/2009	AE574982	LEASE	
7/5/2009	AE656106	LEASE	
4/8/2009	AE875182	VARIATION OF LEASE	
9/12/2010	AF931112	LEASE	
9/2/2011	AG47623	LEASE	
2/6/2011	AG271627	VARIATION OF LEASE	
7/6/2011	AG282228	LEASE	
21/2/2012	AG820508	SURRENDER OF LEASE	
21/2/2012	AG820509	LEASE	
14/5/2012	AG975938	LEASE	
26/2/2013	AH575909	DEPARTMENTAL DEALING	
22/7/2013	AH887572	TRANSFER WITHOUT MONETARY CONSIDERATION	
22/7/2013	AH887573	TRANSFER	EDITION 23

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NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
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FOLIO: A/364217 PAGE 4

Recorded	Number	Type of Instrument	C.T. Issue
13/6/2014	AI657914	VARIATION OF LEASE	
7/7/2014	AI717404	CAVEAT	
3/3/2015	AJ200522	VARIATION OF LEASE	
10/9/2015	AJ802919	WITHDRAWAL OF CAVEAT	
10/9/2015	AJ802920	TRANSFER	
10/9/2015	AJ802921	MORTGAGE	EDITION 24
12/1/2017	AM21175	LEASE	
12/1/2017	AM21176	LEASE	
12/1/2017	AM21177	LEASE	EDITION 25
28/2/2017	AK971351	LEASE	
28/2/2017	AK971352	SUB-LEASE	
28/2/2017	AK971502	MORTGAGE OF LEASE	
28/2/2017	AK971571	CHANGE OF NAME	
28/2/2017	AM28347	DEPARTMENTAL DEALING	
9/3/2017	AM218115	DEPARTMENTAL DEALING	
23/5/2017	AM412643	DEPARTMENTAL DEALING	
21/8/2017	DP1232496	DEPOSITED PLAN	
23/8/2017	AM642879	REQUEST	
1/2/2018	AN78866	DISCHARGE OF MORTGAGE	
1/2/2018	AN78868	TRANSFER	FOLIO CANCELLED

*** END OF SEARCH ***

advlegs PRINTED ON 2/8/2018

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
2/8/2018 1:16PM

FOLIO: A/402876

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 15474 FOL 101

Recorded	Number	Type of Instrument	C.T. Issue
29/7/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
5/10/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
16/5/1991	Z655139	LEASE	EDITION 1
10/10/1991	Z975986	TRANSFER	EDITION 2
8/11/1991	E48207	LEASE	EDITION 3
15/11/1991	E63730	LEASE	EDITION 4
25/2/1993	I145061	SURRENDER OF LEASE	
25/2/1993	I145062	LEASE	
25/2/1993	I145063	SURRENDER OF LEASE	
25/2/1993	I145064	LEASE	EDITION 5
13/8/1993	I563479	LEASE	EDITION 6
2/5/1994	U225139	REQUEST	
2/5/1994	U225140	LEASE	EDITION 7
20/1/1995	U957154	SURRENDER OF LEASE	
20/1/1995	U957155	LEASE	EDITION 8
17/2/1995	O27537	LEASE	EDITION 9
17/11/1995	O697513	LEASE	EDITION 10
27/2/1996	O941951	LEASE	EDITION 11
2/5/1996	2125425	TRANSFER OF LEASE	
6/6/1996	2213640	LEASE	
6/6/1996	2213641	LEASE	EDITION 12
2/7/1997	3197512	LEASE	
2/7/1997	3197513	TRANSFER	EDITION 13

END OF PAGE 1 - CONTINUED OVER

advlegs PRINTED ON 2/8/2018

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
2/8/2018 1:16PM

FOLIO: A/402876 PAGE 2

Recorded	Number	Type of Instrument	C.T. Issue
3/7/1997	3201253	CAVEAT	
28/7/1997	3271323	WITHDRAWAL OF CAVEAT	
28/7/1997	3271324	MORTGAGE	EDITION 14
24/9/1998	5288996	LEASE	EDITION 15
24/8/1999	6122654	LEASE	
24/8/1999	6122655	LEASE	EDITION 16
24/1/2000	6508813	LEASE	EDITION 17
1/2/2000	6525755	SURRENDER OF LEASE	
1/2/2000	6525756	LEASE	EDITION 18
12/10/2000	7145794	LEASE	
12/10/2000	7145795	LEASE	EDITION 19
20/3/2002	8444881	VARIATION OF LEASE	EDITION 20
4/7/2002	8733194	DISCHARGE OF MORTGAGE	
4/7/2002	8733196	TRANSFER	
4/7/2002	8733197	TRANSFER	EDITION 21
20/12/2002	8981154	MORTGAGE	EDITION 22
22/1/2003	9309004	DEPARTMENTAL DEALING	
23/1/2003	9310245	LEASE	
16/4/2003	9535503	LEASE	
23/6/2003	9717763	SUB-LEASE	
25/6/2003	9728140	LEASE	
6/8/2003	9854712	LEASE	
7/4/2004	AA556944	MORTGAGE	
26/5/2005	AB501500	LEASE	
7/7/2005	AB604278	LEASE	

END OF PAGE 2 - CONTINUED OVER

advlegs PRINTED ON 2/8/2018

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
2/8/2018 1:16PM

FOLIO: A/402876 PAGE 3

Recorded	Number	Type of Instrument	C.T. Issue
5/1/2006	AC24424	DISCHARGE OF MORTGAGE	
5/1/2006	AC24337	DISCHARGE OF MORTGAGE	
8/6/2006	AC363888	LEASE	
26/7/2006	AC481583	LEASE	
2/8/2006	AC498407	LEASE	
8/2/2007	AC920611	LEASE	
21/6/2007	AD194290	LEASE	
13/12/2007	AD627210	LEASE	
25/7/2008	AE107169	LEASE	
26/11/2008	AE348707	LEASE	
27/2/2009	AE526315	LEASE	
26/3/2009	AE574982	LEASE	
7/5/2009	AE656106	LEASE	
4/8/2009	AE875182	VARIATION OF LEASE	
9/12/2010	AF931112	LEASE	
9/2/2011	AG47623	LEASE	
2/6/2011	AG271627	VARIATION OF LEASE	
7/6/2011	AG282228	LEASE	
21/2/2012	AG820508	SURRENDER OF LEASE	
21/2/2012	AG820509	LEASE	
14/5/2012	AG975938	LEASE	
26/2/2013	AH575909	DEPARTMENTAL DEALING	
22/7/2013	AH887572	TRANSFER WITHOUT MONETARY	

END OF PAGE 3 - CONTINUED OVER

advlegs PRINTED ON 2/8/2018

Page 3 of 4

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
2/8/2018 1:16PM

FOLIO: A/402876 PAGE 4

Recorded	Number	Type of Instrument	C.T. Issue
		CONSIDERATION	
22/7/2013	AH887573	TRANSFER	EDITION 23
13/6/2014	AI657914	VARIATION OF LEASE	
7/7/2014	AI717404	CAVEAT	
3/3/2015	AJ200522	VARIATION OF LEASE	
10/9/2015	AJ802919	WITHDRAWAL OF CAVEAT	
10/9/2015	AJ802920	TRANSFER	
10/9/2015	AJ802921	MORTGAGE	EDITION 24
12/1/2017	AM21175	LEASE	
12/1/2017	AM21176	LEASE	
12/1/2017	AM21177	LEASE	EDITION 25

*** END OF SEARCH ***

advlegs PRINTED ON 2/8/2018

Req:R019210 /Doc:PA 035597 PA /Rev:23-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:02-Aug-2018 13:58 /Seq:1 of 4
Ref:advlegs /Src:P [redacted]

No 35597

New South Wales.

APPLICATION TO BRING LANDS UNDER THE PROVISIONS OF THE REAL PROPERTY ACT, 1900.

FEE SIMPLE.[a]

[a] This form may be modified to suit the case of a leasehold title.

CAUTION.—Applicants [illegible] by virtue of the provisions of the Crimes Act, 1900, the penalties of perjury are attached to false declarations [illegible] matter or procedure under the Act, and that the utmost care is therefore necessary in framing [illegible] up by an Attorney) every particular statement herein. It is further [illegible] 120 of the Real Property Act, 1900, that any applicant procuring a Certificate through any fraud, error, [illegible] misrepresentation, or misdescription will, notwithstanding the issue of such Certificate, remain liable for damages to any [illegible] thereby prejudiced. And any person who fraudulently procures, assists in fraudulently procuring, or is privy to the fraudulent procurement of any Certificate of Title, is declared guilty of a misdemeanour, and liable to a penalty not exceeding £500, or imprisonment not exceeding three years; and any Certificate thereby procured is rendered void as between all [illegible].

B 212 44 G

FEES:—	£	s.	d.
Assurance			
Lodgment	1		
Certificate	1	5	0
Advertising	1	10	0
Office Copy Plan		5	0
Total	£4	0	0

I[b] PEDER MARTIN ANDERSEN of Rosebery in the State of New South Wales, Mechanical Engineer

do solemnly and sincerely declare, that[c] I am seized for an Estate in fee simple of[d] ALL THAT PIECE or parcel of land situate in the Municipality of Mascot Parish of Botany County of Cumberland containing an area of two roods thirty and one quarter perches being part of J.R. Hatfield's grant of sixty five acres and being the land described in Conveyance dated the fourth day of August one thousand nine hundred and forty two and made between William James Lodge and Charles Henry Lodge (both therein described) of the one part and myself of the other part registered Number 776 Book 1917 subject to the easement described in the said Deed.

which land (including all improvements) is of the value of[e] One thousand five hundred pound ~~Six hundred pounds~~ and no more, and is[f] part of[g] sixty five acres originally granted to[h] J. R. Hatfield by Crown grant, under the hand of the Governor of the Colony, dated the 7th day of April 1839.

And I further declare, that I verily believe there does not exist any lease or agreement for lease of the said land, for any term exceeding a tenancy for one year, or from year to year,[k]

Also, that there does not exist any mortgage, lien, writ of execution, charge or encumbrance, will or settlement, or any deed or writing, contract, or dealing (other than such lease or tenancy as aforesaid), giving any right, claim, or interest in or to the said land, or any part thereof, to any other person than myself[l]

and I further declare, that there is no person in possession or occupation of the said land or any part thereof adversely to my Estate or Interest therein, and that the said land is now[m] occupied by myself

and that the owners and occupiers of adjacent lands are as follows[n]:—

State whether on North, South, East, or West.	Name.	State whether owner or occupier.	Address.
North	Park of Mascot Council		Council Chambers, Mascot.
West	Old Botany Road		
South	Estate late S. Lodge	Vacant land	c/- W.S. Forester, 16 Denison Street, Penshurst.
East	A.W.K. Finch and Mrs.A.E. Crabbe	Vacant land	c/- Mrs. A.E. Crabbe, No.10 Thompson Street, Clifton Gardens.

Cert of Title issue: Vol. 5565 Fol. 36
Dated:- 25-3-46

3675

Margin notes:

[b] Here state Christian and surname (or names) in full with residence and occupation.

[c] "I am" or if the declaration is made by an attorney "C.D. of ... is" (as the case may be).

[d] Here give description of the property in full. If the land is shown on a plan lodged with the application or is fully described in a deed, it will be sufficient to insert a reference to the area, town, parish, and county and words indicating that the land is shown on the plan or described in the deed in question. Unless the Registrar-General has previously dispensed with a plan of survey, an accurate plan, prepared and certified by a surveyor specially licensed under the Act, must accompany the application. If there be any rights of way or other rights or easements affecting the premises the particulars should be stated. If the space for description be insufficient, it may be completed by annexure which must however be identified as part of the declaration, by memorandum signed by the declarant and attesting officer.

[e] The full improved value should be stated.

[f] State whether "the whole" or "part."

[g] Insert allotment with reference to number and section on plan, if any, or if not, number of acres granted.

[h] Name of Grantee.

[k] If there be any Lease, add the words "except as follows" and insert particulars thereof.

[l] If there be any mortgage, lien, etc., add the words "except as follows" and insert particulars thereof.

[m] Insert "unoccupied," or "in the occupation of," adding names and addresses of tenants in full. State also nature of tenancy, if not under some lease before mentioned. When the applicant is not in actual occupation, but has a caretaker or manager in occupation, the name of such caretaker or manager should be stated, together with the nature of his occupancy.

[n] Here insert names and residences of adjacent owners and occupiers on all sides.

Req:R019210 /Doc:PA 035597 PA /Rev:23-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:02-Aug-2018 13:58 /Seq:2 of 4
Ref:advlegs /Src:P

And I further declare, that the annexed Schedule, to which my signature is affixed, and which is to be taken as part of this Declaration, contains a full and correct list* commencing with Conveyance dated 9/2/1872 Savings Bank of New South Wales to James Barnes Registered Number 824 Book 128 of all settlements, deeds, documents, or instruments, maps, plans and papers relating to the land comprised in this application, so far as I have any means of ascertaining the same, distinguishing such as being in my possession or under my control, are herewith lodged and indicating where or with whom, so far as known to me any others thereof are deposited. Also, that there does not exist any fact or circumstance whatever material to the title, which is not hereby fully and fairly disclosed to the utmost extent of my knowledge, information, and belief; and that there is not, to my knowledge and belief, any action or suit pending affecting the said land, nor any person who has or claims any estate, right, title or interest therein, or in any part thereof, otherwise than by virtue and to the extent of some lease or tenancy hereby fully disclosed †

* The declaration may be qualified to the extent to which Applicant's title has been previously passed by the Registrar General by inserting the words "Commencing with Conveyance dated.......... registered.........." or as the case may be. Otherwise all documents from the Crown Grant onwards must be entered in the Schedule.

† If there be any exception add the words "except as follows" and insert necessary particulars.

And I make this solemn Declaration, conscientiously believing the same to be true.

DATED at Sydney this Seventeenth day of February, 1944.

(RULE UP ALL BLANKS BEFORE SIGNING.)

Made and subscribed by the abovenamed PEDER MARTIN ANDERSEN this 17th day of February 19 44 in the presence of ‡

Signature of Applicant

‡ If made in New South Wales this declaration must be attested by the Registrar General or Deputy, or by a Notary Public, or by a Justice of the Peace, or Commissioner for Affidavits. If made outside the State it should be made according to the law of the State where made, before a person authorised by that law to take declarations. If the signature be by mark, the attestation must state that the document was read over to the declarant, and that he appeared fully to understand the contents. This applies also to the subjoined direction, particularly if a different person be nominated to receive certificate.

To the Registrar-General,—

I PEDER MARTIN ANDERSEN the above declarant, do hereby apply to have the land described in the above declaration brought under the provisions of the Real Property Act, and request you to issue the Certificate of Title in the name of* myself this Deponent

* If to Applicant, say "myself"; if to other person write name at full length, with address and occupation. If to two or more, state whether as joint tenants or tenants in common; if as tenants in common state shares. If to an infant, the age should be stated, and verified by Certificate of Birth, or by Statutory Declaration. If to a married woman, the name of the husband, together with his residence and occupation, should be stated.

DATED at Sydney this Seventeenth day of February, 1944.

Witness to Signature—

(Signature of Applicant)

* N.B.—The Schedule below and Certificate indorsed on fourth page should be also signed.

In no case can any alterations, however trifling, be allowed to be made after the application has been once declared, unless all the parties re-sign and re-declare the same. If it is discovered that any alterations are necessary, the applicant may make a statutory declaration setting out in what manner he desires the application to be altered, which declaration will then (unless the Registrar General considers that a fresh application ought to be made) be read as one with the application.

(RULE UP ALL BLANKS BEFORE SIGNING.)

SCHEDULE REFERRED TO.*

(TO BE SIGNED BY APPLICANT IMMEDIATELY BELOW THE LAST DOCUMENT SCHEDULED.)

To include not only Title Deeds, Probates, Letters of Administration, etc., but also the Surveyor's Plan or Statement in lieu thereof.

* For the particulars which this Schedule must comprise, see concluding part of Declaration, to which particular attention is directed, as any omission or misstatement will render applicant liable to the penalties of false Declaration.

No.	Date.	Nature of Instrument.	Parties.	Registration. Book.	Registration. No.	When and by whom Lodged.
1	9/2/72	Convey.	Savings Bank of New South Wales to James Barnes	128	824	Documents Nos. 1 to 8 inclusive permanently deposited on 5/8/42 for custody under Section 64 of the Conveyancing Act 1919 vide receipt No. 8707.
2	9/2/72	Ditto	James Barnes to Herbert S. Gibson	128	825	
3	16/6/75	Ditto	Herbert S. Gibson to John Lodge	151	697	
4	17/6/75	Mortgage	John Lodge to Herbert S. Gibson	151	698	
5	1/12/08	Dischge. (endor.)	Neal Collins to John Lodge	869	948	
6	7/7/97	Trans/M	Herbert S. Gibson to Neal Collins	602	770	
7	12/11/29	Appt. of New Trustee.	Sarah Lodge (widow) (Admix. re Will of Charlotte Lodge)-(Extrix. of John Lodge) to William J. Lodge (new Trustee re Will of said John Lodge)	1582	924	

Should any transaction affecting the land in this application be entered into or any alterations in the buildings or fences be made subsequent to the date of the application, but prior to the issue of the Certificate of Title, the Registrar General should be informed immediately, and all documents evidencing such transaction should be lodged.

SCHEDULE REFERRED TO—(*continued*).*

(TO BE SIGNED BY APPLICANT, IF UTILISED, IMMEDIATELY BELOW THE LAST DOCUMENT SCHEDULED.

No.	Date.	Nature of Instrument.	Parties.	Registration. Book.	Registration. No.	When and by whom Lodged.
8	28/7/42	Appt. of New Trustee	William J. Lodge (Trustee re Will of John Lodge) to Charles H. Lodge (Co-Trustee re said Will)	1917	79	Documents Nos. 1 to 8 inclusive permanently deposited on the 5/8/42 for custody under Sec. 64 of the Conveyancing Act 1919 vide Receipt No. 8707
9	4/8/42	Convey.	W.J. Lodge & anor (1) and myself (2)	776	1917	Lodged herewith
10	1942	Abstract	Abstract of the Title of the Trustees of the Estate of John Lodge deceased to land at Old Botany Road, Mascot.			Lodged herewith
11	30/6/42	Survey	Survey report of F.R. Hardy & A.L. Busby with descriptions "A" and "B" annexed thereto			Lodged herewith
12	25/4/42	Consent	Consent of the Delegate of the Treasurer			Lodged herewith
13	7/4/41	Request	Request to sell by Charles Henry Lodge			Lodged herewith
14	8/7/37	Request	Request to sell by Elizabeth Brotchie			Lodged herewith
15	17/1/30	Request	Request to sell by Charlotte Ethel Hodges			Lodged herewith

H'with Docs 9 to 15

WITNESS

16		Probate in the will of John Lodge				
17		Letters of Administration in the Estate of Charlotte Lodge				
18	13-4-42	Contract for sale to P.A. Andersen				
19	6-11-45	Certificate from the Commissioner of Stamp Duties				
20	6-11-45	"				
21	31-10-45	Stat. Decln. of W. J. Lodge				
22	23-10-45	Result of search re legitimation				
23	11-6-1907	Death Certificate of William James Lodge (certified copy only)				
24	16-9-1913	" " Emma Sarah Lodge (certified copy only)				
25	18-9-1893	" " Francis Joseph McCarthy (certified copy only)				
26	5-3-46	Final Decln by P.A. Andersen				

Docts. 9 to 26 H'with

Docts. 16 + 17 may be delivered to Collins & Mulholland.

Balance to remain in pkt.

24/7/47

Recs 9, 10, 11, 12, 13

See indorsement overleaf.

I certify that the within application is correct for the purposes of the Real Property Act, 1900.

(Signature)

(RULE UP ALL BLANKS BEFORE SIGNING, EXCEPT SPACE IN SCHEDULE BELOW APPLICANT'S SIGNATURE.)

FEES.

PAYMENT OF THESE MUST ACCOMPANY THE APPLICATION.

	£ s. d.
Certificate of Title	1 5 0
Office Copy of Plan (when a Plan is furnished) ...	0 5 0
Preparation of Plan (when a Plan is not furnished)	0 7 6
Advertisement	1 10 0
Assurance, ½d. in the £ on declared value ...	.....
Lodgment fee	1 0 0

☞ State to whom all correspondence relating to this Application should be sent, with address, as under, viz.:—

Name A.E.WHATMORE C.C.M.GEE & CO.,

Occupation Solicitors,

Post Town 14 Spring Street, Sydney.

EXTRA FEES PA 35597
Diagram 2/6
Extra Folios

No 36370

APPLICATION FOR CERTIFICATE OF TITLE FOR RESUMED LAND

REAL PROPERTY ACT,1900, SECTION 31 A.

The Council of the Municipality of Mascot hereby certifies that a Notification of Resumption, a copy of which is set out hereunder, appeared in the Government Gazette of the 31st January,1947 No.18 and the said Council of the Municipality of Mascot hereby applies to the Registrar General for a Certificate of Title for so much of the land described in the said Notification as is not under the provisions of the Real Property Act,1900, and certifies this application to be correct for the purposes of the said Act.

"LOCAL GOVERNMENT ACT,1919 - PUBLIC WORKS ACT,1912

Mascot Municipal Council: Improvement and Embellishment of the Area.

Acquisition of Land.

APPLICATION by The Council of the Municipality of Mascot having been made that the land described in the Schedule hereto be appropriated or resumed for the purpose of the improvement and embellishment of the area, IT IS HEREBY NOTIFIED AND DECLARED by His Excellency the Governor, acting with the advice of the Executive Council, and by the Minister for Public Works, that so much of the said land as is Crown land is hereby appropriated and so much of the said land as is private property is hereby resumed under Division 1 of Part V of the Public Works Act,1912, for the purpose aforesaid; AND the Minister for Public Works hereby further notifies that the said land is vested in The Council of the Municipality of Mascot.

Dated at Sydney, this 21st day of January,1947.

J. NORTHCOTT, Governor.

J.J. CAHILL, Minister for Public Works.

Schedule.

All that piece or parcel of land situate in the Municipality of Mascot, parish of Botany, and county of Cumberland, being part of portion 136; Commencing on the south-eastern side of Old Botany road at the north-western corner of lot A, plan annexed to dealing B646396; and bounded thence on the north-west by that side of that road bearing 30 degrees 8 minutes 67 feet 11 inches to the south-western corner of the land comprised in Real Property Application 35,597; on the north by the southern boundary of that land and part of the southern boundary of the land comprised in Certificate of Title, volume 5,356, folio 166, respectively, bearing 90 degrees 9 minutes 45 seconds 276 feet 8½ inches and 90 degrees 11 minutes 30 seconds 483 feet 10¾ inches to the north-western corner of lot 1, deposited plan 15,190; on the east by the western boundary of that lot bearing 175 degrees 37 minutes 98 feet 2¾ inches; on the south by the northern side of Macintosh

street bearing 269 degrees 39 minutes 20 seconds 99 feet 11½ inches to the north-eastern corner of lot B of the aforesaid plan annexed to dealing B646396; and again on the south by the northern boundary of the said lots B and A, being lines successively bearing 276 degrees 31 minutes 206 feet 11¾ inches, 272 degrees 12 minutes 311 feet 4 inches and 272 degrees 6 minutes 185 feet 7 inches to the point of commencement, - having an area of 1 acre 1 rood 20 perches or thereabouts, and said to be in the possession of Sarah Emily Forster.
(Misc.46-8,355) (2017)"

The Common Seal of the Council of the Municipality of Mascot was hereunto affixed on the 29th day of April, 1947, by resolution of Council passed on the 22nd day of April,1947.

Charles L Gray
Mayor.

Harlen
Town Clerk.

1. Copy of Plan of survey made by C. P. Johns.
2. Final Decln by Town Clerk Mascot A48/8487.
3. Contract of Sale between Council Muni. of Mascot & Morg Investments
~~3. Contract of Sale ... Pty Ltd. to ...~~

Transfer lodged D94674 0

Certificate of Title
Vol **5626** fol **128** issued
12/3/48

Received Documents 3, and undertake same - lodge same
mortgage Branch for
M. mage 31/6/48.

EXTRA FEES A 3632
Diagram
Extra Folios

15.

Doc 1, 2 - 3 8/3/51
all docs to remain with ...

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 13/1232496

SEARCH DATE	TIME	EDITION NO	DATE
2/8/2018	1:16 PM	1	2/2/2018

NO CERTIFICATE OF TITLE HAS ISSUED FOR THE CURRENT EDITION OF THIS FOLIO.
CONTROL OF THE RIGHT TO DEAL IS HELD BY WESTPAC BANKING CORPORATION.

LAND

LOT 13 IN DEPOSITED PLAN 1232496
AT MASCOT
LOCAL GOVERNMENT AREA BAYSIDE
PARISH OF BOTANY COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1232496

FIRST SCHEDULE

JKN PARK PTY LTD

SECOND SCHEDULE (11 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 C562969 EASEMENT FOR STORMWATER CHANNEL AFFECTING THE PART OF THE LAND ABOVE DESCRIBED SHOWN SO BURDENED IN DP187190
3 F326017 RIGHT OF WAY APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND SHOWN IN THE PLAN ANNEXED TO F326017
4 W678085 LEASE TO THE SYDNEY COUNTY COUNCIL OF PREMISES BEING SUBSTATION NO 5937 TOGETHER WITH RIGHT OF WAY & EASEMENT FOR ELECTRICITY PURPOSES AS SHOWN IN PLAN WITH W678085. EXPIRES: 31/12/2035.
AK971351 LEASE OF LEASE W678085 TO BLUE ASSET PARTNER PTY LTD, ERIC ALPHA ASSET CORPORATION 1 PTY LTD, ERIC ALPHA ASSET CORPORATION 2 PTY LTD, ERIC ALPHA ASSET CORPORATION 3 PTY LTD & ERIC ALPHA ASSET CORPORATION 4 PTY LTD EXPIRES: SEE DEALING. CLAUSE 2.3 (b) (ii)
AK971352 LEASE OF LEASE AK971351 TO BLUE OP PARTNER PTY LTD, ERIC ALPHA OPERATOR CORPORATION 1 PTY LTD, ERIC ALPHA OPERATOR CORPORATION 2 PTY LTD, ERIC ALPHA OPERATOR CORPORATION 3 PTY LTD & ERIC ALPHA OPERATOR CORPORATION 4 PTY LTD EXPIRES: SEE DEALING. CLAUSE 12.1
AK971502 MORTGAGE OF LEASE AK971351 TO ANZ FIDUCIARY SERVICES PTY LTD
AK971571 CHANGE OF NAME AFFECTING LEASE W678085 LESSEE

END OF PAGE 1 - CONTINUED OVER

advlegs PRINTED ON 2/8/2018

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 13/1232496 PAGE 2

SECOND SCHEDULE (11 NOTIFICATIONS) (CONTINUED)

NOW ALPHA DISTRIBUTION MINISTERIAL HOLDING CORPORATION

5 AE574982 LEASE TO TRANSFIELD SERVICES (AUSTRALIA) PTY LIMITED BEING UNIT 4, 154 O'RIORDAN STREET, MASCOT. EXPIRES: 31/12/2013.

AJ200522 VARIATION OF LEASE AE574982 EXPIRY DATE NOW 31/12/2018.

6 AG47623 LEASE TO GEARHOUSE BROADCAST PTY LIMITED BEING UNIT 1. EXPIRES: 19/12/2015. OPTION OF RENEWAL: 5 YEARS.

7 AG820509 LEASE TO DAIWA FOOD CORPORATION PTY LIMITED BEING UNIT 6. EXPIRES: 31/12/2021.

8 AJ802921 MORTGAGE TO WESTPAC BANKING CORPORATION

9 AM21175 LEASE TO SUSHI TRAIN (AUSTRALIA) PTY LTD BEING UNIT 2, 154 O'RIORDAN STREET, MASCOT. EXPIRES: 23/10/2022.

10 AM21176 LEASE TO TOWERS INTERNATIONAL FREIGHT FORWARDERS PTY LTD BEING UNIT 5, 154 O'RIORDAN STREET, MASCOT. EXPIRES: 7/9/2020.

11 AM21177 LEASE TO GLASSONS AUSTRALIA LIMITED BEING UNIT 7, 154 O'RIORDAN STREET, MASCOT. EXPIRES: 7/4/2020.

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

advlegs PRINTED ON 2/8/2018

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 14/1232496

SEARCH DATE	TIME	EDITION NO	DATE
2/8/2018	1:16 PM	1	2/2/2018

NO CERTIFICATE OF TITLE HAS ISSUED FOR THE CURRENT EDITION OF THIS FOLIO.
CONTROL OF THE RIGHT TO DEAL IS HELD BY WESTPAC BANKING CORPORATION.

LAND

LOT 14 IN DEPOSITED PLAN 1232496
AT MASCOT
LOCAL GOVERNMENT AREA BAYSIDE
PARISH OF BOTANY COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1232496

FIRST SCHEDULE

JKN PARK PTY LTD

SECOND SCHEDULE (8 NOTIFICATIONS)

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)
2 AE574982 LEASE TO TRANSFIELD SERVICES (AUSTRALIA) PTY LIMITED BEING UNIT 4, 154 O'RIORDAN STREET, MASCOT. EXPIRES: 31/12/2013.
AJ200522 VARIATION OF LEASE AE574982 EXPIRY DATE NOW 31/12/2018.
3 AG47623 LEASE TO GEARHOUSE BROADCAST PTY LIMITED BEING UNIT 1. EXPIRES: 19/12/2015. OPTION OF RENEWAL: 5 YEARS.
4 AG820509 LEASE TO DAIWA FOOD CORPORATION PTY LIMITED BEING UNIT 6. EXPIRES: 31/12/2021.
5 AJ802921 MORTGAGE TO WESTPAC BANKING CORPORATION
6 AM21175 LEASE TO SUSHI TRAIN (AUSTRALIA) PTY LTD BEING UNIT 2, 154 O'RIORDAN STREET, MASCOT. EXPIRES: 23/10/2022.
7 AM21176 LEASE TO TOWERS INTERNATIONAL FREIGHT FORWARDERS PTY LTD BEING UNIT 5, 154 O'RIORDAN STREET, MASCOT. EXPIRES: 7/9/2020.
8 AM21177 LEASE TO GLASSONS AUSTRALIA LIMITED BEING UNIT 7, 154 O'RIORDAN STREET, MASCOT. EXPIRES: 7/4/2020.

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

advlegs PRINTED ON 2/8/2018

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 15/1232496

SEARCH DATE	TIME	EDITION NO	DATE
2/8/2018	1:16 PM	1	2/2/2018

NO CERTIFICATE OF TITLE HAS ISSUED FOR THE CURRENT EDITION OF THIS FOLIO.
CONTROL OF THE RIGHT TO DEAL IS HELD BY WESTPAC BANKING CORPORATION.

LAND

LOT 15 IN DEPOSITED PLAN 1232496
AT MASCOT
LOCAL GOVERNMENT AREA BAYSIDE
PARISH OF BOTANY COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1232496

FIRST SCHEDULE

JKN PARK PTY LTD

SECOND SCHEDULE (3 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 R732850 EASEMENT FOR STORMWATER DRAINAGE AFFECTING THE PART OF THE LAND SHOWN IN DP583011
3 AJ11259 MORTGAGE TO WESTPAC BANKING CORPORATION

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

advlegs PRINTED ON 2/8/2018

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: A/402876

SEARCH DATE	TIME	EDITION NO	DATE
2/8/2018	1:16 PM	25	12/1/2017

LAND

LOT A IN DEPOSITED PLAN 402876
AT MASCOT
LOCAL GOVERNMENT AREA BAYSIDE
PARISH OF BOTANY COUNTY OF CUMBERLAND
TITLE DIAGRAM DP402876

FIRST SCHEDULE

JKN PARK PTY LTD (T AJ802920)

SECOND SCHEDULE (10 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 C562969 EASEMENT FOR STORMWATER CHANNEL AFFECTING THE PART OF THE LAND ABOVE DESCRIBED SHOWN SO BURDENED IN DP187190
3 AE574982 LEASE TO TRANSFIELD SERVICES (AUSTRALIA) PTY LIMITED BEING UNIT 4, 154 O'RIORDAN STREET, MASCOT. EXPIRES: 31/12/2013.
AJ200522 VARIATION OF LEASE AE574982 EXPIRY DATE NOW 31/12/2018.
4 AG47623 LEASE TO GEARHOUSE BROADCAST PTY LIMITED BEING UNIT 1. EXPIRES: 19/12/2015. OPTION OF RENEWAL: 5 YEARS.
5 AG282228 LEASE TO WORKVENTURES LIMITED BEING UNIT 3. EXPIRES: 13/4/2014. OPTION OF RENEWAL: 2 YEARS.
AI657914 VARIATION OF LEASE AG282228 EXPIRY DATE NOW 13/10/2015.
6 AG820509 LEASE TO DAIWA FOOD CORPORATION PTY LIMITED BEING UNIT 6. EXPIRES: 31/12/2021.
7 AJ802921 MORTGAGE TO WESTPAC BANKING CORPORATION
8 AM21175 LEASE TO SUSHI TRAIN (AUSTRALIA) PTY LTD BEING UNIT 2, 154 O'RIORDAN STREET, MASCOT. EXPIRES: 23/10/2022.
9 AM21176 LEASE TO TOWERS INTERNATIONAL FREIGHT FORWARDERS PTY LTD BEING UNIT 5, 154 O'RIORDAN STREET, MASCOT. EXPIRES: 7/9/2020.
10 AM21177 LEASE TO GLASSONS AUSTRALIA LIMITED BEING UNIT 7, 154 O'RIORDAN STREET, MASCOT. EXPIRES: 7/4/2020.

NOTATIONS

END OF PAGE 1 - CONTINUED OVER

advlegs PRINTED ON 2/8/2018

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: A/402876 PAGE 2

NOTATIONS (CONTINUED)

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

advlegs PRINTED ON 2/8/2018

TRACE ENVIRONMENTAL

Appendix D

Planning and Zoning Reports

NSW GOVERNMENT Planning & Environment

This report is provided for general information purposes only and does not replace the need for a section 149 Certificate

Property Report for 146 O'Riordan Street, Mascot, 2020

Property Details

Address:	146 O'Riordan Street, Mascot, 2020
Lot/Section/Plan no:	1/-/DP85597
Council:	BAYSIDE

Council Details

BAYSIDE COUNCIL

Website

Phone Number

Email Address

Council Address

Planning Controls associated with this property

Land Zoning

- B5 - Business Development : (pub. 2013-06-21)

Acid Sulfate Soils

- Class 4 (pub. 2013-06-21)

Contribution Plans (LGA-Based)

- Botany Bay CPs 2016
- Rockdale and Kogarah CP 2006 - Ramsgate Commercial Centre
- Rockdale CP 2004 - as amended 4 November 2010
- Rockdale CP 2008
- Rockdale CP 2016 - Urban Renewal Area

Development Control Plans (LGA-Based)

- Botany Bay DCP 2013 - as amended 25 Oct 2016
- Rockdale DCP 2011 -as amended 5 Jun 2015

Floor Space Ratio

- V - 3.00 Ratio : Range [3.00 - 3.49] (pub. 2013-06-21)

Height of Building

- R - 22.0 m : Range [21.0 - 22.9 m] (pub. 2013-06-21)

Key Sites

- Mascot Station Precinct (pub. 2013-06-21)

Land Application LEP

- Included : Botany Bay Local Environmental Plan 2013 (pub. 2013-06-21)

Other spatial data associated with this property

Local Government Area

- Bayside

Suburbs

- Mascot

NSW GOVERNMENT Planning & Environment

This report is provided for general information purposes only and does not replace the need for a section 149 Certificate

State Environmental Planning Policies which apply at 146 O'Riordan Street, Mascot, 2020

State Environmental Planning Policy (Affordable Rental Housing) 2009 : (pub. 2009-07-31)
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 : (pub. 2004-06-25)
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 : (pub. 2008-12-12)
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 : (pub. 2004-03-31)
State Environmental Planning Policy (Infrastructure) 2007 : (pub. 2007-12-21)
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 : (pub. 2007-02-16)
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007 : (pub. 2007-09-28)
State Environmental Planning Policy No 19-Bushland in Urban Areas : (pub. 1986-10-24)
State Environmental Planning Policy No 1-Development Standards : (pub. 1980-10-17)
State Environmental Planning Policy No 21-Caravan Parks : (pub. 1992-04-24)
State Environmental Planning Policy No 30-Intensive Agriculture : (pub. 1989-12-08)
State Environmental Planning Policy No 33-Hazardous and Offensive Development : (pub. 1992-03-13)
State Environmental Planning Policy No 36-Manufactured Home Estates : (pub. 1993-07-16)
State Environmental Planning Policy No 50-Canal Estate Development : (pub. 1997-11-10)
State Environmental Planning Policy No 55-Remediation of Land : (pub. 1998-08-28)
State Environmental Planning Policy No 62-Sustainable Aquaculture : (pub. 2000-08-25)
State Environmental Planning Policy No 64-Advertising and Signage : (pub. 2001-03-16)
State Environmental Planning Policy No 65-Design Quality of Residential Apartment Development : (pub. 2002-07-26)
State Environmental Planning Policy No 70-Affordable Housing (Revised Schemes) : (pub. 2002-05-01)
State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 : Subject Land (pub. 2017-08-25)

NSW GOVERNMENT Planning & Environment

This report is provided for general information purposes only and does not replace the need for a section 149 Certificate

Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Floor Space Ratio

(1) The objectives of this clause are as follows:

- (a) to establish standards for the maximum development density and intensity of land use,
- (b) to ensure that buildings are compatible with the bulk and scale of the existing and desired future character of the locality,
- (c) to maintain an appropriate visual relationship between new development and the existing character of areas or locations that are not undergoing, and are not likely to undergo, a substantial transformation,
- (d) to ensure that buildings do not adversely affect the streetscape, skyline or landscape when viewed from adjoining roads and other public places such as parks, and community facilities,
- (e) to minimise adverse environmental effects on the use or enjoyment of adjoining properties and the public domain,
- (f) to provide an appropriate correlation between the size of a site and the extent of any development on that site,
- (g) to facilitate development that contributes to the economic growth of Botany Bay.

(2) The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.

(2A) Despite subclause (2), if an area of land in Zone R3 Medium Density Residential or Zone R4 High Density Residential exceeds 2,000 square metres, the floor space ratio of a building on that land may exceed the maximum floor space ratio shown for the land on the Floor Space Ratio Map but must not exceed 1.5:1.

(2B) Subclause (2A) does not apply to land identified as "Area 1" on the Floor Space Ratio Map.

(2C) Despite subclause (2), if an area of land identified as "Area 2" on the Floor Space Ratio Map has a site area exceeding 1,900 square metres, the maximum floor space ratio for a building on that land may exceed the maximum floor space ratio shown for the land on the Floor Space Ratio Map by no more than 0.65:1.

(2D) Despite subclause (2), if a building is permissible under clause 9A of Schedule 1 on land identified as "Area 4" on the Floor Space Ratio Map, the maximum floor space ratio for the building must not exceed 1.5:1.

NSW GOVERNMENT Planning & Environment

This report is provided for general information purposes only and does not replace the need for a section 149 Certificate

Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Height of Building

(1) The objectives of this clause are as follows:

- (a) to ensure that the built form of Botany Bay develops in a coordinated and cohesive manner,
- (b) to ensure that taller buildings are appropriately located,
- (c) to ensure that building height is consistent with the desired future character of an area,
- (d) to minimise visual impact, disruption of views, loss of privacy and loss of solar access to existing development,
- (e) to ensure that buildings do not adversely affect the streetscape, skyline or landscape when viewed from adjoining roads and other public places such as parks, and
- community facilities.

(2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.

(2A) Despite subclause (2), if an area of land in Zone R3 Medium Density Residential or Zone R4 High Density Residential exceeds 2,000 square metres, the height of a building on that land may exceed the maximum height shown for the land on the Height of Buildings Map but must not exceed 22 metres.

(2B) Subclause (2A) does not apply to land identified as "Area 1" on the Height of Buildings Map.

(2C) Despite subclause (2), if an area of land identified as "Area 2" on the Height of Buildings Map has a site area exceeding 1,900 square metres, the maximum height for a building on that land may exceed the maximum height shown for the land on the Height of Buildings Map by no more than 2 metres.

NSW GOVERNMENT Planning & Environment

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Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Land Zoning

Zone B5 Business Development

1 Objectives of zone

To enable a mix of business and warehouse uses, and bulky goods premises that require a large floor area, in locations that are close to, and that support the viability of,

- centres.

2 Permitted without consent

Nil

3 Permitted with consent

Bulky goods premises; Centre-based child care facilities; Food and drink premises; Garden centres; Hardware and building supplies; High technology industries; Landscaping material supplies; Neighbourhood shops; Passenger transport facilities; Respite day care centres; Roads; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Environmental facilities; Environmental protection works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home-based child care; Home businesses; Home occupations; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Recreation facilities (major); Recreation facilities (outdoor); Research stations; Residential accommodation; Resource recovery facilities; Restricted premises; Retail premises; Rural industries; Sewage treatment plants; Sex services premises; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Waste disposal facilities; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies

NSW GOVERNMENT Planning & Environment

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Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Land Zoning

Zone RE1 Public Recreation

1 Objectives of zone

- To enable land to be used for public open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.

2 Permitted without consent

Environmental protection works

3 Permitted with consent

Centre-based child care facilities; Community facilities; Emergency services facilities; Environmental facilities; Flood mitigation works; Information and education facilities; Jetties; Kiosks; Markets; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Respite day care centres; Roads; Signage; Water storage facilities

4 Prohibited

Any development not specified in item 2 or 3

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NSW GOVERNMENT Planning & Environment

This report is provided for general information purposes only and does not replace the need for a section 149 Certificate

Property Report for 154 O'Riordan Street, Mascot, 2020

Property Details

Address:	154 O'Riordan Street, Mascot, 2020
Lot/Section/Plan no:	A/-/DP320192
Council:	BAYSIDE

Council Details

BAYSIDE COUNCIL

Website

Phone Number

Email Address

Council Address

Planning Controls associated with this property

Land Zoning

- B5 - Business Development : (pub. 2013-06-21)

Acid Sulfate Soils

- Class 4 (pub. 2013-06-21)

Contribution Plans (LGA-Based)

- Botany Bay CPs 2016
- Rockdale and Kogarah CP 2006 - Ramsgate Commercial Centre
- Rockdale CP 2004 - as amended 4 November 2010
- Rockdale CP 2008
- Rockdale CP 2016 - Urban Renewal Area

Development Control Plans (LGA-Based)

- Botany Bay DCP 2013 - as amended 25 Oct 2016
- Rockdale DCP 2011 -as amended 5 Jun 2015

Floor Space Ratio

- V - 3.00 Ratio : Range [3.00 - 3.49] (pub. 2013-06-21)

Height of Building

- R - 22.0 m : Range [21.0 - 22.9 m] (pub. 2013-06-21)

Key Sites

- Mascot Station Precinct (pub. 2013-06-21)

Land Application LEP

- Included : Botany Bay Local Environmental Plan 2013 (pub. 2013-06-21)

Other spatial data associated with this property

Local Government Area

- Bayside

Suburbs

- Mascot

NSW GOVERNMENT Planning & Environment

This report is provided for general information purposes only and does not replace the need for a section 149 Certificate

State Environmental Planning Policies which apply at 154 O'Riordan Street, Mascot, 2020

State Environmental Planning Policy (Affordable Rental Housing) 2009 : (pub. 2009-07-31)
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 : (pub. 2004-06-25)
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 : (pub. 2008-12-12)
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 : (pub. 2004-03-31)
State Environmental Planning Policy (Infrastructure) 2007 : (pub. 2007-12-21)
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 : (pub. 2007-02-16)
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007 : (pub. 2007-09-28)
State Environmental Planning Policy No 19-Bushland in Urban Areas : (pub. 1986-10-24)
State Environmental Planning Policy No 1-Development Standards : (pub. 1980-10-17)
State Environmental Planning Policy No 21-Caravan Parks : (pub. 1992-04-24)
State Environmental Planning Policy No 30-Intensive Agriculture : (pub. 1989-12-08)
State Environmental Planning Policy No 33-Hazardous and Offensive Development : (pub. 1992-03-13)
State Environmental Planning Policy No 36-Manufactured Home Estates : (pub. 1993-07-16)
State Environmental Planning Policy No 50-Canal Estate Development : (pub. 1997-11-10)
State Environmental Planning Policy No 55-Remediation of Land : (pub. 1998-08-28)
State Environmental Planning Policy No 62-Sustainable Aquaculture : (pub. 2000-08-25)
State Environmental Planning Policy No 64-Advertising and Signage : (pub. 2001-03-16)
State Environmental Planning Policy No 65-Design Quality of Residential Apartment Development : (pub. 2002-07-26)
State Environmental Planning Policy No 70-Affordable Housing (Revised Schemes) : (pub. 2002-05-01)
State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 : Subject Land (pub. 2017-08-25)

NSW GOVERNMENT Planning & Environment

This report is provided for general information purposes only and does not replace the need for a section 149 Certificate

Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Floor Space Ratio

(1) The objectives of this clause are as follows:

- (a) to establish standards for the maximum development density and intensity of land use,
- (b) to ensure that buildings are compatible with the bulk and scale of the existing and desired future character of the locality,
- (c) to maintain an appropriate visual relationship between new development and the existing character of areas or locations that are not undergoing, and are not likely to undergo, a substantial transformation,
- (d) to ensure that buildings do not adversely affect the streetscape, skyline or landscape when viewed from adjoining roads and other public places such as parks, and community facilities,
- (e) to minimise adverse environmental effects on the use or enjoyment of adjoining properties and the public domain,
- (f) to provide an appropriate correlation between the size of a site and the extent of any development on that site,
- (g) to facilitate development that contributes to the economic growth of Botany Bay.

(2) The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.

(2A) Despite subclause (2), if an area of land in Zone R3 Medium Density Residential or Zone R4 High Density Residential exceeds 2,000 square metres, the floor space ratio of a building on that land may exceed the maximum floor space ratio shown for the land on the Floor Space Ratio Map but must not exceed 1.5:1.

(2B) Subclause (2A) does not apply to land identified as "Area 1" on the Floor Space Ratio Map.

(2C) Despite subclause (2), if an area of land identified as "Area 2" on the Floor Space Ratio Map has a site area exceeding 1,900 square metres, the maximum floor space ratio for a building on that land may exceed the maximum floor space ratio shown for the land on the Floor Space Ratio Map by no more than 0.65:1.

(2D) Despite subclause (2), if a building is permissible under clause 9A of Schedule 1 on land identified as "Area 4" on the Floor Space Ratio Map, the maximum floor space ratio for the building must not exceed 1.5:1.

NSW GOVERNMENT Planning & Environment

This report is provided for general information purposes only and does not replace the need for a section 149 Certificate

Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Height of Building

(1) The objectives of this clause are as follows:

- (a) to ensure that the built form of Botany Bay develops in a coordinated and cohesive manner,
- (b) to ensure that taller buildings are appropriately located,
- (c) to ensure that building height is consistent with the desired future character of an area,
- (d) to minimise visual impact, disruption of views, loss of privacy and loss of solar access to existing development,
- (e) to ensure that buildings do not adversely affect the streetscape, skyline or landscape when viewed from adjoining roads and other public places such as parks, and
- community facilities.

(2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.

(2A) Despite subclause (2), if an area of land in Zone R3 Medium Density Residential or Zone R4 High Density Residential exceeds 2,000 square metres, the height of a building on that land may exceed the maximum height shown for the land on the Height of Buildings Map but must not exceed 22 metres.

(2B) Subclause (2A) does not apply to land identified as "Area 1" on the Height of Buildings Map.

(2C) Despite subclause (2), if an area of land identified as "Area 2" on the Height of Buildings Map has a site area exceeding 1,900 square metres, the maximum height for a building on that land may exceed the maximum height shown for the land on the Height of Buildings Map by no more than 2 metres.

NSW GOVERNMENT Planning & Environment

This report is provided for general information purposes only and does not replace the need for a section 149 Certificate

Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Land Zoning

Zone B5 Business Development

1 Objectives of zone

To enable a mix of business and warehouse uses, and bulky goods premises that require a large floor area, in locations that are close to, and that support the viability of,

- centres.

2 Permitted without consent

Nil

3 Permitted with consent

Bulky goods premises; Centre-based child care facilities; Food and drink premises; Garden centres; Hardware and building supplies; High technology industries; Landscaping material supplies; Neighbourhood shops; Passenger transport facilities; Respite day care centres; Roads; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Environmental facilities; Environmental protection works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home-based child care; Home businesses; Home occupations; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Recreation facilities (major); Recreation facilities (outdoor); Research stations; Residential accommodation; Resource recovery facilities; Restricted premises; Retail premises; Rural industries; Sewage treatment plants; Sex services premises; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Waste disposal facilities; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies

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NSW GOVERNMENT Planning & Environment

This report is provided for general information purposes only and does not replace the need for a section 149 Certificate

Property Report for 154 O'Riordan Street, Mascot, 2020

Property Details

Address:	154 O'Riordan Street, Mascot, 2020
Lot/Section/Plan no:	A/-/DP402876
Council:	BAYSIDE

Council Details

BAYSIDE COUNCIL

Website

Phone Number

Email Address

Council Address

Planning Controls associated with this property

Land Zoning

- B5 - Business Development : (pub. 2013-06-21)

Acid Sulfate Soils

- Class 4 (pub. 2013-06-21)

Contribution Plans (LGA-Based)

- Botany Bay CPs 2016
- Rockdale and Kogarah CP 2006 - Ramsgate Commercial Centre
- Rockdale CP 2004 - as amended 4 November 2010
- Rockdale CP 2008
- Rockdale CP 2016 - Urban Renewal Area

Development Control Plans (LGA-Based)

- Botany Bay DCP 2013 - as amended 25 Oct 2016
- Rockdale DCP 2011 -as amended 5 Jun 2015

Floor Space Ratio

- V - 3.00 Ratio : Range [3.00 - 3.49] (pub. 2013-06-21)

Height of Building

- R - 22.0 m : Range [21.0 - 22.9 m] (pub. 2013-06-21)

Key Sites

- Mascot Station Precinct (pub. 2013-06-21)

Land Application LEP

- Included : Botany Bay Local Environmental Plan 2013 (pub. 2013-06-21)

Other spatial data associated with this property

Local Government Area

- Bayside

Suburbs

- Mascot

NSW GOVERNMENT Planning & Environment

This report is provided for general information purposes only and does not replace the need for a section 149 Certificate

State Environmental Planning Policies which apply at 154 O'Riordan Street, Mascot, 2020

State Environmental Planning Policy (Affordable Rental Housing) 2009 : (pub. 2009-07-31)
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 : (pub. 2004-06-25)
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 : (pub. 2008-12-12)
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 : (pub. 2004-03-31)
State Environmental Planning Policy (Infrastructure) 2007 : (pub. 2007-12-21)
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 : (pub. 2007-02-16)
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007 : (pub. 2007-09-28)
State Environmental Planning Policy No 19-Bushland in Urban Areas : (pub. 1986-10-24)
State Environmental Planning Policy No 1-Development Standards : (pub. 1980-10-17)
State Environmental Planning Policy No 21-Caravan Parks : (pub. 1992-04-24)
State Environmental Planning Policy No 30-Intensive Agriculture : (pub. 1989-12-08)
State Environmental Planning Policy No 33-Hazardous and Offensive Development : (pub. 1992-03-13)
State Environmental Planning Policy No 36-Manufactured Home Estates : (pub. 1993-07-16)
State Environmental Planning Policy No 50-Canal Estate Development : (pub. 1997-11-10)
State Environmental Planning Policy No 55-Remediation of Land : (pub. 1998-08-28)
State Environmental Planning Policy No 62-Sustainable Aquaculture : (pub. 2000-08-25)
State Environmental Planning Policy No 64-Advertising and Signage : (pub. 2001-03-16)
State Environmental Planning Policy No 65-Design Quality of Residential Apartment Development : (pub. 2002-07-26)
State Environmental Planning Policy No 70-Affordable Housing (Revised Schemes) : (pub. 2002-05-01)
State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 : Subject Land (pub. 2017-08-25)

NSW GOVERNMENT Planning & Environment

This report is provided for general information purposes only and does not replace the need for a section 149 Certificate

Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Floor Space Ratio

(1) The objectives of this clause are as follows:

- (a) to establish standards for the maximum development density and intensity of land use,
- (b) to ensure that buildings are compatible with the bulk and scale of the existing and desired future character of the locality,
- (c) to maintain an appropriate visual relationship between new development and the existing character of areas or locations that are not undergoing, and are not likely to undergo, a substantial transformation,
- (d) to ensure that buildings do not adversely affect the streetscape, skyline or landscape when viewed from adjoining roads and other public places such as parks, and community facilities,
- (e) to minimise adverse environmental effects on the use or enjoyment of adjoining properties and the public domain,
- (f) to provide an appropriate correlation between the size of a site and the extent of any development on that site,
- (g) to facilitate development that contributes to the economic growth of Botany Bay.

(2) The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.

(2A) Despite subclause (2), if an area of land in Zone R3 Medium Density Residential or Zone R4 High Density Residential exceeds 2,000 square metres, the floor space ratio of a building on that land may exceed the maximum floor space ratio shown for the land on the Floor Space Ratio Map but must not exceed 1.5:1.

(2B) Subclause (2A) does not apply to land identified as "Area 1" on the Floor Space Ratio Map.

(2C) Despite subclause (2), if an area of land identified as "Area 2" on the Floor Space Ratio Map has a site area exceeding 1,900 square metres, the maximum floor space ratio for a building on that land may exceed the maximum floor space ratio shown for the land on the Floor Space Ratio Map by no more than 0.65:1.

(2D) Despite subclause (2), if a building is permissible under clause 9A of Schedule 1 on land identified as "Area 4" on the Floor Space Ratio Map, the maximum floor space ratio for the building must not exceed 1.5:1.

NSW GOVERNMENT Planning & Environment

This report is provided for general information purposes only and does not replace the need for a section 149 Certificate

Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Height of Building

(1) The objectives of this clause are as follows:

- (a) to ensure that the built form of Botany Bay develops in a coordinated and cohesive manner,
- (b) to ensure that taller buildings are appropriately located,
- (c) to ensure that building height is consistent with the desired future character of an area,
- (d) to minimise visual impact, disruption of views, loss of privacy and loss of solar access to existing development,
- (e) to ensure that buildings do not adversely affect the streetscape, skyline or landscape when viewed from adjoining roads and other public places such as parks, and
- community facilities.

(2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.

(2A) Despite subclause (2), if an area of land in Zone R3 Medium Density Residential or Zone R4 High Density Residential exceeds 2,000 square metres, the height of a building on that land may exceed the maximum height shown for the land on the Height of Buildings Map but must not exceed 22 metres.

(2B) Subclause (2A) does not apply to land identified as "Area 1" on the Height of Buildings Map.

(2C) Despite subclause (2), if an area of land identified as "Area 2" on the Height of Buildings Map has a site area exceeding 1,900 square metres, the maximum height for a building on that land may exceed the maximum height shown for the land on the Height of Buildings Map by no more than 2 metres.

NSW GOVERNMENT Planning & Environment

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Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Land Zoning

Zone B5 Business Development

1 Objectives of zone

To enable a mix of business and warehouse uses, and bulky goods premises that require a large floor area, in locations that are close to, and that support the viability of,

- centres.

2 Permitted without consent

Nil

3 Permitted with consent

Bulky goods premises; Centre-based child care facilities; Food and drink premises; Garden centres; Hardware and building supplies; High technology industries; Landscaping material supplies; Neighbourhood shops; Passenger transport facilities; Respite day care centres; Roads; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Environmental facilities; Environmental protection works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home-based child care; Home businesses; Home occupations; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Recreation facilities (major); Recreation facilities (outdoor); Research stations; Residential accommodation; Resource recovery facilities; Restricted premises; Retail premises; Rural industries; Sewage treatment plants; Sex services premises; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Waste disposal facilities; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies

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Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Land Zoning

Zone R3 Medium Density Residential

1 Objectives of zone

- To provide for the housing needs of the community within a medium density residential environment.
- To provide a variety of housing types within a medium density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To encourage development that promotes walking and cycling.

2 Permitted without consent

Home occupations

3 Permitted with consent

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Centre-based child care facilities; Community facilities; Dwelling houses; Group homes; Multi dwelling housing; Neighbourhood shops; Office premises; Places of public worship; Residential flat buildings; Respite day care centres; Roads; Semi-detached dwellings; Seniors housing; Any other development not specified in item 2 or 4

4 Prohibited

Advertising structures; Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Car parks; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Emergency services facilities; Entertainment facilities; Environmental facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home businesses; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Information and education facilities; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Passenger transport facilities; Port facilities; Public administration buildings; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Research stations; Residential accommodation; Restricted premises; Rural industries; Service stations; Sewage treatment plants; Sex services premises; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies

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NSW GOVERNMENT Planning & Environment

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Property Report for A/DP364217

Property Details

Address:	N/A
Lot/Section/Plan no:	A/-/DP364217
Council:	BAYSIDE

Council Details

BAYSIDE COUNCIL

Website

Phone Number

Email Address

Council Address

Planning Controls associated with this property

Land Zoning

- B5 - Business Development : (pub. 2013-06-21)

Acid Sulfate Soils

- Class 4 (pub. 2013-06-21)

Contribution Plans (LGA-Based)

- Botany Bay CPs 2016
- Rockdale and Kogarah CP 2006 - Ramsgate Commercial Centre
- Rockdale CP 2004 - as amended 4 November 2010
- Rockdale CP 2008
- Rockdale CP 2016 - Urban Renewal Area

Development Control Plans (LGA-Based)

- Botany Bay DCP 2013 - as amended 25 Oct 2016
- Rockdale DCP 2011 -as amended 5 Jun 2015

Floor Space Ratio

- V - 3.00 Ratio : Range [3.00 - 3.49] (pub. 2013-06-21)

Height of Building

- R - 22.0 m : Range [21.0 - 22.9 m] (pub. 2013-06-21)

Key Sites

- Mascot Station Precinct (pub. 2013-06-21)

Land Application LEP

- Included : Botany Bay Local Environmental Plan 2013 (pub. 2013-06-21)

Other spatial data associated with this property

Local Government Area

- Bayside

Suburbs

- Mascot

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State Environmental Planning Policies which apply at N/A

State Environmental Planning Policy (Affordable Rental Housing) 2009 : (pub. 2009-07-31)
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 : (pub. 2004-06-25)
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 : (pub. 2008-12-12)
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 : (pub. 2004-03-31)
State Environmental Planning Policy (Infrastructure) 2007 : (pub. 2007-12-21)
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 : (pub. 2007-02-16)
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007 : (pub. 2007-09-28)
State Environmental Planning Policy No 19-Bushland in Urban Areas : (pub. 1986-10-24)
State Environmental Planning Policy No 1-Development Standards : (pub. 1980-10-17)
State Environmental Planning Policy No 21-Caravan Parks : (pub. 1992-04-24)
State Environmental Planning Policy No 30-Intensive Agriculture : (pub. 1989-12-08)
State Environmental Planning Policy No 33-Hazardous and Offensive Development : (pub. 1992-03-13)
State Environmental Planning Policy No 36-Manufactured Home Estates : (pub. 1993-07-16)
State Environmental Planning Policy No 50-Canal Estate Development : (pub. 1997-11-10)
State Environmental Planning Policy No 55-Remediation of Land : (pub. 1998-08-28)
State Environmental Planning Policy No 62-Sustainable Aquaculture : (pub. 2000-08-25)
State Environmental Planning Policy No 64-Advertising and Signage : (pub. 2001-03-16)
State Environmental Planning Policy No 65-Design Quality of Residential Apartment Development : (pub. 2002-07-26)
State Environmental Planning Policy No 70-Affordable Housing (Revised Schemes) : (pub. 2002-05-01)
State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 : Subject Land (pub. 2017-08-25)

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Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Floor Space Ratio

(1) The objectives of this clause are as follows:

- (a) to establish standards for the maximum development density and intensity of land use,
- (b) to ensure that buildings are compatible with the bulk and scale of the existing and desired future character of the locality,
- (c) to maintain an appropriate visual relationship between new development and the existing character of areas or locations that are not undergoing, and are not likely to undergo, a substantial transformation,
- (d) to ensure that buildings do not adversely affect the streetscape, skyline or landscape when viewed from adjoining roads and other public places such as parks, and community facilities,
- (e) to minimise adverse environmental effects on the use or enjoyment of adjoining properties and the public domain,
- (f) to provide an appropriate correlation between the size of a site and the extent of any development on that site,
- (g) to facilitate development that contributes to the economic growth of Botany Bay.

(2) The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.

(2A) Despite subclause (2), if an area of land in Zone R3 Medium Density Residential or Zone R4 High Density Residential exceeds 2,000 square metres, the floor space ratio of a building on that land may exceed the maximum floor space ratio shown for the land on the Floor Space Ratio Map but must not exceed 1.5:1.

(2B) Subclause (2A) does not apply to land identified as "Area 1" on the Floor Space Ratio Map.

(2C) Despite subclause (2), if an area of land identified as "Area 2" on the Floor Space Ratio Map has a site area exceeding 1,900 square metres, the maximum floor space ratio for a building on that land may exceed the maximum floor space ratio shown for the land on the Floor Space Ratio Map by no more than 0.65:1.

(2D) Despite subclause (2), if a building is permissible under clause 9A of Schedule 1 on land identified as "Area 4" on the Floor Space Ratio Map, the maximum floor space ratio for the building must not exceed 1.5:1.

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Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Height of Building

(1) The objectives of this clause are as follows:

- (a) to ensure that the built form of Botany Bay develops in a coordinated and cohesive manner,
- (b) to ensure that taller buildings are appropriately located,
- (c) to ensure that building height is consistent with the desired future character of an area,
- (d) to minimise visual impact, disruption of views, loss of privacy and loss of solar access to existing development,
- (e) to ensure that buildings do not adversely affect the streetscape, skyline or landscape when viewed from adjoining roads and other public places such as parks, and
- community facilities.

(2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.

(2A) Despite subclause (2), if an area of land in Zone R3 Medium Density Residential or Zone R4 High Density Residential exceeds 2,000 square metres, the height of a building on that land may exceed the maximum height shown for the land on the Height of Buildings Map but must not exceed 22 metres.

(2B) Subclause (2A) does not apply to land identified as "Area 1" on the Height of Buildings Map.

(2C) Despite subclause (2), if an area of land identified as "Area 2" on the Height of Buildings Map has a site area exceeding 1,900 square metres, the maximum height for a building on that land may exceed the maximum height shown for the land on the Height of Buildings Map by no more than 2 metres.

NSW GOVERNMENT Planning & Environment

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Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Land Zoning

Zone B5 Business Development

1 Objectives of zone

To enable a mix of business and warehouse uses, and bulky goods premises that require a large floor area, in locations that are close to, and that support the viability of,

- centres.

2 Permitted without consent

Nil

3 Permitted with consent

Bulky goods premises; Centre-based child care facilities; Food and drink premises; Garden centres; Hardware and building supplies; High technology industries; Landscaping material supplies; Neighbourhood shops; Passenger transport facilities; Respite day care centres; Roads; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Environmental facilities; Environmental protection works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home-based child care; Home businesses; Home occupations; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Recreation facilities (major); Recreation facilities (outdoor); Research stations; Residential accommodation; Resource recovery facilities; Restricted premises; Retail premises; Rural industries; Sewage treatment plants; Sex services premises; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Waste disposal facilities; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies

NSW GOVERNMENT Planning & Environment

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Planning Controls contained in the Botany Bay Local Environmental Plan 2013

Land Zoning

Zone RE1 Public Recreation

1 Objectives of zone

- To enable land to be used for public open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.

2 Permitted without consent

Environmental protection works

3 Permitted with consent

Centre-based child care facilities; Community facilities; Emergency services facilities; Environmental facilities; Flood mitigation works; Information and education facilities; Jetties; Kiosks; Markets; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Respite day care centres; Roads; Signage; Water storage facilities

4 Prohibited

Any development not specified in item 2 or 3

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Appendix E

Contaminated Land Register

List of NSW Contaminated Sites Notified to EPA as of 5 September 2018

Background

A strategy to systematically assess, prioritise and respond to notifications under Section 60 of the *Contaminated Land Management Act 1997* (CLM Act) has been developed by the EPA. This strategy acknowledges the EPA's obligations to make information available to the public under *Government Information (Public Access) Act 2009*.

When a site is notified to the EPA, it may be accompanied by detailed site reports where the owner has been proactive in addressing the contamination and its source. However, often there is minimal information on the nature or extent of the contamination.

For some notifications, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any offsite consequences to the community or environment. Such sites would still need to be cleaned up, but this could be done in conjunction with any subsequent building or redevelopment of the land. These sites may not require intervention under the CLM Act, but could be dealt with through the planning and development consent process.

Where indications are that contamination is significant enough to warrant regulation having regard to the matters in section 12 of the CLM Act, the EPA may apply the regulatory provisions of the CLM Act to have the appropriate person (for example, the responsible polluter and/or landowner) investigate and remediate the site.

Where the EPA reasonably suspects that a pollution incident is occurring (or has occurred) at a premise, the EPA, as the appropriate regulatory authority, may choose to regulate the incident and any resulting contamination under the POEO Act by ordering the occupier or the owner to carry out certain actions.

As such, the sites notified to the EPA and presented in the following table are at various stages of the assessment and/or remediation process. Understanding the nature of the underlying contamination, its implications and implementing a remediation program where required, can take a considerable period of time. The tables provide an indication, in relation to each nominated site, as to the management status of that particular site. Further detailed information may be available from the EPA or the responsible landowner.

The following questions and answers may assist those interested in this issue:

Frequently asked questions

What is the difference between the "List of NSW Contaminated Sites Notified to the EPA" and the "Contaminated Land: Record of Notices"?

A site will be on the Contaminated Land: Record of Notices only if the EPA has issued a regulatory notice in relation to the site under the *Contaminated Land Management Act 1997*.

The sites appearing on this "List of NSW contaminated sites notified to the EPA" indicate that the notifiers consider that the sites are contaminated and warrant reporting to the EPA. However, the contamination may or may not be significant enough to warrant regulation by the EPA. The EPA needs to review and, if necessary, obtain more information before it can make a determination as to whether the site warrants regulation.

Why my site appears on the list?

Your site appears on the list because of one or more of the following reasons:

- The site owner and/or the person partly or fully responsible for causing the contamination notified to the EPA about the contamination under Section 60 of the *Contaminated Land Management Act 1997*. In other words, the site owner or the "polluter" believes the site is contaminated.
- The EPA has been notified via other means and is satisfied that the site is or was contaminated.

Does the list contain all contaminated sites in NSW?

No. The list only contains contaminated sites that the EPA is aware of, with regard to its regulatory role under the CLM Act. An absence of a site from the list does not necessarily imply the site is not contaminated.

The EPA relies upon responsible parties to notify contaminated sites.

How are these notified contaminated sites managed by the EPA?

There are different ways that the EPA manages these notified contaminated sites. First, an initial assessment is carried out by the EPA. At the completion of the initial assessment, the EPA may take one or more than one of the following management approaches:

- The contamination warrants the EPA's direct regulatory intervention either under the *Contaminated Land Management Act 1997* or the *Protection of the Environment Operations Act 1997* (POEO Act), or both. Information about current or past regulatory action on this site can be found on EPA website.
- The contamination with respect to the current use or approved use of the site, as defined under the *Contaminated Land Management Act 1997,* is not significant enough that it warrants EPA regulation.
- The contamination does not require EPA regulation and can be managed by a planning approval process.
- The contamination is related to an operational Underground Petroleum Storage System, such as a service station or fuel depot. The contamination may be managed under the POEO Act and the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2014.
- The contamination is being managed under a specifically tailored program operated by another agency (for example t
- he Department of Industry and Investment's *Derelict Mines Program*).

I am the owner of a site that appears on the list. What should I do?

First of all, you should ensure the current use of the site is compatible with the site contamination. Secondly, if the site is the subject of EPA regulation, make sure you comply with the regulatory requirements, and you have considered your obligations to notify other parties who may be affected.

If you have any concerns, contact us and we may be able to offer you general advice, or direct you to accredited professionals who can assist with specific issues.

I am a prospective buyer of a site that appears on the list. What should I do?

You should seek advice from the vendor to put the contamination issue into perspective. You may need to seek independent expert advice.

The information provided in the list is meant to be indicative only, and a starting point for your own assessment. Site contamination as a legacy of past site uses is not uncommon, particularly in an urbanised environment. If the contamination on a site is properly remediated or managed, it may not materially impact upon the intended future use of the site. However, each site needs to be considered in context.

List of NSW Contaminated Sites Notified to the EPA

Disclaimer

The EPA has taken all reasonable care to ensure that the information in the list of contaminated sites notified to the EPA (the list) is complete and correct. The EPA does not, however, warrant or represent that the list is free from errors or omissions or that it is exhaustive.

The EPA may, without notice, change any or all of the information in the list at any time.

You should obtain independent advice before you make any decision based on the information in the list.

The list is made available on the understanding that the EPA, its servants and agents, to the extent permitted by law, accept no responsibility for any damage, cost, loss or expense incurred by you as a result of:

1. any information in the list; or
2. any error, omission or misrepresentation in the list; or
3. any malfunction or failure to function of the list;
4. without limiting (2) or (3) above, any delay, failure or error in recording, displaying or updating information.

Site Status	Explanation
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or *Protection of the Environment Operations Act 1997*. Alternatively, the EPA may require information via a notice issued under s77 of the *Contaminated Land Management Act 1997* or issue a Preliminary Investigation Order.
Regulation under CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the *Contaminated Land Management Act 1997* is not required.
Regulation being	The EPA has completed an assessment of the contamination and decided

finalised	that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997*. A regulatory approach is being finalised.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record
Contamination currently regulated under POEO Act	Contamination is currently regulated under the *Protection of the Environment Operations Act 1997* (POEO Act). The EPA as *the appropriate regulatory authority* reasonably suspects that a pollution incident is occurring/ has occurred and that it requires regulation under the POEO Act. The EPA may use environment protection notices, such as clean up notices, to require clean up action to be taken. Such regulatory notices are available on the POEO public register.
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the *Environmental Planning and Assessment Act 1979* (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the *Protection of the Environment Operations Act 1997* (POEO Act).
Contamination was addressed via the planning process	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the

(EP&A Act)	*Environmental Planning and Assessment Act 1979* (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the *Contaminated Land Management Act 1997* (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record.

Suburb	Site Name	Site Address	Contamination Activity Type	EPA ManagementClass	Latitude	Longitude
MARRICKVILLE	2 Carrington Road	2 Carrington ROAD	Unclassified	Regulation under CLM Act not required	-33.91596071	151.1597199
MARRICKVILLE	Cooks River Aqueduct	Thornley STREET	Unclassified	Contamination formerly regulated under the CLM Act	-33.92204604	151.1480332
MARRICKVILLE	Former Dry Cleaners and Loading Dock (adjacent Lot 1 DP612551)	Smidmore STREET	Other Industry	Contamination currently regulated under CLM Act	-33.90707592	151.171701
MARRICKVILLE	Former Mobil Service Station	384 Illawarra ROAD	Service Station	Regulation under CLM Act not required	-33.91534869	151.1506717
MARRICKVILLE	Mackey Park	Cnr Richardsons Crescent and Carrington ROAD	Landfill	Regulation under CLM Act not required	-33.9220263	151.1547903
MARRICKVILLE	RailCorp	361 Victoria ROAD	Other Industry	Regulation under CLM Act not required	-33.91404835	151.1557132
MARRICKVILLE	TRW Steering and Suspension	22-28 Carrington ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.92012667	151.1566181
MARRICKVILLE	Woolworths Petrol Service Station	490 Illawarra ROAD	Service Station	Regulation under CLM Act not required	-33.91845177	151.1459951
MARSDEN PARK	226 Grange Avenue	226 Grange AVENUE	Unclassified	Regulation under CLM Act not required	-33.70259609	150.83825
MARSFIELD	Coles Express Service Station Marsfield	189 Epping ROAD	Service Station	Regulation under CLM Act not required	-33.77519246	151.1053691
MARULAN	BP Express Marulan (Northbound)	(Northbound) Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.7188332	149.9949547
MARULAN	BP Service Station	(Southbound) Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.71932066	150.0014827
MARYVILLE	7-Eleven (former Mobil) Service Station	184-188 Hannell STREET	Service Station	Contamination currently regulated under CLM Act	-32.91336028	151.7579315
MASCOT	Caltex Service Station	125 O'Riordan STREET	Service Station	Regulation under CLM Act not required	-33.92309169	151.1911539
MASCOT	Former Mascot Galvanising	336-348 King STREET	Metal Industry	Contamination currently regulated under CLM Act	-33.92902126	151.185874
MASCOT	Former Shell Service Station Mascot	746 Botany ROAD	Service Station	Regulation being finalised	-33.92352295	151.1955852
MASCOT	Former Zinc Smelter and Paint Manufacturing Facility	163 O'Riordan STREET	Metal Industry	Regulation under CLM Act not required	-33.92526513	151.1892582
MASCOT	Heritage Business Centre	5-9 Ricketty STREET	Unclassified	Regulation under CLM Act not required	-33.92029202	151.1816656
MASCOT	Ing Industrial Fund (unoccupied Land and General Parking)	19-33 Kent ROAD	Landfill	Regulation under CLM Act not required	-33.922765	151.185262
MASCOT	Linear Park	Lot 2, 3, 4 & 5 In DP 85917	Landfill	Regulation under CLM Act not required	-33.92278693	151.1904751
MASCOT	Mascot Pioneer Plating	25-29 Ricketty STREET	Metal Industry	Contamination currently regulated under CLM Act	-33.92075288	151.1824801
MASCOT	Sokol Corporation	50-56 Robey STREET	Other Industry	Regulation under CLM Act not required	-33.91162265	151.1904955
MASCOT	Telstra Exchange	904-922 Botany ROAD	Other Industry	Regulation under CLM Act not required	-33.9293166	151.1942777
MATRAVILLE	7-Eleven Service Station Matraville	515 Bunnerong ROAD	Service Station	Regulation being finalised	-33.95943536	151.2317598

List Current as of 05 September 2018

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Appendix F

SafeWork NSW Storage of Hazardous Chemicals Search

NSW GOVERNMENT | SafeWork NSW

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

Our Ref: D18/169299

10 August 2018

TRACE ENVIRONMENTAL
Mr Ken Henderson
PO Box 422
CAMPERDOWN NSW 1450

Dear Mr Henderson

RE SITE: 146-154 O'Riordan Street, MASCOT NSW 2020

I refer to your site search request received by SafeWork NSW on 3 August 2018 requesting information on Storage of Hazardous Chemicals for the above site.

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

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

Yours sincerely

Customer Service Officer
Customer Experience - Operations
SafeWork NSW

TRACE ENVIRONMENTAL

Appendix G

Field Data (Including Bore Logs and Groundwater Sampling Logs)

Sheet 1 of 1

TRACE ENVIRONMENTAL

TRACE Environmental
Shop 2, 793-799 New Canterbury Road
Dulwich Hill, NSW 2203
www.traceenviro.com
enquiries@traceenviro.com

Borehole Log

Hole ID. SB1

Project Name:	**Environmental Site Assessment**	Hole Depth:	**0.75 m**
Project Number:	**1.16**	GW Encountered:	
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**		
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**CC to 0.175m, HA to 0.6m (refusal), SFA to 0.75m.**		
Date Started:	**9/08/2018**		
Date Completed:	**9/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.18						**CONCRETE SLAB.**			
	0.2						**FILL**- SAND, yellow / brown, fine grained.	loose	dry	Cobbles and whole bricks at interface.
	0.30	SB1/0.3	0.0	Fill			**FILL**- Sandy FILL, black / brown.	loose	dry	Frequent gravels and cobbles, brick, concrete, glass, metal.
	0.4									
		SB1/0.5	0.0							
	0.6									
	0.75						**Refusal at 0.75m** on possible concrete slab beneath car park (?)			
	0.8									
	1.0									
	1.2									
	1.4									

Notes

Hand auger refusal on multiple brick and concrete at 0.6m.
Slow solid flight augering to 0.75m.
Hole backfilled.

REUMAD

Log Drawn By: **Laurie White**
Contact: **laurie.white@reumad.com.au**

Logged By: **Jack Ellis** Date: **9/08/2018**
Checked By: Date:

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Borehole Log

Project Name:	**Environmental Site Assessment**	Hole ID.	**SB4**
Project Number:	**1.16**	Hole Depth:	**0.25 m**
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**	GW Encountered:	
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**HA to 0.25m.**		
Date Started:	**14/08/2018**		
Date Completed:	**14/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.05	SB4/0.2	0.0	Fill			**MULCH.**			
	0.10						FILL- TOPSOIL. Silty SAND, black / grey.	loose	dry	Frequent roots and organic material.
	0.2						FILL- SILT & SAND, black.	loose	dry	Frequent gravels & organics, wood, roots.
	0.25						**End of Hole at 0.25m** on frequent tree roots.			
	0.4									
	0.6									
	0.8									
	1.0									
	1.2									
	1.4									

Notes
Hole backfilled.

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Log Drawn By: **Laurie White** Contact: **laurie.white@reumad.com.au**
Logged By: **Jack Ellis** Checked By:
Date: **14/08/2018** Date:

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Monitoring Well Log

Hole ID. **SB6 / MW2**

Project Name:	Environmental Site Assessment	Hole Depth:	6.00 m
Project Number:	1.16	GW Encountered:	
Location / Site:	146-154 O'Riordan Street, Mascot NSW		
Client:	JKN Park Pty Ltd		
Drill Company:	Epoca Environmental Pty Ltd		
Drill Method:	HA to 0.45m, SFA to 1m, PT to 5.1m, HFA to 6m.		
Date Started:	9/08/2018		
Date Completed:	9/08/2018		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments	Well Details	Well Construction
	0.05						**BITUMEN.**					Gatic
	0.15	SB6/0.4	0.0	Fill			**FILL**- ROADBASE.	loose	dry	Boulder at 0.45m, broken through with SFA.		
							FILL- SAND / GRAVEL / COBBLES, black / grey.					Grout
	1.0	SB6/1.0									1.0	
	1.20	SB6/1.25					**FILL**- SANDY GRAVELLY, white / grey.	loose	dry			Bentonite
	1.30						**FILL**- SAND, orange / black.	loose	dry		1.5	
	1.70						**SAND**- white / grey, fine grained.	loose	dry		2.0	
	2.0	SB6/2.0	0.0			SP						
		SB6/2.6										
	3.00	SB6/3.0	0.0				**SAND**- orange / brown.	loose	moist			
		SB6/3.2				SP						
	3.60						**SAND**- brown / light grey.	loose	humid			Sand
▽	4.0	SB6/3.9		Natural								
		SB6/4.0	0.0			SP		loose	wet			
	4.75											Screen
		SB6/4.8					**SAND**- black, fine grained.	loose	wet			
	5.0					SP						
		SB6/5.6	0.0									
	6.00						**End of Hole at 6.00m** at target depth.					
	7.0											

Notes

Well installed.

Backfill Grout Bentonite Gravel Pack Screen Cave-In

REUMAD

Log Drawn By: Laurie White
Contact: laurie.white@reumad.com.au

Logged By: Jack Ellis Date: 9/08/2018
Checked By: Date:

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Borehole Log

Project Name:	**Environmental Site Assessment**	Hole ID.	**SB7**
Project Number:	**1.16**	Hole Depth:	**0.35 m**
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**	GW Encountered:	
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**CC to 0.12m, HA to 0.35m.**		
Date Started:	**14/08/2018**		
Date Completed:	**14/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.12	SB7/0.25	0.0	Fill			**CONCRETE SLAB.**			
	0.17						FILL- SAND, orange, fine grained.	loose	dry	
	0.2						FILL- SAND / GRAVEL / COBBLE, brown, very coarse grained.	loose	dry	
	0.35						**End of Hole at 0.35m** on multiple coarse cobbles.			
	0.4									
	0.6									
	0.8									
	1.0									
	1.2									
	1.4									

Notes
Hole backfilled.

REUMAD

Log Drawn By: **Laurie White** Contact: **laurie.white@reumad.com.au**
Logged By: **Jack Ellis** Checked By:
Date: **14/08/2018** Date:

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Borehole Log

Project Name:	**Environmental Site Assessment**	Hole ID.	**SB8**
Project Number:	**1.16**	Hole Depth:	**0.35 m**
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**	GW Encountered:	
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**CC to 0.135m, HA to 0.35m.**		
Date Started:	**14/08/2018**		
Date Completed:	**14/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.14						**CONCRETE SLAB.**			
	0.15	SB8/0.15	0.0	Fill			**FILL**- SAND, orange / light brown, fine grained.	loose	dry	Frequent cobbles.
	0.2						**FILL**- SAND / GRAVEL / COBBLE, brown, very coarse grained.	loose	dry	
	0.35	SB8/0.3	0.0							
	0.4						**End of Hole at 0.35m** on frequent refusals.			
	0.6									
	0.8									
	1.0									
	1.2									
	1.4									

Notes
Hole backfilled.

REUMAD

Log Drawn By: **Laurie White** Contact: **laurie.white@reumad.com.au**
Logged By: **Jack Ellis** Checked By:
Date: **14/08/2018** Date:

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Borehole Log

Project Name:	**Environmental Site Assessment**	Hole ID.	**SB9**
Project Number:	**1.16**	Hole Depth:	**0.30 m**
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**	GW Encountered:	
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**HA to 0.35m.**		
Date Started:	**14/08/2018**		
Date Completed:	**14/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.2	SB9/0.25	0.0	Fill			FILL- TOPSOIL. Silty SAND, brown, fine grained.	loose	dry	
	0.30						**Refusal at 0.30m** on sand / gravel / cobbles (FILL).			
	0.4									
	0.6									
	0.8									
	1.0									
	1.2									
	1.4									

Notes
Hole backfilled.

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Log Drawn By: **Laurie White** Contact: **laurie.white@reumad.com.au**
Logged By: **Jack Ellis** Checked By:
Date: **14/08/2018** Date:

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Borehole Log

Project Name:	**Environmental Site Assessment**	Hole ID.	**SB10**
Project Number:	**1.16**	Hole Depth:	**1.10 m**
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**	GW Encountered:	
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**HA to 1.1m.**		
Date Started:	**10/08/2018**		
Date Completed:	**10/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.05						**BITUMEN.**			
	0.15						FILL- ROADBASE.			
	0.2	SB10/0.3	0.0	Fill			FILL- SAND & GRAVEL, light brown / grey.	loose	dry	Frequent rocks and concrete.
	0.4	SB10/0.5	0.0							
	0.55						FILL- SAND, brown, fine grained.	loose	dry	
	0.6									
	0.8									
	1.0									
	1.10						**Hole Terminated at 1.10m** on potential service trench.			
	1.2									
	1.4									

Notes

Not confident to take risk with push tubes in potential service trench.
Hole backfilled.

Log Drawn By:	**Laurie White**	Logged By:	**Jack Ellis**	Date: **10/08/2018**
Contact:	**laurie.white@reumad.com.au**	Checked By:		Date:

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Monitoring Well Log

Hole ID. **SB11 / MW3**

Project Name:	Environmental Site Assessment	Hole Depth:	6.00 m
Project Number:	1.16	GW Encountered:	
Location / Site:	146-154 O'Riordan Street, Mascot NSW		
Client:	JKN Park Pty Ltd		
Drill Company:	Epoca Environmental Pty Ltd		
Drill Method:	CC to 0.6m, HA to 0.3m (refusal), SFA to 1m, PT to 5.1m, HFA to 6m.		
Date Started:	9/08/2018		
Date Completed:	9/08/2018		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments	Well Details	Well Construction
	0.16	SB11/0.2	0.0	Fill			**CONCRETE SLAB.**					Gatic
	0.30						FILL- SAND & GRAVEL, orange / yellow.	loose	dry			
		SB11/0.5	0.0				FILL- SAND / GRAVEL / COBBLE, brown / black.	loose	dry	Frequent rocks, concrete, bitumen.		Grout
	1.0	SB11/1.2	0.0								1.0	Bentonite
		SB11/1.6									1.5	
	2.0	SB11/2.0	0.0								2.0	
	2.40	SB11/2.6		Natural		SP	**SAND**- black / grey, fine grained.	loose	moist			
	3.0											
		SB11/3.6						loose	wet			Sand
	4.0	SB11/4.4					Black interval from 4.2 to 4.5m.					Screen
		SB11/4.8	0.0									
	5.0	SB11/5.0										
	6.00						**End of Hole at 6.00m** at target depth.					
	7.0											

Notes

Hand auger refusal on multiple rocks at 0.3m.
Well installed.

Backfill Grout Bentonite Gravel Pack Screen Cave-In

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Log Drawn By: Laurie White
Contact: laurie.white@reumad.com.au

Logged By: Jack Ellis Date: 9/08/2018
Checked By: Date:

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Borehole Log

Project Name:	**Environmental Site Assessment**	Hole ID.	**SB13**
Project Number:	**1.16**	Hole Depth:	**0.40 m**
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**	GW Encountered:	
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**HA to 0.4m.**		
Date Started:	**10/08/2018**		
Date Completed:	**10/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.10	SB13/0.3	0.0	Fill			**FILL**- TOPSOIL. Silty SAND, brown / grey.	loose	dry	Frequent organics.
	0.2						**FILL**- SILT / SAND / GRAVEL, brown / grey.	loose	dry	
	0.37									
	0.40						**FILL**- SAND, light brown.	loose	dry	
	0.6						**Hole Terminated at 0.40m** on potential service trench.			
	0.8									
	1.0									
	1.2									
	1.4									

Notes
Hole backfilled.

REUMAD

Log Drawn By: **Laurie White** Contact: **laurie.white@reumad.com.au**
Logged By: **Jack Ellis** Checked By:
Date: **10/08/2018** Date:

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Borehole Log

Hole ID. SB14

Project Name:	**Environmental Site Assessment**	Hole Depth:	**10.00 m**
Project Number:	**1.16**	GW Encountered:	
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**		
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**HA to 0.7m (refusal), SFA to 1m, PT to 3.9m, SFA to 10m.**		
Date Started:	**10/08/2018**		
Date Completed:	**9/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.11	SB14/0.2	0.0	Fill			**CONCRETE SLAB.**			
	0.40	QS2,QS2A SB14/0.4	0.4				**FILL**- SAND / GRAVEL / COBBLE, yellow / light brown.	loose	dry	
		SB14/0.5	0.0				**FILL**- SAND / GRAVEL / COBBLE, black / brown.	loose	dry	Bricks, rocks, glass.
	1.0	SB14/1.2	0.0							
	2.0	SB14/2.0	0.3							
		SB14/2.5	0.0							
	2.80									
	3.0	SB14/3.0	0.0	Natural		SP	**SAND**- black, fine grained.	loose	moist	
▽	3.20	SB14/3.2				SP	**SAND**- black, fine grained.	loose	wet	
	3.50					SP	**SAND**- grey / light brown, fine grained.	loose	wet	
		SB14/3.8								
	4.00	SB14/4.0	0.0			SP	**SAND**- black, fine grained.	loose	sat'd	
	5.0	SB14/5.0	0.0							
	6.0	SB14/6.0	0.0							
	7.0	SB14/7.0	0.0							

Notes

Hole backfilled.

REUMAD

Log Drawn By: **Laurie White**
Contact: **laurie.white@reumad.com.au**

Logged By: **Jack Ellis** Date: **10/08/2018**
Checked By: Date:

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Borehole Log

Hole ID. **SB14**

Project Name:	**Environmental Site Assessment**	Hole Depth:	**10.00 m**
Project Number:	**1.16**	GW Encountered:	
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**		
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**HA to 0.7m (refusal), SFA to 1m, PT to 3.9m, SFA to 10m.**		
Date Started:	**10/08/2018**		
Date Completed:	**9/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	8.0	SB14/8.0	0.0	Natural		SP	**SAND**- black, fine grained.*(continued)*	loose	sat'd	
	9.0	SB14/9.0	0.0							
	10.00	SB14/10.0	0.0				**End of Hole at 10.00m** at target depth.			
	11.0									
	12.0									
	13.0									
	14.0									
	15.0									

Notes
Hole backfilled.

REUMAD

Log Drawn By: **Laurie White**
Contact: **laurie.white@reumad.com.au**
Logged By: **Jack Ellis** Date: **10/08/2018**
Checked By: Date:

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Borehole Log

Hole ID. **SB17**

Project Name:	**Environmental Site Assessment**	Hole Depth:	**10.00 m**
Project Number:	**1.16**	GW Encountered:	
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**		
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**CC to 0.15m, HA to 0.9m (obstruction), SFA to 1.1m, PT to 3.9m, SFA to 10m.**		
Date Started:	**10/08/2018**		
Date Completed:	**9/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.15	SB17/0.2	0.0				**CONCRETE SLAB.**			
	0.45						**FILL**- SAND, light brown.	loose	moist	Occasional gravel.
	0.65	SB17/0.5	0.0				**FILL**- SAND / GRAVEL / COBBLE, light brown.	loose	dry	
	1.0						**FILL**- SAND / GRAVEL / COBBLE, black / brown.	loose	dry	
		SB17/1.0	0.0							
	1.30	SB17/1.2	0.0							
	1.40			Fill			**FILL**- Clayey SAND, brown.	loose	moist	
	1.70	SB17/1.6					**FILL**- SAND, brown.	loose	moist	
	2.0	SB17/1.9					**FILL**- Sandy CLAY, brown / black.	soft	moist	Poor returns.
▽	2.70									
	3.0						**SAND**- black.	loose	wet	No returns 2.7-3.6m.
		SB17/3.8	0.0							
	4.0									
	5.0	SB17/5.0	0.0	Natural		SP				
	6.0	SB17/6.0	0.0							
	7.0	SB17/7.0	0.0							

Notes

Hole backfilled.

REUMAD

Log Drawn By: **Laurie White** Contact: **laurie.white@reumad.com.au**

Logged By: **Jack Ellis** Checked By:

Date: **10/08/2018** Date:

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Borehole Log

Hole ID. SB17

Project Name:	Environmental Site Assessment	Hole Depth:	10.00 m
Project Number:	1.16	GW Encountered:	
Location / Site:	146-154 O'Riordan Street, Mascot NSW		
Client:	JKN Park Pty Ltd		
Drill Company:	Epoca Environmental Pty Ltd		
Drill Method:	CC to 0.15m, HA to 0.9m (obstruction), SFA to 1.1m, PT to 3.9m, SFA to 10m.		
Date Started:	10/08/2018		
Date Completed:	9/08/2018		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	8.0	SB17/8.0	0.0	Natural		SP	**SAND**- black.*(continued)*	loose	wet	
	9.0	SB17/9.0	0.0							
	10.00	SB17/10.0	0.0				**End of Hole at 10.00m** at target depth.			
	11.0									
	12.0									
	13.0									
	14.0									
	15.0									

Notes

Hole backfilled.

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Log Drawn By: Laurie White
Contact: laurie.white@reumad.com.au

Logged By: Jack Ellis
Checked By:

Date: 10/08/2018
Date:

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Borehole Log

Project Name:	Environmental Site Assessment	Hole ID.	SB18
Project Number:	1.16	Hole Depth:	1.00 m
Location / Site:	146-154 O'Riordan Street, Mascot NSW	GW Encountered:	
Client:	JKN Park Pty Ltd		
Drill Company:	Epoca Environmental Pty Ltd		
Drill Method:	HA to 0.6m (refusal), SFA to 1m.		
Date Started:	10/08/2018		
Date Completed:	10/08/2018		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.14						**CONCRETE SLAB.**			
	0.2	SB18/0.2		Fill			FILL- SAND / GRAVEL / COBBLE, light brown.	loose	dry	Brick, concrete.
	0.55									
	0.6	SB18/0.6					FILL- SAND / GRAVEL / COBBLE, black / brown.	loose	dry	
	1.00	SB18/1.0					**Hole Terminated at 1.00m** on brick - potential service.			
	1.2									
	1.4									

Notes

PID went flat prior to use.
Hole backfilled.

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Contact: laurie.white@reumad.com.au

Logged By: Jack Ellis
Checked By:

Date: 10/08/2018
Date:

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Borehole Log

Hole ID. **SB19**

Project Name:	**Environmental Site Assessment**	Hole Depth:	**3.90 m**
Project Number:	**1.16**	GW Encountered:	
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**		
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**HA to 0.6m (obstruction), SFA to 1m, PT to 3.9m.**		
Date Started:	**8/08/2018**		
Date Completed:	**8/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.05						**BITUMEN.**			
	0.15	SB19/0.2	0.0				**FILL**- ROADBASE.	loose	dry	Frequent rock, slag gravel, cobbles.
							FILL- Silty SAND, black / brown.			
	1.0	SB19/0.8	0.8	Fill						
		SB19/1.5	1.0							
	2.0									
	2.60	SB19/2.5								
	3.0						**Silty SAND**- brown.	loose	dry	
		SB19/3.2		Natural		SM		loose	damp	
▽		SB19/3.7						loose	wet	
	3.90						**End of Hole at 3.90m** at target depth.			
	4.0									
	5.0									
	6.0									
	7.0									

Notes
Hole backfilled.

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Contact: **laurie.white@reumad.com.au**

Logged By: **Jack Ellis** Date: **8/08/2018**
Checked By: Date:

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Borehole Log

Hole ID. **SB20**

Project Name:	**Environmental Site Assessment**	Hole Depth:	**12.00 m**
Project Number:	**1.16**	GW Encountered:	
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**		
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**HA to 0.6m (refusal), SFA to 1m, PT to 3.9m, SFA to 12m.**		
Date Started:	**8/08/2018**		
Date Completed:	**8/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.10						**FILL**- TOPSOIL. Silty SAND, brown.	loose	dry	
		SB20/0.3	0.0				**FILL**- SILT & SAND, black.	loose	dry	Frequent gravels, metal slag, concrete, glass.
	1.0	SB20/1.0	0.0							
	1.25			Fill			**FILL**- yellow / brown / grey.	dense	dry	Concrete, sand, brick.
	1.50	SB20/1.5	0.0				**FILL**- yellow.	dense	dry	Brick.
	2.00									
	2.30	SB20/2.2	0.0				**FILL**- SAND, grey, fine grained.	loose	dry	
▽	2.50	SB20/2.4	0.0				**FILL**- SAND, black, fine grained.	loose	dry	
		SB20/2.6	0.0				**SAND**- orange, fine grained.	loose	dry	
	3.0	SB20/3.0	0.0			SP				
	3.50						**SAND**- black, fine grained.	loose	wet	
		SB20/3.8	0.0							
	4.0									
	5.0	SB20/5.0	0.0	Natural		SP				
	6.0	SB20/6.0	0.0							
	7.0	SB20/7.0	0.0							
	7.50									

Notes

Hole backfilled.

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Contact: **laurie.white@reumad.com.au**

Logged By: **Jack Ellis** Date: **8/08/2018**
Checked By: Date:

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Borehole Log

Hole ID. **SB20**

Project Name:	**Environmental Site Assessment**	Hole Depth:	**12.00 m**
Project Number:	**1.16**	GW Encountered:	
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**		
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**HA to 0.6m (refusal), SFA to 1m, PT to 3.9m, SFA to 12m.**		
Date Started:	**8/08/2018**		
Date Completed:	**8/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	8.0	SB20/8.0	0.0	Natural		SP	**SAND**- grey.	loose	wet	
	9.0	SB20/9.0	0.0							
	10.0	SB20/10.0	0.0							
	11.0	SB20/11.0	0.0							
	12.00						**End of Hole at 12.00m** at target depth.			
	13.0									
	14.0									
	15.0									

Notes
Hole backfilled.

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Logged By: **Jack Ellis** Checked By:
Date: **8/08/2018** Date:

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Borehole Log

Project Name:	**Environmental Site Assessment**	Hole ID.	**SB21**
Project Number:	**1.16**	Hole Depth:	**0.80 m**
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**	GW Encountered:	
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**HA to 0.7m (refusal), SFA to 0.8m.**		
Date Started:	**13/08/2018**		
Date Completed:	**13/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.20	SB21/0.15	0.0	Fill			**FILL**- TOPSOIL. Silty SAND, brown.	loose	dry	Frequent organics, gravels and cobbles.
	0.4	SB21/0.4					**FILL**- Silty SAND, brown.	loose	dry	Gravels, cobbles, brick, rock.
	0.6	SB21/0.5								
	0.80	SB21/0.8					**Refusal at 0.80m** on concrete.			
	1.0									
	1.2									
	1.4									

Notes

Hand auger refusal on multiple rocks at 0.7m.
Hole backfilled.

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Logged By: **Jack Ellis** Checked By:
Date: **13/08/2018** Date:

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Borehole Log

Hole ID. SB22 / MW4

Project Name:	**Environmental Site Assessment**	Hole Depth:	**7.00 m**
Project Number:	**1.16**	GW Encountered:	
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**		
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**HA to 1m, PT to 5m, SFA to 7m.**		
Date Started:	**13/08/2018**		
Date Completed:	**13/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	PID ppm	LEL %	O_2 %	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments	Well Details	Well Construction
	0.20	SB22/0.1	0.0			Fill			**FILL**- SILT / SAND / GRAVEL / COBBLE, brown / black.	loose	dry			Gatic
		SB22/0.5							**FILL**- SAND / GRAVEL / COBBLE, grey / black.	loose	dry	Coal, metal, concrete.		Grout
	0.80													
	1.0	SB22/0.9							**Silty SAND**- grey / brown, fine grained.	loose	dry		1.0	
		SB22/1.0	0.0					SM						Bentonite
		SB22/1.3											1.5	
	1.70													
	2.0	SB22/2.0	0.0						**SAND**- brown / orange, fine grained.	loose	dry		2.0	
								SP						
		SB22/2.6							- grey / white band at 2.4-2.5m.					
	2.80													
	3.0	SB22/3.0	0.0					SP	**SAND**- light brown.	loose	moist			
	3.50													
	4.0	SB22/4.0	0.0			Natural			**SAND**- grey / brown.	loose	moist			Sand
▽										loose	wet			
	5.0	SB22/5.0	0.0					SP						
	6.0	SB22/6.0 QS3, QS3A												Screen
	7.00	SB22/7.0							**End of Hole at 7.00m** at target depth.					

Notes
Well installed.

Backfill Grout Bentonite Gravel Pack Screen Cave-In

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Logged By: **Jack Ellis** Checked By:
Date: **13/08/2018** Date:

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Borehole Log

Hole ID. SB23

Project Name:	Environmental Site Assessment
Project Number:	1.16
Location / Site:	146-154 O'Riordan Street, Mascot NSW
Client:	JKN Park Pty Ltd
Drill Company:	Epoca Environmental Pty Ltd
Drill Method:	CC to 0.156m, HA to 0.45m.
Date Started:	14/08/2018
Date Completed:	14/08/2018

Hole Depth:	0.45 m
GW Encountered:	

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.16						**CONCRETE SLAB.**			
	0.20	SB23/0.2	0.0	Fill			FILL- SAND, orange, fine grained.	loose	dry	
							FILL- SAND / GRAVEL / COBBLE, brown, very coarse gravel.	loose	dry	
	0.4	SB23/0.4	0.0							
	0.45						**Refusal at 0.45m** on very coarse multiple cobbles.			
	0.6									
	0.8									
	1.0									
	1.2									
	1.4									

Notes
Hole backfilled.

REUMAD

Log Drawn By: Laurie White
Contact: laurie.white@reumad.com.au

Logged By: Jack Ellis
Checked By:

Date: 14/08/2018
Date:

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Borehole Log

Project Name:	**Environmental Site Assessment**	Hole ID.	**SB24**
Project Number:	**1.16**	Hole Depth:	**0.35 m**
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**	GW Encountered:	
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**CC to 0.116m, HA to 0.35m.**		
Date Started:	**14/08/2018**		
Date Completed:	**14/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.12	SB24/0.3	0.0	Fill			**CONCRETE SLAB.**			
	0.20						FILL- SAND, orange / brown, fine grained.	loose	dry	
	0.35						FILL- SAND / GRAVEL / COBBLE, brown.	loose	dry	
	0.4						**Refusal at 0.35m** on very large white cobble. Could not be broken or moved.			
	0.6									
	0.8									
	1.0									
	1.2									
	1.4									

Notes
Hole backfilled.

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Logged By: **Jack Ellis** Checked By:
Date: **14/08/2018** Date:

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Borehole Log

Project Name:	Environmental Site Assessment	Hole ID.	SB25
Project Number:	1.16	Hole Depth:	0.30 m
Location / Site:	146-154 O'Riordan Street, Mascot NSW	GW Encountered:	
Client:	JKN Park Pty Ltd		
Drill Company:	Epoca Environmental Pty Ltd		
Drill Method:	CC to 0.116m, HA to 0.3m.		
Date Started:	14/08/2018		
Date Completed:	14/08/2018		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.12		0.0	Fill			**CONCRETE SLAB.**			
	0.20						FILL- SAND, orange / brown, fine grained.	loose	dry	
	0.30						FILL- SAND / GRAVEL / COBBLE, brown.	loose	dry	
							Refusal at 0.30m on very large cobble, larger than hole.			

Notes

Hole backfilled.

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Contact: laurie.white@reumad.com.au

Logged By: Jack Ellis
Checked By:

Date: 14/08/2018
Date:

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Borehole Log

Project Name:	**Environmental Site Assessment**	Hole ID.	**SB26**
Project Number:	**1.16**	Hole Depth:	**10.00 m**
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**	GW Encountered:	
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**CC to 0.12m, HA to 0.3m (refusal), SFA to 10m.**		
Date Started:	**10/08/2018**		
Date Completed:	**10/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	0.12						**CONCRETE SLAB.**			
		SB26/0.2	0.0				**FILL**- SAND / GRAVEL / COBBLE, yellow / light brown.	loose	dry	Concrete, rock, organics (wood).
	0.50	SB26/0.5								
	0.70						**FILL**- SAND, brown, fine grained.	loose	dry	
	1.0	SB26/1.0	3.9	Fill			**FILL**- Sandy Gravelly CLAY, black, medium plasticity.	soft	humid	
	1.50									
		SB26/1.5-2.0	8.3				**FILL**- Clayey SAND & GRAVEL, black.	loose	dry	Moderate hydrocarbon odour.
▽	2.00	SB26/2.0	7.3				**SAND**- black, fine grained.	loose	wet	Hydrocarbon odour.
	3.0	SB26/3.0	6.4							
	4.0	SB26/4.0	8.5			SP				
	5.0	SB26/5.0	8.9	Natural						
	6.00	SB26/6.0	5.5				**SAND**- brown.	loose	wet	Organic odour.
	7.0	SB26/7.0	2.7			SP				

Notes

No push tube due to noise inside building with workers.
Hole backfilled.

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Contact: **laurie.white@reumad.com.au**

Logged By: **Jack Ellis** Date: **10/08/2018**
Checked By: Date:

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Borehole Log

Project Name:	**Environmental Site Assessment**	Hole ID.	**SB26**
Project Number:	**1.16**	Hole Depth:	**10.00 m**
Location / Site:	**146-154 O'Riordan Street, Mascot NSW**	GW Encountered:	
Client:	**JKN Park Pty Ltd**		
Drill Company:	**Epoca Environmental Pty Ltd**		
Drill Method:	**CC to 0.12m, HA to 0.3m (refusal), SFA to 10m.**		
Date Started:	**10/08/2018**		
Date Completed:	**10/08/2018**		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments
	8.0	SB26/8.0	2.0	Natural		SP	**SAND**- brown.*(continued)*	loose	wet	
	9.0	SB26/9.0								
	10.00	SB26/10.0	0.0				**End of Hole at 10.00m** at target depth.			
	11.0									
	12.0									
	13.0									
	14.0									
	15.0									

Notes

No push tube due to noise inside building with workers.
Hole backfilled.

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Contact: **laurie.white@reumad.com.au**

Logged By: **Jack Ellis**
Checked By:

Date: **10/08/2018**
Date:

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Monitoring Well Log

Hole ID. **SB27 / MW1**

Project Name:	Environmental Site Assessment	Hole Depth:	6.00 m
Project Number:	1.16	GW Encountered:	
Location / Site:	146-154 O'Riordan Street, Mascot NSW		
Client:	JKN Park Pty Ltd		
Drill Company:	Epoca Environmental Pty Ltd		
Drill Method:	HA to 1.1m (refusal on slag), PT to 3.9m, SFA to 6m.		
Date Started:	8/08/2018		
Date Completed:	8/08/2018		

Water Inflow	Depth (m)	Sample ID No.	Sample PID ppm	Sample LEL %	Sample O_2 %	Material Type	Graphic Log	USCS Symbol	Material Description	Consistency / Density	Moisture	Observations / Comments	Well Details	Well Construction
	0.05								**BITUMEN**.					Gatic
	0.15	SB27/0.2	0.0						**FILL**- ROADBASE.	loose	dry	Frequent slag gravel, brick, concrete.		
		SB27/0.5	0.0						**FILL**- Silty SAND, black / brown, slightly clayey.					Grout
	1.0	SB27/1.0	0.0										1.0	Bentonite
	1.55	SB27/1.5	0.0			Fill			**NO RETURNS**- likely sand.	very soft / loose		Push tubes push aside whilst advancing.	1.5	
	2.0												2.0	
	3.00	SB27/3.1	0.0					SP	**SAND**- brown, occasional black pockets, fine grained.	loose	dry			Sand
▽	3.90	SB27/3.8 QS1, QS1A	0.0							loose	wet			
	4.0					Natural			**SAND**- black / grey, fine grained.	loose	wet			
	5.0	SB27/5.0	0.0					SP						Screen
	6.00	SB27/6.0	0.0						**End of Hole at 6.00m** at target depth.					
	7.0													

Notes

Well installed.

Backfill Grout Bentonite Gravel Pack Screen Cave-In

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Log Drawn By: Laurie White
Contact: laurie.white@reumad.com.au

Logged By: Jack Ellis Date: 8/08/2018
Checked By: Date:

TRACE AUG2018 2 1.16 MASCOT.GPJ WSP.GDT 24/8/18 10:32:02 AM - drawn by laurie white at www.reumad.com.au

Well Gauging Sheet - 146-154 O'Riordan Street, Mascot

Monitoring Well ID	Well Diameter (mm)	Total Well Depth (mBTOC)	Depth to LNAPL (mBTOC)	Depth to Water (mBTOC)	TOC Elevation mAHD	WT Elevation mAHD	Calculated LNAPL Thickness (m)	Colour	Purged Volume (L)	Electrical Conductivity EC (uS/cm)	Total Dissolved Solids TDS (mg/L)	Dissolved Oxygen DO (mg/L)	pH (pH unit)	Redox ORP (mV)	Comments
MW-1	50	5.756	-	3.682	8.40	4.718	-	Brown	5	1100	737	6.38	5.65	346.5	No odour, no sheen, high turbidity.
MW-2	50	5.870	-	4.058	8.115	4.057	-	Yellow	5	1100	737	7.03	7.21	-197.6	No odour, no sheen, low turbidity.
MW-3	50	5.729	-	3.781	8.805	5.024	-	Yellow/brown	5	1200	804	5.06	5.20	377.8	No odour, no sheen, Medium turbidity.
MW-4	50	6.866	-	4.596	8.135	3.539	-	Yellow	5	2100	1407	5.24	6.04	137.8	No odour, no sheen, low turbidity.

Notes:
"MW-#" Groundwater Monitoring Well
"TPMW-#" Tank Pit Monitoring Well
LNAPL - Light Non-Aqueous Phase Liquid
mBTOC - metres below top of casing
mbgs - metres below ground surface
TOC - Top of Casing (metres Australian Height Datum)
WT - Water Table (metres Australian Height Datum)
Monitoring wells gauged on 15 August 2018

MONITORING WELL SAMPLING LOG

TRACE ENVIRONMENTAL

Date: 15/8/18
Project No: 1.16
Site Address: 154 O'Riordan St, Mascot
Start Time: 11.50
Finish Time: 12.15
Monitor Well No: MW1
Sampling Method: low flow
Well Head Condition: New
Recorded by: JE

H = High M = Medium L = Low
X = Not present Y = Yes N = No
Note: Do not smell for HC odour, however, inadvertent observations should be noted.
All ACT sites must be tested for ethanol.

Field Observations

Well ID	Well Diameter (mm)	Depth to LNAPL (mbtoc)	Depth to Water (mbtoc)	LNAPL Thickness (m)	Total Well Depth (mbtoc)	Sample Filtered	HC Odour	Sheen	Turbidity	Physical Observations Colour, LNAPL colour, other odours, etc.
MW1	50	–	3.682	–	5.756	Y	N	N	High	Brown

Field Parameter Measurements

Time	Volume Purged (L)	Temp (°C)	Electrical Cond (EC) (µS/cm)	Dissolved Oxygen (DO) (mg/L)	pH	Redox Potential (ORP) (mV)	Comments
							DTW
11.53	1	23.6	1.2	7.18	5.41	356.0	3.699
11.56	2	23.3	1.1	7.03	6.21	369.2	3.699
11.59	3	23.4	1.2	6.80	5.74	360.3	3.700
12.01	4	23.4	1.1	6.64	5.62	348.1	3.701
12.04	5	23.4	1.1	6.28	5.65	348.5	3.701

QW1/QW1A

TRACE ENVIRONMENTAL

MONITORING WELL SAMPLING LOG

Date: 15/8/18 Project No: 1.16

Site Address: 154 O'Riordan St, Mascot

Start Time: 09.58 Finish Time: 10.36

Monitor Well No: MW2 Sampling Method: Low Flow

Well Head Condition: New Recorded by: JT

H = High M = Medium L = Low
X = Not present Y = Yes N = No
Note: Do not smell for HC odour, however, inadvertent observations should be noted.
All ACT sites must be tested for ethanol.

Field Observations

Well ID	Well Diameter (mm)	Depth to LNAPL (mbtoc)	Depth to Water (mbtoc)	LNAPL Thickness (m)	Total Well Depth (mbtoc)	Sample Filtered	HC Odour	Sheen	Turbidity	Physical Observations Colour, LNAPL colour, other odours, etc.
MW3	50	–	4.058	–	8.670	Y	N	N	Low	Yellow Colour

Field Parameter Measurements

Time	Volume Purged (L)	Temp (°C)	Electrical Cond (EC) (mS/cm)	Dissolved Oxygen (DO) (mg/L)	pH	Redox Potential (ORP) (mV)	Comments DTW
10.02	1	19.2	1.1	8.39	7.23	-199.6	4.077m
10.05	2	19.6	1.1	8.13	7.30	-205.9	4.077m
10.08	3	20.1	1.2	7.79	7.39	-186.5	4.082m
10.12	4	20.3	1.3	7.86	7.36	-174.5	4.085m
10.16	5	21.1	1.1	7.03	7.21	-197.6	4.093m

TRACE ENVIRONMENTAL

MONITORING WELL SAMPLING LOG

Date: 15/8/18
Project No: 1.16
Site Address: 154 O'Riordan St, Mascot
Start Time: 10.56
Finish Time: 11.28
Monitor Well No: MW3
Sampling Method: Low Flow
Well Head Condition: New
Recorded by: JE

H = High M = Medium L = Low
X = Not present Y = Yes N = No
Note: Do not smell for HC odour, however, inadvertent observations should be noted.
All ACT sites must be tested for ethanol.

Field Observations

Well ID	Well Diameter (mm)	Depth to LNAPL (mbtoc)	Depth to Water (mbtoc)	LNAPL Thickness (m)	Total Well Depth (mbtoc)	Sample Filtered	HC Odour	Sheen	Turbidity	Physical Observations Colour, LNAPL colour, other odours, etc.
MW3	50	–	3.781	–	3.799	Y	N	N	Mod	Yellow/brown

Field Parameter Measurements

Time	Volume Purged (L)	Temp (°C)	Electrical Cond (EC) (µS/cm)	Dissolved Oxygen (DO) (mg/L)	pH	Redox Potential (ORP) (mV)	Comments
							DTW
11.01	1	21.6	1.2	6.81	5.56	409.7	3.789
11.08	2	21.4	1.2	5.85	5.45	296.6	3.791
11.12	3	21.4	1.2	5.45	5.37	346.2	3.793
11.16	4	21.2	1.2	5.26	5.46	331.3	3.792
11.20	5	21.2	1.2	5.06	5.39	377.8	3.791

MONITORING WELL SAMPLING LOG

TRACE ENVIRONMENTAL

Date: 15/8/18
Project No: 1.16
H = High M = Medium L = Low

Site Address: 156 O'Riordan St, Mascot
X = Not present Y = Yes N = No

Start Time: 12.28
Finish Time:
Note: Do not smell for HC odour, however, inadvertent observations should be noted.

Monitor Well No: MW4
Sampling Method: Low flow

Well Head Condition: New
Recorded by: SE
All ACT sites must be tested for ethanol.

Field Observations

Well ID	Well Diameter (mm)	Depth to LNAPL (mbtoc)	Depth to Water (mbtoc)	LNAPL Thickness (m)	Total Well Depth (mbtoc)	Sample Filtered	HC Odour	Sheen	Turbidity	Physical Observations Colour, LNAPL colour, other odours, etc.
MW4	50	-	4.596	-	6.866	Y	N	N	low	Yellow ~~[illegible]~~

Field Parameter Measurements

Time	Volume Purged (L)	Temp (°C)	Electrical Cond (EC) (µS/cm)	Dissolved Oxygen (DO) (mg/L)	pH	Redox Potential (ORP) (mV)	Comments
12.33	1	20.7	1.8	5.55	6.10	191.1	DTW 4.605
12.36	2	20.7	2.1	3.78	6.30	111.8	4.607
12.39	3	20.8	2.1	3.90	6.09	88.3	4.609
12.42	4	20.8	2.1	4.66	5.99	98.9	4.610
12.44	5	20.8	2.1	5.24	6.04	137.8	4.611

TRACE ENVIRONMENTAL

Appendix H

Laboratory Analytical Reports

eurofins | mgt

30 years Testing For Life

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1 217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests calibrations and or measurements included in this document are traceable to Australian national standards.

Trace Environmental P/L
Shop 2, 7 3 7 New Canterbury Road
Dulwich Hill
NSW 2203

Attention: J ack Ellis

Report 61202 S
Pro ect name **MASCO T**
Pro ect ID **1.1**
Received Date **Aug 1 2018**

Client Sample ID			SB 1/0.3	SB 1/0.	SB 6/0.4	SB 6/1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16412	S1 Au16413	S1 Au16414	S1 Au1641
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg	0.5			0.5
T RH C C10	20	mg kg	20			20
T RH C C10 less BT EX[N0] F1	20	mg kg	20			20
T RH C10 C1	50	mg kg	50			50
T RH C10 C1 less Naphthalene[N01] F2	50	mg kg	50			50
T RH C1 C	100	mg kg	100			1 0
T RH C C 0	100	mg kg	100			100
T RH C10 C 0 total	100	mg kg	100			1 0
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg	20			20
T RH C10 C1	20	mg kg	20			20
T RH C15 C28	50	mg kg	50			
T RH C2 C	50	mg kg	50			100
T RH C10 T otal	50	mg kg	50			1
B TEX						
Ben ene	0.1	mg kg	0.1			0.1
T oluene	0.1	mg kg	0.1			0.1
Ethylben ene	0.1	mg kg	0.1			0.1
m p X ylenes	0.2	mg kg	0.2			0.2
o X ylene	0.1	mg kg	0.1			0.1
X ylenes T otal	0.	mg kg	0.			0.
Bromofluoroben ene surr.	1		1 1			108
V olatile Organics						
1.1 Dichloroethane	0.5	mg kg	0.5			
1.1 Dichloroethene	0.5	mg kg	0.5			
1.1.1 T richloroethane	0.5	mg kg	0.5			
1.1.1.2 T etrachloroethane	0.5	mg kg	0.5			
1.1.2 T richloroethane	0.5	mg kg	0.5			
1.1.2.2 T etrachloroethane	0.5	mg kg	0.5			
1.2 Dibromoethane	0.5	mg kg	0.5			
1.2 Dichloroben ene	0.5	mg kg	0.5			
1.2 Dichloroethane	0.5	mg kg	0.5			
1.2 Dichloropropane	0.5	mg kg	0.5			
1.2. T richloropropane	0.5	mg kg	0.5			
1.2. T rimethylben ene	0.5	mg kg	0.5			

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled T est Reference	LO R	nit	SB 1/0.3 Soil S1 Au16412 Aug 0 , 201	SB 1/0. Soil S1 Au16413 Aug 0 , 201	SB 6/0.4 Soil S1 Au16414 Aug 0 , 201	SB 6/1.0 Soil S1 Au1641 Aug 0 , 201
V olatile Organics						
1. Dichloroben ene	0.5	mg kg	0.5			
1. Dichloropropane	0.5	mg kg	0.5			
1. .5 T rimethylben ene	0.5	mg kg	0.5			
1. Dichloroben ene	0.5	mg kg	0.5			
2 Butanone MEK	0.5	mg kg	0.5			
2 Propanone Acetone	0.5	mg kg	0.5			
Chlorotoluene	0.5	mg kg	0.5			
Methyl 2 pentanone MIBK	0.5	mg kg	0.5			
Allyl chloride	0.5	mg kg	0.5			
Ben ene	0.1	mg kg	0.1			
Bromoben ene	0.5	mg kg	0.5			
Bromochloromethane	0.5	mg kg	0.5			
Bromodichloromethane	0.5	mg kg	0.5			
Bromoform	0.5	mg kg	0.5			
Bromomethane	0.5	mg kg	0.5			
Carbon disulfide	0.5	mg kg	0.5			
Carbon T etrachloride	0.5	mg kg	0.5			
Chloroben ene	0.5	mg kg	0.5			
Chloroethane	0.5	mg kg	0.5			
Chloroform	0.5	mg kg	0.5			
Chloromethane	0.5	mg kg	0.5			
cis 1.2 Dichloroethene	0.5	mg kg	0.5			
cis 1. Dichloropropene	0.5	mg kg	0.5			
Dibromochloromethane	0.5	mg kg	0.5			
Dibromomethane	0.5	mg kg	0.5			
Dichlorodifluoromethane	0.5	mg kg	0.5			
Ethylben ene	0.1	mg kg	0.1			
Iodomethane	0.5	mg kg	0.5			
Isopropyl ben ene Cumene	0.5	mg kg	0.5			
m p X ylenes	0.2	mg kg	0.2			
Methylene Chloride	0.5	mg kg	0.5			
o X ylene	0.1	mg kg	0.1			
Styrene	0.5	mg kg	0.5			
T etrachloroethene	0.5	mg kg	0.5			
T oluene	0.1	mg kg	0.1			
trans 1.2 Dichloroethene	0.5	mg kg	0.5			
trans 1. Dichloropropene	0.5	mg kg	0.5			
T richloroethene	0.5	mg kg	0.5			
T richlorofluoromethane	0.5	mg kg	0.5			
V inyl chloride	0.5	mg kg	0.5			
X ylenes T otal	0.	mg kg	0.			
T otal MAH	0.5	mg kg	0.5			
V ic EPA IWRG 21 CHC T otal	0.5	mg kg	0.5			
V ic EPA IWRG 21 O ther CHC T otal	0.5	mg kg	0.5			
Bromofluoroben ene surr.	1		1 1			
T oluene d8 surr.	1		115			

Client Sample ID			SB 1/0.3	SB 1/0.	SB 6/0.4	SB 6/1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16412	S1 Au16413	S1 Au16414	S1 Au1641
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg	0.5	2.2		1.0
Ben o a pyrene T EQ medium bound	0.5	mg kg	0.	2.5		1.
Ben o a pyrene T EQ upper bound	0.5	mg kg	1.2	2.		1.5
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.		0.5
Ben a anthracene	0.5	mg kg	0.5	1.		0.5
Ben o a pyrene	0.5	mg kg	0.5	1.		0.8
Ben o b fluoranthene	0.5	mg kg	0.5	1.		0.
Ben o g.h.i perylene	0.5	mg kg	0.5	1.0		0.5
Ben o k fluoranthene	0.5	mg kg	0.5	1.0		0.
Chrysene	0.5	mg kg	0.5	1.5		0.
Diben a.h anthracene	0.5	mg kg	0.5	0.5		0.5
Fluoranthene	0.5	mg kg	0.5	.0		0.
Fluorene	0.5	mg kg	0.5	0.5		0.5
Indeno 1.2. cd pyrene	0.5	mg kg	0.5	0.8		0.
Naphthalene	0.5	mg kg	0.5	0.5		0.5
Phenanthrene	0.5	mg kg	0.5	.1		0.5
Pyrene	0.5	mg kg	0.5	.1		1.0
T otal PAH	0.5	mg kg	0.5	18.		5.2
2 Fluorobiphenyl surr.	1			121		10
p T erphenyl d1 surr.	1		10	10		11
Organochlorine Pesticides						
Chlordanes T otal	0.1	mg kg		0.1	0.1	
. DDD	0.05	mg kg		0.05	0.05	
. DDE	0.05	mg kg		0.05	0.05	
. DDT	0.05	mg kg		0.05	0.05	
a BHC	0.05	mg kg		0.05	0.05	
Aldrin	0.05	mg kg		0.05	0.05	
b BHC	0.05	mg kg		0.05	0.05	
d BHC	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 BHC 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	
Hexachloroben ene	0.05	mg kg		0.05	0.05	
M ethoxychlor	0.05	mg kg		0.05	0.05	
T oxaphene	1	mg kg		1	1	
Aldrin and Dieldrin T otal	0.05	mg kg		0.05	0.05	
DDT DDE DDD T otal	0.05	mg kg		0.05	0.05	
V ic EPA IWRG 21 O CP T otal	0.1	mg kg		0.1	0.1	
V ic EPA IWRG 21 O ther O CP T otal	0.1	mg kg		0.1	0.1	
Dibutylchlorendate surr.	1			105	11	
T etrachloro m xylene surr.	1				8	

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Client Sample ID			SB 1/0.3	SB 1/0.	SB 6/0.4	SB 6/1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16412	S1 Au16413	S1 Au16414	S1 Au1641
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Organophosphorus Pesticides						
A inphos 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	
Dia inon	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	
M alathion	0.2	mg kg		0.2	0.2	
M erphos	0.2	mg kg		0.2	0.2	
M ethyl parathion	0.2	mg kg		0.2	0.2	
M evinphos	0.2	mg kg		0.2	0.2	
M onocrotophos	2	mg kg		2	2	
Naled	0.2	mg kg		0.2	0.2	
O methoate	2	mg kg		2	2	
Phorate	0.2	mg kg		0.2	0.2	
Pirimiphos methyl	0.2	mg kg		0.2	0.2	
Pyra ophos	0.2	mg kg		0.2	0.2	
Ronnel	0.2	mg kg		0.2	0.2	
T erbufos	0.2	mg kg		0.2	0.2	
T etrachlorvinphos	0.2	mg kg		0.2	0.2	
T okuthion	0.2	mg kg		0.2	0.2	
T richloronate	0.2	mg kg		0.2	0.2	
T riphenylphosphate surr.	1				120	
Polychlorinated B iphenyls						
Aroclor 101	0.1	mg kg		0.1	1	
Aroclor 1221	0.1	mg kg		0.1	1	
Aroclor 12 2	0.1	mg kg		0.1	1	
Aroclor 12 2	0.1	mg kg		0.1	1	
Aroclor 12 8	0.1	mg kg		0.1	1	
Aroclor 125	0.1	mg kg		0.1	1	
Aroclor 12 0	0.1	mg kg		0.1	1	
T otal PCB	0.1	mg kg		0.1	1	
Dibutylchlorendate surr.	1			105	11	
T etrachloro m xylene surr.	1				8	

Client Sample ID			SB 1/0.3	SB 1/0.	SB 6/0.4	SB 6/1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16412	S1 Au16413	S1 Au16414	S1 Au1641
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Clay	1			.		
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS cm		2 0		
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH nits		.		
T otal O rganic Carbon	0.1			0.5		
Cation Exchange Capacity	0.05	meq 100g		1		
Iron	0.01			1.0		
Moisture	1		2.	.	.	.2
Heavy Metals						
Arsenic	2	mg kg	2.1	1		5
Cadmium	0.	mg kg	0.	0.		0.
Chromium	5	mg kg	8.	1		
Copper	5	mg kg		0		1 0
Iron	20	mg kg		10000		
Lead	5	mg kg	22	0		0
Mercury	0.1	mg kg	0.1	0.1		0.
Nickel	5	mg kg	5	.		120
inc	5	mg kg	2	1 0		1100

Client Sample ID			SB 6/2.6	SB 6/3.2	SB 6/4.	SB 11/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16416	S1 Au16417	S1 Au1641	S1 Au1641
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[J02]	0.5	mg kg	0.5		0.5	
T RH C C10	20	mg kg	20		20	
T RH C C10 less BT EX[N0] F1	20	mg kg	20		20	
T RH C10 C1	50	mg kg	50		50	
T RH C10 C1 less Naphthalene[J01] F2	50	mg kg	50		50	
T RH C1 C	100	mg kg	100		100	
T RH C C 0	100	mg kg	100		100	
T RH C10 C 0 total	100	mg kg	100		100	
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg	20		20	
T RH C10 C1	20	mg kg	20		20	
T RH C15 C28	50	mg kg	50		50	
T RH C2 C	50	mg kg	50		50	
T RH C10 T otal	50	mg kg	50		50	
B TEX						
Ben ene	0.1	mg kg	0.1		0.1	
T oluene	0.1	mg kg	0.1		0.1	
Ethylben ene	0.1	mg kg	0.1		0.1	
m p X ylenes	0.2	mg kg	0.2		0.2	
o X ylene	0.1	mg kg	0.1		0.1	
X ylenes T otal	0.	mg kg	0.		0.	
Bromofluoroben ene surr.	1		10		1 5	

Client Sample ID			SB 6/2.6	SB 6/3.2	SB 6/4.	SB 11/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16416	S1 Au16417	S1 Au1641	S1 Au1641
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg	0.5		0.5	
Ben o a pyrene T EQ medium bound	0.5	mg kg	0.		0.	
Ben o a pyrene T EQ 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	
Ben a anthracene	0.5	mg kg	0.5		0.5	
Ben o a pyrene	0.5	mg kg	0.5		0.5	
Ben o b fluoranthene	0.5	mg kg	0.5		0.5	
Ben o g.h.i perylene	0.5	mg kg	0.5		0.5	
Ben o k fluoranthene	0.5	mg kg	0.5		0.5	
Chrysene	0.5	mg kg	0.5		0.5	
Diben 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. 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	
T otal PAH	0.5	mg kg	0.5		0.5	
2 Fluorobiphenyl surr.	1		112		11	
p T erphenyl d1 surr.	1		128		1	
Organochlorine Pesticides						
Chlordanes T otal	0.1	mg kg		0.1		0.1
. DDD	0.05	mg kg		0.05		0.05
. DDE	0.05	mg kg		0.05		0.05
. DDT	0.05	mg kg		0.05		0.05
a BHC	0.05	mg kg		0.05		0.05
Aldrin	0.05	mg kg		0.05		0.05
b BHC	0.05	mg kg		0.05		0.05
d BHC	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 BHC 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
Hexachloroben ene	0.05	mg kg		0.05		0.05
M ethoxychlor	0.05	mg kg		0.05		0.05
T oxaphene	1	mg kg		1		1
Aldrin and Dieldrin T otal	0.05	mg kg		0.05		0.05
DDT DDE DDD T otal	0.05	mg kg		0.05		0.05
V ic EPA IWRG 21 O CP T otal	0.1	mg kg		0.1		0.1
V ic EPA IWRG 21 O ther O CP T otal	0.1	mg kg		0.1		0.1
Dibutylchlorendate surr.	1					0
T etrachloro m xylene surr.	1			0		

Client Sample ID			SB 6/2.6	SB 6/3.2	SB 6/4.	SB 11/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16416	S1 Au16417	S1 Au1641	S1 Au1641
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Organophosphorus Pesticides						
A inphos 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
Dia inon	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
M alathion	0.2	mg kg		0.2		0.2
M erphos	0.2	mg kg		0.2		0.2
M ethyl parathion	0.2	mg kg		0.2		0.2
M evinphos	0.2	mg kg		0.2		0.2
M onocrotophos	2	mg kg		2		2
Naled	0.2	mg kg		0.2		0.2
O methoate	2	mg kg		2		2
Phorate	0.2	mg kg		0.2		0.2
Pirimiphos methyl	0.2	mg kg		0.2		0.2
Pyra ophos	0.2	mg kg		0.2		0.2
Ronnel	0.2	mg kg		0.2		0.2
T erbufos	0.2	mg kg		0.2		0.2
T etrachlorvinphos	0.2	mg kg		0.2		0.2
T okuthion	0.2	mg kg		0.2		0.2
T richloronate	0.2	mg kg		0.2		0.2
T riphenylphosphate surr.	1			10		8
Polychlorinated B iphenyls						
Aroclor 101	0.1	mg kg		0.1		0.1
Aroclor 1221	0.1	mg kg		0.1		0.1
Aroclor 12 2	0.1	mg kg		0.1		0.1
Aroclor 12 2	0.1	mg kg		0.1		0.1
Aroclor 12 8	0.1	mg kg		0.1		0.1
Aroclor 125	0.1	mg kg		0.1		0.1
Aroclor 12 0	0.1	mg kg		0.1		0.1
T otal PCB	0.1	mg kg		0.1		0.1
Dibutylchlorendate surr.	1					0
T etrachloro m xylene surr.	1			0		

Client Sample ID			SB 6/2.6	SB 6/3.2	SB 6/4.	SB 11/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16416	S1 Au16417	S1 Au1641	S1 Au1641
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Phenols (Halogenated)						
2 Chlorophenol	0.5	mg kg			0.5	
2. Dichlorophenol	0.5	mg kg			0.5	
2. .5 T richlorophenol	1	mg kg			1	
2. . T richlorophenol	1.0	mg kg			1	
2. Dichlorophenol	0.5	mg kg			0.5	
Chloro methylphenol	1.0	mg kg			1	
Pentachlorophenol	1.0	mg kg			1	
T etrachlorophenols T otal	1.0	mg kg			1	
T otal Halogenated Phenol	1	mg kg			1	
Phenols (non Halogenated)						
2 Cyclohexyl . dinitrophenol	20	mg kg			20	
2 Methyl . dinitrophenol	5	mg kg			5	
2 Methylphenol o Cresol	0.2	mg kg			0.2	
2 Nitrophenol	1.0	mg kg			1	
2. Dimethylphenol	0.5	mg kg			0.5	
2. Dinitrophenol	5	mg kg			5	
Methylphenol m p Cresol	0.	mg kg			0.	
Nitrophenol	5	mg kg			5	
Dinoseb	20	mg kg			20	
Phenol	0.5	mg kg			0.5	
T otal Non Halogenated Phenol	20	mg kg			20	
Phenol d surr.	1				118	
Clay	1		1			
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS cm				
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH nits	.			
T otal O rganic Carbon	0.1		0.1			
Cation Exchange Capacity	0.05	meq 100g	1.1			
Iron	0.01		0.01			
Moisture	1		1.	5.2	1	.
Heavy Metals						
Arsenic	2	mg kg	2		2	
Cadmium	0.	mg kg	0.		0.	
Chromium	5	mg kg	5		.	
Copper	5	mg kg	5		5	
Iron	20	mg kg	1 0			
Lead	5	mg kg	5		5	
Mercury	0.1	mg kg	0.1		0.1	
Nickel	5	mg kg	5		5	
inc	5	mg kg	1		21	

Client Sample ID			SB 11/0.	SB 11/1.2	SB 11/1.6	SB 11/4.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16420	S1 Au16421	S1 Au16422	S1 Au16423
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg	0.5		0.5	0.5
T RH C C10	20	mg kg	20		20	20
T RH C C10 less BT EX[N0] F1	20	mg kg	20		20	20
T RH C10 C1	50	mg kg	50		2	50
T RH C10 C1 less Naphthalene[N01] F2	50	mg kg	50		2	50
T RH C1 C	100	mg kg	1 0		80	100
T RH C C 0	100	mg kg	100		100	100
T RH C10 C 0 total	100	mg kg	1 0		5 2	100
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg	20		20	20
T RH C10 C1	20	mg kg	20		0	20
T RH C15 C28	50	mg kg	0		50	50
T RH C2 C	50	mg kg	1			50
T RH C10 T otal	50	mg kg	1 1		50	50
B TEX						
Ben ene	0.1	mg kg	0.1		0.1	0.1
T oluene	0.1	mg kg	0.1		0.1	0.1
Ethylben ene	0.1	mg kg	0.1		0.1	0.1
m p X ylenes	0.2	mg kg	0.2		0.2	0.2
o X ylene	0.1	mg kg	0.1		0.1	0.1
X ylenes T otal	0.	mg kg	0.		0.	0.
Bromofluoroben ene surr.	1		11		100	11
V olatile Organics						
1.1 Dichloroethane	0.5	mg kg			0.5	
1.1 Dichloroethene	0.5	mg kg			0.5	
1.1.1 T richloroethane	0.5	mg kg			0.5	
1.1.1.2 T etrachloroethane	0.5	mg kg			0.5	
1.1.2 T richloroethane	0.5	mg kg			0.5	
1.1.2.2 T etrachloroethane	0.5	mg kg			0.5	
1.2 Dibromoethane	0.5	mg kg			0.5	
1.2 Dichloroben ene	0.5	mg kg			0.5	
1.2 Dichloroethane	0.5	mg kg			0.5	
1.2 Dichloropropane	0.5	mg kg			0.5	
1.2. T richloropropane	0.5	mg kg			0.5	
1.2. T rimethylben ene	0.5	mg kg			0.5	
1. Dichloroben ene	0.5	mg kg			0.5	
1. Dichloropropane	0.5	mg kg			0.5	
1. .5 T rimethylben ene	0.5	mg kg			0.5	
1. Dichloroben ene	0.5	mg kg			0.5	
2 Butanone MEK	0.5	mg kg			0.5	
2 Propanone Acetone	0.5	mg kg			0.5	
Chlorotoluene	0.5	mg kg			0.5	
Methyl 2 pentanone MIBK	0.5	mg kg			0.5	
Allyl chloride	0.5	mg kg			0.5	
Ben ene	0.1	mg kg			0.1	
Bromoben ene	0.5	mg kg			0.5	
Bromochloromethane	0.5	mg kg			0.5	
Bromodichloromethane	0.5	mg kg			0.5	
Bromoform	0.5	mg kg			0.5	

Client Sample ID			SB 11/0.	SB 11/1.2	SB 11/1.6	SB 11/4.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16420	S1 Au16421	S1 Au16422	S1 Au16423
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
V olatile Organics						
Bromomethane	0.5	mg kg			0.5	
Carbon disulfide	0.5	mg kg			0.5	
Carbon T etrachloride	0.5	mg kg			0.5	
Chloroben ene	0.5	mg kg			0.5	
Chloroethane	0.5	mg kg			0.5	
Chloroform	0.5	mg kg			0.5	
Chloromethane	0.5	mg kg			0.5	
cis 1.2 Dichloroethene	0.5	mg kg			0.5	
cis 1. Dichloropropene	0.5	mg kg			0.5	
Dibromochloromethane	0.5	mg kg			0.5	
Dibromomethane	0.5	mg kg			0.5	
Dichlorodifluoromethane	0.5	mg kg			0.5	
Ethylben ene	0.1	mg kg			0.1	
Iodomethane	0.5	mg kg			0.5	
Isopropyl ben ene Cumene	0.5	mg kg			0.5	
m p X ylenes	0.2	mg kg			0.2	
M ethylene Chloride	0.5	mg kg			0.5	
o X ylene	0.1	mg kg			0.1	
Styrene	0.5	mg kg			0.5	
T etrachloroethene	0.5	mg kg			0.5	
T oluene	0.1	mg kg			0.1	
trans 1.2 Dichloroethene	0.5	mg kg			0.5	
trans 1. Dichloropropene	0.5	mg kg			0.5	
T richloroethene	0.5	mg kg			0.5	
T richlorofluoromethane	0.5	mg kg			0.5	
V inyl chloride	0.5	mg kg			0.5	
X ylenes T otal	0.	mg kg			0.	
T otal MAH	0.5	mg kg			0.5	
V ic EPA IWRG 21 CHC T otal	0.5	mg kg			0.5	
V ic EPA IWRG 21 O ther CHC T otal	0.5	mg kg			0.5	
Bromofluoroben ene surr.	1				100	
T oluene d8 surr.	1				102	
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o a pyrene T EQ medium bound	0.5	mg kg	0.	0.	0.	0.
Ben o a pyrene T EQ upper bound	0.5	mg kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg kg	0.5	0.5	0.5	0.5
Acenaphthylene	0.5	mg kg	0.5	0.5	0.5	0.5
Anthracene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben a anthracene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o a pyrene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o b fluoranthene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o g.h.i perylene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o k fluoranthene	0.5	mg kg	0.5	0.5	0.5	0.5
Chrysene	0.5	mg kg	0.5	0.5	0.5	0.5
Diben a.h anthracene	0.5	mg kg	0.5	0.5	0.5	0.5
Fluoranthene	0.5	mg kg	0.5	0.5	0.5	0.5
Fluorene	0.5	mg kg	0.5	0.5	0.5	0.5
Indeno 1.2. cd pyrene	0.5	mg kg	0.5	0.5	0.5	0.5

Client Sample ID			SB 11/0.	SB 11/1.2	SB 11/1.6	SB 11/4.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16420	S1 Au16421	S1 Au16422	S1 Au16423
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Polycyclic Aromatic Hydrocarbons						
Naphthalene	0.5	mg kg	0.5	0.5	.0	0.5
Phenanthrene	0.5	mg kg	0.5	0.	1.	0.5
Pyrene	0.5	mg kg	0.5	0.5	0.5	0.5
T otal PAH	0.5	mg kg	0.5	0.	5.	0.5
2 Fluorobiphenyl surr.	1		108	10	10	11
p T erphenyl d1 surr.	1		11	11	10	1
Phenols (Halogenated)						
2 Chlorophenol	0.5	mg kg	0.5			0.5
2. Dichlorophenol	0.5	mg kg	0.5			0.5
2. .5 T richlorophenol	1	mg kg	1			1
2. . T richlorophenol	1.0	mg kg	1			1
2. Dichlorophenol	0.5	mg kg	0.5			0.5
Chloro methylphenol	1.0	mg kg	1			1
Pentachlorophenol	1.0	mg kg	1			1
T etrachlorophenols T otal	1.0	mg kg	1			1
T otal Halogenated Phenol	1	mg kg	1			1
Phenols (non Halogenated)						
2 Cyclohexyl . dinitrophenol	20	mg kg	20			20
2 Methyl . dinitrophenol	5	mg kg	5			5
2 Methylphenol o Cresol	0.2	mg kg	0.2			0.2
2 Nitrophenol	1.0	mg kg	1			1
2. Dimethylphenol	0.5	mg kg	0.5			0.5
2. Dinitrophenol	5	mg kg	5			5
Methylphenol m p Cresol	0.	mg kg	0.			0.
Nitrophenol	5	mg kg	5			5
Dinoseb	20	mg kg	20			20
Phenol	0.5	mg kg	0.5			0.5
T otal Non Halogenated Phenol	20	mg kg	20			20
Phenol d surr.	1		10			11
Moisture	1		5.8	1	0	1
Heavy Metals						
Arsenic	2	mg kg	.	.8	2	2
Cadmium	0.	mg kg	0.	0.	.	0.
Chromium	5	mg kg	12	1	22	5
Copper	5	mg kg	0	5	150	5
Lead	5	mg kg	1 0	280	100	5
Mercury	0.1	mg kg	0.1	0.1	0.2	0.1
Nickel	5	mg kg	11	18	5	5
inc	5	mg kg	0	1 00	2 00	5

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Client Sample ID			SB 11/ .0	SB 14/0.2	SB 14/0.	SB 14/1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16424	S1 Au1642	S1 Au16426	S1 Au16427
Date Sampled			Aug 0 , 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg		0.5		
T RH C C10	20	mg kg		20		
T RH C C10 less BT EX[N0] F1	20	mg kg		20		
T RH C10 C1	50	mg kg		50		
T RH C10 C1 less Naphthalene[N01] F2	50	mg kg		50		
T RH C1 C	100	mg kg		100		
T RH C C 0	100	mg kg		100		
T RH C10 C 0 total	100	mg kg		100		
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg		20		
T RH C10 C1	20	mg kg		20		
T RH C15 C28	50	mg kg		50		
T RH C2 C	50	mg kg		50		
T RH C10 T otal	50	mg kg		50		
B TEX						
Ben ene	0.1	mg kg		0.1		
T oluene	0.1	mg kg		0.1		
Ethylben ene	0.1	mg kg		0.1		
m p X ylenes	0.2	mg kg		0.2		
o X ylene	0.1	mg kg		0.1		
X ylenes T otal	0.	mg kg		0.		
Bromofluoroben ene surr.	1			111		
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg		0.5		.
Ben o a pyrene T EQ medium bound	0.5	mg kg		0.		.
Ben o a pyrene T EQ upper bound	0.5	mg kg		1.2		.
Acenaphthene	0.5	mg kg		0.5		0.5
Acenaphthylene	0.5	mg kg		0.5		0.
Anthracene	0.5	mg kg		0.5		1.5
Ben a anthracene	0.5	mg kg		0.5		2.
Ben o a pyrene	0.5	mg kg		0.5		.8
Ben o b fluoranthene	0.5	mg kg		0.5		.
Ben o g.h.i perylene	0.5	mg kg		0.5		2.2
Ben o k fluoranthene	0.5	mg kg		0.5		.1
Chrysene	0.5	mg kg		0.5		.
Diben a.h anthracene	0.5	mg kg		0.5		1.
Fluoranthene	0.5	mg kg		0.5		.1
Fluorene	0.5	mg kg		0.5		0.
Indeno 1.2. cd pyrene	0.5	mg kg		0.5		2.
Naphthalene	0.5	mg kg		0.5		0.5
Phenanthrene	0.5	mg kg		0.5		.
Pyrene	0.5	mg kg		0.5		.2
T otal PAH	0.5	mg kg		0.5		.1
2 Fluorobiphenyl surr.	1			10		111
p T erphenyl d1 surr.	1			1 1		108

Client Sample ID			SB 11/ .0	SB 14/0.2	SB 14/0.	SB 14/1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16424	S1 Au1642	S1 Au16426	S1 Au16427
Date Sampled			Aug 0 , 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Organochlorine Pesticides						
Chlordanes T otal	0.1	mg kg	0.1		0.1	
. DDD	0.05	mg kg	0.05		0.05	
. DDE	0.05	mg kg	0.05		0.05	
. DDT	0.05	mg kg	0.05		0.05	
a BHC	0.05	mg kg	0.05		0.05	
Aldrin	0.05	mg kg	0.05		0.05	
b BHC	0.05	mg kg	0.05		0.05	
d BHC	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 BHC 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	
Hexachloroben ene	0.05	mg kg	0.05		0.05	
M ethoxychlor	0.05	mg kg	0.05		0.05	
T oxaphene	1	mg kg	1		1	
Aldrin and Dieldrin T otal	0.05	mg kg	0.05		0.05	
DDT DDE DDD T otal	0.05	mg kg	0.05		0.05	
V ic EPA IWRG 21 O CP T otal	0.1	mg kg	0.1		0.1	
V ic EPA IWRG 21 O ther O CP T otal	0.1	mg kg	0.1		0.1	
Dibutylchlorendate surr.	1		81		80	
T etrachloro m xylene surr.	1		11		101	
Organophosphorus Pesticides						
A inphos 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	
Dia inon	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	
M alathion	0.2	mg kg	0.2		0.2	
M erphos	0.2	mg kg	0.2		0.2	

eurofins | mgt

Client Sample ID			SB 11/ .0	SB 14/0.2	SB 14/0.	SB 14/1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16424	S1 Au1642	S1 Au16426	S1 Au16427
Date Sampled			Aug 0 , 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Organophosphorus Pesticides						
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	
O methoate	2	mg kg	2		2	
Phorate	0.2	mg kg	0.2		0.2	
Pirimiphos methyl	0.2	mg kg	0.2		0.2	
Pyra ophos	0.2	mg kg	0.2		0.2	
Ronnel	0.2	mg kg	0.2		0.2	
T erbufos	0.2	mg kg	0.2		0.2	
T etrachlorvinphos	0.2	mg kg	0.2		0.2	
T okuthion	0.2	mg kg	0.2		0.2	
T richloronate	0.2	mg kg	0.2		0.2	
T riphenylphosphate surr.	1		110		12	
Polychlorinated B iphenyls						
Aroclor 101	0.1	mg kg	0.1		0.1	
Aroclor 1221	0.1	mg kg	0.1		0.1	
Aroclor 12 2	0.1	mg kg	0.1		0.1	
Aroclor 12 2	0.1	mg kg	0.1		0.1	
Aroclor 12 8	0.1	mg kg	0.1		0.1	
Aroclor 125	0.1	mg kg	0.1		0.1	
Aroclor 12 0	0.1	mg kg	0.1		0.1	
T otal PCB	0.1	mg kg	0.1		0.1	
Dibutylchlorendate surr.	1		81		80	
T etrachloro m xylene surr.	1		11		101	
Clay	1					2.
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS cm				120
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH nits				.5
T otal O rganic Carbon	0.1					2.
Cation Exchange Capacity	0.05	meq 100g				21
Iron	0.01					2.
Moisture	1		1	.	.1	11
Heavy Metals						
Arsenic	2	mg kg		2		.
Cadmium	0.	mg kg		0.		1.0
Chromium	5	mg kg		5		
Copper	5	mg kg		5		110
Iron	20	mg kg				2 000
Lead	5	mg kg		5		10
Mercury	0.1	mg kg		0.1		0.5
Nickel	5	mg kg		5		12
Inc	5	mg kg		1		850

Client Sample ID			SB 14/2.	SB 14/3.	SB 14/10.0	SB 10/0.
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1642	S1 Au1642	S1 Au16430	S1 Au16432
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg			0.5	
T RH C C10	20	mg kg			20	
T RH C C10 less BT EX[N0] F1	20	mg kg			20	
T RH C10 C1	50	mg kg			50	
T RH C10 C1 less Naphthalene[N01] F2	50	mg kg			50	
T RH C1 C	100	mg kg			100	
T RH C C 0	100	mg kg			100	
T RH C10 C 0 total	100	mg kg			100	
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg			20	
T RH C10 C1	20	mg kg			20	
T RH C15 C28	50	mg kg			50	
T RH C2 C	50	mg kg			50	
T RH C10 T otal	50	mg kg			50	
B TEX						
Ben ene	0.1	mg kg			0.1	
T oluene	0.1	mg kg			0.1	
Ethylben ene	0.1	mg kg			0.1	
m p X ylenes	0.2	mg kg			0.2	
o X ylene	0.1	mg kg			0.1	
X ylenes T otal	0.	mg kg			0.	
Bromofluoroben ene surr.	1				1 2	
V olatile Organics						
1.1 Dichloroethane	0.5	mg kg	0.5			
1.1 Dichloroethene	0.5	mg kg	0.5			
1.1.1 T richloroethane	0.5	mg kg	0.5			
1.1.1.2 T etrachloroethane	0.5	mg kg	0.5			
1.1.2 T richloroethane	0.5	mg kg	0.5			
1.1.2.2 T etrachloroethane	0.5	mg kg	0.5			
1.2 Dibromoethane	0.5	mg kg	0.5			
1.2 Dichloroben ene	0.5	mg kg	0.5			
1.2 Dichloroethane	0.5	mg kg	0.5			
1.2 Dichloropropane	0.5	mg kg	0.5			
1.2. T richloropropane	0.5	mg kg	0.5			
1.2. T rimethylben ene	0.5	mg kg	0.5			
1. Dichloroben ene	0.5	mg kg	0.5			
1. Dichloropropane	0.5	mg kg	0.5			
1. .5 T rimethylben ene	0.5	mg kg	0.5			
1. Dichloroben ene	0.5	mg kg	0.5			
2 Butanone MEK	0.5	mg kg	0.5			
2 Propanone Acetone	0.5	mg kg	0.5			
Chlorotoluene	0.5	mg kg	0.5			
Methyl 2 pentanone MIBK	0.5	mg kg	0.5			
Allyl chloride	0.5	mg kg	0.5			
Ben ene	0.1	mg kg	0.1			
Bromoben ene	0.5	mg kg	0.5			
Bromochloromethane	0.5	mg kg	0.5			
Bromodichloromethane	0.5	mg kg	0.5			
Bromoform	0.5	mg kg	0.5			

eurofins | mgt

Client Sample ID			SB 14/2.	SB 14/3.	SB 14/10.0	SB 10/0.
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1642	S1 Au1642	S1 Au16430	S1 Au16432
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
V olatile Organics						
Bromomethane	0.5	mg kg	0.5			
Carbon disulfide	0.5	mg kg	0.5			
Carbon T etrachloride	0.5	mg kg	0.5			
Chloroben ene	0.5	mg kg	0.5			
Chloroethane	0.5	mg kg	0.5			
Chloroform	0.5	mg kg	0.5			
Chloromethane	0.5	mg kg	0.5			
cis 1.2 Dichloroethene	0.5	mg kg	0.5			
cis 1. Dichloropropene	0.5	mg kg	0.5			
Dibromochloromethane	0.5	mg kg	0.5			
Dibromomethane	0.5	mg kg	0.5			
Dichlorodifluoromethane	0.5	mg kg	0.5			
Ethylben ene	0.1	mg kg	0.1			
Iodomethane	0.5	mg kg	0.5			
Isopropyl ben ene Cumene	0.5	mg kg	0.5			
m p X ylenes	0.2	mg kg	0.2			
M ethylene Chloride	0.5	mg kg	0.5			
o X ylene	0.1	mg kg	0.1			
Styrene	0.5	mg kg	0.5			
T etrachloroethene	0.5	mg kg	0.5			
T oluene	0.1	mg kg	0.1			
trans 1.2 Dichloroethene	0.5	mg kg	0.5			
trans 1. Dichloropropene	0.5	mg kg	0.5			
T richloroethene	0.5	mg kg	0.5			
T richlorofluoromethane	0.5	mg kg	0.5			
V inyl chloride	0.5	mg kg	0.5			
X ylenes T otal	0.	mg kg	0.			
T otal MAH	0.5	mg kg	0.5			
V ic EPA IWRG 21 CHC T otal	0.5	mg kg	0.5			
V ic EPA IWRG 21 O ther CHC T otal	0.5	mg kg	0.5			
Bromofluoroben ene surr.	1		111			
T oluene d8 surr.	1		10			
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg			0.5	
Ben o a pyrene T EQ medium bound	0.5	mg kg			0.	
Ben o a pyrene T EQ upper bound	0.5	mg kg			1.2	
Acenaphthene	0.5	mg kg			0.5	
Acenaphthylene	0.5	mg kg			0.5	
Anthracene	0.5	mg kg			0.5	
Ben a anthracene	0.5	mg kg			0.5	
Ben o a pyrene	0.5	mg kg			0.5	
Ben o b fluoranthene	0.5	mg kg			0.5	
Ben o g.h.i perylene	0.5	mg kg			0.5	
Ben o k fluoranthene	0.5	mg kg			0.5	
Chrysene	0.5	mg kg			0.5	
Diben a.h anthracene	0.5	mg kg			0.5	
Fluoranthene	0.5	mg kg			0.5	
Fluorene	0.5	mg kg			0.5	
Indeno 1.2. cd pyrene	0.5	mg kg			0.5	

Client Sample ID			SB 14/2.	SB 14/3.	SB 14/10.0	SB 10/0.
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1642	S1 Au1642	S1 Au16430	S1 Au16432
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Polycyclic Aromatic Hydrocarbons						
Naphthalene	0.5	mg kg			0.5	
Phenanthrene	0.5	mg kg			0.5	
Pyrene	0.5	mg kg			0.5	
T otal PAH	0.5	mg kg			0.5	
2 Fluorobiphenyl surr.	1				8	
p T erphenyl d1 surr.	1				2	
Organochlorine Pesticides						
Chlordanes T otal	0.1	mg kg		0.1	0.1	0.1
. DDD	0.05	mg kg		0.05	0.05	0.05
. DDE	0.05	mg kg		0.05	0.05	0.05
. DDT	0.05	mg kg		0.05	0.05	0.05
a BHC	0.05	mg kg		0.05	0.05	0.05
Aldrin	0.05	mg kg		0.05	0.05	0.05
b BHC	0.05	mg kg		0.05	0.05	0.05
d BHC	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 BHC 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
Hexachloroben ene	0.05	mg kg		0.05	0.05	0.05
M ethoxychlor	0.05	mg kg		0.05	0.05	0.05
T oxaphene	1	mg kg		1	1	1
Aldrin and Dieldrin T otal	0.05	mg kg		0.05	0.05	0.05
DDT DDE DDD T otal	0.05	mg kg		0.05	0.05	0.05
V ic EPA IWRG 21 O CP T otal	0.1	mg kg		0.1	0.1	0.1
V ic EPA IWRG 21 O ther O CP T otal	0.1	mg kg		0.1	0.1	0.1
Dibutylchlorendate surr.	1			5		100
T etrachloro m xylene surr.	1			2		81
Organophosphorus Pesticides						
A inphos methyl	0.2	mg kg		0.2	0.2	0.2
Bolstar	0.2	mg kg		0.2	0.2	0.2
Chlorfenvinphos	0.2	mg kg		0.2	0.2	0.2
Chlorpyrifos	0.2	mg kg		0.2	0.2	0.2
Chlorpyrifos methyl	0.2	mg kg		0.2	0.2	0.2
Coumaphos	2	mg kg		2	2	2
Demeton S	0.2	mg kg		0.2	0.2	0.2
Demeton O	0.2	mg kg		0.2	0.2	0.2
Dia inon	0.2	mg kg		0.2	0.2	0.2
Dichlorvos	0.2	mg kg		0.2	0.2	0.2
Dimethoate	0.2	mg kg		0.2	0.2	0.2
Disulfoton	0.2	mg kg		0.2	0.2	0.2
EPN	0.2	mg kg		0.2	0.2	0.2
Ethion	0.2	mg kg		0.2	0.2	0.2

Client Sample ID			SB 14/2.	SB 14/3.	SB 14/10.0	SB 10/0.
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1642	S1 Au1642	S1 Au16430	S1 Au16432
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Organophosphorus Pesticides						
Ethoprop	0.2	mg kg		0.2	0.2	0.2
Ethyl parathion	0.2	mg kg		0.2	0.2	0.2
Fenitrothion	0.2	mg kg		0.2	0.2	0.2
Fensulfothion	0.2	mg kg		0.2	0.2	0.2
Fenthion	0.2	mg kg		0.2	0.2	0.2
M alathion	0.2	mg kg		0.2	0.2	0.2
M erphos	0.2	mg kg		0.2	0.2	0.2
M ethyl parathion	0.2	mg kg		0.2	0.2	0.2
M evinphos	0.2	mg kg		0.2	0.2	0.2
M onocrotophos	2	mg kg		2	2	2
Naled	0.2	mg kg		0.2	0.2	0.2
O methoate	2	mg kg		2	2	2
Phorate	0.2	mg kg		0.2	0.2	0.2
Pirimiphos methyl	0.2	mg kg		0.2	0.2	0.2
Pyra ophos	0.2	mg kg		0.2	0.2	0.2
Ronnel	0.2	mg kg		0.2	0.2	0.2
T erbufos	0.2	mg kg		0.2	0.2	0.2
T etrachlorvinphos	0.2	mg kg		0.2	0.2	0.2
T okuthion	0.2	mg kg		0.2	0.2	0.2
T richloronate	0.2	mg kg		0.2	0.2	0.2
T riphenylphosphate surr.	1			10	11	12
Polychlorinated B iphenyls						
Aroclor 101	0.1	mg kg		0.1	0.1	0.1
Aroclor 1221	0.1	mg kg		0.1	0.1	0.1
Aroclor 12 2	0.1	mg kg		0.1	0.1	0.1
Aroclor 12 2	0.1	mg kg		0.1	0.1	0.1
Aroclor 12 8	0.1	mg kg		0.1	0.1	0.1
Aroclor 125	0.1	mg kg		0.1	0.1	0.1
Aroclor 12 0	0.1	mg kg		0.1	0.1	0.1
T otal PCB	0.1	mg kg		0.1	0.1	0.1
Dibutylchlorendate surr.	1			5		100
T etrachloro m xylene surr.	1			2		81
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH nits				8.2
M oisture	1		.5	1	18	.0
Heavy Metals						
Arsenic	2	mg kg			2	2
Cadmium	0.	mg kg			0.	0.
Chromium	5	mg kg			5	5
Copper	5	mg kg			5	.
Lead	5	mg kg			5	12
M ercury	0.1	mg kg			0.1	0.1
Nickel	5	mg kg			5	.
inc	5	mg kg			5	110

eurofins | mgt

Client Sample ID			SB 17/0.	SB 17/1.0	SB 17/6.0	SB 17/7.
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16433	S1 Au16434	S1 Au1643	S1 Au16436
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg	0.5			0.5
T RH C C10	20	mg kg	20			20
T RH C C10 less BT EX[N0] F1	20	mg kg	20			20
T RH C10 C1	50	mg kg	50			50
T RH C10 C1 less Naphthalene[N01] F2	50	mg kg	50			50
T RH C1 C	100	mg kg	100			100
T RH C C 0	100	mg kg	100			100
T RH C10 C 0 total	100	mg kg	100			100
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg	20			20
T RH C10 C1	20	mg kg	20			20
T RH C15 C28	50	mg kg	50			50
T RH C2 C	50	mg kg	50			50
T RH C10 T otal	50	mg kg	50			50
B TEX						
Ben ene	0.1	mg kg	0.1			0.1
T oluene	0.1	mg kg	0.1			0.1
Ethylben ene	0.1	mg kg	0.1			0.1
m p X ylenes	0.2	mg kg	0.2			0.2
o X ylene	0.1	mg kg	0.1			0.1
X ylenes T otal	0.	mg kg	0.			0.
Bromofluoroben ene surr.	1		1			0
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg	0.5			0.5
Ben o a pyrene T EQ medium bound	0.5	mg kg	0.			0.
Ben o a pyrene T EQ 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
Ben a anthracene	0.5	mg kg	0.5			0.5
Ben o a pyrene	0.5	mg kg	0.5			0.5
Ben o b fluoranthene	0.5	mg kg	0.5			0.5
Ben o g.h.i perylene	0.5	mg kg	0.5			0.5
Ben o k fluoranthene	0.5	mg kg	0.5			0.5
Chrysene	0.5	mg kg	0.5			0.5
Diben 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. 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
T otal PAH	0.5	mg kg	0.5			0.5
2 Fluorobiphenyl surr.	1		110			11
p T erphenyl d1 surr.	1		11			1

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled T est Reference	LO R	nit	SB 17/0. Soil S1 Au16433 Aug 10, 201	SB 17/1.0 Soil S1 Au16434 Aug 10, 201	SB 17/6.0 Soil S1 Au1643 Aug 10, 201	SB 17/7. Soil S1 Au16436 Aug 10, 201
Organochlorine Pesticides						
Chlordanes T otal	0.1	mg kg		0.1		
. DDD	0.05	mg kg		0.05		
. DDE	0.05	mg kg		0.05		
. DDT	0.05	mg kg		0.05		
a BHC	0.05	mg kg		0.05		
Aldrin	0.05	mg kg		0.05		
b BHC	0.05	mg kg		0.05		
d BHC	0.05	mg kg		0.05		
Dieldrin	0.05	mg kg		0.05		
Endosulfan I	0.05	mg kg		0.05		
Endosulfan II	0.05	mg kg		0.05		
Endosulfan sulphate	0.05	mg kg		0.05		
Endrin	0.05	mg kg		0.05		
Endrin aldehyde	0.05	mg kg		0.05		
Endrin ketone	0.05	mg kg		0.05		
g BHC Lindane	0.05	mg kg		0.05		
Heptachlor	0.05	mg kg		0.05		
Heptachlor epoxide	0.05	mg kg		0.05		
Hexachloroben ene	0.05	mg kg		0.05		
M ethoxychlor	0.05	mg kg		0.05		
T oxaphene	1	mg kg		1		
Aldrin and Dieldrin T otal	0.05	mg kg		0.05		
DDT DDE DDD T otal	0.05	mg kg		0.05		
V ic EPA IWRG 21 O CP T otal	0.1	mg kg		0.1		
V ic EPA IWRG 21 O ther O CP T otal	0.1	mg kg		0.1		
Dibutylchlorendate surr.	1			121		
T etrachloro m xylene surr.	1			11		
Organophosphorus Pesticides						
A inphos 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		
Dia inon	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		
M alathion	0.2	mg kg		0.2		
M erphos	0.2	mg kg		0.2		

Client Sample ID			SB 17/0.	SB 17/1.0	SB 17/6.0	SB 17/7.
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16433	S1 Au16434	S1 Au1643	S1 Au16436
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg kg		0.2		
Mevinphos	0.2	mg kg		0.2		
Monocrotophos	2	mg kg		2		
Naled	0.2	mg kg		0.2		
O methoate	2	mg kg		2		
Phorate	0.2	mg kg		0.2		
Pirimiphos methyl	0.2	mg kg		0.2		
Pyra ophos	0.2	mg kg		0.2		
Ronnel	0.2	mg kg		0.2		
T erbufos	0.2	mg kg		0.2		
T etrachlorvinphos	0.2	mg kg		0.2		
T okuthion	0.2	mg kg		0.2		
T richloronate	0.2	mg kg		0.2		
T riphenylphosphate surr.	1			12		
Polychlorinated B iphenyls						
Aroclor 101	0.1	mg kg		0.1		
Aroclor 1221	0.1	mg kg		0.1		
Aroclor 12 2	0.1	mg kg		0.1		
Aroclor 12 2	0.1	mg kg		0.1		
Aroclor 12 8	0.1	mg kg		0.1		
Aroclor 125	0.1	mg kg		0.1		
Aroclor 12 0	0.1	mg kg		0.1		
T otal PCB	0.1	mg kg		0.1		
Dibutylchlorendate surr.	1			121		
T etrachloro m xylene surr.	1			11		
Phenols (Halogenated)						
2 Chlorophenol	0.5	mg kg				0.5
2. Dichlorophenol	0.5	mg kg				0.5
2. .5 T richlorophenol	1	mg kg				1
2. . T richlorophenol	1.0	mg kg				1
2. Dichlorophenol	0.5	mg kg				0.5
Chloro methylphenol	1.0	mg kg				1
Pentachlorophenol	1.0	mg kg				1
T etrachlorophenols T otal	1.0	mg kg				1
T otal Halogenated Phenol	1	mg kg				1
Phenols (non Halogenated)						
2 Cyclohexyl . dinitrophenol	20	mg kg				20
2 Methyl . dinitrophenol	5	mg kg				5
2 Methylphenol o Cresol	0.2	mg kg				0.2
2 Nitrophenol	1.0	mg kg				1
2. Dimethylphenol	0.5	mg kg				0.5
2. Dinitrophenol	5	mg kg				5
Methylphenol m p Cresol	0.	mg kg				0.
Nitrophenol	5	mg kg				5
Dinoseb	20	mg kg				20
Phenol	0.5	mg kg				0.5
T otal Non Halogenated Phenol	20	mg kg				20
Phenol d surr.	1					11

eurofins | mgt

Client Sample ID			SB 17/0.	SB 17/1.0	SB 17/6.0	SB 17/7.
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16433	S1 Au16434	S1 Au1643	S1 Au16436
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH nits			.	
Moisture	1		8.5	15	1	1
Heavy Metals						
Arsenic	2	mg kg	.			2
Cadmium	0.	mg kg	0.			0.
Chromium	5	mg kg	8.0			5
Copper	5	mg kg	.5			5
Lead	5	mg kg	1			11
Mercury	0.1	mg kg	0.1			0.1
Nickel	5	mg kg	.5			5
inc	5	mg kg	250			1

Client Sample ID			SB 17/ .0	SB 1 /0.2	SB 1 /0.6	SB 1 /1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16437	S1 Au1643	S1 Au1643	S1 Au16440
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg				0.5
T RH C C10	20	mg kg				20
T RH C C10 less BT EX[N0] F1	20	mg kg				20
T RH C10 C1	50	mg kg				210
T RH C10 C1 less Naphthalene[N01] F2	50	mg kg				210
T RH C1 C	100	mg kg				2000
T RH C C 0	100	mg kg				810
T RH C10 C 0 total	100	mg kg				020
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg				20
T RH C10 C1	20	mg kg				150
T RH C15 C28	50	mg kg				1100
T RH C2 C	50	mg kg				1100
T RH C10 T otal	50	mg kg				2 50
B TEX						
Ben ene	0.1	mg kg				0.1
T oluene	0.1	mg kg				0.1
Ethylben ene	0.1	mg kg				0.1
m p X ylenes	0.2	mg kg				0.2
o X ylene	0.1	mg kg				0.1
X ylenes T otal	0.	mg kg				0.
Bromofluoroben ene surr.	1					11
V olatile Organics						
1.1 Dichloroethane	0.5	mg kg			0.5	
1.1 Dichloroethene	0.5	mg kg			0.5	
1.1.1 T richloroethane	0.5	mg kg			0.5	
1.1.1.2 T etrachloroethane	0.5	mg kg			0.5	
1.1.2 T richloroethane	0.5	mg kg			0.5	
1.1.2.2 T etrachloroethane	0.5	mg kg			0.5	
1.2 Dibromoethane	0.5	mg kg			0.5	

Client Sample ID			SB 17/ .0	SB 1 /0.2	SB 1 /0.6	SB 1 /1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16437	S1 Au1643	S1 Au1643	S1 Au16440
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
V olatile Organics						
1.2 Dichloroben ene	0.5	mg kg			0.5	
1.2 Dichloroethane	0.5	mg kg			0.5	
1.2 Dichloropropane	0.5	mg kg			0.5	
1.2. T richloropropane	0.5	mg kg			0.5	
1.2. T rimethylben ene	0.5	mg kg			0.5	
1. Dichloroben ene	0.5	mg kg			0.5	
1. Dichloropropane	0.5	mg kg			0.5	
1. .5 T rimethylben ene	0.5	mg kg			0.5	
1. Dichloroben ene	0.5	mg kg			0.5	
2 Butanone MEK	0.5	mg kg			0.5	
2 Propanone Acetone	0.5	mg kg			0.5	
Chlorotoluene	0.5	mg kg			0.5	
Methyl 2 pentanone MIBK	0.5	mg kg			0.5	
Allyl chloride	0.5	mg kg			0.5	
Ben ene	0.1	mg kg			0.1	
Bromoben ene	0.5	mg kg			0.5	
Bromochloromethane	0.5	mg kg			0.5	
Bromodichloromethane	0.5	mg kg			0.5	
Bromoform	0.5	mg kg			0.5	
Bromomethane	0.5	mg kg			0.5	
Carbon disulfide	0.5	mg kg			0.5	
Carbon T etrachloride	0.5	mg kg			0.5	
Chloroben ene	0.5	mg kg			0.5	
Chloroethane	0.5	mg kg			0.5	
Chloroform	0.5	mg kg			0.5	
Chloromethane	0.5	mg kg			0.5	
cis 1.2 Dichloroethene	0.5	mg kg			0.5	
cis 1. Dichloropropene	0.5	mg kg			0.5	
Dibromochloromethane	0.5	mg kg			0.5	
Dibromomethane	0.5	mg kg			0.5	
Dichlorodifluoromethane	0.5	mg kg			0.5	
Ethylben ene	0.1	mg kg			0.1	
Iodomethane	0.5	mg kg			0.5	
Isopropyl ben ene Cumene	0.5	mg kg			0.5	
m p X ylenes	0.2	mg kg			0.2	
Methylene Chloride	0.5	mg kg			0.5	
o X ylene	0.1	mg kg			0.1	
Styrene	0.5	mg kg			0.5	
T etrachloroethene	0.5	mg kg			0.5	
T oluene	0.1	mg kg			0.1	
trans 1.2 Dichloroethene	0.5	mg kg			0.5	
trans 1. Dichloropropene	0.5	mg kg			0.5	
T richloroethene	0.5	mg kg			0.5	
T richlorofluoromethane	0.5	mg kg			0.5	
V inyl chloride	0.5	mg kg			0.5	
X ylenes T otal	0.	mg kg			0.	
T otal MAH	0.5	mg kg			0.5	
V ic EPA IWRG 21 CHC T otal	0.5	mg kg			0.5	
V ic EPA IWRG 21 O ther CHC T otal	0.5	mg kg			0.5	

Client Sample ID			SB 17/ .0	SB 1 /0.2	SB 1 /0.6	SB 1 /1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16437	S1 Au1643	S1 Au1643	S1 Au16440
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
V olatile Organics						
Bromofluoroben ene surr.	1				108	
T oluene d8 surr.	1				10	
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg		0.5		0.5
Ben o a pyrene T EQ medium bound	0.5	mg kg		0.		2.
Ben o a pyrene T EQ upper bound	0.5	mg kg		1.2		.8
Acenaphthene	0.5	mg kg		0.5		2
Acenaphthylene	0.5	mg kg		0.5		2
Anthracene	0.5	mg kg		0.5		2
Ben a anthracene	0.5	mg kg		0.5		2
Ben o a pyrene	0.5	mg kg		0.5		2
Ben o b fluoranthene	0.5	mg kg		0.5		2
Ben o g.h.i perylene	0.5	mg kg		0.5		2
Ben o k fluoranthene	0.5	mg kg		0.5		2
Chrysene	0.5	mg kg		0.5		2
Diben a.h anthracene	0.5	mg kg		0.5		2
Fluoranthene	0.5	mg kg		0.5		2
Fluorene	0.5	mg kg		0.5		2
Indeno 1.2. cd pyrene	0.5	mg kg		0.5		2
Naphthalene	0.5	mg kg		0.5		2
Phenanthrene	0.5	mg kg		0.5		2
Pyrene	0.5	mg kg		0.5		2
T otal PAH	0.5	mg kg		0.5		2
2 Fluorobiphenyl surr.	1					11
p T erphenyl d1 surr.	1			10		1
Organochlorine Pesticides						
Chlordanes T otal	0.1	mg kg	0.1	0.1		
. DDD	0.05	mg kg	0.05	0.05		
. DDE	0.05	mg kg	0.05	0.05		
. DDT	0.05	mg kg	0.05	0.05		
a BHC	0.05	mg kg	0.05	0.05		
Aldrin	0.05	mg kg	0.05	0.05		
b BHC	0.05	mg kg	0.05	0.05		
d BHC	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 BHC 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		
Hexachloroben ene	0.05	mg kg	0.05	0.05		
Methoxychlor	0.05	mg kg	0.05	0.05		
T oxaphene	1	mg kg	1	1		
Aldrin and Dieldrin T otal	0.05	mg kg	0.05	0.05		
DDT DDE DDD T otal	0.05	mg kg	0.05	0.05		

Client Sample ID			SB 17/ .0	SB 1 /0.2	SB 1 /0.6	SB 1 /1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16437	S1 Au1643	S1 Au1643	S1 Au16440
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Organochlorine Pesticides						
V ic EPA IWRG 21 O CP T otal	0.1	mg kg	0.1	0.1		
V ic EPA IWRG 21 O ther O CP T otal	0.1	mg kg	0.1	0.1		
Dibutylchlorendate surr.	1		11	11		
T etrachloro m xylene surr.	1		11	118		
Organophosphorus Pesticides						
A inphos 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		
Dia inon	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		
M alathion	0.2	mg kg	0.2	0.2		
M erphos	0.2	mg kg	0.2	0.2		
M ethyl parathion	0.2	mg kg	0.2	0.2		
M evinphos	0.2	mg kg	0.2	0.2		
M onocrotophos	2	mg kg	2	2		
Naled	0.2	mg kg	0.2	0.2		
O methoate	2	mg kg	2	2		
Phorate	0.2	mg kg	0.2	0.2		
Pirimiphos methyl	0.2	mg kg	0.2	0.2		
Pyra ophos	0.2	mg kg	0.2	0.2		
Ronnel	0.2	mg kg	0.2	0.2		
T erbufos	0.2	mg kg	0.2	0.2		
T etrachlorvinphos	0.2	mg kg	0.2	0.2		
T okuthion	0.2	mg kg	0.2	0.2		
T richloronate	0.2	mg kg	0.2	0.2		
T riphenylphosphate surr.	1		11	110		
Polychlorinated B iphenyls						
Aroclor 101	0.1	mg kg	0.1	0.1		
Aroclor 1221	0.1	mg kg	0.1	0.1		
Aroclor 12 2	0.1	mg kg	0.1	0.1		
Aroclor 12 2	0.1	mg kg	0.1	0.1		
Aroclor 12 8	0.1	mg kg	0.1	0.1		
Aroclor 125	0.1	mg kg	0.1	0.1		
Aroclor 12 0	0.1	mg kg	0.1	0.1		
T otal PCB	0.1	mg kg	0.1	0.1		

Client Sample ID			SB 17/ .0	SB 1 /0.2	SB 1 /0.6	SB 1 /1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16437	S1 Au1643	S1 Au1643	S1 Au16440
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Polychlorinated B iphenyls						
Dibutylchlorendate surr.	1		11	11		
T etrachloro m xylene surr.	1		11	118		
Phenols (Halogenated)						
2 Chlorophenol	0.5	mg kg				2
2. Dichlorophenol	0.5	mg kg				2
2. .5 T richlorophenol	1	mg kg				5
2. . T richlorophenol	1.0	mg kg				5
2. Dichlorophenol	0.5	mg kg				2
Chloro methylphenol	1.0	mg kg				5
Pentachlorophenol	1.0	mg kg				5
T etrachlorophenols T otal	1.0	mg kg				10
T otal Halogenated Phenol	1	mg kg				5
Phenols (non Halogenated)						
2 Cyclohexyl . dinitrophenol	20	mg kg				50
2 Methyl . dinitrophenol	5	mg kg				20
2 Methylphenol o Cresol	0.2	mg kg				2
2 Nitrophenol	1.0	mg kg				5
2. Dimethylphenol	0.5	mg kg				2
2. Dinitrophenol	5	mg kg				20
Methylphenol m p Cresol	0.	mg kg				5
Nitrophenol	5	mg kg				20
Dinoseb	20	mg kg				50
Phenol	0.5	mg kg				2
T otal Non Halogenated Phenol	20	mg kg				50
Phenol d surr.	1					
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH nits		8.		
Moisture	1		1	.	.0	.8
Heavy Metals						
Arsenic	2	mg kg		2		.
Cadmium	0.	mg kg		0.		0.
Chromium	5	mg kg		5		21
Copper	5	mg kg		5		
Lead	5	mg kg		8.		20
Mercury	0.1	mg kg		0.1		0.1
Nickel	5	mg kg		5		21
Inc	5	mg kg		.		1000

Client Sample ID			SB 1 /0.	SB 1 /1.	SB 1 /2.	SB 1 /3.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16441	S1 Au16442	S1 Au16443	S1 Au16444
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg		0.5		0.5
T RH C C10	20	mg kg		20		20
T RH C C10 less BT EX[N0] F1	20	mg kg		20		20
T RH C10 C1	50	mg kg		50		50
T RH C10 C1 less Naphthalene[N01] F2	50	mg kg		50		50
T RH C1 C	100	mg kg		1 0		100
T RH C C 0	100	mg kg		100		100
T RH C10 C 0 total	100	mg kg		1 0		100
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg		20		20
T RH C10 C1	20	mg kg		20		20
T RH C15 C28	50	mg kg		1		50
T RH C2 C	50	mg kg				50
T RH C10 T otal	50	mg kg		15		50
B TEX						
Ben ene	0.1	mg kg		0.1		0.1
T oluene	0.1	mg kg		0.1		0.1
Ethylben ene	0.1	mg kg		0.1		0.1
m p X ylenes	0.2	mg kg		0.2		0.2
o X ylene	0.1	mg kg		0.1		0.1
X ylenes T otal	0.	mg kg		0.		0.
Bromofluoroben ene surr.	1			11		11
V olatile Organics						
1.1 Dichloroethane	0.5	mg kg			0.5	
1.1 Dichloroethene	0.5	mg kg			0.5	
1.1.1 T richloroethane	0.5	mg kg			0.5	
1.1.1.2 T etrachloroethane	0.5	mg kg			0.5	
1.1.2 T richloroethane	0.5	mg kg			0.5	
1.1.2.2 T etrachloroethane	0.5	mg kg			0.5	
1.2 Dibromoethane	0.5	mg kg			0.5	
1.2 Dichloroben ene	0.5	mg kg			0.5	
1.2 Dichloroethane	0.5	mg kg			0.5	
1.2 Dichloropropane	0.5	mg kg			0.5	
1.2. T richloropropane	0.5	mg kg			0.5	
1.2. T rimethylben ene	0.5	mg kg			0.5	
1. Dichloroben ene	0.5	mg kg			0.5	
1. Dichloropropane	0.5	mg kg			0.5	
1. .5 T rimethylben ene	0.5	mg kg			0.5	
1. Dichloroben ene	0.5	mg kg			0.5	
2 Butanone MEK	0.5	mg kg			0.5	
2 Propanone Acetone	0.5	mg kg			0.5	
Chlorotoluene	0.5	mg kg			0.5	
Methyl 2 pentanone MIBK	0.5	mg kg			0.5	
Allyl chloride	0.5	mg kg			0.5	
Ben ene	0.1	mg kg			0.1	
Bromoben ene	0.5	mg kg			0.5	
Bromochloromethane	0.5	mg kg			0.5	
Bromodichloromethane	0.5	mg kg			0.5	
Bromoform	0.5	mg kg			0.5	

Client Sample ID			SB 1 /0.	SB 1 /1.	SB 1 /2.	SB 1 /3.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16441	S1 Au16442	S1 Au16443	S1 Au16444
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
V olatile Organics						
Bromomethane	0.5	mg kg			0.5	
Carbon disulfide	0.5	mg kg			0.5	
Carbon T etrachloride	0.5	mg kg			0.5	
Chloroben ene	0.5	mg kg			0.5	
Chloroethane	0.5	mg kg			0.5	
Chloroform	0.5	mg kg			0.5	
Chloromethane	0.5	mg kg			0.5	
cis 1.2 Dichloroethene	0.5	mg kg			0.5	
cis 1. Dichloropropene	0.5	mg kg			0.5	
Dibromochloromethane	0.5	mg kg			0.5	
Dibromomethane	0.5	mg kg			0.5	
Dichlorodifluoromethane	0.5	mg kg			0.5	
Ethylben ene	0.1	mg kg			0.1	
Iodomethane	0.5	mg kg			0.5	
Isopropyl ben ene Cumene	0.5	mg kg			0.5	
m p X ylenes	0.2	mg kg			0.2	
M ethylene Chloride	0.5	mg kg			0.5	
o X ylene	0.1	mg kg			0.1	
Styrene	0.5	mg kg			0.5	
T etrachloroethene	0.5	mg kg			0.5	
T oluene	0.1	mg kg			0.1	
trans 1.2 Dichloroethene	0.5	mg kg			0.5	
trans 1. Dichloropropene	0.5	mg kg			0.5	
T richloroethene	0.5	mg kg			0.5	
T richlorofluoromethane	0.5	mg kg			0.5	
V inyl chloride	0.5	mg kg			0.5	
X ylenes T otal	0.	mg kg			0.	
T otal MAH	0.5	mg kg			0.5	
V ic EPA IWRG 21 CHC T otal	0.5	mg kg			0.5	
V ic EPA IWRG 21 O ther CHC T otal	0.5	mg kg			0.5	
Bromofluoroben ene surr.	1				11	
T oluene d8 surr.	1				110	
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg	0.8	1.1		0.5
Ben o a pyrene T EQ medium bound	0.5	mg kg	1.1	1.		0.
Ben o a pyrene T EQ upper bound	0.5	mg kg	1.	1.		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
Ben a anthracene	0.5	mg kg	0.	0.8		0.5
Ben o a pyrene	0.5	mg kg	0.	0.		0.5
Ben o b fluoranthene	0.5	mg kg	0.5	0.		0.5
Ben o g.h.i perylene	0.5	mg kg	0.	0.		0.5
Ben o k fluoranthene	0.5	mg kg	0.5	0.		0.5
Chrysene	0.5	mg kg	0.5	0.		0.5
Diben a.h anthracene	0.5	mg kg	0.5	0.5		0.5
Fluoranthene	0.5	mg kg	0.	1.5		0.5
Fluorene	0.5	mg kg	0.5	0.5		0.5
Indeno 1.2. cd pyrene	0.5	mg kg	0.5	0.5		0.5

Client Sample ID			SB 1 /0.	SB 1 /1.	SB 1 /2.	SB 1 /3.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16441	S1 Au16442	S1 Au16443	S1 Au16444
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Polycyclic Aromatic Hydrocarbons						
Naphthalene	0.5	mg kg	0.5	0.5		0.5
Phenanthrene	0.5	mg kg	0.	0.		0.5
Pyrene	0.5	mg kg	0.	1.5		0.5
T otal PAH	0.5	mg kg	.	8.		0.5
2 Fluorobiphenyl surr.	1		85	111		100
p T erphenyl d1 surr.	1		2	10		125
Organochlorine Pesticides						
Chlordanes T otal	0.1	mg kg	0.1		0.1	
. DDD	0.05	mg kg	0.05		0.05	
. DDE	0.05	mg kg	0.05		0.05	
. DDT	0.05	mg kg	0.05		0.05	
a BHC	0.05	mg kg	0.05		0.05	
Aldrin	0.05	mg kg	0.05		0.0	
b BHC	0.05	mg kg	0.05		0.05	
d BHC	0.05	mg kg	0.05		0.05	
Dieldrin	0.05	mg kg	0.05		0.2	
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 BHC 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	
Hexachloroben ene	0.05	mg kg	0.05		0.05	
M ethoxychlor	0.05	mg kg	0.05		0.05	
T oxaphene	1	mg kg	1		1	
Aldrin and Dieldrin T otal	0.05	mg kg	0.05		0. 1	
DDT DDE DDD T otal	0.05	mg kg	0.05		0.05	
V ic EPA IWRG 21 O CP T otal	0.1	mg kg	0.1		0. 1	
V ic EPA IWRG 21 O ther O CP T otal	0.1	mg kg	0.1		0.1	
Dibutylchlorendate surr.	1		10		112	
T etrachloro m xylene surr.	1				10	
Organophosphorus Pesticides						
A inphos 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	
Dia inon	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	

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Client Sample ID			SB 1 /0.	SB 1 /1.	SB 1 /2.	SB 1 /3.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16441	S1 Au16442	S1 Au16443	S1 Au16444
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Organophosphorus Pesticides						
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	
O methoate	2	mg kg	2		2	
Phorate	0.2	mg kg	0.2		0.2	
Pirimiphos methyl	0.2	mg kg	0.2		0.2	
Pyra ophos	0.2	mg kg	0.2		0.2	
Ronnel	0.2	mg kg	0.2		0.2	
T erbufos	0.2	mg kg	0.2		0.2	
T etrachlorvinphos	0.2	mg kg	0.2		0.2	
T okuthion	0.2	mg kg	0.2		0.2	
T richloronate	0.2	mg kg	0.2		0.2	
T riphenylphosphate surr.	1		8		10	
Polychlorinated B iphenyls						
Aroclor 101	0.1	mg kg	0.1		0.1	
Aroclor 1221	0.1	mg kg	0.1		0.1	
Aroclor 12 2	0.1	mg kg	0.1		0.1	
Aroclor 12 2	0.1	mg kg	0.1		0.1	
Aroclor 12 8	0.1	mg kg	0.1		0.1	
Aroclor 125	0.1	mg kg	0.1		0.1	
Aroclor 12 0	0.1	mg kg	0.1		0.1	
T otal PCB	0.1	mg kg	0.1		0.1	
Dibutylchlorendate surr.	1		10		112	
T etrachloro m xylene surr.	1				10	
Phenols (Halogenated)						
2 Chlorophenol	0.5	mg kg				0.5
2. Dichlorophenol	0.5	mg kg				0.5
2. .5 T richlorophenol	1	mg kg				1
2. . T richlorophenol	1.0	mg kg				1
2. Dichlorophenol	0.5	mg kg				0.5
Chloro methylphenol	1.0	mg kg				1
Pentachlorophenol	1.0	mg kg				1
T etrachlorophenols T otal	1.0	mg kg				1
T otal Halogenated Phenol	1	mg kg				1
Phenols (non Halogenated)						
2 Cyclohexyl . dinitrophenol	20	mg kg				20
2 Methyl . dinitrophenol	5	mg kg				5
2 Methylphenol o Cresol	0.2	mg kg				0.2
2 Nitrophenol	1.0	mg kg				1
2. Dimethylphenol	0.5	mg kg				0.5
2. Dinitrophenol	5	mg kg				5

eurofins | mgt

Client Sample ID			SB 1 /0.	SB 1 /1.	SB 1 /2.	SB 1 /3.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16441	S1 Au16442	S1 Au16443	S1 Au16444
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Phenols (non Halogenated)						
M ethylphenol m p Cresol	0.	mg kg				0.
Nitrophenol	5	mg kg				5
Dinoseb	20	mg kg				20
Phenol	0.5	mg kg				0.5
T otal Non Halogenated Phenol	20	mg kg				20
Phenol d surr.	1					10
M oisture	1		.	.0	8.8	15
Heavy Metals						
Arsenic	2	mg kg	.0	.		2
Cadmium	0.	mg kg	0.	1.5		0.
Chromium	5	mg kg	2	2		5
Copper	5	mg kg	0	2		5
Lead	5	mg kg	8			5
M ercury	0.1	mg kg	0.1	0.1		0.1
Nickel	5	mg kg	58	120		5
Inc	5	mg kg	8 0	20		5

Client Sample ID			SB 20/0.3	SB 20/1.0	SB 20/1.	SB 20/3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1644	S1 Au16446	S1 Au16447	S1 Au1644
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg		0.5		
T RH C C10	20	mg kg		20		
T RH C C10 less BT EX[N0] F1	20	mg kg		20		
T RH C10 C1	50	mg kg		50		
T RH C10 C1 less Naphthalene[N01] F2	50	mg kg		50		
T RH C1 C	100	mg kg		100		
T RH C C 0	100	mg kg		100		
T RH C10 C 0 total	100	mg kg		100		
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg		20		
T RH C10 C1	20	mg kg		20		
T RH C15 C28	50	mg kg		50		
T RH C2 C	50	mg kg		50		
T RH C10 T otal	50	mg kg		50		
B TEX						
Ben ene	0.1	mg kg		0.1		
T oluene	0.1	mg kg		0.1		
Ethylben ene	0.1	mg kg		0.1		
m p X ylenes	0.2	mg kg		0.2		
o X ylene	0.1	mg kg		0.1		
X ylenes T otal	0.	mg kg		0.		
Bromofluoroben ene surr.	1			1 0		

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled T est Reference	LO R	nit	SB 20/0.3 Soil S1 Au1644 Aug 0 , 201	SB 20/1.0 Soil S1 Au16446 Aug 0 , 201	SB 20/1. Soil S1 Au16447 Aug 0 , 201	SB 20/3.0 Soil S1 Au1644 Aug 0 , 201
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg	0.5	0.5		
Ben o a pyrene T EQ medium bound	0.5	mg kg	0.	0.		
Ben o a pyrene T EQ 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		
Ben a anthracene	0.5	mg kg	0.5	0.5		
Ben o a pyrene	0.5	mg kg	0.5	0.5		
Ben o b fluoranthene	0.5	mg kg	0.5	0.5		
Ben o g.h.i perylene	0.5	mg kg	0.5	0.5		
Ben o k fluoranthene	0.5	mg kg	0.5	0.5		
Chrysene	0.5	mg kg	0.5	0.5		
Diben 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. 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		
T otal PAH	0.5	mg kg	0.5	0.5		
2 Fluorobiphenyl surr.	1			101		
p T erphenyl d1 surr.	1		8	120		
Organochlorine Pesticides						
Chlordanes T otal	0.1	mg kg	0.1			0.1
. DDD	0.05	mg kg	0.05			0.05
. DDE	0.05	mg kg	0.05			0.05
. DDT	0.05	mg kg	0.05			0.05
a BHC	0.05	mg kg	0.05			0.05
Aldrin	0.05	mg kg	0.05			0.05
b BHC	0.05	mg kg	0.05			0.05
d BHC	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 BHC 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
Hexachloroben ene	0.05	mg kg	0.05			0.05
M ethoxychlor	0.05	mg kg	0.05			0.05
T oxaphene	1	mg kg	1			1
Aldrin and Dieldrin T otal	0.05	mg kg	0.05			0.05
DDT DDE DDD T otal	0.05	mg kg	0.05			0.05
V ic EPA IWRG 21 O CP T otal	0.1	mg kg	0.1			0.1
V ic EPA IWRG 21 O ther O CP T otal	0.1	mg kg	0.1			0.1
Dibutylchlorendate surr.	1		102			10
T etrachloro m xylene surr.	1					101

Client Sample ID			SB 20/0.3	SB 20/1.0	SB 20/1.	SB 20/3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1644	S1 Au16446	S1 Au16447	S1 Au1644
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Organophosphorus Pesticides						
A inphos 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
Dia inon	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
M alathion	0.2	mg kg	0.2			0.2
M erphos	0.2	mg kg	0.2			0.2
M ethyl parathion	0.2	mg kg	0.2			0.2
M evinphos	0.2	mg kg	0.2			0.2
M onocrotophos	2	mg kg	2			2
Naled	0.2	mg kg	0.2			0.2
O methoate	2	mg kg	2			2
Phorate	0.2	mg kg	0.2			0.2
Pirimiphos methyl	0.2	mg kg	0.2			0.2
Pyra ophos	0.2	mg kg	0.2			0.2
Ronnel	0.2	mg kg	0.2			0.2
T erbufos	0.2	mg kg	0.2			0.2
T etrachlorvinphos	0.2	mg kg	0.2			0.2
T okuthion	0.2	mg kg	0.2			0.2
T richloronate	0.2	mg kg	0.2			0.2
T riphenylphosphate surr.	1		10			8
Polychlorinated B iphenyls						
Aroclor 101	0.1	mg kg	0.1			0.1
Aroclor 1221	0.1	mg kg	0.1			0.1
Aroclor 12 2	0.1	mg kg	0.1			0.1
Aroclor 12 2	0.1	mg kg	0.1			0.1
Aroclor 12 8	0.1	mg kg	0.1			0.1
Aroclor 125	0.1	mg kg	0.1			0.1
Aroclor 12 0	0.1	mg kg	0.1			0.1
T otal PCB	0.1	mg kg	0.1			0.1
Dibutylchlorendate surr.	1		102			10
T etrachloro m xylene surr.	1					101
M oisture	1		.2	.5	.5	.2

eurofins | mgt

Client Sample ID			SB 20/0.3	SB 20/1.0	SB 20/1.	SB 20/3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1644	S1 Au16446	S1 Au16447	S1 Au1644
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Heavy Metals						
Arsenic	2	mg kg	.	.2	5.8	
Cadmium	0.	mg kg	0.5	0.	0.	
Chromium	5	mg kg	28		8	
Copper	5	mg kg		8	5	
Lead	5	mg kg	200	0	0	
Mercury	0.1	mg kg	0.2	0.5	0.2	
Nickel	5	mg kg		200	1	
inc	5	mg kg	810	2	1 0	

Client Sample ID			SB 20/3.	SB 20/ .0	SB 20/12.0	SB 26/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1644	S1 Au164 0	S1 Au164 1	S1 Au164 2
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 10, 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg	0.5		0.5	0.5
T RH C C10	20	mg kg	20		20	20
T RH C C10 less BT EX[N0] F1	20	mg kg	20		20	20
T RH C10 C1	50	mg kg	50		50	50
T RH C10 C1 less Naphthalene[I01] F2	50	mg kg	50		50	50
T RH C1 C	100	mg kg	100		100	100
T RH C C 0	100	mg kg	100		100	100
T RH C10 C 0 total	100	mg kg	100		100	100
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg	20		20	20
T RH C10 C1	20	mg kg	20		20	20
T RH C15 C28	50	mg kg	50		50	50
T RH C2 C	50	mg kg	50		50	50
T RH C10 T otal	50	mg kg	50		50	50
B TEX						
Ben ene	0.1	mg kg	0.1		0.1	0.1
T oluene	0.1	mg kg	0.1		0.1	0.1
Ethylben ene	0.1	mg kg	0.1		0.1	0.1
m p X ylenes	0.2	mg kg	0.2		0.2	0.2
o X ylene	0.1	mg kg	0.1		0.1	0.1
X ylenes T otal	0.	mg kg	0.		0.	0.
Bromofluoroben ene surr.	1		1		5	1
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o a pyrene T EQ medium bound	0.5	mg kg	0.	0.	0.	0.
Ben o a pyrene T EQ upper bound	0.5	mg kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg kg	0.5	0.5	0.5	0.5
Acenaphthylene	0.5	mg kg	0.5	0.5	0.5	0.5
Anthracene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben a anthracene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o a pyrene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o b fluoranthene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o g.h.i perylene	0.5	mg kg	0.5	0.5	0.5	0.5

Client Sample ID			SB 20/3.	SB 20/ .0	SB 20/12.0	SB 26/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1644	S1 Au164	0 S1 Au164	1 S1 Au164 2
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 10, 201
T est Reference	LO R	nit				
Polycyclic Aromatic Hydrocarbons						
Ben o k fluoranthene	0.5	mg kg	0.5	0.5	0.5	0.5
Chrysene	0.5	mg kg	0.5	0.5	0.5	0.5
Diben a.h anthracene	0.5	mg kg	0.5	0.5	0.5	0.5
Fluoranthene	0.5	mg kg	0.5	0.5	0.5	0.5
Fluorene	0.5	mg kg	0.5	0.5	0.5	0.5
Indeno 1.2. cd pyrene	0.5	mg kg	0.5	0.5	0.5	0.5
Naphthalene	0.5	mg kg	0.5	0.5	0.5	0.5
Phenanthrene	0.5	mg kg	0.5	0.5	0.5	0.5
Pyrene	0.5	mg kg	0.5	0.5	0.5	0.5
T otal PAH	0.5	mg kg	0.5	0.5	0.5	0.5
2 Fluorobiphenyl surr.	1		85			5
p T erphenyl d1 surr.	1		10	121	11	11
Phenols (Halogenated)						
2 Chlorophenol	0.5	mg kg	0.5		0.5	
2. Dichlorophenol	0.5	mg kg	0.5		0.5	
2. .5 T richlorophenol	1	mg kg	1		1	
2. . T richlorophenol	1.0	mg kg	1		1	
2. Dichlorophenol	0.5	mg kg	0.5		0.5	
Chloro methylphenol	1.0	mg kg	1		1	
Pentachlorophenol	1.0	mg kg	1		1	
T etrachlorophenols T otal	1.0	mg kg	1		1	
T otal Halogenated Phenol	1	mg kg	1		1	
Phenols (non Halogenated)						
2 Cyclohexyl . dinitrophenol	20	mg kg	20		20	
2 Methyl . dinitrophenol	5	mg kg	5		5	
2 Methylphenol o Cresol	0.2	mg kg	0.2		0.2	
2 Nitrophenol	1.0	mg kg	1		1	
2. Dimethylphenol	0.5	mg kg	0.5		0.5	
2. Dinitrophenol	5	mg kg	5		5	
Methylphenol m p Cresol	0.	mg kg	0.		0.	
Nitrophenol	5	mg kg	5		5	
Dinoseb	20	mg kg	20		20	
Phenol	0.5	mg kg	0.5		0.5	
T otal Non Halogenated Phenol	20	mg kg	20		20	
Phenol d surr.	1		0		8	
Clay	1			1		
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS cm		1		
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH nits		.2		
T otal O rganic Carbon	0.1			0.		
Cation Exchange Capacity	0.05	meq 100g		1.0		
Iron	0.01			0.0		
Moisture	1		20	1	1	10
Heavy Metals						
Arsenic	2	mg kg	2		.	.5
Cadmium	0.	mg kg	0.		0.	0.
Chromium	5	mg kg	5		5	1
Copper	5	mg kg	5		5	25
Iron	20	mg kg		0		

Client Sample ID			SB 20/3.	SB 20/ .0	SB 20/12.0	SB 26/0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1644	S1 Au164 0	S1 Au164 1	S1 Au164 2
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 10, 201
T est Reference	LO R	nit				
Heavy Metals						
Lead	5	mg kg	5		5	120
Mercury	0.1	mg kg	0.1		0.1	0.2
Nickel	5	mg kg	5		5	1
inc	5	mg kg	5		12	0

Client Sample ID			SB 26/0.	SB 26/2.0	SB 26/3.0	SB 26/4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au164 3	S1 Au164 4	S1 Au164	S1 Au164 6
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene N02	0.5	mg kg				0.5
T RH C C10	20	mg kg				20
T RH C C10 less BT EX N0 F1	20	mg kg				20
T RH C10 C1	50	mg kg				2
T RH C10 C1 less Naphthalene N01 F2	50	mg kg				2
T RH C1 C	100	mg kg				100
T RH C C 0	100	mg kg				100
T RH C10 C 0 total	100	mg kg				100
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg				20
T RH C10 C1	20	mg kg				
T RH C15 C28	50	mg kg				50
T RH C2 C	50	mg kg				50
T RH C10 T otal	50	mg kg				
B TEX						
Ben ene	0.1	mg kg				0.1
T oluene	0.1	mg kg				0.1
Ethylben ene	0.1	mg kg				0.1
m p X ylenes	0.2	mg kg				0.2
o X ylene	0.1	mg kg				0.1
X ylenes T otal	0.	mg kg				0.
Bromofluoroben ene surr.	1					1
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg				0.5
Ben o a pyrene T EQ medium bound	0.5	mg kg				0.
Ben o a pyrene T EQ upper bound	0.5	mg kg				1.2
Acenaphthene	0.5	mg kg				0.5
Acenaphthylene	0.5	mg kg				0.5
Anthracene	0.5	mg kg				0.5
Ben a anthracene	0.5	mg kg				0.5
Ben o a pyrene	0.5	mg kg				0.5
Ben o b fluoranthene N0	0.5	mg kg				0.5
Ben o g.h.i perylene	0.5	mg kg				0.5
Ben o k fluoranthene	0.5	mg kg				0.5
Chrysene	0.5	mg kg				0.5
Diben a.h anthracene	0.5	mg kg				0.5
Fluoranthene	0.5	mg kg				0.5

Client Sample ID			SB 26/0.	SB 26/2.0	SB 26/3.0	SB 26/4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au164 3	S1 Au164 4	S1 Au164	S1 Au164 6
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Polycyclic Aromatic Hydrocarbons						
Fluorene	0.5	mg kg				0.5
Indeno 1.2. cd pyrene	0.5	mg kg				0.5
Naphthalene	0.5	mg kg				0.5
Phenanthrene	0.5	mg kg				0.5
Pyrene	0.5	mg kg				0.5
T otal PAH	0.5	mg kg				0.5
2 Fluorobiphenyl surr.	1					11
p T erphenyl d1 surr.	1					1 0
Organochlorine Pesticides						
Chlordanes T otal	0.1	mg kg	0.1		0.1	
. DDD	0.05	mg kg	0.05		0.05	
. DDE	0.05	mg kg	0.05		0.05	
. DDT	0.05	mg kg	0.05		0.05	
a BHC	0.05	mg kg	0.05		0.05	
Aldrin	0.05	mg kg	0.05		0.05	
b BHC	0.05	mg kg	0.05		0.05	
d BHC	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 BHC 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	
Hexachloroben ene	0.05	mg kg	0.05		0.05	
M ethoxychlor	0.05	mg kg	0.05		0.05	
T oxaphene	1	mg kg	1		1	
Aldrin and Dieldrin T otal	0.05	mg kg	0.05		0.05	
DDT DDE DDD T otal	0.05	mg kg	0.05		0.05	
V ic EPA IWRG 21 O CP T otal	0.1	mg kg	0.1		0.1	
V ic EPA IWRG 21 O ther O CP T otal	0.1	mg kg	0.1		0.1	
Dibutylchlorendate surr.	1		110		118	
T etrachloro m xylene surr.	1		10			
Organophosphorus Pesticides						
A inphos 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	
Dia inon	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	

Client Sample ID			SB 26/0.	SB 26/2.0	SB 26/3.0	SB 26/4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au164 3	S1 Au164 4	S1 Au164	S1 Au164 6
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Organophosphorus Pesticides						
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	
O methoate	2	mg kg	2		2	
Phorate	0.2	mg kg	0.2		0.2	
Pirimiphos methyl	0.2	mg kg	0.2		0.2	
Pyra ophos	0.2	mg kg	0.2		0.2	
Ronnel	0.2	mg kg	0.2		0.2	
T erbufos	0.2	mg kg	0.2		0.2	
T etrachlorvinphos	0.2	mg kg	0.2		0.2	
T okuthion	0.2	mg kg	0.2		0.2	
T richloronate	0.2	mg kg	0.2		0.2	
T riphenylphosphate surr.	1		12		12	
Polychlorinated B iphenyls						
Aroclor 101	0.1	mg kg	0.1		0.1	
Aroclor 1221	0.1	mg kg	0.1		0.1	
Aroclor 12 2	0.1	mg kg	0.1		0.1	
Aroclor 12 2	0.1	mg kg	0.1		0.1	
Aroclor 12 8	0.1	mg kg	0.1		0.1	
Aroclor 125	0.1	mg kg	0.1		0.1	
Aroclor 12 0	0.1	mg kg	0.1		0.1	
T otal PCB	0.1	mg kg	0.1		0.1	
Dibutylchlorendate surr.	1		110		118	
T etrachloro m xylene surr.	1		10			
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH nits		8.8		
Moisture	1		.	1	1	1
Heavy Metals						
Arsenic	2	mg kg				2
Cadmium	0.	mg kg				0.
Chromium	5	mg kg				5
Copper	5	mg kg				5
Lead	5	mg kg				
Mercury	0.1	mg kg				0.1
Nickel	5	mg kg				5
Inc	5	mg kg				12

Client Sample ID			SB 26/ .0	SB 26/6.0	SB 26/ .0	SB 26/1.	2.0
Sample Matrix			Soil	Soil	Soil	Soil	
Eurofins mgt Sample No.			S1 Au164 7	S1 Au164	S1 Au164	S1 Au16460	
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201	
T est Reference	LO R	nit					
Total Recoverable Hydrocarbons 2013 NEPM Fractions							
Naphthalene[N02]	0.5	mg kg		0.5		.	
T RH C C10	20	mg kg		20		1	
T RH C C10 less BT EX[N0] F1	20	mg kg		20		0	
T RH C10 C1	50	mg kg				1 00	
T RH C10 C1 less Naphthalene[N01] F2	50	mg kg				1 00	
T RH C1 C	100	mg kg		1 0		1800	
T RH C C 0	100	mg kg		100		2 0	
T RH C10 C 0 total	100	mg kg		1		0	
Total Recoverable Hydrocarbons 1 NEPM Fractions							
T RH C C	20	mg kg		20		20	
T RH C10 C1	20	mg kg				1000	
T RH C15 C28	50	mg kg		81		1500	
T RH C2 C	50	mg kg				500	
T RH C10 T otal	50	mg kg		18		000	
B TEX							
Ben ene	0.1	mg kg		0.1		0.1	
T oluene	0.1	mg kg		0.1		0.1	
Ethylben ene	0.1	mg kg		0.1		0.	
m p X ylenes	0.2	mg kg		0.2		0.5	
o X ylene	0.1	mg kg		0.1		0.	
X ylenes T otal	0.	mg kg		0.		0.8	
Bromofluoroben ene surr.	1			5		10	
V olatile Organics							
1.1 Dichloroethane	0.5	mg kg	0.5			0.5	
1.1 Dichloroethene	0.5	mg kg	0.5			0.5	
1.1.1 T richloroethane	0.5	mg kg	0.5			0.5	
1.1.1.2 T etrachloroethane	0.5	mg kg	0.5			0.5	
1.1.2 T richloroethane	0.5	mg kg	0.5			0.5	
1.1.2.2 T etrachloroethane	0.5	mg kg	0.5			0.5	
1.2 Dibromoethane	0.5	mg kg	0.5			0.5	
1.2 Dichloroben ene	0.5	mg kg	0.5			0.5	
1.2 Dichloroethane	0.5	mg kg	0.5			0.5	
1.2 Dichloropropane	0.5	mg kg	0.5			0.5	
1.2. T richloropropane	0.5	mg kg	0.5			0.5	
1.2. T rimethylben ene	0.5	mg kg	0.5			.	
1. Dichloroben ene	0.5	mg kg	0.5			0.5	
1. Dichloropropane	0.5	mg kg	0.5			0.5	
1. .5 T rimethylben ene	0.5	mg kg	0.5			0.	
1. Dichloroben ene	0.5	mg kg	0.5			0.5	
2 Butanone MEK	0.5	mg kg	0.5			0.5	
2 Propanone Acetone	0.5	mg kg	0.5			0.5	
Chlorotoluene	0.5	mg kg	0.5			0.5	
Methyl 2 pentanone MIBK	0.5	mg kg	0.5			0.5	
Allyl chloride	0.5	mg kg	0.5			0.5	
Ben ene	0.1	mg kg	0.1			0.1	
Bromoben ene	0.5	mg kg	0.5			0.5	
Bromochloromethane	0.5	mg kg	0.5			0.5	
Bromodichloromethane	0.5	mg kg	0.5			0.5	
Bromoform	0.5	mg kg	0.5			0.5	

Client Sample ID			SB 26/ .0	SB 26/6.0	SB 26/ .0	SB 26/1.	2.0
Sample Matrix			Soil	Soil	Soil	Soil	
Eurofins mgt Sample No.			S1 Au164 7	S1 Au164	S1 Au164	S1 Au16460	
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201	
T est Reference	LO R	nit					
V olatile Organics							
Bromomethane	0.5	mg kg	0.5			0.5	
Carbon disulfide	0.5	mg kg	0.5			0.5	
Carbon T etrachloride	0.5	mg kg	0.5			0.5	
Chloroben ene	0.5	mg kg	0.5			0.5	
Chloroethane	0.5	mg kg	0.5			0.5	
Chloroform	0.5	mg kg	0.5			0.5	
Chloromethane	0.5	mg kg	0.5			0.5	
cis 1.2 Dichloroethene	0.5	mg kg	0.5			0.5	
cis 1. Dichloropropene	0.5	mg kg	0.5			0.5	
Dibromochloromethane	0.5	mg kg	0.5			0.5	
Dibromomethane	0.5	mg kg	0.5			0.5	
Dichlorodifluoromethane	0.5	mg kg	0.5			0.5	
Ethylben ene	0.1	mg kg	0.1			0.	
Iodomethane	0.5	mg kg	0.5			0.5	
Isopropyl ben ene Cumene	0.5	mg kg	0.5			0.5	
m p X ylenes	0.2	mg kg	0.2			0.5	
M ethylene Chloride	0.5	mg kg	0.5			0.5	
o X ylene	0.1	mg kg	0.1			0.	
Styrene	0.5	mg kg	0.5			0.5	
T etrachloroethene	0.5	mg kg	0.5			0.5	
T oluene	0.1	mg kg	0.1			0.1	
trans 1.2 Dichloroethene	0.5	mg kg	0.5			0.5	
trans 1. Dichloropropene	0.5	mg kg	0.5			0.5	
T richloroethene	0.5	mg kg	0.5			0.5	
T richlorofluoromethane	0.5	mg kg	0.5			0.5	
V inyl chloride	0.5	mg kg	0.5			0.5	
X ylenes T otal	0.	mg kg	0.			0.8	
T otal MAH	0.5	mg kg	0.5			1.1	
V ic EPA IWRG 21 CHC T otal	0.5	mg kg	0.5			0.5	
V ic EPA IWRG 21 O ther CHC T otal	0.5	mg kg	0.5			0.5	
Bromofluoroben ene surr.	1		10			10	
T oluene d8 surr.	1		10				
Polycyclic Aromatic Hydrocarbons							
Ben o a pyrene T EQ lower bound	0.5	mg kg		0.5		1.	
Ben o a pyrene T EQ medium bound	0.5	mg kg		0.		2.2	
Ben o a pyrene T EQ upper bound	0.5	mg kg		1.2		2.	
Acenaphthene	0.5	mg kg		0.5		2.	
Acenaphthylene	0.5	mg kg		0.5		0.5	
Anthracene	0.5	mg kg		0.5		1.	
Ben a anthracene	0.5	mg kg		0.5		1.8	
Ben o a pyrene	0.5	mg kg		0.5		1.	
Ben o b fluoranthene	0.5	mg kg		0.5		1.	
Ben o g.h.i perylene	0.5	mg kg		0.5		0.	
Ben o k fluoranthene	0.5	mg kg		0.5		1.1	
Chrysene	0.5	mg kg		0.5		1.	
Diben a.h anthracene	0.5	mg kg		0.5		0.5	
Fluoranthene	0.5	mg kg		0.5		.8	
Fluorene	0.5	mg kg		0.5		2.	
Indeno 1.2. cd pyrene	0.5	mg kg		0.5		0.8	

Client Sample ID			SB 26/ .0	SB 26/6.0	SB 26/ .0	SB 26/1.	2.0
Sample Matrix			Soil	Soil	Soil	Soil	
Eurofins mgt Sample No.			S1 Au164 7	S1 Au164	S1 Au164	S1 Au16460	
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201	
T est Reference	LO R	nit					
Polycyclic Aromatic Hydrocarbons							
Naphthalene	0.5	mg kg		0.5		.	
Phenanthrene	0.5	mg kg		0.5		.	
Pyrene	0.5	mg kg		0.5		5.2	
T otal PAH	0.5	mg kg		0.5		.	
2 Fluorobiphenyl surr.	1			100		102	
p T erphenyl d1 surr.	1			10		102	
Organochlorine Pesticides							
Chlordanes T otal	0.1	mg kg			0.1		
. DDD	0.05	mg kg			0.05		
. DDE	0.05	mg kg			0.05		
. DDT	0.05	mg kg			0.05		
a BHC	0.05	mg kg			0.05		
Aldrin	0.05	mg kg			0.05		
b BHC	0.05	mg kg			0.05		
d BHC	0.05	mg kg			0.05		
Dieldrin	0.05	mg kg			0.05		
Endosulfan I	0.05	mg kg			0.05		
Endosulfan II	0.05	mg kg			0.05		
Endosulfan sulphate	0.05	mg kg			0.05		
Endrin	0.05	mg kg			0.05		
Endrin aldehyde	0.05	mg kg			0.05		
Endrin ketone	0.05	mg kg			0.05		
g BHC Lindane	0.05	mg kg			0.05		
Heptachlor	0.05	mg kg			0.05		
Heptachlor epoxide	0.05	mg kg			0.05		
Hexachloroben ene	0.05	mg kg			0.05		
M ethoxychlor	0.05	mg kg			0.05		
T oxaphene	1	mg kg			1		
Aldrin and Dieldrin T otal	0.05	mg kg			0.05		
DDT DDE DDD T otal	0.05	mg kg			0.05		
V ic EPA IWRG 21 O CP T otal	0.1	mg kg			0.1		
V ic EPA IWRG 21 O ther O CP T otal	0.1	mg kg			0.1		
Dibutylchlorendate surr.	1				2		
T etrachloro m xylene surr.	1						
Organophosphorus Pesticides							
A inphos 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		
Dia inon	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		

Client Sample ID			SB 26/ .0	SB 26/6.0	SB 26/ .0	SB 26/1.	2.0
Sample Matrix			Soil	Soil	Soil	Soil	
Eurofins mgt Sample No.			S1 Au164 7	S1 Au164	S1 Au164	S1 Au16460	
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201	
T est Reference	LO R	nit					
Organophosphorus Pesticides							
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		
Naled	0.2	mg kg			0.2		
O methoate	2	mg kg			2		
Phorate	0.2	mg kg			0.2		
Pirimiphos methyl	0.2	mg kg			0.2		
Pyra ophos	0.2	mg kg			0.2		
Ronnel	0.2	mg kg			0.2		
T erbufos	0.2	mg kg			0.2		
T etrachlorvinphos	0.2	mg kg			0.2		
T okuthion	0.2	mg kg			0.2		
T richloronate	0.2	mg kg			0.2		
T riphenylphosphate surr.	1				10		
Polychlorinated B iphenyls							
Aroclor 101	0.1	mg kg			0.1		
Aroclor 1221	0.1	mg kg			0.1		
Aroclor 12 2	0.1	mg kg			0.1		
Aroclor 12 2	0.1	mg kg			0.1		
Aroclor 12 8	0.1	mg kg			0.1		
Aroclor 125	0.1	mg kg			0.1		
Aroclor 12 0	0.1	mg kg			0.1		
T otal PCB	0.1	mg kg			0.1		
Dibutylchlorendate surr.	1				2		
T etrachloro m xylene surr.	1						
Phenols (Halogenated)							
2 Chlorophenol	0.5	mg kg				0.5	
2. Dichlorophenol	0.5	mg kg				0.5	
2. .5 T richlorophenol	1	mg kg				1	
2. . T richlorophenol	1.0	mg kg				1	
2. Dichlorophenol	0.5	mg kg				0.5	
Chloro methylphenol	1.0	mg kg				1	
Pentachlorophenol	1.0	mg kg				1	
T etrachlorophenols T otal	1.0	mg kg				1	
T otal Halogenated Phenol	1	mg kg				1	
Phenols (non Halogenated)							
2 Cyclohexyl . dinitrophenol	20	mg kg				20	
2 Methyl . dinitrophenol	5	mg kg				5	
2 Methylphenol o Cresol	0.2	mg kg				0.2	
2 Nitrophenol	1.0	mg kg				1	
2. Dimethylphenol	0.5	mg kg				0.5	
2. Dinitrophenol	5	mg kg				5	

Client Sample ID			SB 26/ .0	SB 26/6.0	SB 26/ .0	SB 26/1. 2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au164 7	S1 Au164	S1 Au164	S1 Au16460
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Phenols (non Halogenated)						
M ethylphenol m p Cresol	0.	mg kg				0.
Nitrophenol	5	mg kg				5
Dinoseb	20	mg kg				20
Phenol	0.5	mg kg				0.5
T otal Non Halogenated Phenol	20	mg kg				20
Phenol d surr.	1					
M oisture	1		1	1	1	12
Heavy Metals						
Arsenic	2	mg kg		2		
Cadmium	0.	mg kg		0.		1.1
Chromium	5	mg kg		5		
Copper	5	mg kg		5		2 0
Lead	5	mg kg		11		000
M ercury	0.1	mg kg		0.1		0.2
Nickel	5	mg kg		5		
Inc	5	mg kg		5		2 00

Client Sample ID			SB 27/0.2	SB 27/0.	SB 27/1.0	SB 27/3.
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16461	S1 Au16462	S1 Au16463	S1 Au1646
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg				0.5
T RH C C10	20	mg kg				20
T RH C C10 less BT EX[N0] F1	20	mg kg				20
T RH C10 C1	50	mg kg				50
T RH C10 C1 less Naphthalene[N01] F2	50	mg kg				50
T RH C1 C	100	mg kg				100
T RH C C 0	100	mg kg				100
T RH C10 C 0 total	100	mg kg				100
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg				20
T RH C10 C1	20	mg kg				20
T RH C15 C28	50	mg kg				50
T RH C2 C	50	mg kg				50
T RH C10 T otal	50	mg kg				50
B TEX						
Ben ene	0.1	mg kg				0.1
T oluene	0.1	mg kg				0.1
Ethylben ene	0.1	mg kg				0.1
m p X ylenes	0.2	mg kg				0.2
o X ylene	0.1	mg kg				0.1
X ylenes T otal	0.	mg kg				0.
Bromofluoroben ene surr.	1					1 0

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test Reference	LOR	nit	SB 27/0.2 Soil S1 Au16461 Aug 0 , 201	SB 27/0. Soil S1 Au16462 Aug 0 , 201	SB 27/1.0 Soil S1 Au16463 Aug 0 , 201	SB 27/3. Soil S1 Au1646 Aug 0 , 201
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene TEQ lower bound	0.5	mg kg			0.5	0.5
Ben o a pyrene TEQ medium bound	0.5	mg kg			0.	0.
Ben o 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
Ben a anthracene	0.5	mg kg			0.5	0.5
Ben o a pyrene	0.5	mg kg			0.5	0.5
Ben o b fluoranthene	0.5	mg kg			0.5	0.5
Ben o g.h.i perylene	0.5	mg kg			0.5	0.5
Ben o k fluoranthene	0.5	mg kg			0.5	0.5
Chrysene	0.5	mg kg			0.5	0.5
Diben 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. 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				101	120
p Terphenyl d1 surr.	1				10	1 5
Organochlorine Pesticides						
Chlordanes Total	0.1	mg kg	0.1			
. DDD	0.05	mg kg	0.05			
. DDE	0.05	mg kg	0.05			
. DDT	0.05	mg kg	0.05			
a BHC	0.05	mg kg	0.05			
Aldrin	0.05	mg kg	0.05			
b BHC	0.05	mg kg	0.05			
d BHC	0.05	mg kg	0.05			
Dieldrin	0.05	mg kg	0.05			
Endosulfan I	0.05	mg kg	0.05			
Endosulfan II	0.05	mg kg	0.05			
Endosulfan sulphate	0.05	mg kg	0.05			
Endrin	0.05	mg kg	0.05			
Endrin aldehyde	0.05	mg kg	0.05			
Endrin ketone	0.05	mg kg	0.05			
g BHC Lindane	0.05	mg kg	0.05			
Heptachlor	0.05	mg kg	0.05			
Heptachlor epoxide	0.05	mg kg	0.05			
Hexachloroben ene	0.05	mg kg	0.05			
Methoxychlor	0.05	mg kg	0.05			
Toxaphene	1	mg kg	1			
Aldrin and Dieldrin Total	0.05	mg kg	0.05			
DDT DDE DDD Total	0.05	mg kg	0.05			
Vic EPA IWRG 21 OCP Total	0.1	mg kg	0.1			
Vic EPA IWRG 21 Other OCP Total	0.1	mg kg	0.1			
Dibutylchlorendate surr.	1		110			
Tetrachloro m xylene surr.	1					

Client Sample ID			SB 27/0.2	SB 27/0.	SB 27/1.0	SB 27/3.
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16461	S1 Au16462	S1 Au16463	S1 Au1646
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Organophosphorus Pesticides						
A inphos 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			
Dia inon	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			
M alathion	0.2	mg kg	0.2			
M erphos	0.2	mg kg	0.2			
M ethyl parathion	0.2	mg kg	0.2			
M evinphos	0.2	mg kg	0.2			
M onocrotophos	2	mg kg	2			
Naled	0.2	mg kg	0.2			
O methoate	2	mg kg	2			
Phorate	0.2	mg kg	0.2			
Pirimiphos methyl	0.2	mg kg	0.2			
Pyra ophos	0.2	mg kg	0.2			
Ronnel	0.2	mg kg	0.2			
T erbufos	0.2	mg kg	0.2			
T etrachlorvinphos	0.2	mg kg	0.2			
T okuthion	0.2	mg kg	0.2			
T richloronate	0.2	mg kg	0.2			
T riphenylphosphate surr.	1		11			
Polychlorinated B iphenyls						
Aroclor 101	0.1	mg kg	0.1			
Aroclor 1221	0.1	mg kg	0.1			
Aroclor 12 2	0.1	mg kg	0.1			
Aroclor 12 2	0.1	mg kg	0.1			
Aroclor 12 8	0.1	mg kg	0.1			
Aroclor 125	0.1	mg kg	0.1			
Aroclor 12 0	0.1	mg kg	0.1			
T otal PCB	0.1	mg kg	0.1			
Dibutylchlorendate surr.	1		110			
T etrachloro m xylene surr.	1					
M oisture	1		5.	5.8	5.	1

Client Sample ID			SB 27/0.2	SB 27/0.	SB 27/1.0	SB 27/3.
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16461	S1 Au16462	S1 Au16463	S1 Au1646
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Heavy Metals						
Arsenic	2	mg kg		.8		2
Cadmium	0.	mg kg		.8		0.
Chromium	5	mg kg		8		5
Copper	5	mg kg				5
Lead	5	mg kg		0		5
Mercury	0.1	mg kg		0.1		0.1
Nickel	5	mg kg		8		5
inc	5	mg kg		1500		5.

Client Sample ID			SB 27/ .0	SB 27/6.0	Q S1	Q S2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16466	S1 Au16467	S1 Au1646	S1 Au16470
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 10, 201	Aug 0 , 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg		0.5	0.5	0.5
T RH C C10	20	mg kg		20	20	20
T RH C C10 less BT EX[N0] F1	20	mg kg		20	20	20
T RH C10 C1	50	mg kg		50	50	50
T RH C10 C1 less Naphthalene[I01] F2	50	mg kg		50	50	50
T RH C1 C	100	mg kg		100	100	100
T RH C C 0	100	mg kg		100	100	100
T RH C10 C 0 total	100	mg kg		100	100	100
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg		20	20	20
T RH C10 C1	20	mg kg		20	20	20
T RH C15 C28	50	mg kg		50	50	50
T RH C2 C	50	mg kg		50	50	50
T RH C10 T otal	50	mg kg		50	50	50
B TEX						
Ben ene	0.1	mg kg		0.1	0.1	0.1
T oluene	0.1	mg kg		0.1	0.1	0.1
Ethylben ene	0.1	mg kg		0.1	0.1	0.1
m p X ylenes	0.2	mg kg		0.2	0.2	0.2
o X ylene	0.1	mg kg		0.1	0.1	0.1
X ylenes T otal	0.	mg kg		0.	0.	0.
Bromofluoroben ene surr.	1			10	1 1	1 8
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg		0.5	0.5	0.5
Ben o a pyrene T EQ medium bound	0.5	mg kg		0.	0.	0.
Ben o a pyrene T EQ 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
Ben a anthracene	0.5	mg kg		0.5	0.5	0.5
Ben o a pyrene	0.5	mg kg		0.5	0.5	0.5
Ben o b fluoranthene	0.5	mg kg		0.5	0.5	0.5
Ben o g.h.i perylene	0.5	mg kg		0.5	0.5	0.5

Client Sample ID			SB 27/ .0	SB 27/6.0	Q S1	Q S2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au16466	S1 Au16467	S1 Au1646	S1 Au16470
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 10, 201	Aug 0 , 201
T est Reference	LO R	nit				
Polycyclic Aromatic Hydrocarbons						
Ben o k fluoranthene	0.5	mg kg		0.5	0.5	0.5
Chrysene	0.5	mg kg		0.5	0.5	0.5
Diben 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. 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
T otal PAH	0.5	mg kg		0.5	0.5	0.5
2 Fluorobiphenyl surr.	1			11	120	102
p T erphenyl d1 surr.	1			1 2	1 5	122
Phenols (Halogenated)						
2 Chlorophenol	0.5	mg kg		0.5		
2. Dichlorophenol	0.5	mg kg		0.5		
2. .5 T richlorophenol	1	mg kg		1		
2. . T richlorophenol	1.0	mg kg		1		
2. Dichlorophenol	0.5	mg kg		0.5		
Chloro methylphenol	1.0	mg kg		1		
Pentachlorophenol	1.0	mg kg		1		
T etrachlorophenols T otal	1.0	mg kg		1		
T otal Halogenated Phenol	1	mg kg		1		
Phenols (non Halogenated)						
2 Cyclohexyl . dinitrophenol	20	mg kg		20		
2 Methyl . dinitrophenol	5	mg kg		5		
2 Methylphenol o Cresol	0.2	mg kg		0.2		
2 Nitrophenol	1.0	mg kg		1		
2. Dimethylphenol	0.5	mg kg		0.5		
2. Dinitrophenol	5	mg kg		5		
Methylphenol m p Cresol	0.	mg kg		0.		
Nitrophenol	5	mg kg		5		
Dinoseb	20	mg kg		20		
Phenol	0.5	mg kg		0.5		
T otal Non Halogenated Phenol	20	mg kg		20		
Phenol d surr.	1			105		
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH nits	.			
Moisture	1		1	18	1	12
Heavy Metals						
Arsenic	2	mg kg		2	2	2
Cadmium	0.	mg kg		0.	0.	0.
Chromium	5	mg kg		5	5	5
Copper	5	mg kg		5	5	5
Lead	5	mg kg		5	5	5
Mercury	0.1	mg kg		0.1	0.1	0.1
Nickel	5	mg kg		5	5	5
inc	5	mg kg		5	5	1

Client Sample ID			TS	TB
Sample Matrix			Soil	Soil
Eurofins mgt Sample No.			S1 Au1664	S1 Au16646
Date Sampled			Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit		
Total Recoverable Hydrocarbons 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg kg		0.5
T RH C C10	20	mg kg	110	20
T RH C C10 less BT EX[N0] F1	20	mg kg		20
Total Recoverable Hydrocarbons 1 NEPM Fractions				
T RH C C	20	mg kg	110	20
B TEX				
Ben ene	0.1	mg kg	110	0.1
T oluene	0.1	mg kg	110	0.1
Ethylben ene	0.1	mg kg	110	0.1
m p X ylenes	0.2	mg kg	110	0.2
o X ylene	0.1	mg kg	110	0.1
X ylenes T otal	0.	mg kg	110	0.
Bromofluoroben ene surr.	1			5

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Sample History

Where samples are submitted analysed over several days the last date of extraction and analysis is reported.
A recent review of our LIM S has resulted in the correction or clarification of some method identifications. Due to this some of the method reference information on reports has changed. However no substantive change has been made to our laboratory methods and as such there is no change in the validity of current or previous results regarding both quality and NAT A accreditation .

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
T otal Recoverable Hydrocarbons 201 NEPM Fractions	Melbourne	Aug 1 2018	1 Day
Method: T RH C C 0 LT M O RG 2010			
T otal Recoverable Hydrocarbons	Sydney	Aug 1 2018	1 Day
Method: T RH C C 0 LT M O RG 2010			
T otal Recoverable Hydrocarbons 1 NEPM Fractions	Sydney	Aug 1 2018	1 Day
Method: T RH C C LT M O RG 2010			
BT EX	Sydney	Aug 1 2018	1 Day
Method: T RH C C 0 LT M O RG 2010			
Eurofins mgt Suite B A			
T otal Recoverable Hydrocarbons 201 NEPM Fractions	Melbourne	Aug 1 2018	1 Day
Method: T RH C C 0 LT M O RG 2010			
Polycyclic Aromatic Hydrocarbons	Melbourne	Aug 1 2018	1 Day
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Phenols Halogenated	Melbourne	Aug 1 2018	1 Days
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Phenols non Halogenated	Melbourne	Aug 1 2018	1 Day
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Metals M8	Melbourne	Aug 1 2018	28 Days
Method: LT M MET 0 0 Metals in Waters Soils Sediments by ICP M S			
V olatile O rganics	Melbourne	Aug 1 2018	Days
Method: LT M O RG 2150 V O Cs in Soils Liquid and other Aqueous Matrices			
pH (1:5 Aqueous extract at 25°C as rec.)	Melbourne	Aug 1 2018	Day
Method: LT M G EN 0 0 pH in soil by ISE			
Eurofins mgt Suite B15			
O rganochlorine Pesticides	Melbourne	Aug 1 2018	1 Day
Method: LT M O RG 2220 O CP PCB in Soil and Water			
O rganophosphorus Pesticides	Melbourne	Aug 1 2018	1 Day
Method: LT M O RG 2200 O rganophosphorus Pesticides by G C M S			
Polychlorinated Biphenyls	Melbourne	Aug 1 2018	28 Days
Method: LT M O RG 2220 O CP PCB in Soil and Water			
NEPM Screen for Soil Classification			
Clay	Brisbane	Aug 20 2018	Day
Method: LT M G EN 0 0			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Aug 1 2018	Day
Method: LT M INO 0 0 Conductivity			
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Melbourne	Aug 1 2018	Day
Method: LT M G EN 0 0 pH in soil by ISE			
T otal O rganic Carbon	Melbourne	Aug 1 2018	28 Day
Method: APHA 5 10B T otal O rganic Carbon			
Cation Exchange Capacity	Melbourne	Aug 1 2018	28 Day
Method: LT M MET 0 0 Cation Exchange Capacity CEC Exchangeable Sodium Percentage ESP			
Iron	Melbourne	Aug 1 2018	180 Day
Method: LT M MET 0 0 Metals in Waters Soils Sediments by ICP M S			
Iron	Melbourne	Aug 1 2018	Month
Method: LT M MET 0 0 by ICP O ES			
Moisture	Melbourne	Aug 1 2018	1 Day
Method: LT M G EN 080 Moisture			

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Site 2

Company Name: T race Environmental P L
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Project Name: MASCO T
Project ID: 1.1

Order No.:
Report : 12025
Phone: 02 8 0 0555
Fax:

Received: Aug 1 2018 :0 PM
Due: Aug 20 2018
Priority: 5 Day
Contact Name: ack Ellis

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail	Asbestos WA guidelines	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Volatile Organics	Moisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BT EX N and V olatile T RH	
Melbourne Laboratory NATA Site 12 4 & 14271			X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217		X									X	X	X	
B risbane Laboratory NATA Site 207 4										X				
Perth Laboratory NATA Site 23736	X													
External Laboratory														

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID											
1	SB1 0.	Aug 0	2018	Soil	S18 Au1	12							X	X		X		
2	SB1 0.5	Aug 0	2018	Soil	S18 Au1	1	X				X	X	X		X	X		
	SB 0.	Aug 0	2018	Soil	S18 Au1	1	X						X		X			
	SB 1.0	Aug 0	2018	Soil	S18 Au1	15									X		X	
5	SB 2.	Aug 0	2018	Soil	S18 Au1	1									X	X	X	
	SB .2	Aug 0	2018	Soil	S18 Au1	1							X		X			
	SB .8	Aug 0	2018	Soil	S18 Au1	18									X		X	
8	SB11 0.2	Aug 0	2018	Soil	S18 Au1	1							X		X			
	SB11 0.5	Aug 0	2018	Soil	S18 Au1	20									X		X	

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Company Name:	T race Environmental P L	Order No.:	Received: Aug 1 2018 :0 PM
Address:	Shop 2 New Canterbury Road Dulwich Hill NSW 220	Report : 12025 Phone: 02 8 0 0555 Fax:	Due: Aug 20 2018 Priority: 5 Day Contact Name: ack Ellis
Project Name:	MASCO T		
Project ID:	1.1		Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Volatile Organics	Moisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BT EX N and V olatile T RH	
Melbourne Laboratory NATA Site 12 4 & 14271								X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217							X									X	X	X	
B risbane Laboratory NATA Site 207 4															X				
Perth Laboratory NATA Site 23736						X													
10	SB11 1.2	Aug 0 2018	Soil	S18 Au1	21	X				X	X			X					
11	SB11 1.	Aug 0 2018	Soil	S18 Au1	22								X	X		X			
12	SB11 .	Aug 0 2018	Soil	S18 Au1	2									X			X		
1	SB11 5.0	Aug 0 2018	Soil	S18 Au1	2							X		X					
1	SB1 0.2	Aug 10 2018	Soil	S18 Au1	25	X								X		X			
15	SB1 0.5	Aug 10 2018	Soil	S18 Au1	2							X		X					
1	SB1 1.2	Aug 10 2018	Soil	S18 Au1	2					X	X			X	X				
1	SB1 2.5	Aug 10 2018	Soil	S18 Au1	28	X							X	X					
18	SB1 .8	Aug 10 2018	Soil	S18 Au1	2							X		X					
1	SB1 10.0	Aug 10 2018	Soil	S18 Au1	0							X		X		X			
20	SB10 0.	Aug 10 2018	Soil	S18 Au1	1	X													
21	SB10 0.5	Aug 10 2018	Soil	S18 Au1	2				X		X	X		X					

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Eurofins mgt Analytical Services Manager : Nibha V aidya

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Melbourne Laboratory NATA Site 12 4 & 14271								X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217							X									X	X	X	
B risbane Laboratory NATA Site 207 4															X				
Perth Laboratory NATA Site 23736						X													
22	SB1	0.5	Aug 10 2018	Soil	S18 Au1									X		X			
2	SB1	1.0	Aug 10 2018	Soil	S18 Au1	X						X		X					
2	SB1	.0	Aug 10 2018	Soil	S18 Au1	5			X					X					
25	SB1	.5	Aug 10 2018	Soil	S18 Au1									X			X		
2	SB1	.0	Aug 10 2018	Soil	S18 Au1							X		X					
2	SB18	0.2	Aug 10 2018	Soil	S18 Au1	8X			X	X	X	X		X					
28	SB18	0.	Aug 10 2018	Soil	S18 Au1	X							X	X					
2	SB18	1.0	Aug 10 2018	Soil	S18 Au1	0								X			X		
0	SB1	0.8	Aug 08 2018	Soil	S18 Au1	1X				X	X	X		X					
1	SB1	1.5	Aug 08 2018	Soil	S18 Au1	2								X		X			
2	SB1	2.5	Aug 08 2018	Soil	S18 Au1							X	X	X					
	SB1	.	Aug 08 2018	Soil	S18 Au1									X			X		

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Company Name:	Trace Environmental P L	Order No.:	
Address:	Shop 2 New Canterbury Road	Report :	12025
	Dulwich Hill	Phone:	02 8 0 0555
	NSW 220	Fax:	
Project Name:	MASCOT	Received:	Aug 1 2018 :0 PM
Project ID:	1.1	Due:	Aug 20 2018
		Priority:	5 Day
		Contact Name:	ack Ellis

Eurofins mgt Analytical Services Manager : Nibha Vaidya

	Sample Detail				Asbestos WA guidelines	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Volatile Organics	Moisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BTEXN and Volatile TRH	
Melbourne Laboratory NATA Site 12 4 & 14271							x	x	x	x	x	x	x	x	x	x	x	x
Sydney Laboratory NATA Site 1 217						x									x	x	x	
Brisbane Laboratory NATA Site 207 4														x				
Perth Laboratory NATA Site 23736					x													
	SB20 0.	Aug 08 2018	Soil	S18 Au1 5					x	x	x		x					
5	SB20 1.0	Aug 08 2018	Soil	S18 Au1	x								x		x			
	SB20 1.5	Aug 08 2018	Soil	S18 Au1						x			x					
	SB20 .0	Aug 08 2018	Soil	S18 Au1 8							x		x					
8	SB20 .8	Aug 08 2018	Soil	S18 Au1									x			x		
	SB20 .0	Aug 08 2018	Soil	S18 Au1 50					x				x	x				
0	SB20 12.0	Aug 08 2018	Soil	S18 Au1 51									x			x		
1	SB2 0.2	Aug 10 2018	Soil	S18 Au1 52	x								x		x			
2	SB2 0.5	Aug 10 2018	Soil	S18 Au1 5							x		x					
	SB2 2.0	Aug 10 2018	Soil	S18 Au1 5				x					x					
	SB2 .0	Aug 10 2018	Soil	S18 Au1 55							x		x					
5	SB2 .0	Aug 10 2018	Soil	S18 Au1 5									x		x			

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Melbourne Laboratory NATA Site 12 4 & 14271								X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217							X									X	X	X	
B risbane Laboratory NATA Site 207 4															X				
Perth Laboratory NATA Site 23736						X													
	SB2 5.0	Aug 10 2018		Soil	S18 Au1	5							X	X					
	SB2 .0	Aug 10 2018		Soil	S18 Au1	58								X		X			
8	SB2 8.0	Aug 10 2018		Soil	S18 Au1	5						X		X					
	SB2 1.5	2.0 Aug 10 2018		Soil	S18 Au1	0							X	X			X		
50	SB2 0.2	Aug 08 2018		Soil	S18 Au1	1X						X		X					
51	SB2 0.5	Aug 08 2018		Soil	S18 Au1	2					X			X					
52	SB2 1.0	Aug 08 2018		Soil	S18 Au1					X				X					
5	SB2 1.5	Aug 08 2018		Soil	S18 Au1	X													
5	SB2 .8	Aug 08 2018		Soil	S18 Au1	5								X		X			
55	SB2 5.0	Aug 08 2018		Soil	S18 Au1				X					X					
5	SB2 .0	Aug 08 2018		Soil	S18 Au1									X			X		
5	Q S1	Aug 10 2018		Soil	S18 Au1	8								X		X			

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Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	V olatile O rganics	Moisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BT EX N and V olatile T RH
Melbourne Laboratory NATA Site 12 4 & 14271									x	x	x							x
Sydney Laboratory NATA Site 1 217							x									x		
B risbane Laboratory NATA Site 207 4															x			
Perth Laboratory NATA Site 23736						x												
58	Q S2		Aug 08 2018	Soil	S18 Au1	0								x		x		
5	RB1		Aug 08 2018	Water	S18 Au1	2											x	
0	SB 1.25		Aug 0 2018	Soil	S18 Au1	5 2		x										
1	SB .		Aug 0 2018	Soil	S18 Au1	5		x										
2	SB11 2.0		Aug 0 2018	Soil	S18 Au1	5		x										
	SB11 2.		Aug 0 2018	Soil	S18 Au1	5 5		x										
	SB11 .		Aug 0 2018	Soil	S18 Au1	5		x										
5	SB1 0.		Aug 10 2018	Soil	S18 Au1	5		x										
	SB1 .2		Aug 10 2018	Soil	S18 Au1	5 8		x										
	SB1 5.0		Aug 10 2018	Soil	S18 Au1	5		x										
8	SB1 .0		Aug 10 2018	Soil	S18 Au1	550		x										
	SB1 .0		Aug 10 2018	Soil	S18 Au1	551		x										

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Melbourne Laboratory	NATA Site 12 4 & 14271					x	x	x							x
Sydney Laboratory	NATA Site 1 217			x									x	x	x
B risbane Laboratory	NATA Site 207 4											x			
Perth Laboratory	NATA Site 23736		x												
0	SB1 .0 Aug 10 2018	Soil	S18 Au1 552		x	x									
1	SB1 0.2 Aug 10 2018	Soil	S18 Au1 55		x	x									
2	SB1 1. Aug 10 2018	Soil	S18 Au1 55		x	x									
	SB1 1. Aug 10 2018	Soil	S18 Au1 555		x	x									
	SB1 1. Aug 10 2018	Soil	S18 Au1 55	x											
5	SB1 1. Aug 10 2018	Soil	S18 Au1 55		x	x									
	SB1 .8 Aug 10 2018	Soil	S18 Au1 558		x	x									
	SB1 10.0 Aug 10 2018	Soil	S18 Au1 55		x	x									
8	SB1 0.2 Aug 10 2018	Soil	S18 Au1 5 0		x	x									
	SB1 .2 Aug 10 2018	Soil	S18 Au1 5 1		x	x									
80	SB20 2. Aug 10 2018	Soil	S18 Au1 5 2		x	x									
81	SB2 1.0 Aug 10 2018	Soil	S18 Au1 5		x	x									

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Melbourne Laboratory NATA Site 12 4 & 14271								X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217							X									X	X	X	
B risbane Laboratory NATA Site 207 4															X				
Perth Laboratory NATA Site 23736						X													
82	SB2	.0	Aug 10 2018	Soil	S18 Au1 5			X											
8	SB2	.0	Aug 10 2018	Soil	S18 Au1 5	5		X											
8	SB2	10.0	Aug 10 2018	Soil	S18 Au1 5			X											
85	SB2	.1	Aug 08 2018	Soil	S18 Au1 5			X											
8	SB1	8.0	Aug 10 2018	Soil	S18 Au1 0			X											
8	T S		Aug 0 2018	Soil	S18 Au1	5												X	
88	T B		Aug 0 2018	Soil	S18 Au1													X	
Test Counts						1	1	2	5	8		20		5			15	11	2

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks Duplicates Matrix Spikes and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis unless otherwise stated.
   - All biota food results are reported on a wet weight basis on the edible portion unless otherwise stated.
   - 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.
   - SVOC analysis on waters are performed on homogenised unfiltered samples unless noted otherwise.
   - Samples were analysed on an as received basis.
8. This report replaces any interim results previously issued.

Holding Times

Please refer to Sample Preservation and Container Guide for holding times QS 001 .
For samples received on the last day of holding time notification of testing requirements should have been received at least 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 days however for all other VOCs such as BTEX or C 10 TRH then the holding time is 1 days.
NOTE H duplicates are reported as a range NOT as RPD

Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample reported as percent recovery.
CRM	Certified Reference Material 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.
Surr Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	nited States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 S Department of Defense
CP	Client Parent QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 0 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 0
Surrogate Recoveries: Recoveries must lie between 50 150 Phenols PFASs
PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.
WA DWER n 10 : PFBA PFPeA PFHxA PFHpA PFOA PFBS PFHxS PFOS :2 FTSA 8:2 FTSA

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.
   - Organochlorine Pesticide analysis where reporting LCS data Toxaphene Chlordane are not added to the LCS.
   - Organochlorine Pesticide analysis where reporting Spike data Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons where reporting Spike LCS data a single spike of commercial Hydrocarbon products in the range of C12 C 0 is added and its Total Recovery is reported in the C10 C1 cell of the Report.
   - pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 0 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
   - Recovery Data Spikes Surrogates where chromatographic interference does not allow the determination of Recovery the term " INT " appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 12 0 in Matrix Spikes and LCS.
   - For Matrix Spikes and LCS results a dash " " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Q uality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Q ualifying Code
Method B lank							
Total Recoverable Hydrocarbons 2013 NEPM Fractions							
Naphthalene	mg kg	0.5			0.5	Pass	
T RH C C10	mg kg	20			20	Pass	
T RH C10 C1	mg kg	50			50	Pass	
T RH C1 C	mg kg	100			100	Pass	
T RH C C 0	mg kg	100			100	Pass	
Method B lank							
Total Recoverable Hydrocarbons 1 NEPM Fractions							
T RH C C	mg kg	20			20	Pass	
T RH C10 C1	mg kg	20			20	Pass	
T RH C15 C28	mg kg	50			50	Pass	
T RH C2 C	mg kg	50			50	Pass	
Method B lank							
B TEX							
Ben ene	mg kg	0.1			0.1	Pass	
T oluene	mg kg	0.1			0.1	Pass	
Ethylben ene	mg kg	0.1			0.1	Pass	
m p X ylenes	mg kg	0.2			0.2	Pass	
o X ylene	mg kg	0.1			0.1	Pass	
X ylenes T otal	mg kg	0.			0.	Pass	
Method B lank							
V olatile Organics							
1.1 Dichloroethane	mg kg	0.5			0.5	Pass	
1.1 Dichloroethene	mg kg	0.5			0.5	Pass	
1.1.1 T richloroethane	mg kg	0.5			0.5	Pass	
1.1.1.2 T etrachloroethane	mg kg	0.5			0.5	Pass	
1.1.2 T richloroethane	mg kg	0.5			0.5	Pass	
1.1.2.2 T etrachloroethane	mg kg	0.5			0.5	Pass	
1.2 Dibromoethane	mg kg	0.5			0.5	Pass	
1.2 Dichloroben ene	mg kg	0.5			0.5	Pass	
1.2 Dichloroethane	mg kg	0.5			0.5	Pass	
1.2 Dichloropropane	mg kg	0.5			0.5	Pass	
1.2. T richloropropane	mg kg	0.5			0.5	Pass	
1.2. T rimethylben ene	mg kg	0.5			0.5	Pass	
1. Dichloroben ene	mg kg	0.5			0.5	Pass	
1. Dichloropropane	mg kg	0.5			0.5	Pass	
1. .5 T rimethylben ene	mg kg	0.5			0.5	Pass	
1. Dichloroben ene	mg kg	0.5			0.5	Pass	
2 Butanone MEK	mg kg	0.5			0.5	Pass	
2 Propanone Acetone	mg kg	0.5			0.5	Pass	
Chlorotoluene	mg kg	0.5			0.5	Pass	
Methyl 2 pentanone MIBK	mg kg	0.5			0.5	Pass	
Allyl chloride	mg kg	0.5			0.5	Pass	
Bromoben ene	mg kg	0.5			0.5	Pass	
Bromochloromethane	mg kg	0.5			0.5	Pass	
Bromodichloromethane	mg kg	0.5			0.5	Pass	
Bromoform	mg kg	0.5			0.5	Pass	
Bromomethane	mg kg	0.5			0.5	Pass	
Carbon disulfide	mg kg	0.5			0.5	Pass	
Carbon T etrachloride	mg kg	0.5			0.5	Pass	
Chloroben ene	mg kg	0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chloroethane	mg kg	0.5			0.5	Pass	
Chloroform	mg kg	0.5			0.5	Pass	
Chloromethane	mg kg	0.5			0.5	Pass	
cis 1.2 Dichloroethene	mg kg	0.5			0.5	Pass	
cis 1. Dichloropropene	mg kg	0.5			0.5	Pass	
Dibromochloromethane	mg kg	0.5			0.5	Pass	
Dibromomethane	mg kg	0.5			0.5	Pass	
Dichlorodifluoromethane	mg kg	0.5			0.5	Pass	
Iodomethane	mg kg	0.5			0.5	Pass	
Isopropyl ben ene Cumene	mg kg	0.5			0.5	Pass	
Methylene Chloride	mg kg	0.5			0.5	Pass	
Styrene	mg kg	0.5			0.5	Pass	
T etrachloroethene	mg kg	0.5			0.5	Pass	
trans 1.2 Dichloroethene	mg kg	0.5			0.5	Pass	
trans 1. Dichloropropene	mg kg	0.5			0.5	Pass	
T richloroethene	mg kg	0.5			0.5	Pass	
T richlorofluoromethane	mg kg	0.5			0.5	Pass	
V inyl chloride	mg kg	0.5			0.5	Pass	
Method B lank							
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	
Ben a anthracene	mg kg	0.5			0.5	Pass	
Ben o a pyrene	mg kg	0.5			0.5	Pass	
Ben o b fluoranthene	mg kg	0.5			0.5	Pass	
Ben o g.h.i perylene	mg kg	0.5			0.5	Pass	
Ben o k fluoranthene	mg kg	0.5			0.5	Pass	
Chrysene	mg kg	0.5			0.5	Pass	
Diben 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. 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 B lank							
Organochlorine Pesticides							
Chlordanes T otal	mg kg	0.1			0.1	Pass	
. DDD	mg kg	0.05			0.05	Pass	
. DDE	mg kg	0.05			0.05	Pass	
. DDT	mg kg	0.05			0.05	Pass	
a BHC	mg kg	0.05			0.05	Pass	
Aldrin	mg kg	0.05			0.05	Pass	
b BHC	mg kg	0.05			0.05	Pass	
d BHC	mg kg	0.05			0.05	Pass	
Dieldrin	mg kg	0.05			0.05	Pass	
Endosulfan I	mg kg	0.05			0.05	Pass	
Endosulfan II	mg kg	0.05			0.05	Pass	
Endosulfan sulphate	mg kg	0.05			0.05	Pass	
Endrin	mg kg	0.05			0.05	Pass	
Endrin aldehyde	mg kg	0.05			0.05	Pass	
Endrin ketone	mg kg	0.05			0.05	Pass	
g BHC Lindane	mg kg	0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor	mg kg	0.05			0.05	Pass	
Heptachlor epoxide	mg kg	0.05			0.05	Pass	
Hexachloroben ene	mg kg	0.05			0.05	Pass	
Methoxychlor	mg kg	0.05			0.05	Pass	
T oxaphene	mg kg	1			1	Pass	
Method B lank							
Organophosphorus Pesticides							
A inphos 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	
Dia inon	mg kg	0.2			0.2	Pass	
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	
O methoate	mg kg	2			2	Pass	
Phorate	mg kg	0.2			0.2	Pass	
Pirimiphos methyl	mg kg	0.2			0.2	Pass	
Pyra ophos	mg kg	0.2			0.2	Pass	
Ronnel	mg kg	0.2			0.2	Pass	
T erbufos	mg kg	0.2			0.2	Pass	
T etrachlorvinphos	mg kg	0.2			0.2	Pass	
T okuthion	mg kg	0.2			0.2	Pass	
T richloronate	mg kg	0.2			0.2	Pass	
Method B lank							
Polychlorinated B iphenyls							
Aroclor 101	mg kg	0.1			0.1	Pass	
Aroclor 1221	mg kg	0.1			0.1	Pass	
Aroclor 12 2	mg kg	0.1			0.1	Pass	
Aroclor 12 2	mg kg	0.1			0.1	Pass	
Aroclor 12 8	mg kg	0.1			0.1	Pass	
Aroclor 125	mg kg	0.1			0.1	Pass	
Aroclor 12 0	mg kg	0.1			0.1	Pass	
T otal PCB	mg kg	0.1			0.1	Pass	
Method B lank							
Phenols (Halogenated)							
2 Chlorophenol	mg kg	0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2. Dichlorophenol	mg kg	0.5			0.5	Pass	
2. .5 T richlorophenol	mg kg	1			1	Pass	
2. . T richlorophenol	mg kg	1			1.0	Pass	
2. Dichlorophenol	mg kg	0.5			0.5	Pass	
Chloro methylphenol	mg kg	1			1.0	Pass	
Pentachlorophenol	mg kg	1			1.0	Pass	
T etrachlorophenols T otal	mg kg	1			1.0	Pass	
Method B lank							
Phenols (non Halogenated)							
2 Cyclohexyl . dinitrophenol	mg kg	20			20	Pass	
2 Methyl . dinitrophenol	mg kg	5			5	Pass	
2 Methylphenol o Cresol	mg kg	0.2			0.2	Pass	
2 Nitrophenol	mg kg	1			1.0	Pass	
2. Dimethylphenol	mg kg	0.5			0.5	Pass	
2. Dinitrophenol	mg kg	5			5	Pass	
Methylphenol m p Cresol	mg kg	0.			0.	Pass	
Nitrophenol	mg kg	5			5	Pass	
Dinoseb	mg kg	20			20	Pass	
Phenol	mg kg	0.5			0.5	Pass	
Method B lank							
Clay		1			1	Pass	
T otal O rganic Carbon		0.1			0.1	Pass	
Method B lank							
Heavy Metals							
Arsenic	mg kg	2			2	Pass	
Cadmium	mg kg	0.			0.	Pass	
Chromium	mg kg	5			5	Pass	
Copper	mg kg	5			5	Pass	
Iron	mg kg	20			20	Pass	
Lead	mg kg	5			5	Pass	
Mercury	mg kg	0.1			0.1	Pass	
Nickel	mg kg	5			5	Pass	
inc	mg kg	5			5	Pass	
LCS Recovery							
Total Recoverable Hydrocarbons 2013 NEPM Fractions							
Naphthalene					0 1 0	Pass	
Naphthalene		122			0 1 0	Pass	
T RH C C10		8			0 1 0	Pass	
T RH C C10		11			0 1 0	Pass	
T RH C10 C1		10			0 1 0	Pass	
LCS Recovery							
Total Recoverable Hydrocarbons 1 NEPM Fractions							
T RH C C		101			0 1 0	Pass	
T RH C10 C1		8			0 1 0	Pass	
LCS Recovery							
B TEX							
Ben ene		1			0 1 0	Pass	
T oluene		85			0 1 0	Pass	
Ethylben ene		0			0 1 0	Pass	
m p X ylenes		85			0 1 0	Pass	
X ylenes T otal		85			0 1 0	Pass	
LCS Recovery							
V olatile Organics							
1,1 Dichloroethene		80			0 1 0	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.1.1 T richloroethane		1			0 1 0	Pass	
1.2 Dichloroben ene		8			0 1 0	Pass	
1.2 Dichloroethane		110			0 1 0	Pass	
Ben ene		10			0 1 0	Pass	
Ethylben ene		10			0 1 0	Pass	
m p X ylenes		101			0 1 0	Pass	
T oluene		100			0 1 0	Pass	
T richloroethene		10			0 1 0	Pass	
X ylenes T otal		102			0 1 0	Pass	
LCS Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene		8			0 1 0	Pass	
Acenaphthylene		8			0 1 0	Pass	
Anthracene		8			0 1 0	Pass	
Ben a anthracene		0			0 1 0	Pass	
Ben o a pyrene		88			0 1 0	Pass	
Ben o b fluoranthene		8			0 1 0	Pass	
Ben o g.h.i perylene		0			0 1 0	Pass	
Ben o k fluoranthene		88			0 1 0	Pass	
Chrysene					0 1 0	Pass	
Diben a.h anthracene		5			0 1 0	Pass	
Fluoranthene		8			0 1 0	Pass	
Fluorene		8			0 1 0	Pass	
Indeno 1.2. cd pyrene		85			0 1 0	Pass	
Naphthalene		8			0 1 0	Pass	
Phenanthrene		8			0 1 0	Pass	
Pyrene		8			0 1 0	Pass	
LCS Recovery							
Organochlorine Pesticides							
. DDD					0 1 0	Pass	
. DDE		10			0 1 0	Pass	
. DDT		115			0 1 0	Pass	
a BHC		10			0 1 0	Pass	
Aldrin		112			0 1 0	Pass	
b BHC		100			0 1 0	Pass	
d BHC		100			0 1 0	Pass	
Dieldrin		105			0 1 0	Pass	
Endosulfan I		10			0 1 0	Pass	
Endosulfan II		8			0 1 0	Pass	
Endosulfan sulphate		105			0 1 0	Pass	
Endrin		11			0 1 0	Pass	
Endrin aldehyde		10			0 1 0	Pass	
Endrin ketone		10			0 1 0	Pass	
g BHC Lindane		10			0 1 0	Pass	
Heptachlor		10			0 1 0	Pass	
Heptachlor epoxide		105			0 1 0	Pass	
Hexachloroben ene		105			0 1 0	Pass	
M ethoxychlor		112			0 1 0	Pass	
LCS Recovery							
Organophosphorus Pesticides							
Dia inon		8			0 1 0	Pass	
Dimethoate					0 1 0	Pass	
Ethion		10			0 1 0	Pass	
Fenitrothion		10			0 1 0	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Methyl parathion		8			0 1 0	Pass	
Mevinphos		88			0 1 0	Pass	
LCS Recovery							
Polychlorinated Biphenyls							
Aroclor 12 0		8			0 1 0	Pass	
LCS Recovery							
Phenols (Halogenated)							
2 Chlorophenol		8			0 1 0	Pass	
2. Dichlorophenol					0 1 0	Pass	
2. .5 Trichlorophenol		10			0 1 0	Pass	
2. . Trichlorophenol		110			0 1 0	Pass	
2. Dichlorophenol		10			0 1 0	Pass	
Chloro methylphenol					0 1 0	Pass	
Pentachlorophenol					0 1 0	Pass	
Tetrachlorophenols Total		8			0 1 0	Pass	
LCS Recovery							
Phenols (non Halogenated)							
2 Cyclohexyl . dinitrophenol		5			0 1 0	Pass	
2 Methyl . dinitrophenol					0 1 0	Pass	
2 Methylphenol o Cresol		81			0 1 0	Pass	
2 Nitrophenol		2			0 1 0	Pass	
2. Dimethylphenol					0 1 0	Pass	
Methylphenol m p Cresol					0 1 0	Pass	
Nitrophenol		0			0 1 0	Pass	
Dinoseb					0 1 0	Pass	
Phenol		10			0 1 0	Pass	
LCS Recovery							
Clay		8			0 1 0	Pass	
Total Organic Carbon		100			0 1 0	Pass	
LCS Recovery							
Heavy Metals							
Arsenic		111			80 120	Pass	
Cadmium		102			80 120	Pass	
Chromium		11			80 120	Pass	
Copper		118			80 120	Pass	
Lead		11			80 120	Pass	
Mercury		10			5 125	Pass	
Nickel		118			80 120	Pass	
inc		112			80 120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike Recovery									
Volatile Organics				Result 1					
1.1 Dichloroethene	M18 Au1	25 NCP		2			0 1 0	Pass	
1.1.1 Trichloroethane	M18 Au1	25 NCP					0 1 0	Pass	
1.2 Dichloroben ene	M18 Au1	25 NCP		10			0 1 0	Pass	
1.2 Dichloroethane	M18 Au1	25 NCP		121			0 1 0	Pass	
Trichloroethene	M18 Au1	25 NCP		110			0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons	2013 NEPM Fractions			Result 1					
Naphthalene	S18 Au1	15 CP		8			0 1 0	Pass	
TRHC C10	S18 Au1	15 CP		10			0 1 0	Pass	
TRH C10 C1	S18 Au1	15 CP		2			0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons	1 NEPM Fractions			Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
T RH C C	S18 Au1 15	CP		110			0 1 0	Pass	
T RH C10 C1	S18 Au1 15	CP		8			0 1 0	Pass	
Spike Recovery									
B TEX				Result 1					
Ben ene	S18 Au1 15	CP					0 1 0	Pass	
T oluene	S18 Au1 15	CP		5			0 1 0	Pass	
Ethylben ene	S18 Au1 15	CP					0 1 0	Pass	
m p X ylenes	S18 Au1 15	CP		1			0 1 0	Pass	
o X ylene	S18 Au1 15	CP					0 1 0	Pass	
X ylenes T otal	S18 Au1 15	CP		1			0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons	2013 NEPM Fractions			Result 1					
Naphthalene	S18 Au1 18	CP		12			0 1 0	Pass	
T RH C C10	S18 Au1 18	CP		12			0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons 1	NEPM Fractions			Result 1					
T RH C C	S18 Au1 18	CP		12			0 1 0	Pass	
Spike Recovery									
B TEX				Result 1					
Ben ene	S18 Au1 18	CP		108			0 1 0	Pass	
T oluene	S18 Au1 18	CP		108			0 1 0	Pass	
Ethylben ene	S18 Au1 18	CP		112			0 1 0	Pass	
m p X ylenes	S18 Au1 18	CP		10			0 1 0	Pass	
o X ylene	S18 Au1 18	CP		10			0 1 0	Pass	
X ylenes T otal	S18 Au1 18	CP		10			0 1 0	Pass	
Spike Recovery									
Phenols (Halogenated)				Result 1					
2 Chlorophenol	M18 Au1 822	NCP		10			0 1 0	Pass	
2. Dichlorophenol	M18 Au1 822	NCP		101			0 1 0	Pass	
2. .5 T richlorophenol	M18 Au1 822	NCP		5			0 1 0	Pass	
2. . T richlorophenol	M18 Au1 822	NCP		8			0 1 0	Pass	
2. Dichlorophenol	M18 Au1 822	NCP					0 1 0	Pass	
Chloro methylphenol	M18 Au1 822	NCP		8			0 1 0	Pass	
Pentachlorophenol	M18 Au1 80	NCP					0 1 0	Pass	
T etrachlorophenols T otal	M18 Au1 822	NCP					0 1 0	Pass	
Spike Recovery									
Phenols (non Halogenated)				Result 1					
2 Cyclohexyl . dinitrophenol	M18 Au18 5	NCP					0 1 0	Pass	
2 Methyl . dinitrophenol	M18 Au15 8	NCP		2			0 1 0	Pass	
2 Methylphenol o Cresol	M18 Au1 822	NCP					0 1 0	Pass	
2 Nitrophenol	M18 Au1 822	NCP		88			0 1 0	Pass	
2. Dimethylphenol	M18 Au1 822	NCP		100			0 1 0	Pass	
2. Dinitrophenol	M18 Au18 5	NCP					0 1 0	Pass	
Methylphenol m p Cresol	M18 Au1 822	NCP			102		0 1 0	Pass	
Nitrophenol	M18 Au1 822	NCP		5			0 1 0	Pass	
Dinoseb	M18 Au15 8	NCP					0 1 0	Pass	
Phenol	M18 Au1 822	NCP		10			0 1 0	Pass	
Spike Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S18 Au1 21	CP		0			0 1 0	Pass	
Acenaphthylene	S18 Au1 21	CP		1			0 1 0	Pass	
Anthracene	S18 Au1 21	CP					0 1 0	Pass	
Ben a anthracene	S18 Au1 21	CP					0 1 0	Pass	
Ben o a pyrene	S18 Au1 21	CP		85			0 1 0	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ben o b fluoranthene	S18 Au1 21	CP					0 1 0	Pass	
Ben o g.h.i perylene	S18 Au1 21	CP		0			0 1 0	Pass	
Ben o k fluoranthene	S18 Au1 21	CP		8			0 1 0	Pass	
Chrysene	S18 Au1 21	CP					0 1 0	Pass	
Diben a.h anthracene	S18 Au1 21	CP		8			0 1 0	Pass	
Fluoranthene	S18 Au1 21	CP		1			0 1 0	Pass	
Fluorene	S18 Au1 21	CP					0 1 0	Pass	
Indeno 1.2. cd pyrene	S18 Au1 21	CP					0 1 0	Pass	
Naphthalene	S18 Au1 21	CP		0			0 1 0	Pass	
Phenanthrene	S18 Au1 21	CP		8			0 1 0	Pass	
Pyrene	S18 Au1 21	CP		2			0 1 0	Pass	
Spike Recovery									
Heavy Metals				Result 1					
Arsenic	S18 Au1 22	CP		8			5 125	Pass	
Cadmium	S18 Au1 22	CP		1			5 125	Pass	
Chromium	S18 Au1 22	CP		108			5 125	Pass	
Copper	S18 Au1 22	CP		8			5 125	Pass	
Lead	S18 Au1 22	CP		1			5 125	Fail	Q08
Mercury	S18 Au1 22	CP		8			0 1 0	Pass	
Nickel	S18 Au1 22	CP		11			5 125	Pass	
Spike Recovery									
Organochlorine Pesticides				Result 1					
. DDD	S18 Au1 2	CP		100			0 1 0	Pass	
. DDE	S18 Au1 2	CP		105			0 1 0	Pass	
. DDT	S18 Au1 2	CP		8			0 1 0	Pass	
a BHC	S18 Au1 2	CP					0 1 0	Pass	
Aldrin	S18 Au1 2	CP		10			0 1 0	Pass	
b BHC	S18 Au1 2	CP		5			0 1 0	Pass	
d BHC	S18 Au1 2	CP		8			0 1 0	Pass	
Dieldrin	S18 Au1 2	CP		8			0 1 0	Pass	
Endosulfan I	S18 Au1 2	CP					0 1 0	Pass	
Endosulfan II	S18 Au1 2	CP		5			0 1 0	Pass	
Endosulfan sulphate	S18 Au1 2	CP		100			0 1 0	Pass	
Endrin	S18 Au1 2	CP		10			0 1 0	Pass	
Endrin aldehyde	S18 Au1 2	CP		102			0 1 0	Pass	
Endrin ketone	S18 Au1 2	CP		10			0 1 0	Pass	
g BHC Lindane	S18 Au1 2	CP					0 1 0	Pass	
Heptachlor	S18 Au1 2	CP					0 1 0	Pass	
Heptachlor epoxide	S18 Au1 2	CP		5			0 1 0	Pass	
Hexachloroben ene	S18 Au1 2	CP		5			0 1 0	Pass	
Methoxychlor	S18 Au1 2	CP		100			0 1 0	Pass	
Spike Recovery									
Polychlorinated B iphenyls				Result 1					
Aroclor 12 0	S18 Au1 2	CP		102			0 1 0	Pass	
Spike Recovery									
Heavy Metals				Result 1					
Arsenic	S18 Au1 1	CP		10			5 125	Pass	
Cadmium	S18 Au1 1	CP		8			5 125	Pass	
Chromium	S18 Au1 1	CP		10			5 125	Pass	
Copper	S18 Au1 1	CP		118			5 125	Pass	
Lead	S18 Au1 1	CP		11			5 125	Pass	
Mercury	S18 Au1 1	CP		10			0 1 0	Pass	
Nickel	S18 Au1 1	CP		10			5 125	Pass	
Spike Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Organophosphorus Pesticides				Result 1			
Dia inon	S18 Au1	5	CP		0 1 0	Pass	
Dimethoate	S18 Au1	5	CP	1	0 1 0	Pass	
Ethion	S18 Au1	5	CP	12	0 1 0	Pass	
Fenitrothion	S18 Au1	5	CP	10	0 1 0	Pass	
Methyl parathion	S18 Au1	5	CP	8	0 1 0	Pass	
Mevinphos	S18 Au1	5	CP	10	0 1 0	Pass	
Spike Recovery							
Organochlorine Pesticides				Result 1			
. DDD	S18 Au1	5	CP	5	0 1 0	Pass	
. DDE	S18 Au1	5	CP	100	0 1 0	Pass	
. DDT	S18 Au1	5	CP	11	0 1 0	Pass	
a BHC	S18 Au1	5	CP	2	0 1 0	Pass	
Aldrin	S18 Au1	5	CP		0 1 0	Pass	
b BHC	S18 Au1	5	CP	85	0 1 0	Pass	
d BHC	S18 Au1	5	CP	8	0 1 0	Pass	
Dieldrin	S18 Au1	5	CP		0 1 0	Pass	
Endosulfan I	S18 Au1	5	CP	2	0 1 0	Pass	
Endosulfan II	S18 Au1	5	CP		0 1 0	Pass	
Endosulfan sulphate	S18 Au1	5	CP		0 1 0	Pass	
Endrin	S18 Au1	5	CP	10	0 1 0	Pass	
Endrin aldehyde	S18 Au1	5	CP		0 1 0	Pass	
Endrin ketone	S18 Au1	5	CP	1	0 1 0	Pass	
g BHC Lindane	S18 Au1	5	CP	2	0 1 0	Pass	
Heptachlor	S18 Au1	5	CP	118	0 1 0	Pass	
Heptachlor epoxide	S18 Au1	5	CP	8	0 1 0	Pass	
Hexachloroben ene	S18 Au1	5	CP	1	0 1 0	Pass	
Methoxychlor	S18 Au1	5	CP	115	0 1 0	Pass	
Spike Recovery							
Heavy Metals				Result 1			
Arsenic	S18 Au1	5	CP	10	5 125	Pass	
Cadmium	S18 Au1	5	CP		5 125	Pass	
Chromium	S18 Au1	5	CP	112	5 125	Pass	
Copper	S18 Au1	5	CP	112	5 125	Pass	
Lead	S18 Au1	5	CP	11	5 125	Pass	
Mercury	S18 Au1	5	CP	5	0 1 0	Pass	
Nickel	S18 Au1	5	CP	108	5 125	Pass	
inc	S18 Au1	5	CP	120	5 125	Pass	
Spike Recovery							
Polycyclic Aromatic Hydrocarbons				Result 1			
Acenaphthene	S18 Au1	58	CP	8	0 1 0	Pass	
Acenaphthylene	S18 Au1	58	CP		0 1 0	Pass	
Anthracene	S18 Au1	58	CP	82	0 1 0	Pass	
Ben a anthracene	S18 Au1	58	CP	8	0 1 0	Pass	
Ben o a pyrene	S18 Au1	58	CP	2	0 1 0	Pass	
Ben o b fluoranthene	S18 Au1	58	CP		0 1 0	Pass	
Ben o g.h.i perylene	S18 Au1	58	CP		0 1 0	Pass	
Ben o k fluoranthene	S18 Au1	58	CP	101	0 1 0	Pass	
Chrysene	S18 Au1	58	CP	88	0 1 0	Pass	
Diben a.h anthracene	S18 Au1	58	CP		0 1 0	Pass	
Fluoranthene	S18 Au1	58	CP	81	0 1 0	Pass	
Fluorene	S18 Au1	58	CP		0 1 0	Pass	
Indeno 1.2. cd pyrene	S18 Au1	58	CP	8	0 1 0	Pass	
Naphthalene	S18 Au1	58	CP	8	0 1 0	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenanthrene	S18 Au1 58	CP					0 1 0	Pass	
Pyrene	S18 Au1 58	CP		80			0 1 0	Pass	
Spike Recovery									
Polychlorinated B iphenyls				Result 1					
Aroclor 12 0	S18 Au1 5	CP		102			0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons	2013 NEPM Fractions			Result 1					
Naphthalene	S18 Au1 5	CP		101			0 1 0	Pass	
T RH C C10	S18 Au1 5	CP					0 1 0	Pass	
T RH C10 C1	S18 Au1 5	CP		128			0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons 1	NEPM Fractions			Result 1					
T RH C C	S18 Au1 5	CP					0 1 0	Pass	
T RH C10 C1	S18 Au1 5	CP		110			0 1 0	Pass	
Spike Recovery									
B TEX				Result 1					
Ben ene	S18 Au1 5	CP		8			0 1 0	Pass	
T oluene	S18 Au1 5	CP		85			0 1 0	Pass	
Ethylben ene	S18 Au1 5	CP		8			0 1 0	Pass	
m p X ylenes	S18 Au1 5	CP		8			0 1 0	Pass	
o X ylene	S18 Au1 5	CP		8			0 1 0	Pass	
X ylenes T otal	S18 Au1 5	CP		85			0 1 0	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons	2013 NEPM Fractions			Result 1	Result 2	RPD			
T RH C10 C1	S18 Au1 12	CP	mg	kg	50	50	1	0	Pass
T RH C1 C	S18 Au1 12	CP	mg	kg	100	100	1	0	Pass
T RH C C 0	S18 Au1 12	CP	mg	kg	100	100	1	0	Pass
Duplicate									
Total Recoverable Hydrocarbons 1	NEPM Fractions			Result 1	Result 2	RPD			
T RH C10 C1	S18 Au1 12	CP	mg	kg	20	20	1	0	Pass
T RH C15 C28	S18 Au1 12	CP	mg	kg	50	50	1	0	Pass
T RH C2 C	S18 Au1 12	CP	mg	kg	50	50	1	0	Pass
Duplicate									
				Result 1	Result 2	RPD			
T otal O rganic Carbon	M18 Ma0 58	NCP		0.	0.5	2	0		Pass
Cation Exchange Capacity	M18 Au1 0	NCReq	100g	11	11	1.0	0	Pass	
Duplicate									
Total Recoverable Hydrocarbons	2013 NEPM Fractions			Result 1	Result 2	RPD			
Naphthalene	S18 Au1 1	CP	mg	kg	0.5	0.5	1	0	Pass
T RH C C10	S18 Au1 1	CP	mg	kg	20	20	1	0	Pass
Duplicate									
Total Recoverable Hydrocarbons 1	NEPM Fractions			Result 1	Result 2	RPD			
T RH C C	S18 Au1 1	CP	mg	kg	20	20	1	0	Pass
Duplicate									
B TEX				Result 1	Result 2	RPD			
Ben ene	S18 Au1 1	CP	mg	kg	0.1	0.1	1	0	Pass
T oluene	S18 Au1 1	CP	mg	kg	0.1	0.1	1	0	Pass
Ethylben ene	S18 Au1 1	CP	mg	kg	0.1	0.1	1	0	Pass
m p X ylenes	S18 Au1 1	CP	mg	kg	0.2	0.2	1	0	Pass
o X ylene	S18 Au1 1	CP	mg	kg	0.1	0.1	1	0	Pass
X ylenes T otal	S18 Au1 1	CP	mg	kg	0.	0.	1	0	Pass

Duplicate											
							Result 1	Result 2	RPD			
Clay	S18	Au1	1		CP			1	1	1	0	Pass
Conductivity 1:5 aqueous extract at 25°C as rec.)	S18	Au1	1		CP	uS	cm		0	11	0	Pass
pH units 1:5 soil:CaCl2 extract at 25°C as rec.)	S18	Au1	1		CP	pH	nits	.	.2	pass	0	Pass
Duplicate												
Heavy Metals							Result 1	Result 2	RPD			
Arsenic	S18	Au1	18		CP	mg	kg	2	2	1	0	Pass
Cadmium	S18	Au1	18		CP	mg	kg	0.	0.	1	0	Pass
Chromium	S18	Au1	18		CP	mg	kg	.	5.	8.0	0	Pass
Copper	S18	Au1	18		CP	mg	kg	5	5	1	0	Pass
Iron	S18	Au1	18		CP	mg	kg	1100	1000	8.0	0	Pass
Lead	S18	Au1	18		CP	mg	kg	5	5	1	0	Pass
Mercury	S18	Au1	18		CP	mg	kg	0.1	0.1	1	0	Pass
Nickel	S18	Au1	18		CP	mg	kg	5	5	1	0	Pass
inc	S18	Au1	18		CP	mg	kg	21	20	.0	0	Pass
Duplicate												
Polycyclic Aromatic Hydrocarbons							Result 1	Result 2	RPD			
Acenaphthene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Acenaphthylene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Anthracene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Ben a anthracene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Ben o a pyrene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Ben o b fluoranthene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Ben o g.h.i perylene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Ben o k fluoranthene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Chrysene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Diben a.h anthracene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Fluoranthene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Fluorene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Indeno 1.2. cd pyrene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Naphthalene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Phenanthrene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Pyrene	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Duplicate												
Organophosphorus Pesticides							Result 1	Result 2	RPD			
A inphos methyl	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Bolstar	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Chlorfenvinphos	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Chlorpyrifos	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Chlorpyrifos methyl	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Coumaphos	S18	Au1	1		CP	mg	kg	2	2	1	0	Pass
Demeton S	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Demeton O	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Dia inon	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Dichlorvos	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Dimethoate	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Disulfoton	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
EPN	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Ethion	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Ethoprop	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Ethyl parathion	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Fenitrothion	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Fensulfothion	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Fenthion	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass

Duplicate												
Organophosphorus Pesticides							Result 1	Result 2	RPD			
Malathion	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Merphos	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Methyl parathion	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Mevinphos	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Monocrotophos	S18	Au1	1		CP	mg	kg	2	2	1	0	Pass
Naled	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Omethoate	S18	Au1	1		CP	mg	kg	2	2	1	0	Pass
Phorate	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Pirimiphos methyl	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Pyra ophos	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Ronnel	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
T erbufos	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
T etrachlorvinphos	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
T okuthion	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
T richloronate	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
Duplicate												
Phenols (Halogenated)							Result 1	Result 2	RPD			
2 Chlorophenol	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
2. Dichlorophenol	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
2. .5 T richlorophenol	S18	Au1	1		CP	mg	kg	1	1	1	0	Pass
2. . T richlorophenol	S18	Au1	1		CP	mg	kg	1	1	1	0	Pass
2. Dichlorophenol	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Chloro methylphenol	S18	Au1	1		CP	mg	kg	1	1	1	0	Pass
Pentachlorophenol	S18	Au1	1		CP	mg	kg	1	1	1	0	Pass
T etrachlorophenols T otal	S18	Au1	1		CP	mg	kg	1	1	1	0	Pass
Duplicate												
Phenols (non Halogenated)							Result 1	Result 2	RPD			
2 Cyclohexyl . dinitrophenol	S18	Au1	1		CP	mg	kg	20	20	1	0	Pass
2 Methyl . dinitrophenol	S18	Au1	1		CP	mg	kg	5	5	1	0	Pass
2 Methylphenol o Cresol	S18	Au1	1		CP	mg	kg	0.2	0.2	1	0	Pass
2 Nitrophenol	S18	Au1	1		CP	mg	kg	1	1	1	0	Pass
2. Dimethylphenol	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
2. Dinitrophenol	S18	Au1	1		CP	mg	kg	5	5	1	0	Pass
Methylphenol m p Cresol	S18	Au1	1		CP	mg	kg	0.	0.	1	0	Pass
Nitrophenol	S18	Au1	1		CP	mg	kg	5	5	1	0	Pass
Dinoseb	S18	Au1	1		CP	mg	kg	20	20	1	0	Pass
Phenol	S18	Au1	1		CP	mg	kg	0.5	0.5	1	0	Pass
Duplicate												
							Result 1	Result 2	RPD			
Moisture	S18	Au1	1		CP				.	.0	0	Pass
Duplicate												
Heavy Metals							Result 1	Result 2	RPD			
Arsenic	S18	Au1	22		CP	mg	kg	2		1.0	0	Pass
Cadmium	S18	Au1	22		CP	mg	kg	.	.	1.0	0	Pass
Chromium	S18	Au1	22		CP	mg	kg	22	2	2.0	0	Pass
Copper	S18	Au1	22		CP	mg	kg	150	150	2.0	0	Pass
Lead	S18	Au1	22		CP	mg	kg	100	100	1.0	0	Pass
Mercury	S18	Au1	22		CP	mg	kg	0.2	0.2	.0	0	Pass
Nickel	S18	Au1	22		CP	mg	kg	5	5	1.0	0	Pass
inc	S18	Au1	22		CP	mg	kg	2 00	2 00	1	0	Pass

Duplicate										
Organochlorine Pesticides					Result 1	Result 2	RPD			
Chlordanes T otal	S18 Au1	2	CP	mg	kg	0.1	0.1	1	0	Pass
. DDD	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
. DDE	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
. DDT	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
a BHC	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
Aldrin	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
b BHC	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
d BHC	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
Dieldrin	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
Endosulfan I	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
Endosulfan II	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
Endosulfan sulphate	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
Endrin	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
Endrin aldehyde	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
Endrin ketone	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
g BHC Lindane	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
Heptachlor	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
Heptachlor epoxide	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
Hexachloroben ene	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
M ethoxychlor	S18 Au1	2	CP	mg	kg	0.05	0.05	1	0	Pass
T oxaphene	S18 Au1	2	CP	mg	kg	1	1	1	0	Pass
Duplicate										
Polychlorinated B iphenyls					Result 1	Result 2	RPD			
Aroclor 101	S18 Au1	2	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 1221	S18 Au1	2	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 2	S18 Au1	2	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 2	S18 Au1	2	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 8	S18 Au1	2	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 125	S18 Au1	2	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 0	S18 Au1	2	CP	mg	kg	0.1	0.1	1	0	Pass
T otal PCB	S18 Au1	2	CP	mg	kg	0.1	0.1	1	0	Pass
Duplicate										
					Result 1	Result 2	RPD			
M oisture	S18 Au1	2	CP		1	1		2.0	0	Pass
Duplicate										
Organochlorine Pesticides					Result 1	Result 2	RPD			
Chlordanes T otal	S18 Au1	0	CP	mg	kg	0.1	0.1	1	0	Pass
. DDD	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
. DDE	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
. DDT	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
a BHC	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
Aldrin	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
b BHC	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
d BHC	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
Dieldrin	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
Endosulfan I	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
Endosulfan II	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
Endosulfan sulphate	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
Endrin	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
Endrin aldehyde	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
Endrin ketone	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
g BHC Lindane	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
Heptachlor	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
Heptachlor epoxide	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass

Duplicate										
Organochlorine Pesticides					Result 1	Result 2	RPD			
Hexachloroben ene	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
Methoxychlor	S18 Au1	0	CP	mg	kg	0.05	0.05	1	0	Pass
T oxaphene	S18 Au1	0	CP	mg	kg	1	1	1	0	Pass
Duplicate										
Polychlorinated B iphenyls					Result 1	Result 2	RPD			
Aroclor 101	S18 Au1	0	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 1221	S18 Au1	0	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 2	S18 Au1	0	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 2	S18 Au1	0	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 8	S18 Au1	0	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 125	S18 Au1	0	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 0	S18 Au1	0	CP	mg	kg	0.1	0.1	1	0	Pass
T otal PCB	S18 Au1	0	CP	mg	kg	0.1	0.1	1	0	Pass
Duplicate										
					Result 1	Result 2	RPD			
pH (1:5 Aqueous extract at 25°C as rec.	M18 Au1	8	NCP	pH	nits	8.1	8.0	pass	0	Pass
Duplicate										
Total Recoverable Hydrocarbons	2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S18 Au1		CP	mg	kg	0.5	0.5	1	0	Pass
T RH C C10	S18 Au1		CP	mg	kg	20	20	1	0	Pass
T RH C10 C1	S18 Au1		CP	mg	kg	50	50	1	0	Pass
T RH C1 C	S18 Au1		CP	mg	kg	100	100	1	0	Pass
T RH C C 0	S18 Au1		CP	mg	kg	100	100	1	0	Pass
Duplicate										
Total Recoverable Hydrocarbons 1	NEPM Fractions				Result 1	Result 2	RPD			
T RH C C	S18 Au1		CP	mg	kg	20	20	1	0	Pass
T RH C10 C1	S18 Au1		CP	mg	kg	20	20	1	0	Pass
T RH C15 C28	S18 Au1		CP	mg	kg	50	50	1	0	Pass
T RH C2 C	S18 Au1		CP	mg	kg	50	50	1	0	Pass
Duplicate										
B TEX					Result 1	Result 2	RPD			
Ben ene	S18 Au1		CP	mg	kg	0.1	0.1	1	0	Pass
T oluene	S18 Au1		CP	mg	kg	0.1	0.1	1	0	Pass
Ethylben ene	S18 Au1		CP	mg	kg	0.1	0.1	1	0	Pass
m p X ylenes	S18 Au1		CP	mg	kg	0.2	0.2	1	0	Pass
o X ylene	S18 Au1		CP	mg	kg	0.1	0.1	1	0	Pass
X ylenes T otal	S18 Au1		CP	mg	kg	0.	0.	1	0	Pass
Duplicate										
Polycyclic Aromatic Hydrocarbons					Result 1	Result 2	RPD			
Acenaphthene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Acenaphthylene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Anthracene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Ben a anthracene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Ben o a pyrene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Ben o b fluoranthene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Ben o g.h.i perylene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Ben o k fluoranthene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Chrysene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Diben a.h anthracene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Fluoranthene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Fluorene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Indeno 1.2. cd pyrene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Naphthalene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass

Duplicate										
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Phenanthrene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Pyrene	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Duplicate										
Organophosphorus Pesticides				Result 1	Result 2	RPD			
A inphos methyl	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Bolstar	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Chlorfenvinphos	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Chlorpyrifos	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Chlorpyrifos methyl	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Coumaphos	S18 Au1	8	CP	mg	kg	2	2	1	0	Pass
Demeton S	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Demeton O	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Dia inon	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Dichlorvos	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Dimethoate	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Disulfoton	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
EPN	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Ethion	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Ethoprop	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Ethyl parathion	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Fenitrothion	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Fensulfothion	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Fenthion	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Malathion	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Merphos	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Methyl parathion	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Mevinphos	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Monocrotophos	S18 Au1	8	CP	mg	kg	2	2	1	0	Pass
Naled	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
O methoate	S18 Au1	8	CP	mg	kg	2	2	1	0	Pass
Phorate	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Pirimiphos methyl	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Pyra ophos	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Ronnel	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
T erbufos	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
T etrachlorvinphos	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
T okuthion	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
T richloronate	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
Duplicate										
Phenols (Halogenated)				Result 1	Result 2	RPD			
2 Chlorophenol	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
2. Dichlorophenol	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
2. .5 T richlorophenol	S18 Au1	8	CP	mg	kg	1	1	1	0	Pass
2. . T richlorophenol	S18 Au1	8	CP	mg	kg	1	1	1	0	Pass
2. Dichlorophenol	S18 Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Chloro methylphenol	S18 Au1	8	CP	mg	kg	1	1	1	0	Pass
Pentachlorophenol	S18 Au1	8	CP	mg	kg	1	1	1	0	Pass
T etrachlorophenols T otal	S18 Au1	8	CP	mg	kg	1	1	1	0	Pass
Duplicate										
Phenols (non Halogenated)				Result 1	Result 2	RPD			
2 Cyclohexyl . dinitrophenol	S18 Au1	8	CP	mg	kg	20	20	1	0	Pass
2 Methyl . dinitrophenol	S18 Au1	8	CP	mg	kg	5	5	1	0	Pass
2 Methylphenol o Cresol	S18 Au1	8	CP	mg	kg	0.2	0.2	1	0	Pass
2 Nitrophenol	S18 Au1	8	CP	mg	kg	1	1	1	0	Pass

Duplicate											
Phenols (non Halogenated)						Result 1	Result 2	RPD			
2. Dimethylphenol	S18	Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
2. Dinitrophenol	S18	Au1	8	CP	mg	kg	5	5	1	0	Pass
Methylphenol m p Cresol	S18	Au1	8	CP	mg	kg	0.	0.	1	0	Pass
Nitrophenol	S18	Au1	8	CP	mg	kg	5	5	1	0	Pass
Dinoseb	S18	Au1	8	CP	mg	kg	20	20	1	0	Pass
Phenol	S18	Au1	8	CP	mg	kg	0.5	0.5	1	0	Pass
Duplicate											
						Result 1	Result 2	RPD			
Moisture	S18	Au1	0	CP			8	.	1.0	0	Pass
Duplicate											
Heavy Metals						Result 1	Result 2	RPD			
Arsenic	S18	Au1	0	CP	mg	kg	.	.	.0	0	Pass
Cadmium	S18	Au1	0	CP	mg	kg	0.	0.	1	0	Pass
Chromium	S18	Au1	0	CP	mg	kg	21	18	1	0	Pass
Copper	S18	Au1	0	CP	mg	kg			8.0	0	Pass
Lead	S18	Au1	0	CP	mg	kg	20	10	2.0	0	Pass
Mercury	S18	Au1	0	CP	mg	kg	0.1	0.1	.0	0	Pass
Nickel	S18	Au1	0	CP	mg	kg	21	12	5	0	Fail Q15
inc	S18	Au1	0	CP	mg	kg	1000	8 0	1	0	Pass
Duplicate											
Heavy Metals						Result 1	Result 2	RPD			
Arsenic	S18	Au1	1	CP	mg	kg	.0	.2	.0	0	Pass
Cadmium	S18	Au1	1	CP	mg	kg	0.	0.	1	0	Pass
Chromium	S18	Au1	1	CP	mg	kg	2	2	1.0	0	Pass
Copper	S18	Au1	1	CP	mg	kg	0	1	2.0	0	Pass
Iron	S18	Au1	1	CP	mg	kg	15000	15000	2.0	0	Pass
Lead	S18	Au1	1	CP	mg	kg	8	2	.0	0	Pass
Mercury	S18	Au1	1	CP	mg	kg	0.1	0.1	11	0	Pass
Nickel	S18	Au1	1	CP	mg	kg	58	58	2.0	0	Pass
inc	S18	Au1	1	CP	mg	kg	8 0	8 0	2.0	0	Pass
Duplicate											
Organochlorine Pesticides						Result 1	Result 2	RPD			
Chlordanes T otal	S18	Au1	8	CP	mg	kg	0.1	0.1	1	0	Pass
. DDD	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
. DDE	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
. DDT	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
a BHC	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
Aldrin	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
b BHC	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
d BHC	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
Dieldrin	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
Endosulfan I	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
Endosulfan II	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
Endosulfan sulphate	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
Endrin	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
Endrin aldehyde	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
Endrin ketone	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
g BHC Lindane	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
Heptachlor	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
Heptachlor epoxide	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
Hexachloroben ene	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
Methoxychlor	S18	Au1	8	CP	mg	kg	0.05	0.05	1	0	Pass
T oxaphene	S18	Au1	8	CP	mg	kg	1	1	1	0	Pass

Duplicate										
Polychlorinated B iphenyls					Result 1	Result 2	RPD			
Aroclor 101	S18 Au1	8	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 1221	S18 Au1	8	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 2	S18 Au1	8	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 2	S18 Au1	8	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 8	S18 Au1	8	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 125	S18 Au1	8	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 0	S18 Au1	8	CP	mg	kg	0.1	0.1	1	0	Pass
T otal PCB	S18 Au1	8	CP	mg	kg	0.1	0.1	1	0	Pass
Duplicate										
					Result 1	Result 2	RPD			
Moisture	S18 Au1	50	CP		1	1		1	0	Pass
Duplicate										
Heavy Metals					Result 1	Result 2	RPD			
Arsenic	S18 Au1	52	CP	mg	kg	.5	.	5.0	0	Pass
Cadmium	S18 Au1	52	CP	mg	kg	0.	0.	1	0	Pass
Chromium	S18 Au1	52	CP	mg	kg	1	20	20	0	Pass
Copper	S18 Au1	52	CP	mg	kg	25	21	1	0	Pass
Iron	S18 Au1	52	CP	mg	kg	11000	12000	1.0	0	Pass
Lead	S18 Au1	52	CP	mg	kg	120	110	11	0	Pass
Mercury	S18 Au1	52	CP	mg	kg	0.2	0.2	1	0	Pass
Nickel	S18 Au1	52	CP	mg	kg	1	18	8.0	0	Pass
inc	S18 Au1	52	CP	mg	kg	0	10	.0	0	Pass
Duplicate										
Organochlorine Pesticides					Result 1	Result 2	RPD			
Chlordanes T otal	S18 Au1	55	CP	mg	kg	0.1	0.1	1	0	Pass
. DDD	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
. DDE	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
. DDT	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
a BHC	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
Aldrin	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
b BHC	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
d BHC	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
Dieldrin	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
Endosulfan I	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
Endosulfan II	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
Endosulfan sulphate	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
Endrin	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
Endrin aldehyde	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
Endrin ketone	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
g BHC Lindane	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
Heptachlor	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
Heptachlor epoxide	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
Hexachloroben ene	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
Methoxychlor	S18 Au1	55	CP	mg	kg	0.05	0.05	1	0	Pass
T oxaphene	S18 Au1	55	CP	mg	kg	1	1	1	0	Pass
Duplicate										
Polychlorinated B iphenyls					Result 1	Result 2	RPD			
Aroclor 101	S18 Au1	55	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 1221	S18 Au1	55	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 2	S18 Au1	55	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 2	S18 Au1	55	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 8	S18 Au1	55	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 125	S18 Au1	55	CP	mg	kg	0.1	0.1	1	0	Pass
Aroclor 12 0	S18 Au1	55	CP	mg	kg	0.1	0.1	1	0	Pass
T otal PCB	S18 Au1	55	CP	mg	kg	0.1	0.1	1	0	Pass

Duplicate									
Polycyclic Aromatic Hydrocarbons		Result 1	Result 2	RPD			
Acenaphthene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Acenaphthylene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Anthracene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Ben a anthracene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Ben o a pyrene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Ben o b fluoranthene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Ben o g.h.i perylene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Ben o k fluoranthene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Chrysene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Diben a.h anthracene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Fluoranthene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Fluorene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Indeno 1.2. cd pyrene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Naphthalene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Phenanthrene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Pyrene	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Duplicate							
Phenols (Halogenated)		Result 1	Result 2	RPD			
2 Chlorophenol	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
2. Dichlorophenol	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
2. .5 T richlorophenol	S18 Au1 5 CP mg	kg	1	1	1	0	Pass
2. . T richlorophenol	S18 Au1 5 CP mg	kg	1	1	1	0	Pass
2. Dichlorophenol	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Chloro methylphenol	S18 Au1 5 CP mg	kg	1	1	1	0	Pass
Pentachlorophenol	S18 Au1 5 CP mg	kg	1	1	1	0	Pass
T etrachlorophenols T otal	S18 Au1 5 CP mg	kg	1	1	1	0	Pass
Duplicate							
Phenols (non Halogenated)		Result 1	Result 2	RPD			
2 Cyclohexyl . dinitrophenol	S18 Au1 5 CP mg	kg	20	20	1	0	Pass
2 Methyl . dinitrophenol	S18 Au1 5 CP mg	kg	5	5	1	0	Pass
2 Methylphenol o Cresol	S18 Au1 5 CP mg	kg	0.2	0.2	1	0	Pass
2 Nitrophenol	S18 Au1 5 CP mg	kg	1	1	1	0	Pass
2. Dimethylphenol	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
2. Dinitrophenol	S18 Au1 5 CP mg	kg	5	5	1	0	Pass
Methylphenol m p Cresol	S18 Au1 5 CP mg	kg	0.	0.	1	0	Pass
Nitrophenol	S18 Au1 5 CP mg	kg	5	5	1	0	Pass
Dinoseb	S18 Au1 5 CP mg	kg	20	20	1	0	Pass
Phenol	S18 Au1 5 CP mg	kg	0.5	0.5	1	0	Pass
Duplicate							
Heavy Metals		Result 1	Result 2	RPD			
Arsenic	S18 Au1 5 CP mg	kg	2	2	1	0	Pass
Cadmium	S18 Au1 5 CP mg	kg	0.	0.	1	0	Pass
Chromium	S18 Au1 5 CP mg	kg	5	5	1	0	Pass
Copper	S18 Au1 5 CP mg	kg	5	5	1	0	Pass
Iron	S18 Au1 5 CP mg	kg	0	0	.0	0	Pass
Lead	S18 Au1 5 CP mg	kg		0	1.0	0	Pass
Mercury	S18 Au1 5 CP mg	kg	0.1	0.1	1	0	Pass
Nickel	S18 Au1 5 CP mg	kg	5	5	1	0	Pass
inc	S18 Au1 5 CP mg	kg	12	1	2.0	0	Pass

Duplicate												
Total Recoverable Hydrocarbons	2013 NEPM Fractions					Result 1	Result 2	RPD				
Naphthalene	S18 Au1	0	CP	mg	kg	.	5.		5	0	Fail	Q15
T RH C C10	S18 Au1	0	CP	mg	kg	1	58			0	Fail	Q15
T RH C10 C1	S18 Au1	0	CP	mg	kg	1 00	1500		12	0	Pass	
T RH C1 C	S18 Au1	0	CP	mg	kg	1800	2100		1	0	Pass	
T RH C C 0	S18 Au1	0	CP	mg	kg	2 0	0		21	0	Pass	
Duplicate												
Total Recoverable Hydrocarbons	1 NEPM Fractions					Result 1	Result 2	RPD				
T RH C C	S18 Au1	0	CP	mg	kg	20	20		1	0	Pass	
T RH C10 C1	S18 Au1	0	CP	mg	kg	1000	1000		1.0	0	Pass	
T RH C15 C28	S18 Au1	0	CP	mg	kg	1500	1800		18	0	Pass	
T RH C2 C	S18 Au1	0	CP	mg	kg	500	5 0		1	0	Pass	
Duplicate												
B TEX						Result 1	Result 2	RPD				
Ben ene	S18 Au1	0	CP	mg	kg	0.1	0.1		1	0	Pass	
T oluene	S18 Au1	0	CP	mg	kg	0.1	0.1		1	0	Pass	
Ethylben ene	S18 Au1	0	CP	mg	kg	0.	0.5			0	Fail	Q15
m p X ylenes	S18 Au1	0	CP	mg	kg	0.5	0.8			0	Fail	Q15
o X ylene	S18 Au1	0	CP	mg	kg	0.	0.			0	Fail	Q15
X ylenes T otal	S18 Au1	0	CP	mg	kg	0.8	1.2		5	0	Fail	Q15
Duplicate												
V olatile Organics						Result 1	Result 2	RPD				
1.1 Dichloroethane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
1.1 Dichloroethene	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
1.1.1 T richloroethane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
1.1.1.2 T etrachloroethane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
1.1.2 T richloroethane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
1.1.2.2 T etrachloroethane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
1.2 Dibromoethane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
1.2 Dichloroben ene	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
1.2 Dichloroethane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
1.2 Dichloropropane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
1.2. T richloropropane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
1.2. T rimethylben ene	S18 Au1	0	CP	mg	kg	.	.0		5	0	Fail	Q15
1. Dichloroben ene	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
1. Dichloropropane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
1. .5 T rimethylben ene	S18 Au1	0	CP	mg	kg	0.	1.5		50	0	Fail	Q15
1. Dichloroben ene	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
2 Butanone MEK	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
2 Propanone Acetone	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
Chlorotoluene	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
Methyl 2 pentanone MIBK	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
Allyl chloride	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
Bromoben ene	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
Bromochloromethane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
Bromodichloromethane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
Bromoform	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
Bromomethane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
Carbon disulfide	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
Carbon T etrachloride	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
Chloroben ene	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
Chloroethane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
Chloroform	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
Chloromethane	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	
cis 1.2 Dichloroethene	S18 Au1	0	CP	mg	kg	0.5	0.5		1	0	Pass	

Duplicate									
V olatile Organics			Result 1	Result 2	RPD				
cis 1. Dichloropropene	S18 Au1	0 CP mg	kg	0.5	0.5	1	0	Pass	
Dibromochloromethane	S18 Au1	0 CP mg	kg	0.5	0.5	1	0	Pass	
Dibromomethane	S18 Au1	0 CP mg	kg	0.5	0.5	1	0	Pass	
Dichlorodifluoromethane	S18 Au1	0 CP mg	kg	0.5	0.5	1	0	Pass	
Iodomethane	S18 Au1	0 CP mg	kg	0.5	0.5	1	0	Pass	
Isopropyl ben ene Cumene	S18 Au1	0 CP	mg kg	0.5	0.5		0	Fail	Q 15
M ethylene Chloride	S18 Au1	0 CP mg	kg	0.5	0.5	1	0	Pass	
Styrene	S18 Au1	0 CP mg	kg	0.5	0.5	1	0	Pass	
T etrachloroethene	S18 Au1	0 CP mg	kg	0.5	0.5	1	0	Pass	
trans 1.2 Dichloroethene	S18 Au1	0 CP mg	kg	0.5	0.5	1	0	Pass	
trans 1. Dichloropropene	S18 Au1	0 CP mg	kg	0.5	0.5	1	0	Pass	
T richloroethene	S18 Au1	0 CP mg	kg	0.5	0.5	1	0	Pass	
T richlorofluoromethane	S18 Au1	0 CP mg	kg	0.5	0.5	1	0	Pass	
V inyl chloride	S18 Au1	0 CP mg	kg	0.5	0.5	1	0	Pass	
Duplicate									
			Result 1	Result 2	RPD				
M oisture	S18 Au1	1 CP	5.	5.		.0	0	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 HoldingT ime	Yes
Some samples have been subcontracted	No

Q ualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the " naphthalene" value from the " C10 C1 " value. T he naphthalene value used in this calculation is obtained from volatiles Purge T rap analysis .
N02	Where we have reported both volatile P T G CM S and semivolatile G CM S 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 Q AQ C acceptance criteria and are entirely technically valid.
N0	F1 is determined by arithmetically subtracting the " T otal BT EX " value from the " C C10" value. T he " T otal BT EX " value is obtained by summing the concentrations of BT EX analytes. T he " C C10" value is obtained by quantitating against a standard of mixed aromatic aliphatic analytes.
N0	Please note: T hese two PAH isomers closely co elute using the most contemporary analytical methods and both the reported concentration and the T EQ apply specifically to the total of the two co eluting PAHs
Q 08	T he 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
Q 15	T he RPD reported passes Eurofins mgt s Q C Acceptance Criteria as defined in the Internal Q uality Control Review and G lossary page of this report.

Authorised B y

Nibha V aidya	Analytical Services Manager
Alex Petridis	Senior Analyst Metal V IC
Harry Bacalis	Senior Analyst V olatile V IC
onathon Angell	Senior Analyst Inorganic Q LD
oseph Edouard	Senior Analyst O rganic V IC
Matthew Deaves	Senior Analyst Asbestos WA
Michael Brancati	Senior Analyst Inorganic V IC
Rhys T homas	Senior Analyst Asbestos WA

G lenn J ackson
National Operations Manager

Final report - this Report replaces any previously issued Report

Indicates Not Requested

Indicates NAT A accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please here.

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30 years Testing For Life

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1 217

Accredited for compliance with ISO/IEC 17025–Testing
T he results of the tests calibrations and or measurements included in this document are traceable to Australian national standards.

Trace Environmental P/L
Shop 2, 7 3 7 New Canterbury Road
Dulwich Hill
NSW 2203

Attention:	**ack Ellis**
Report	**12025 V 2 AID**
Project Name	**MASCO T**
Project ID	**1.1**
Received Date	**Aug 1 2018**
Date Reported	**Aug 21 2018**

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 LT M ASB 8020 by polarised light microscopy PLM and dispersion staining DS techniques.**
OT E Positive T race Analysis results indicate the sample contains detectable respirable fibres.

nknown M ineral Fibres

M ineral fibres of unknown type as determined by PLM with DS may require another analytical technique such as Electron M icroscopy to confirm unequivocal identity.
OT E hile Actinolite, Anthophyllite and T remolite asbestos may be detected by PLM ith DS , due to variability in the optical properties of these materials, AS 9 re uires that these are reported as MF unless confirmed by an independent techni ue.

Subsampling Soil Samples

T he 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 0 to 0g then a sub sampling routine based on ISO 082:200 E is employed.
OT E Depending on the nature and si e of the soil sample, the sub 2 mm residue material may need to be sub sampled for trace analysis, in accordance ith AS 9 200 .

Bonded asbestos containing material ACM

T he 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.T he resultant material is then further examined in accordance with AS 200 .
OT E Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos containing bui materials using PLM and DS . T his is due to the lo 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. V inyl asbestos floor tiles, some asbestos containing sealants and mastics, asbestos containing epo y resins and some ore samples are e amples of these types of material, hich are difficult to analyse.

Limit of Reporting

T he performance limitation of the AS method for inhomogeneous samples is around 0.1 g kg 0.01 w w . W no asbestos is found by PLM and DS including T race Analysis where required this is considered to be at the nominal reporting limit of 0.01 w w .T he examination of large sample si es 500 mL is recommended may improve the likelihood of identifying ACM in the 2mm fraction.T he NEPM screening level of 0.001 w w asbestos in soil for FA friable asbestos and AF asbestos fines then applies where they are able to be quantified by gravimetric procedures.T his quantitative screening is not generally applicable to FF free fibres and results of T race Analysis are referred.
NOTE: NATA News March 2014, p.7, states in relation to AS4964: "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". Accordingly, AT A Accreditation does not cover the performance of this service (indicated ith an asteris).
T his report is consistent ith the analytical procedures and reporting recommendations in the ational Environment Protection (Assessment of S ite Contamination) Measure, 201 (as amended) and the estern Australia Guidelines for the Assessment, R emediation and Management of Asbestos Contaminated S ites in estern Australia, 2009, including supporting document R ecommended Procedures for Laboratory Analysis of Asbestos in S oil, une 2011.

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Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests calibrations and or measurements included in this document are traceable to Australian national standards.

Project Name MASCO T
Project ID 1.1
Date Sampled Aug 08 2018 to Aug 10 2018
Report 12025 V 2 AID

Client Sample ID	Eurofins mgt Sample No.	Date Sampled	Sample Description	Result
SB1 0.5	18 Au1 1	Aug 0 2018	Approximate Sample 08g Sample consisted of: Brown coarse grain soil and rocks	ACM: Chrysotile and amosite asbestos detected in fibre cement fragments. Approximate raw weight of ACM 1. g T otal estimated asbestos content in ACM 0.2 g T otal estimated asbestos concentration in ACM 0.02 w w O rganic fibre detected. No respirable fibres detected.
SB 0.	18 Au1 1	Aug 0 2018	Approximate Sample 101 g Sample consisted of: Brown coarse grain soil and rocks	ACM: Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of ACM 5. g T otal estimated asbestos content in ACM 0.80g T otal estimated asbestos concentration in ACM 0.0 w w FA: Chrysotile asbestos detected in weathered fibre cement fragments. Approximate raw weight of FA 0.0 2g Estimated asbestos content in FA 0.01 g AF: Chrysotile asbestos detected in fibre cement fragments and in the form of loose fibre bundles. Approximate raw weight of AF 0.00 1g Estimated asbestos content in AF 0.00 g T otal estimated asbestos content in FA and AF 0.01 g T otal estimated asbestos concentration in FA and AF 0.001 w w O rganic fibre detected. No respirable fibres detected.
SB11 1.2	18 Au1 21	Aug 0 2018	Approximate Sample 25g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. O rganic fibre detected. No respirable fibres detected.

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NATA Accredited
Accreditation Number 1261
Site Number 1 217

Accredited for compliance with ISO/IEC 17025—Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian national standards.

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
SB1 0.2	18 Au1 25	Aug 10 2018	Approximate Sample g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB1 2.5	18 Au1 28	Aug 10 2018	Approximate Sample 1 g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB10 0.	18 Au1 1	Aug 10 2018	Approximate Sample 65 g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB1 1.0	18 Au1	Aug 10 2018	Approximate Sample 5 g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB18 0.2	18 Au1 8	Aug 10 2018	Approximate Sample 0g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB18 0.	18 Au1	Aug 10 2018	Approximate Sample g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB1 0.8	18 Au1 1	Aug 08 2018	Approximate Sample 5 g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB20 1.0	18 Au1	Aug 08 2018	Approximate Sample 5 1g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB2 0.2	18 Au1 52	Aug 10 2018	Approximate Sample g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB2 0.2	18 Au1 1	Aug 08 2018	Approximate Sample g Sample consisted of: Brown coarse grain soil and rocks	ACM: Chrysotile asbestos detected in Fibre cement fragments. Approximate raw weight of ACM 0.82g Total estimated asbestos content in ACM 0.12g Total estimated asbestos concentration in ACM 0.01 w w Organic fibre detected. No respirable fibres detected.
SB2 1.5	18 Au1	Aug 08 2018	Approximate Sample 8 g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.

First Reported: Aug 21 2018
Date Reported: Sep 0 2018

Eurofins mgt nit F Building F 1 Mars Road Lane Cove West NSW Australia 20
ABN : 50 005 085 521 Telephone: 12 00 8 00

Page of 1
Report Number: 19035 V 2 AID

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Sample History

Where samples are submitted analysed over several days the last date of extraction and analysis is reported. A recent review of our LIM S has resulted in the correction or clarification of some method identifications. Due to this some of the method reference information on reports has changed. However no substantive change has been made to our laboratory methods and as such there is no change in the validity of current or previous results regarding both quality and NAT A accreditation .

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 LT M ASB 8020	Perth	Aug 20 2018	Indefinite

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Phone : 1 02 00
NAT A 12 1 Site 20

Perth
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K ewdale WA 105
Phone : 18 251 00
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Company Name: T race Environmental P L
Address: Shop 2 New Canterbury Road
Dulwich Hill
NSW 220

Project Name: MASCO T
Project ID: 1.1

Order No.:
Report : 12025
Phone: 02 8 0 0555
Fax:

Received: Aug 1 2018 :0 PM
Due: Aug 20 2018
Priority: 5 Day
Contact Name: ack Ellis

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail	Asbestos WA guidelines	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	V olatile O rganics	Moisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BT EX N and V olatile T RH	
Melbourne Laboratory NATA Site 12 4 & 14271			X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217		X									X	X	X	
B risbane Laboratory NATA Site 207 4										X				
Perth Laboratory NATA Site 23736	X													
External Laboratory														
No Sample ID Sample Date Sampling Time Matrix LAB ID														
1 SB1 0. Aug 0 2018 Soil S18 Au1 12								X	X		X			
2 SB1 0.5 Aug 0 2018 Soil S18 Au1 1 X					X	X	X		X	X				
SB 0. Aug 0 2018 Soil S18 Au1 1 X							X		X					
SB 1.0 Aug 0 2018 Soil S18 Au1 15									X		X			
5 SB 2. Aug 0 2018 Soil S18 Au1 1									X	X	X			
SB .2 Aug 0 2018 Soil S18 Au1 1							X		X					
SB .8 Aug 0 2018 Soil S18 Au1 18									X			X		
8 SB11 0.2 Aug 0 2018 Soil S18 Au1 1							X		X					
SB11 0.5 Aug 0 2018 Soil S18 Au1 20									X			X		

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Melbourne Laboratory NATA Site 12 4 & 14271							X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217						X									X	X	X	
B risbane Laboratory NATA Site 207 4														X				
Perth Laboratory NATA Site 23736					X													
10	SB11 1.2	Aug 0 2018	Soil	S18 Au1	21	X				X	X			X				
11	SB11 1.	Aug 0 2018	Soil	S18 Au1	22							X	X		X			
12	SB11 .	Aug 0 2018	Soil	S18 Au1	2								X			X		
1	SB11 5.0	Aug 0 2018	Soil	S18 Au1	2						X		X					
1	SB1 0.2	Aug 10 2018	Soil	S18 Au1	25	X							X		X			
15	SB1 0.5	Aug 10 2018	Soil	S18 Au1	2						X		X					
1	SB1 1.2	Aug 10 2018	Soil	S18 Au1	2				X	X			X	X				
1	SB1 2.5	Aug 10 2018	Soil	S18 Au1	28	X						X	X					
18	SB1 .8	Aug 10 2018	Soil	S18 Au1	2						X		X					
1	SB1 10.0	Aug 10 2018	Soil	S18 Au1	0						X		X		X			
20	SB10 0.	Aug 10 2018	Soil	S18 Au1	1	X												
21	SB10 0.5	Aug 10 2018	Soil	S18 Au1	2			X		X	X		X					

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Melbourne Laboratory NATA Site 12 4 & 14271								X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217							X									X	X	X	
B risbane Laboratory NATA Site 207 4															X				
Perth Laboratory NATA Site 23736						X													
22	SB1	0.5	Aug 10 2018	Soil	S18 Au1									X		X			
2	SB1	1.0	Aug 10 2018	Soil	S18 Au1	X						X		X					
2	SB1	.0	Aug 10 2018	Soil	S18 Au1	5			X					X					
25	SB1	.5	Aug 10 2018	Soil	S18 Au1									X			X		
2	SB1	.0	Aug 10 2018	Soil	S18 Au1							X		X					
2	SB18	0.2	Aug 10 2018	Soil	S18 Au1	8[x]			X	X	X	X		X					
28	SB18	0.	Aug 10 2018	Soil	S18 Au1	X							X	X					
2	SB18	1.0	Aug 10 2018	Soil	S18 Au1	0								X			X		
0	SB1	0.8	Aug 08 2018	Soil	S18 Au1	1[x]				X	X	X		X					
1	SB1	1.5	Aug 08 2018	Soil	S18 Au1	2								X		X			
2	SB1	2.5	Aug 08 2018	Soil	S18 Au1							X	X	X					
	SB1	.	Aug 08 2018	Soil	S18 Au1									X			X		

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Melbourne Laboratory NATA Site 12 4 & 14271								X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217							X									X	X	X	
B risbane Laboratory NATA Site 207 4															X				
Perth Laboratory NATA Site 23736						X													
	SB20 0.	Aug 08 2018	Soil	S18 Au1		5				X	X	X		X					
5	SB20 1.0	Aug 08 2018	Soil	S18 Au1		X								X		X			
	SB20 1.5	Aug 08 2018	Soil	S18 Au1							X			X					
	SB20 .0	Aug 08 2018	Soil	S18 Au1		8						X		X					
8	SB20 .8	Aug 08 2018	Soil	S18 Au1										X			X		
	SB20 .0	Aug 08 2018	Soil	S18 Au1	50					X				X	X				
0	SB20 12.0	Aug 08 2018	Soil	S18 Au1	51									X			X		
1	SB2 0.2	Aug 10 2018	Soil	S18 Au1	52	X								X		X			
2	SB2 0.5	Aug 10 2018	Soil	S18 Au1	5							X		X					
	SB2 2.0	Aug 10 2018	Soil	S18 Au1	5				X					X					
	SB2 .0	Aug 10 2018	Soil	S18 Au1	55							X		X					
5	SB2 .0	Aug 10 2018	Soil	S18 Au1	5									X		X			

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K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1
Site 2

Company Name: T race Environmental P L
Address: Shop 2 New Canterbury Road
Dulwich Hill
NSW 220

Project Name: MASCO T
Project ID: 1.1

Order No.:
Report : 12025
Phone: 02 8 0 0555
Fax:

Received: Aug 1 2018 :0 PM
Due: Aug 20 2018
Priority: 5 Day
Contact Name: ack Ellis

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	V olatile O rganics	Moisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BT EX N and V olatile T RH	
Melbourne Laboratory NATA Site 12 4 & 14271								X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217							X									X	X	X	
B risbane Laboratory NATA Site 207 4															X				
Perth Laboratory NATA Site 23736						X													
	SB2 5.0	Aug 10 2018		Soil	S18 Au1	5							X	X					
	SB2 .0	Aug 10 2018		Soil	S18 Au1	58								X		X			
8	SB2 8.0	Aug 10 2018		Soil	S18 Au1	5						X		X					
	SB2 1.5	2.0 Aug 10 2018		Soil	S18 Au1	0							X	X			X		
50	SB2 0.2	Aug 08 2018		Soil	S18 Au1	1X						X		X					
51	SB2 0.5	Aug 08 2018		Soil	S18 Au1	2					X			X					
52	SB2 1.0	Aug 08 2018		Soil	S18 Au1					X				X					
5	SB2 1.5	Aug 08 2018		Soil	S18 Au1	X													
5	SB2 .8	Aug 08 2018		Soil	S18 Au1	5								X		X			
55	SB2 5.0	Aug 08 2018		Soil	S18 Au1				X					X					
5	SB2 .0	Aug 08 2018		Soil	S18 Au1									X			X		
5	Q S1	Aug 10 2018		Soil	S18 Au1	8								X		X			

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Melbourne Laboratory NATA Site 12 4 & 14271								X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217							X									X	X	X	
B risbane Laboratory NATA Site 207 4															X				
Perth Laboratory NATA Site 23736						X													
58	Q S2	Aug 08 2018		Soil	S18 Au1	0								X		X			
5	RB1	Aug 08 2018		Water	S18 Au1	2											X		
0	SB 1.25	Aug 0	2018	Soil	S18 Au1 5	2		X											
1	SB .	Aug 0	2018	Soil	S18 Au1 5			X											
2	SB11 2.0	Aug 0	2018	Soil	S18 Au1 5			X											
	SB11 2.	Aug 0	2018	Soil	S18 Au1 5	5		X											
	SB11 .	Aug 0	2018	Soil	S18 Au1 5			X											
5	SB1 0.	Aug 10	2018	Soil	S18 Au1 5			X											
	SB1 .2	Aug 10	2018	Soil	S18 Au1 5	8		X											
	SB1 5.0	Aug 10	2018	Soil	S18 Au1 5			X											
8	SB1 .0	Aug 10	2018	Soil	S18 Au1 550			X											
	SB1 .0	Aug 10	2018	Soil	S18 Au1 551			X											

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Melbourne Laboratory NATA Site 12 4 & 14271							X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217						X									X	X	X	
B risbane Laboratory NATA Site 207 4														X				
Perth Laboratory NATA Site 23736					X													
0	SB1 .0	Aug 10 2018	Soil	S18 Au1 552			X											
1	SB1 0.2	Aug 10 2018	Soil	S18 Au1 55			X											
2	SB1 1.	Aug 10 2018	Soil	S18 Au1 55			X											
	SB1 1.	Aug 10 2018	Soil	S18 Au1 555			X											
	SB1 1.	Aug 10 2018	Soil	S18 Au1 55		X												
5	SB1 1.	Aug 10 2018	Soil	S18 Au1 55			X											
	SB1 .8	Aug 10 2018	Soil	S18 Au1 558			X											
	SB1 10.0	Aug 10 2018	Soil	S18 Au1 55			X											
8	SB1 0.2	Aug 10 2018	Soil	S18 Au1 5	0		X											
	SB1 .2	Aug 10 2018	Soil	S18 Au1 5	1		X											
80	SB20 2.	Aug 10 2018	Soil	S18 Au1 5	2		X											
81	SB2 1.0	Aug 10 2018	Soil	S18 Au1 5			X											

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Address:	Shop 2 New Canterbury Road Dulwich Hill NSW 220	Report : 12025 Phone: 02 8 0 0555 Fax:	Due: Aug 20 2018 Priority: 5 Day Contact Name: ack Ellis
Project Name:	MASCO T		
Project ID:	1.1		

Eurofins mgt Analytical Services Manager : Nibha V aidya

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Melbourne Laboratory NATA Site 12 4 & 14271								X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217							X									X	X	X	
B risbane Laboratory NATA Site 207 4															X				
Perth Laboratory NATA Site 23736						X													
82	SB2 .0	Aug 10 2018	Soil	S18 Au1 5				X											
8	SB2 .0	Aug 10 2018	Soil	S18 Au1 5	5			X											
8	SB2 10.0	Aug 10 2018	Soil	S18 Au1 5				X											
85	SB2 .1	Aug 08 2018	Soil	S18 Au1 5				X											
8	SB1 8.0	Aug 10 2018	Soil	S18 Au1 0				X											
8	T S	Aug 0 2018	Soil	S18 Au1	5													X	
88	T B	Aug 0 2018	Soil	S18 Au1														X	
Test Counts						1	1	2	5	8		20		5			15	11	2

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. This report replaces any interim results previously issued.

Holding Times

Please refer to Sample Preservation and Container Guide for holding times QS 001 .

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

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: weight for weight basis	grams per kilogram
Filter loading:	fibres 100 graticule areas
Reported Concentration:	fibres mL
Flowrate:	L min

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Western Australia Department of Health
NOHSC	National Occupational Health and Safety Commission
ACM	Bonded asbestos containing material means any material containing more than 1 asbestos and comprises asbestos containing material which is in sound condition although possibly broken or fragmented and where the asbestos is bound in a matrix such as cement or resin. Common examples of ACM include but are not limited to: pipe and boiler insulation sprayed on fireproofing troweled on acoustical plaster floor tile and mastic floor linoleum transite shingles roofing materials wall an ceiling plaster ceiling tiles and gasket materials. This term is restricted to material that cannot pass a mm x mm sieve. This sieve si e is selected because it approximates the thickness of common asbestos cement sheeting and for fragments to be smaller than this would imply a high degree of damage and hence potential for fibre release.
FA	FA comprises friable asbestos material and includes severely weathered cement sheet insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded crumbling .
PACM	Presumed Asbestos Containing Material means thermal system insulation and surfacing material found in buildings vessels and vessel sections constructed no later than 1 80 that are assumed to contain greater than one percent asbestos but have not been sampled or analy ed to verify or negate the presence of asbestos.
AF	Asbestos fines AF are defined as free fibres or fibre bundles smaller than mm. It is the free fibres which present the greatest risk to human health although very small fibres 5 microns in length are not considered to be such a risk. AF also includes small fragments of bonded ACM that pass through a mm x mm sieve. Note that for bonded ACM fragments to pass through a mm x mm sieve implies a substatntial degree of damage which increases the potential for fibre release.
AC	Asbestos cement means a mixture of cement and asbestos fibres typically 0:10 ratios .

Comments

T his report has been revised V 2 to amend Asbestos test results for samples 18 Au1 1 18 Au1 1 and 18 Au1 1.

Sample Integrity

Custody Seals Intact if used	N A
Attempt to Chill was evident	Y es
Sample correctly preserved	Y es
Appropriate sample containers have been used	Y es
Sample containers for volatile analysis received with minimal headspace	Y es
Samples received within HoldingT ime	Y es
Some samples have been subcontracted	No

Q ualifier Codes/Comments

Code	Description
N A	Not applicable

Asbestos Counter/Identifier:

Edward Rowley	Asbestos Analyst	WA

Authorised by:

Rhys T homas	Senior Analyst	Asbestos	WA

G lenn J ackson
National Operations Manager

Final Report – this report replaces any previously issued Report

Indicates Not Requested

Indicates NAT A accreditation does not cover the performance of this service

M easurement uncertainty of test data is available on request or please here.

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Testing For Life

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1 217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests calibrations and or measurements included in this document are traceable to Australian national standards.

Trace Environmental P/L
Shop 2, 7 3 7 New Canterbury Road
Dulwich Hill
NSW 2203

Attention: J ack Ellis

Report 61202 W
Pro ect name **MASCO T**
Pro ect ID **1.1**
Received Date **Aug 1 2018**

Client Sample ID			RB 1
Sample Matrix			Water
Eurofins mgt Sample No.			S1 Au16472
Date Sampled			Aug 0 , 201
T est Reference	**LO R**	**nit**	
Total Recoverable Hydrocarbons 1 NEPM Fractions			
T RH C C	0.02	mg L	0.02
T RH C10 C1	0.05	mg L	0.05
T RH C15 C28	0.1	mg L	0.1
T RH C2 C	0.1	mg L	0.1
T RH C10 T otal	0.1	mg L	0.1
B TEX			
Ben ene	0.001	mg L	0.001
T oluene	0.001	mg L	0.001
Ethylben ene	0.001	mg L	0.001
m p X ylenes	0.002	mg L	0.002
o X ylene	0.001	mg L	0.001
X ylenes T otal	0.00	mg L	0.00
Bromofluoroben ene surr.	1		82
Total Recoverable Hydrocarbons 2013 NEPM Fractions			
Naphthalene[N02]	0.01	mg L	0.01
T RH C C10	0.02	mg L	0.02
T RH C C10 less BT EX[N0] F1	0.02	mg L	0.02
T RH C10 C1	0.05	mg L	0.05
T RH C10 C1 less Naphthalene[N01] F2	0.05	mg L	0.05
T RH C1 C	0.1	mg L	0.1
T RH C C 0	0.1	mg L	0.1
T RH C10 C 0 total	0.1	mg L	0.1
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.001	mg L	0.001
Acenaphthylene	0.001	mg L	0.001
Anthracene	0.001	mg L	0.001
Ben a anthracene	0.001	mg L	0.001
Ben o a pyrene	0.001	mg L	0.001
Ben o b fluoranthene	0.001	mg L	0.001
Ben o g.h.i perylene	0.001	mg L	0.001
Ben o k fluoranthene	0.001	mg L	0.001
Chrysene	0.001	mg L	0.001
Diben a.h anthracene	0.001	mg L	0.001
Fluoranthene	0.001	mg L	0.001
Fluorene	0.001	mg L	0.001

Client Sample ID			RB 1
Sample Matrix			Water
Eurofins mgt Sample No.			S1 Au16472
Date Sampled			Aug 0 , 201
T est Reference	LO R	nit	
Polycyclic Aromatic Hydrocarbons			
Indeno 1.2. cd pyrene	0.001	mg L	0.001
Naphthalene	0.001	mg L	0.001
Phenanthrene	0.001	mg L	0.001
Pyrene	0.001	mg L	0.001
T otal PAH	0.001	mg L	0.001
2 Fluorobiphenyl surr.	1		2
p T erphenyl d1 surr.	1		11
Phenols (Halogenated)			
2 Chlorophenol	0.00	mg L	0.00
2. Dichlorophenol	0.00	mg L	0.00
2. .5 T richlorophenol	0.01	mg L	0.01
2. . T richlorophenol	0.01	mg L	0.01
2. Dichlorophenol	0.00	mg L	0.00
Chloro methylphenol	0.01	mg L	0.01
Pentachlorophenol	0.01	mg L	0.01
T etrachlorophenols T otal	0.0	mg L	0.0
T otal Halogenated Phenol	0.01	mg L	0.01
Phenols (non Halogenated)			
2 Cyclohexyl . dinitrophenol	0.1	mg L	0.1
2 Methyl . dinitrophenol	0.0	mg L	0.0
2 Methylphenol o Cresol	0.00	mg L	0.00
2 Nitrophenol	0.01	mg L	0.01
2. Dimethylphenol	0.00	mg L	0.00
2. Dinitrophenol	0.0	mg L	0.0
Methylphenol m p Cresol	0.00	mg L	0.00
Nitrophenol	0.0	mg L	0.0
Dinoseb	0.1	mg L	0.1
Phenol	0.00	mg L	0.00
T otal Non Halogenated Phenol	0.1	mg L	0.1
Phenol d surr.	1		50
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
M ercury	0.0001	mg L	0.0001
Nickel	0.001	mg L	0.001
inc	0.005	mg L	0.005

Sample History

Where samples are submitted analysed over several days the last date of extraction and analysis is reported.
A recent review of our LIM S has resulted in the correction or clarification of some method identifications. Due to this some of the method reference information on reports has changed. However no substantive change has been made to our laboratory methods and as such there is no change in the validity of current or previous results regarding both quality and NAT A accreditation .

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
T otal Recoverable Hydrocarbons 1 NEPM Fractions	Melbourne	Aug 1 2018	Day
Method: LT M O RG 2010 T RH C C			
BT EX	Melbourne	Aug 15 2018	1 Day
Method: T RH C C 0 LT M O RG 2010			
T otal Recoverable Hydrocarbons 201 NEPM Fractions	Melbourne	Aug 15 2018	Day
Method: T RH C C 0 LT M O RG 2010			
Eurofins mgt Suite B A			
T otal Recoverable Hydrocarbons 201 NEPM Fractions	Melbourne	Aug 1 2018	Day
Method: T RH C C 0 LT M O RG 2010			
Polycyclic Aromatic Hydrocarbons	Melbourne	Aug 1 2018	Day
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Phenols Halogenated	Melbourne	Aug 1 2018	Days
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Phenols non Halogenated	Melbourne	Aug 1 2018	Day
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Metals M 8	Melbourne	Aug 15 2018	28 Days
Method: LT M MET 0 0 Metals in Waters Soils Sediments by ICP M S			

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Melbourne Laboratory NATA Site 12 4 & 14271			X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217		X									X	X	X	
Brisbane Laboratory NATA Site 207 4										X				
Perth Laboratory NATA Site 23736	X													
External Laboratory														

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID											
1	SB1 0.	Aug 0	2018	Soil	S18 Au1	12							X	X		X		
2	SB1 0.5	Aug 0	2018	Soil	S18 Au1	1	X				X	X	X		X	X		
	SB 0.	Aug 0	2018	Soil	S18 Au1	1	X						X		X			
	SB 1.0	Aug 0	2018	Soil	S18 Au1	15									X		X	
5	SB 2.	Aug 0	2018	Soil	S18 Au1	1									X	X	X	
	SB .2	Aug 0	2018	Soil	S18 Au1	1							X		X			
	SB .8	Aug 0	2018	Soil	S18 Au1	18									X		X	
8	SB11 0.2	Aug 0	2018	Soil	S18 Au1	1							X		X			
	SB11 0.5	Aug 0	2018	Soil	S18 Au1	20									X		X	

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	Dulwich Hill	Phone:	02 8 0 0555	Priority:	5 Day
	NSW 220	Fax:		Contact Name:	ack Ellis
Project Name:	MASCOT				
Project ID:	1.1				

Eurofins mgt Analytical Services Manager : Nibha Vaidya

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Melbourne Laboratory NATA Site 12 4 & 14271								x	x	x	x	x	x	x	x	x	x	x
Sydney Laboratory NATA Site 1 217							x									x	x	x
Brisbane Laboratory NATA Site 207 4															x			
Perth Laboratory NATA Site 23736						x												
10	SB11 1.2	Aug 0 2018	Soil	S18 Au1	21	x				x	x			x				
11	SB11 1.	Aug 0 2018	Soil	S18 Au1	22								x	x		x		
12	SB11 .	Aug 0 2018	Soil	S18 Au1	2									x			x	
1	SB11 5.0	Aug 0 2018	Soil	S18 Au1	2							x		x				
1	SB1 0.2	Aug 10 2018	Soil	S18 Au1	25	x								x		x		
15	SB1 0.5	Aug 10 2018	Soil	S18 Au1	2							x		x				
1	SB1 1.2	Aug 10 2018	Soil	S18 Au1	2					x	x			x	x			
1	SB1 2.5	Aug 10 2018	Soil	S18 Au1	28	x							x	x				
18	SB1 .8	Aug 10 2018	Soil	S18 Au1	2							x		x				
1	SB1 10.0	Aug 10 2018	Soil	S18 Au1	0							x		x		x		
20	SB10 0.	Aug 10 2018	Soil	S18 Au1	1	x												
21	SB10 0.5	Aug 10 2018	Soil	S18 Au1	2				x		x	x		x				

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Company Name:	T race Environmental P L	Order No.:	
Address:	Shop 2 New Canterbury Road	Report :	12025
	Dulwich Hill	Phone:	02 8 0 0555
	NSW 220	Fax:	
Project Name:	MASCO T	Received:	Aug 1 2018 :0 PM
Project ID:	1.1	Due:	Aug 20 2018
		Priority:	5 Day
		Contact Name:	ack Ellis

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail					Asbestos WA guidelines	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	V olatile O rganics	Moisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BT EX N and V olatile T RH
Melbourne Laboratory NATA Site 12 4 & 14271							x	x	x	x	x	x	x	x	x	x	x
Sydney Laboratory NATA Site 1 217						x									x	x	x
B risbane Laboratory NATA Site 207 4														x			
Perth Laboratory NATA Site 23736					x												
22	SB1 0.5	Aug 10 2018	Soil	S18 Au1									x		x		
2	SB1 1.0	Aug 10 2018	Soil	S18 Au1	x						x		x				
2	SB1 .0	Aug 10 2018	Soil	S18 Au1	5			x					x				
25	SB1 .5	Aug 10 2018	Soil	S18 Au1									x			x	
2	SB1 .0	Aug 10 2018	Soil	S18 Au1							x		x				
2	SB18 0.2	Aug 10 2018	Soil	S18 Au1	8x			x	x	x	x		x				
28	SB18 0.	Aug 10 2018	Soil	S18 Au1	x							x	x				
2	SB18 1.0	Aug 10 2018	Soil	S18 Au1	0								x			x	
0	SB1 0.8	Aug 08 2018	Soil	S18 Au1	1x				x	x	x		x				
1	SB1 1.5	Aug 08 2018	Soil	S18 Au1	2								x		x		
2	SB1 2.5	Aug 08 2018	Soil	S18 Au1							x	x	x				
	SB1 .	Aug 08 2018	Soil	S18 Au1									x			x	

x

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Melbourne Laboratory NATA Site 12 4 & 14271								X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217							X									X	X	X	
B risbane Laboratory NATA Site 207 4															X				
Perth Laboratory NATA Site 23736						X													
	SB20 0.	Aug 08 2018	Soil	S18 Au1		5				X	X	X		X					
5	SB20 1.0	Aug 08 2018	Soil	S18 Au1		X								X		X			
	SB20 1.5	Aug 08 2018	Soil	S18 Au1							X			X					
	SB20 .0	Aug 08 2018	Soil	S18 Au1		8						X		X					
8	SB20 .8	Aug 08 2018	Soil	S18 Au1										X			X		
	SB20 .0	Aug 08 2018	Soil	S18 Au1	50					X				X	X				
0	SB20 12.0	Aug 08 2018	Soil	S18 Au1	51									X			X		
1	SB2 0.2	Aug 10 2018	Soil	S18 Au1	52	X								X		X			
2	SB2 0.5	Aug 10 2018	Soil	S18 Au1	5							X		X					
	SB2 2.0	Aug 10 2018	Soil	S18 Au1	5				X					X					
	SB2 .0	Aug 10 2018	Soil	S18 Au1	55							X		X					
5	SB2 .0	Aug 10 2018	Soil	S18 Au1	5									X		X			

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Project ID:	1.1		Eurofins mgt Analytical Services Manager : Nibha V aidya

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Melbourne Laboratory NATA Site 12 4 & 14271								X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217							X									X	X	X	
B risbane Laboratory NATA Site 207 4															X				
Perth Laboratory NATA Site 23736						X													
	SB2 5.0	Aug 10 2018		Soil	S18 Au1 5								X	X					
	SB2 .0	Aug 10 2018		Soil	S18 Au1 58									X		X			
8	SB2 8.0	Aug 10 2018		Soil	S18 Au1 5							X		X					
	SB2 1.5	2.0 Aug 10 2018		Soil	S18 Au1 0								X	X			X		
50	SB2 0.2	Aug 08 2018		Soil	S18 Au1 1X							X		X					
51	SB2 0.5	Aug 08 2018		Soil	S18 Au1 2						X			X					
52	SB2 1.0	Aug 08 2018		Soil	S18 Au1					X				X					
5	SB2 1.5	Aug 08 2018		Soil	S18 Au1 X														
5	SB2 .8	Aug 08 2018		Soil	S18 Au1 5									X		X			
55	SB2 5.0	Aug 08 2018		Soil	S18 Au1				X					X					
5	SB2 .0	Aug 08 2018		Soil	S18 Au1									X			X		
5	Q S1	Aug 10 2018		Soil	S18 Au1 8									X		X			

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Melbourne Laboratory NATA Site 12 4 & 14271								X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217							X									X	X	X	
B risbane Laboratory NATA Site 207 4															X				
Perth Laboratory NATA Site 23736						X													
58	Q S2	Aug 08 2018		Soil	S18 Au1	0								X		X			
5	RB1	Aug 08 2018		Water	S18 Au1	2											X		
0	SB 1.25	Aug 0	2018	Soil	S18 Au1 5	2		X											
1	SB .	Aug 0	2018	Soil	S18 Au1 5			X											
2	SB11 2.0	Aug 0	2018	Soil	S18 Au1 5			X											
	SB11 2.	Aug 0	2018	Soil	S18 Au1 5	5		X											
	SB11 .	Aug 0	2018	Soil	S18 Au1 5			X											
5	SB1 0.	Aug 10	2018	Soil	S18 Au1 5			X											
	SB1 .2	Aug 10	2018	Soil	S18 Au1 5	8		X											
	SB1 5.0	Aug 10	2018	Soil	S18 Au1 5			X											
8	SB1 .0	Aug 10	2018	Soil	S18 Au1 550			X											
	SB1 .0	Aug 10	2018	Soil	S18 Au1 551			X											

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Melbourne Laboratory NATA Site 12 4 & 14271								x	x	x	x	x	x	x	x	x	x	x	x
Sydney Laboratory NATA Site 1 217							x									x	x	x	
B risbane Laboratory NATA Site 207 4															x				
Perth Laboratory NATA Site 23736						x													
0	SB1 .0	Aug 10 2018	Soil	S18 Au1 552				x											
1	SB1 0.2	Aug 10 2018	Soil	S18 Au1 55				x											
2	SB1 1.	Aug 10 2018	Soil	S18 Au1 55				x											
	SB1 1.	Aug 10 2018	Soil	S18 Au1 555				x											
	SB1 1.	Aug 10 2018	Soil	S18 Au1 55		x													
5	SB1 1.	Aug 10 2018	Soil	S18 Au1 55				x											
	SB1 .8	Aug 10 2018	Soil	S18 Au1 558				x											
	SB1 10.0	Aug 10 2018	Soil	S18 Au1 55				x											
8	SB1 0.2	Aug 10 2018	Soil	S18 Au1 5	0			x											
	SB1 .2	Aug 10 2018	Soil	S18 Au1 5	1			x											
80	SB20 2.	Aug 10 2018	Soil	S18 Au1 5	2			x											
81	SB2 1.0	Aug 10 2018	Soil	S18 Au1 5				x											

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Melbourne Laboratory NATA Site 12 4 & 14271								X	X	X	X	X		X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217							X									X	X	X	
B risbane Laboratory NATA Site 207 4															X				
Perth Laboratory NATA Site 23736						X													
82	SB2	.0	Aug 10 2018	Soil	S18 Au1 5			X											
8	SB2	.0	Aug 10 2018	Soil	S18 Au1 5	5		X											
8	SB2	10.0	Aug 10 2018	Soil	S18 Au1 5			X											
85	SB2	.1	Aug 08 2018	Soil	S18 Au1 5			X											
8	SB1	8.0	Aug 10 2018	Soil	S18 Au1 0			X											
8	T S		Aug 0 2018	Soil	S18 Au1	5												X	
88	T B		Aug 0 2018	Soil	S18 Au1													X	
Test Counts						1	1	2	5	8		20		5			15	11	2

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks Duplicates Matrix Spikes and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis unless otherwise stated.
   - All biota food results are reported on a wet weight basis on the edible portion unless otherwise stated.
   - 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.
   - SVOC analysis on waters are performed on homogenised unfiltered samples unless noted otherwise.
   - Samples were analysed on an as received basis.
8. This report replaces any interim results previously issued.

Holding Times

Please refer to Sample Preservation and Container Guide for holding times QS 001 .
For samples received on the last day of holding time notification of testing requirements should have been received at least 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 days however for all other VOCs such as BTEX or C 10 TRH then the holding time is 1 days.
NOTE H duplicates are reported as a range NOT as RPD

Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample reported as percent recovery.
CRM	Certified Reference Material 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.
Surr Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	nited States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 S Department of Defense
CP	Client Parent QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 0 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 0
Surrogate Recoveries: Recoveries must lie between 50 150 Phenols PFASs
PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.
WA DWER n 10 : PFBA PFPeA PFHxA PFHpA PFOA PFBS PFHxS PFOS :2 FTSA 8:2 FTSA

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.
   - Organochlorine Pesticide analysis where reporting LCS data Toxaphene Chlordane are not added to the LCS.
   - Organochlorine Pesticide analysis where reporting Spike data Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons where reporting Spike LCS data a single spike of commercial Hydrocarbon products in the range of C12 C 0 is added and its Total Recovery is reported in the C10 C1 cell of the Report.
   - pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 0 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
   - Recovery Data Spikes Surrogates where chromatographic interference does not allow the determination of Recovery the term " INT " appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 12 0 in Matrix Spikes and LCS.
   - For Matrix Spikes and LCS results a dash " " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

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Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons 1 NEPM Fractions							
TRH C C	mg/L	0.02			0.02	Pass	
TRH C10 C1	mg/L	0.05			0.05	Pass	
TRH C15 C28	mg/L	0.1			0.1	Pass	
TRH C2 C	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	0.00			0.00	Pass	
Method Blank							
Total Recoverable Hydrocarbons 2013 NEPM Fractions							
Naphthalene	mg/L	0.01			0.01	Pass	
TRH C C10	mg/L	0.02			0.02	Pass	
TRH C10 C1	mg/L	0.05			0.05	Pass	
TRH C1 C	mg/L	0.1			0.1	Pass	
TRH C C 0	mg/L	0.1			0.1	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	
Benzo a anthracene	mg/L	0.001			0.001	Pass	
Benzo a pyrene	mg/L	0.001			0.001	Pass	
Benzo b 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. 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							
Phenols (Halogenated)							
2 Chlorophenol	mg/L	0.00			0.00	Pass	
2. Dichlorophenol	mg/L	0.00			0.00	Pass	
2. .5 Trichlorophenol	mg/L	0.01			0.01	Pass	
2. . Trichlorophenol	mg/L	0.01			0.01	Pass	
2. Dichlorophenol	mg/L	0.00			0.00	Pass	
Chloro methylphenol	mg/L	0.01			0.01	Pass	
Pentachlorophenol	mg/L	0.01			0.01	Pass	
Tetrachlorophenols Total	mg/L	0.0			0.0	Pass	
Method Blank							
Phenols (non Halogenated)							
2 Cyclohexyl . dinitrophenol	mg/L	0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2 Methyl . dinitrophenol	mg L	0.0			0.0	Pass	
2 Methylphenol o Cresol	mg L	0.00			0.00	Pass	
2 Nitrophenol	mg L	0.01			0.01	Pass	
2. Dimethylphenol	mg L	0.00			0.00	Pass	
2. Dinitrophenol	mg L	0.0			0.0	Pass	
Methylphenol m p Cresol	mg L	0.00			0.00	Pass	
Nitrophenol	mg L	0.0			0.0	Pass	
Dinoseb	mg L	0.1			0.1	Pass	
Phenol	mg L	0.00			0.00	Pass	
Method B lank							
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	
inc	mg L	0.005			0.005	Pass	
LCS Recovery							
Total Recoverable Hydrocarbons 1 NEPM Fractions							
T RH C C		115			0 1 0	Pass	
T RH C10 C1		10			0 1 0	Pass	
LCS Recovery							
B TEX							
Ben ene		11			0 1 0	Pass	
T oluene		105			0 1 0	Pass	
Ethylben ene		8			0 1 0	Pass	
m p X ylenes		100			0 1 0	Pass	
X ylenes T otal		100			0 1 0	Pass	
LCS Recovery							
Total Recoverable Hydrocarbons 2013 NEPM Fractions							
Naphthalene					0 1 0	Pass	
T RH C C10		115			0 1 0	Pass	
T RH C10 C1		10			0 1 0	Pass	
LCS Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene		1			0 1 0	Pass	
Acenaphthylene		110			0 1 0	Pass	
Anthracene		110			0 1 0	Pass	
Ben a anthracene		108			0 1 0	Pass	
Ben o a pyrene		122			0 1 0	Pass	
Ben o b fluoranthene		115			0 1 0	Pass	
Ben o g.h.i perylene		10			0 1 0	Pass	
Ben o k fluoranthene		108			0 1 0	Pass	
Chrysene		105			0 1 0	Pass	
Diben a.h anthracene					0 1 0	Pass	
Fluoranthene		115			0 1 0	Pass	
Fluorene		101			0 1 0	Pass	
Indeno 1.2. cd pyrene		11			0 1 0	Pass	
Naphthalene		10			0 1 0	Pass	
Phenanthrene		102			0 1 0	Pass	
Pyrene		11			0 1 0	Pass	
LCS Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenols (Halogenated)							
2 Chlorophenol		10			0 1 0	Pass	
2. Dichlorophenol		11			0 1 0	Pass	
2. .5 T richlorophenol		108			0 1 0	Pass	
2. . T richlorophenol		105			0 1 0	Pass	
2. Dichlorophenol		105			0 1 0	Pass	
Chloro methylphenol		11			0 1 0	Pass	
Pentachlorophenol		1			0 1 0	Pass	
T etrachlorophenols T otal		10			0 1 0	Pass	
LCS Recovery							
Phenols (non Halogenated)							
2 Cyclohexyl . dinitrophenol					0 1 0	Pass	
2 Methyl . dinitrophenol					0 1 0	Pass	
2 Methylphenol o Cresol		8			0 1 0	Pass	
2 Nitrophenol		112			0 1 0	Pass	
2. Dimethylphenol					0 1 0	Pass	
2. Dinitrophenol					0 1 0	Pass	
Methylphenol m p Cresol					0 1 0	Pass	
Nitrophenol		2			0 1 0	Pass	
Dinoseb		0			0 1 0	Pass	
Phenol					0 1 0	Pass	
LCS Recovery							
Heavy Metals							
Arsenic					80 120	Pass	
Cadmium		105			80 120	Pass	
Chromium		100			80 120	Pass	
Copper					80 120	Pass	
Lead		10			80 120	Pass	
Mercury		100			5 125	Pass	
Nickel		100			80 120	Pass	
inc		101			80 120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike Recovery									
Total Recoverable Hydrocarbons 1 NEPM Fractions				Result 1					
T RH C C	M18 Au1 20	NCP		11			0 1 0	Pass	
T RH C10 C1	M18 Au1 008	NCP		1 0			0 1 0	Pass	
Spike Recovery									
B TEX				Result 1					
Ben ene	M18 Au1 20	NCP		11			0 1 0	Pass	
T oluene	M18 Au1 20	NCP		112			0 1 0	Pass	
Ethylben ene	M18 Au1 20	NCP		10			0 1 0	Pass	
m p X ylenes	M18 Au1 20	NCP		108			0 1 0	Pass	
o X ylene	M18 Au1 20	NCP		110			0 1 0	Pass	
X ylenes T otal	M18 Au1 20	NCP		10			0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons 2013 NEPM Fractions				Result 1					
Naphthalene	M18 Au1 20	NCP		2			0 1 0	Pass	
T RH C C10	M18 Au1 20	NCP		11			0 1 0	Pass	
T RH C10 C1	M18 Au1 008	NCP		122			0 1 0	Pass	
Spike Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S18 Au1	NCP		8			0 1 0	Pass	
Acenaphthylene	S18 Au1	NCP					0 1 0	Pass	
Anthracene	S18 Au1	NCP		8			0 1 0	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ben a anthracene	S18 Au1		NCP	88			0 1 0	Pass	
Ben o a pyrene	S18 Au1		NCP	10			0 1 0	Pass	
Ben o b fluoranthene	S18 Au1		NCP	10			0 1 0	Pass	
Ben o g.h.i perylene	S18 Au1		NCP	82			0 1 0	Pass	
Ben o k fluoranthene	S18 Au1		NCP	10			0 1 0	Pass	
Chrysene	S18 Au1		NCP	8			0 1 0	Pass	
Diben a.h anthracene	S18 Au1		NCP		5		0 1 0	Pass	
Fluoranthene	S18 Au1		NCP		1		0 1 0	Pass	
Fluorene	S18 Au1		NCP	8			0 1 0	Pass	
Indeno 1.2. cd pyrene	S18 Au1		NCP	8			0 1 0	Pass	
Naphthalene	M18 Au12 01		NCP				0 1 0	Pass	
Phenanthrene	S18 Au1		NCP				0 1 0	Pass	
Pyrene	S18 Au1		NCP		2		0 1 0	Pass	
Spike Recovery									
Phenols (Halogenated)				Result 1					
2 Chlorophenol	B18 Au111 2		NCP	102			0 1 0	Pass	
2. Dichlorophenol	B18 Au111 2		NCP	111			0 1 0	Pass	
2. .5 T richlorophenol	B18 Au111 2		NCP	10			0 1 0	Pass	
2. . T richlorophenol	B18 Au111 2		NCP	101			0 1 0	Pass	
2. Dichlorophenol	B18 Au111 2		NCP				0 1 0	Pass	
Chloro methylphenol	B18 Au111 2		NCP	12			0 1 0	Pass	
Pentachlorophenol	B18 Au111 2		NCP	81			0 1 0	Pass	
T etrachlorophenols T otal	B18 Au111 2		NCP	10			0 1 0	Pass	
Spike Recovery									
Phenols (non Halogenated)				Result 1					
2 Cyclohexyl . dinitrophenol	B18 Au111 2		NCP				0 1 0	Pass	
2 Methyl . dinitrophenol	B18 Au111 2		NCP	5			0 1 0	Pass	
2 Methylphenol o Cresol	B18 Au111 2		NCP				0 1 0	Pass	
2 Nitrophenol	B18 Au111 2		NCP	110			0 1 0	Pass	
2. Dimethylphenol	B18 Au111 2		NCP	111			0 1 0	Pass	
Methylphenol m p Cresol	B18 Au111 2		NCP		8		0 1 0	Pass	
Nitrophenol	B18 Au111 2		NCP				0 1 0	Pass	
Dinoseb	B18 Au111 2		NCP	10			0 1 0	Pass	
Phenol	B18 Au111 2		NCP				0 1 0	Pass	
Spike Recovery									
Heavy Metals				Result 1					
Arsenic	M18 Au1	25	NCP	8			5 125	Pass	
Cadmium	M18 Au1	25	NCP	8			5 125	Pass	
Chromium	M18 Au1	25	NCP				5 125	Pass	
Copper	M18 Au1	25	NCP				5 125	Pass	
Lead	M18 Au1	25	NCP	81			5 125	Pass	
Mercury	M18 Au1	25	NCP				0 1 0	Pass	
Nickel	M18 Au1	25	NCP	80			5 125	Pass	
inc	M18 Au1	25	NCP	81			5 125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code	
Duplicate										
Total Recoverable Hydrocarbons 1 NEPM Fractions				Result 1	Result 2	RPD				
T RH C C	M18 Au1 1	5	NCP mg	L	0.02	0.02	1	0	Pass	
T RH C10 C1	M18 Au1	55	NCP mg	L 0.28	0	1	.0	0	Pass	
T RH C15 C28	M18 Au1	55	NCP mg	L 0		0.5		0	Fail	Q15
T RH C2 C	M18 Au1	55	NCP mg	L	0.1	0.1	1	0	Pass	

Duplicate												
B TEX							Result 1	Result 2	RPD			
Ben ene	M18	Au1	1	5	NCP	mg	L	0.001	0.001	1	0	Pass
T oluene	M18	Au1	1	5	NCP	mg	L	0.001	0.001	1	0	Pass
Ethylben ene	M18	Au1	1	5	NCP	mg	L	0.001	0.001	1	0	Pass
m p X ylenes	M18	Au1	1	5	NCP	mg	L	0.002	0.002	1	0	Pass
o X ylene	M18	Au1	1	5	NCP	mg	L	0.001	0.001	1	0	Pass
X ylenes T otal	M18	Au1	1	5	NCP	mg	L	0.00	0.00	1	0	Pass
Duplicate												
Total Recoverable Hydrocarbons	2013 NEPM Fractions						Result 1	Result 2	RPD			
Naphthalene	M18	Au1	1	5	NCP	mg	L	0.01	0.01	1	0	Pass
T RH C C10	M18	Au1	1	5	NCP	mg	L	0.02	0.02	1	0	Pass
T RH C10 C1	M18	Au1		55	NCP	mg	L	0.	0. 5	18	0	Pass
T RH C1 C	M18	Au1		55	NCP	mg	L	0.2	0.	0	0	Fail Q15
T RH C C 0	M18	Au1		55	NCP	mg	L	0.1	0.1	1	0	Pass
Duplicate												
Polycyclic Aromatic Hydrocarbons							Result 1	Result 2	RPD			
Acenaphthene	S18	Au1		8	NCP	mg	L	0.01	0.01	1	0	Pass
Acenaphthylene	S18	Au1		8	NCP	mg	L	0.01	0.01	1	0	Pass
Anthracene	S18	Au1		8	NCP	mg	L	0.01	0.01	1	0	Pass
Ben a anthracene	S18	Au1		8	NCP	mg	L	0.01	0.01	1	0	Pass
Ben o a pyrene	S18	Au1		8	NCP	mg	L	0.01	0.01	1	0	Pass
Ben o b fluoranthene	S18	Au1		8	NCP	mg	L	0.01	0.01	1	0	Pass
Ben o g.h.i perylene	S18	Au1		8	NCP	mg	L	0.01	0.01	1	0	Pass
Ben o k fluoranthene	S18	Au1		8	NCP	mg	L	0.01	0.01	1	0	Pass
Chrysene	S18	Au1		8	NCP	mg	L	0.01	0.01	1	0	Pass
Diben a.h anthracene	S18	Au1		8	NCP	mg	L	0.01	0.01	1	0	Pass
Fluoranthene	S18	Au1		8	NCP	mg	L	0.01	0.01	1.0	0	Pass
Fluorene	S18	Au1		8	NCP	mg	L	0.01	0.01	1	0	Pass
Indeno 1.2. cd pyrene	S18	Au1		8	NCP	mg	L	0.01	0.01	1	0	Pass
Naphthalene	S18	Au1		8	NCP	mg	L	0.01	0.01	1	0	Pass
Phenanthrene	S18	Au1		8	NCP	mg	L	0.01	0.01	1	0	Pass
Pyrene	S18	Au1		8	NCP	mg	L	0.01	0.011	18	0	Pass
Duplicate												
Phenols (Halogenated)							Result 1	Result 2	RPD			
2 Chlorophenol	B18	Au111	1		NCP	mg	L	0.00	0.00	1	0	Pass
2. Dichlorophenol	B18	Au111	1		NCP	mg	L	0.00	0.00	1	0	Pass
2. .5 T richlorophenol	B18	Au111	1		NCP	mg	L	0.01	0.01	1	0	Pass
2. . T richlorophenol	B18	Au111	1		NCP	mg	L	0.01	0.01	1	0	Pass
2. Dichlorophenol	B18	Au111	1		NCP	mg	L	0.00	0.00	1	0	Pass
Chloro methylphenol	B18	Au111	1		NCP	mg	L	0.01	0.01	1	0	Pass
Pentachlorophenol	B18	Au111	1		NCP	mg	L	0.01	0.01	1	0	Pass
T etrachlorophenols T otal	B18	Au111	1		NCP	mg	L	0.0	0.0	1	0	Pass
Duplicate												
Phenols (non Halogenated)							Result 1	Result 2	RPD			
2 Cyclohexyl . dinitrophenol	B18	Au111	1		NCP	mg	L	0.1	0.1	1	0	Pass
2 Methyl . dinitrophenol	B18	Au111	1		NCP	mg	L	0.0	0.0	1	0	Pass
2 Methylphenol o Cresol	B18	Au111	1		NCP	mg	L	0.00	0.00	1	0	Pass
2 Nitrophenol	B18	Au111	1		NCP	mg	L	0.01	0.01	1	0	Pass
2. Dimethylphenol	B18	Au111	1		NCP	mg	L	0.00	0.00	1	0	Pass
2. Dinitrophenol	B18	Au111	1		NCP	mg	L	0.0	0.0	1	0	Pass
Methylphenol m p Cresol	B18	Au111	1		NCP	mg	L	0.00	0.00	1	0	Pass
Nitrophenol	B18	Au111	1		NCP	mg	L	0.0	0.0	1	0	Pass
Dinoseb	B18	Au111	1		NCP	mg	L	0.1	0.1	1	0	Pass
Phenol	B18	Au111	1		NCP	mg	L	0.00	0.00	1	0	Pass

Duplicate											
Heavy Metals						Result 1	Result 2	RPD			
Arsenic	M18	Au1	25	NCP	mg	L	0.001	0.001	1	0	Pass
Cadmium	M18	Au1	25	NCP	mg	L	0.0002	0.0002	1	0	Pass
Chromium	M18	Au1	25	NCP	mg	L	0.001	0.001	1	0	Pass
Copper	M18	Au1	25	NCP	mg	L	0.001	0.001	1	0	Pass
Lead	M18	Au1	25	NCP	mg	L	0.001	0.001	1	0	Pass
Mercury	M18	Au1	25	NCP	mg	L	0.0001	0.0001	1	0	Pass
Nickel	M18	Au1	25	NCP	mg	L	0.001	0.001	1	0	Pass
Zinc	M18	Au1	25	NCP	mg	L	0.005	0.005	1	0	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 C1 " value. The naphthalene value used in this calculation is obtained from volatiles Purge Trap analysis .
N02	Where we have reported both volatile PT 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.
N0	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C C10" value is obtained by quantitating against a standard of mixed aromatic aliphatic analytes.
N0	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
Q15	The RPD reported passes Eurofins mgt sQC Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Nibha Vaidya	Analytical Services Manager
Alex Petridis	Senior Analyst Metal VIC
Harry Bacalis	Senior Analyst Volatile VIC
oseph Edouard	Senior Analyst Organic VIC

Glenn Jackson
National Operations 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 here.

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Perth
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Phone : 18 251 00
NATA 12 1
Site 2

Company Name:	Trace Environmental P L	Order No.:	
Address:	Shop 2, New Canterbury Road, Dulwich Hill, NSW 220	Report :	12025
		Phone:	02 8 0 0555
		Fax:	
Project Name:	MASCOT	Received:	Aug 1 2018 :0 PM
Project ID:	1.1	Due:	Aug 20 2018
		Priority:	5 Day
		Contact Name:	ack Ellis

Eurofins mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Volatile Organics	Moisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BTEXN and Volatile TRH
Melbourne Laboratory NATA Site 12 4 & 14271								X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory NATA Site 1 217							X									X	X	X
Brisbane Laboratory NATA Site 207 4															X			
Perth Laboratory NATA Site 23736						X												
External Laboratory																		
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID													
1	SB1 0.	Aug 0 2018		Soil	S18 Au1 12								X	X		X		
2	SB1 0.5	Aug 0 2018		Soil	S18 Au1 1	X				X	X	X		X	X			
	SB 0.	Aug 0 2018		Soil	S18 Au1 1	X						X		X				
	SB 1.0	Aug 0 2018		Soil	S18 Au1 15									X		X		
5	SB 2.	Aug 0 2018		Soil	S18 Au1 1									X	X	X		
	SB .2	Aug 0 2018		Soil	S18 Au1 1							X		X				
	SB .8	Aug 0 2018		Soil	S18 Au1 18									X			X	
8	SB11 0.2	Aug 0 2018		Soil	S18 Au1 1							X		X				
	SB11 0.5	Aug 0 2018		Soil	S18 Au1 20									X			X	

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Company Name:	Trace Environmental P L	Order No.:		Received:	Aug 1 2018 :0 PM
Address:	Shop 2 New Canterbury Road	Report :	12025	Due:	Aug 20 2018
	Dulwich Hill	Phone:	02 8 0 0555	Priority:	5 Day
	NSW 220	Fax:		Contact Name:	ack Ellis
Project Name:	MASCOT				
Project ID:	1.1				

Eurofins mgt Analytical Services Manager : Nibha Vaidya

Sample Detail					Asbestos WA guidelines	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Volatile Organics	Moisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BTEXN and Volatile TRH
Melbourne Laboratory NATA Site 12 4 & 14271							x	x	x	x	x	x	x	x	x	x	x
Sydney Laboratory NATA Site 1 217						x									x	x	x
Brisbane Laboratory NATA Site 207 4														x			
Perth Laboratory NATA Site 23736					x												
10	SB11 1.2	Aug 0 2018	Soil	S18 Au1	21 x				x	x			x				
11	SB11 1.	Aug 0 2018	Soil	S18 Au1	22							x	x		x		
12	SB11 .	Aug 0 2018	Soil	S18 Au1	2								x			x	
1	SB11 5.0	Aug 0 2018	Soil	S18 Au1	2						x		x				
1	SB1 0.2	Aug 10 2018	Soil	S18 Au1	25 x								x		x		
15	SB1 0.5	Aug 10 2018	Soil	S18 Au1	2						x		x				
1	SB1 1.2	Aug 10 2018	Soil	S18 Au1	2				x	x			x	x			
1	SB1 2.5	Aug 10 2018	Soil	S18 Au1	28 x							x	x				
18	SB1 .8	Aug 10 2018	Soil	S18 Au1	2						x		x				
1	SB1 10.0	Aug 10 2018	Soil	S18 Au1	0						x		x		x		
20	SB10 0.	Aug 10 2018	Soil	S18 Au1	1X												
21	SB10 0.5	Aug 10 2018	Soil	S18 Au1	2			x		x	x		x				

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Company Name: T race Environmental P L
Address: Shop 2 New Canterbury Road
Dulwich Hill
NSW 220

Project Name: M ASCO T
Project ID: 1.1

Order No.:
Report : 12025
Phone: 02 8 0 0555
Fax:

Received: Aug 1 2018 :0 PM
Due: Aug 20 2018
Priority: 5 Day
Contact Name: ack Ellis

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail					Asbestos WA guidelines	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	V olatile O rganics	Moisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BT EX N and V olatile T RH
Melbourne Laboratory NATA Site 12 4 & 14271							x	x	x	x	x		x	x	x	x	x
Sydney Laboratory NATA Site 1 217						x									x	x	x
B risbane Laboratory NATA Site 207 4														x			
Perth Laboratory NATA Site 23736					x												
22	SB1 0.5	Aug 10 2018	Soil	S18 Au1									x		x		
2	SB1 1.0	Aug 10 2018	Soil	S18 Au1	x						x		x				
2	SB1 .0	Aug 10 2018	Soil	S18 Au1	5			x					x				
25	SB1 .5	Aug 10 2018	Soil	S18 Au1									x			x	
2	SB1 .0	Aug 10 2018	Soil	S18 Au1							x		x				
2	SB18 0.2	Aug 10 2018	Soil	S18 Au1	8x			x	x	x	x		x				
28	SB18 0.	Aug 10 2018	Soil	S18 Au1	x							x	x				
2	SB18 1.0	Aug 10 2018	Soil	S18 Au1	0								x			x	
0	SB1 0.8	Aug 08 2018	Soil	S18 Au1	1x				x	x	x		x				
1	SB1 1.5	Aug 08 2018	Soil	S18 Au1	2								x		x		
2	SB1 2.5	Aug 08 2018	Soil	S18 Au1							x	x	x				
	SB1 .	Aug 08 2018	Soil	S18 Au1									x			x	

x

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Address:	Shop 2 New Canterbury Road	Report :	12025	Due:	Aug 20 2018
	Dulwich Hill	Phone:	02 8 0 0555	Priority:	5 Day
	NSW 220	Fax:		Contact Name:	ack Ellis
Project Name:	MASCO T				
Project ID:	1.1				

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	V olatile O rganics	Moisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BT EX N and V olatile T RH
Melbourne Laboratory NATA Site 12 4 & 14271								x	x	x	x	x	x	x	x	x	x	x
Sydney Laboratory NATA Site 1 217							x									x	x	x
B risbane Laboratory NATA Site 207 4															x			
Perth Laboratory NATA Site 23736						x												
	SB20 0.	Aug 08	2018	Soil	S18 Au1	5				x	x	x		x				
5	SB20 1.0	Aug 08	2018	Soil	S18 Au1	x								x		x		
	SB20 1.5	Aug 08	2018	Soil	S18 Au1						x			x				
	SB20 .0	Aug 08	2018	Soil	S18 Au1	8						x		x				
8	SB20 .8	Aug 08	2018	Soil	S18 Au1									x			x	
	SB20 .0	Aug 08	2018	Soil	S18 Au1	50				x				x	x			
0	SB20 12.0	Aug 08	2018	Soil	S18 Au1	51								x			x	
1	SB2 0.2	Aug 10	2018	Soil	S18 Au1	52 x								x		x		
2	SB2 0.5	Aug 10	2018	Soil	S18 Au1	5						x		x				
	SB2 2.0	Aug 10	2018	Soil	S18 Au1	5			x					x				
	SB2 .0	Aug 10	2018	Soil	S18 Au1	55						x		x				
5	SB2 .0	Aug 10	2018	Soil	S18 Au1	5								x		x		

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web : www.eurofins.com.au

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Site 125 1 2 1

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Phone : 1 2 00 8 00
NAT A 12 1 Site 1821

Brisbane
1 21 Smallwood Place
Murarrie Q LD 1 2
Phone : 1 02 00
NAT A 12 1 Site 20

Perth
2 1 Leach Highway
K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1
Site 2

Company Name:	T race Environmental P L	Order No.:		Received:	Aug 1 2018 :0 PM
Address:	Shop 2 New Canterbury Road	Report :	12025	Due:	Aug 20 2018
	Dulwich Hill	Phone:	02 8 0 0555	Priority:	5 Day
	NSW 220	Fax:		Contact Name:	ack Ellis
Project Name:	MASCO T				
Project ID:	1.1				

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	V olatile O rganics	Moisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BT EX N and V olatile T RH
Melbourne Laboratory NATA Site 12 4 & 14271								x	x	x	x	x	x	x	x	x	x	x
Sydney Laboratory NATA Site 1 217							x									x	x	x
B risbane Laboratory NATA Site 207 4															x			
Perth Laboratory NATA Site 23736						x												
	SB2 5.0	Aug 10 2018		Soil	S18 Au1 5								x	x				
	SB2 .0	Aug 10 2018		Soil	S18 Au1 58									x		x		
8	SB2 8.0	Aug 10 2018		Soil	S18 Au1 5							x		x				
	SB2 1.5	2.0 Aug 10 2018		Soil	S18 Au1	0							x	x			x	
50	SB2 0.2	Aug 08 2018		Soil	S18 Au1	1x						x		x				
51	SB2 0.5	Aug 08 2018		Soil	S18 Au1	2					x			x				
52	SB2 1.0	Aug 08 2018		Soil	S18 Au1					x				x				
5	SB2 1.5	Aug 08 2018		Soil	S18 Au1	x												
5	SB2 .8	Aug 08 2018		Soil	S18 Au1	5								x		x		
55	SB2 5.0	Aug 08 2018		Soil	S18 Au1				x					x				
5	SB2 .0	Aug 08 2018		Soil	S18 Au1									x			x	
5	Q S1	Aug 10 2018		Soil	S18 Au1	8								x		x		

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Brisbane
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Murarrie Q LD 1 2
Phone : 1 02 00
NAT A 12 1 Site 20

Perth
2 1 Leach Highway
K ewdale WA 105
Phone : 18 251 00
NAT A 12 1
Site 2

Company Name:	T race Environmental P L	Order No.:	
Address:	Shop 2 New Canterbury Road	Report :	12025
	Dulwich Hill	Phone:	02 8 0 0555
	NSW 220	Fax:	
Project Name:	MASCO T	Received:	Aug 1 2018 :0 PM
Project ID:	1.1	Due:	Aug 20 2018
		Priority:	5 Day
		Contact Name:	ack Ellis

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail					Asbestos WA guidelines	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	V olatile O rganics	Moisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BT EX N and V olatile T RH	
Melbourne Laboratory NATA Site 12 4 & 14271							x	x	x	x	x	x	x	x	x	x	x	x
Sydney Laboratory NATA Site 1 217						x									x	x	x	
B risbane Laboratory NATA Site 207 4														x				
Perth Laboratory NATA Site 23736					x													
58	Q S2	Aug 08 2018	Soil	S18 Au1	0								x		x			
5	RB1	Aug 08 2018	Water	S18 Au1	2											x		
0	SB 1.25	Aug 0 2018	Soil	S18 Au1 5	2		x											
1	SB .	Aug 0 2018	Soil	S18 Au1 5			x											
2	SB11 2.0	Aug 0 2018	Soil	S18 Au1 5			x											
	SB11 2.	Aug 0 2018	Soil	S18 Au1 5	5		x											
	SB11 .	Aug 0 2018	Soil	S18 Au1 5			x											
5	SB1 0.	Aug 10 2018	Soil	S18 Au1 5			x											
	SB1 .2	Aug 10 2018	Soil	S18 Au1 5	8		x											
	SB1 5.0	Aug 10 2018	Soil	S18 Au1 5			x											
8	SB1 .0	Aug 10 2018	Soil	S18 Au1 550			x											
	SB1 .0	Aug 10 2018	Soil	S18 Au1 551			x											

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NAT A 12 1 Site 20

Perth
2 1 Leach Highway
K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1
Site 2

Company Name:	T race Environmental P L		Order No.:		Received: Aug 1 2018 :0 PM
Address:	Shop 2 New Canterbury Road, Dulwich Hill, NSW 220		Report :	12025	Due: Aug 20 2018
			Phone:	02 8 0 0555	Priority: 5 Day
			Fax:		Contact Name: ack Ellis
Project Name:	M ASCO T				
Project ID:	1.1				

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Asbestos WA guidelines	CANCELLED	HO LD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M 8	Eurofins mgt Suite B15	V olatile O rganics	M oisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BT EX N and V olatile T RH	
Melbourne Laboratory NATA Site 12 4 & 14271								x	x	x	x	x	x	x	x	x	x	x	x
Sydney Laboratory NATA Site 1 217							x									x	x	x	
B risbane Laboratory NATA Site 207 4															x				
Perth Laboratory NATA Site 23736						x													
0	SB1	.0	Aug 10 2018	Soil	S18 Au1 552			x											
1	SB1	0.2	Aug 10 2018	Soil	S18 Au1 55			x											
2	SB1	1.	Aug 10 2018	Soil	S18 Au1 55			x											
	SB1	1.	Aug 10 2018	Soil	S18 Au1 555			x											
	SB1	1.	Aug 10 2018	Soil	S18 Au1 55		x												
5	SB1	1.	Aug 10 2018	Soil	S18 Au1 55			x											
	SB1	.8	Aug 10 2018	Soil	S18 Au1 558			x											
	SB1	10.0	Aug 10 2018	Soil	S18 Au1 55			x											
8	SB1	0.2	Aug 10 2018	Soil	S18 Au1 5 0			x											
	SB1	.2	Aug 10 2018	Soil	S18 Au1 5 1			x											
80	SB20	2.	Aug 10 2018	Soil	S18 Au1 5 2			x											
81	SB2	1.0	Aug 10 2018	Soil	S18 Au1 5			x											

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K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1
Site 2

Company Name:	T race Environmental P L	Order No.:	
Address:	Shop 2 New Canterbury Road	Report :	12025
	Dulwich Hill	Phone:	02 8 0 0555
	NSW 220	Fax:	
Project Name:	M ASCO T		
Project ID:	1.1		

Received:	Aug 1 2018 :0 PM
Due:	Aug 20 2018
Priority:	5 Day
Contact Name:	ack Ellis

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	V olatile O rganics	Moisture Set	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A	BT EX N and V olatile T RH	
Melbourne Laboratory NATA Site 12 4 & 14271								x	x	x	x	x		x	x	x	x	x	x
Sydney Laboratory NATA Site 1 217							x									x	x	x	
B risbane Laboratory NATA Site 207 4															x				
Perth Laboratory NATA Site 23736						x													
82	SB2	.0	Aug 10 2018	Soil	S18 Au1 5			x											
8	SB2	.0	Aug 10 2018	Soil	S18 Au1 5	5		x											
8	SB2	10.0	Aug 10 2018	Soil	S18 Au1 5			x											
85	SB2	.1	Aug 08 2018	Soil	S18 Au1 5			x											
8	SB1	8.0	Aug 10 2018	Soil	S18 Au1 0			x											
8	T S		Aug 0 2018	Soil	S18 Au1	5												x	
88	T B		Aug 0 2018	Soil	S18 Au1													x	
Test Counts						1	1	2	5	8		20		5			15	11	2

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5 K ingston T own Closenit F Building F
O akleigh V ic 1 1 M ars Road
Phone : 1 85 5008ne Cove West N SW 20
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Site 125 1 2 1 NAT A 12 1 Site 1821

1 21 Smallwood Place
M urarrie Q LD 1 2
Phone : 1 02 0
NAT A 12 1 Site 20

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K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1 Site 2

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name: T race Environmental P L

Contact name: ack Ellis
Pro ect name: M ASCO T
Pro ect ID: 1.1
CO C number: Not provided
T urn around time: 5 Day
Date T ime received: Aug 1 2018 :0 PM
Eurofins mgt reference: 12[redacted]5

Sample information

☑ A detailed list of analytes logged into our LIM S is included in the attached summary table.

☑ Sample T emperature of a random sample selected from the batch as recorded by Eurofins mgt Sample Receipt : . degrees Celsius.

☑ All samples have been received as described on the above CO C.

☑ CO C 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 ero headspace.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

[redacted] N/A Custody Seals intact if used .

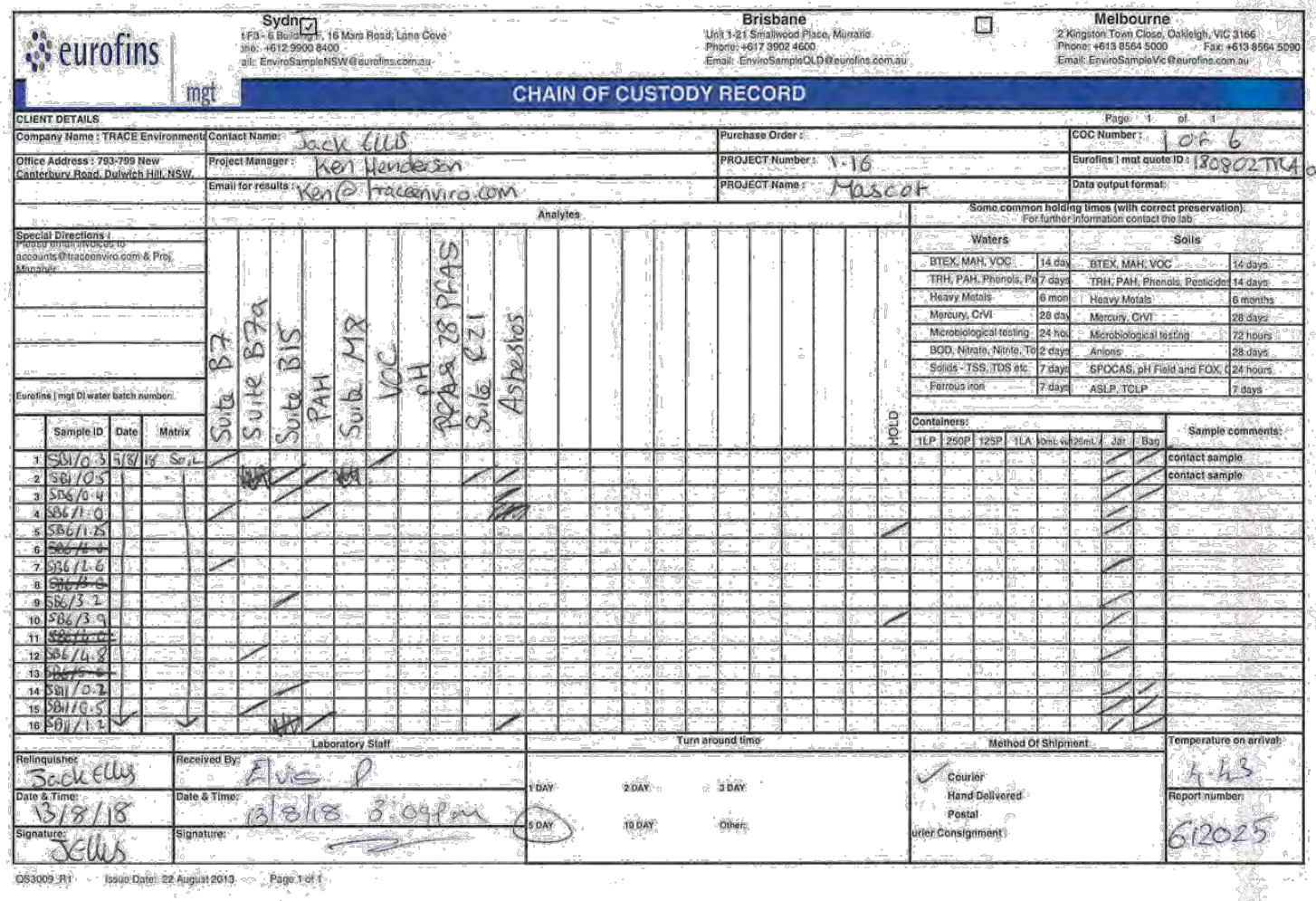
ars not received for SB10 0. only asbestos analysis conducted SB10 0.5 analysis conducted from bag . not received for SB1 1. . T rip spike and blank received and placed on hold.

Contact notes

If you have any questions with respect to these samples please contact:

Nibha V aidya on Phone : 1 2 00 8 15 or by e.mail: NibhaV aidya eurofins.com

Results will be delivered electronically via e.mail to ack Ellis ack traceenviro.com.



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Phone: +613 8564 5000 Fax: +613 8564 5090
Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name : TRACE Environmental
Contact Name: Jack Ellis
Purchase Order :
Page 1 of 1
COC Number : 1 of 6

Office Address : 793-799 New Canterbury Road, Dulwich Hill, NSW,
Project Manager : Ken Henderson
PROJECT Number : 1.16
Eurofins | mgt quote ID : 130802TM4a

Email for results : Ken@traceenviro.com
PROJECT Name : Mascot
Data output format:

Special Directions :
Please email invoices to accounts@traceenviro.com & Proj. Manager

Eurofins | mgt DI water batch number:

Analytes

	Sample ID	Date	Matrix	Suite B7	Suite B7a	Suite B15	PAH	Suite MR	VOC	pH	PFAS 28	Suite E21	Asbestos	HOLD
1	SB1/0.3	7/8/18	Soil	/		/			/			/		
2	SB1/0.5													
3	SB6/0.4													
4	SB6/1.0			/		/								
5	SB6/1.8													/
6	SB6/2.4													
7	SB6/2.6			/										
8	SB6/3.0													
9	SB6/3.2				/									
10	SB6/3.9													/
11	SB6/4.0													
12	SB6/4.8				/									
13	SB6/5.0													
14	SB1/0.2				/	/								
15	SB1/0.5													
16	SB1/1.2	✓	↓									/		

Some common holding times (with correct preservation). For further information contact the lab.

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pe	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 mon	Heavy Metals	6 months
Mercury, CrVI	28 day	Mercury, CrVI	28 days
Microbiological testing	24 hou	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, To	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, C	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

1LP	250P	125P	1LA	40mL vial	125mL / 250mL Jar	Bag
					/	/
					/	/
					/	
					/	
					/	
					/	
					/	
					/	
					/	
					/	
					/	
					/	
					/	/
					/	/

Sample comments:
contact sample
contact sample

Laboratory Staff

Relinquished: Jack Ellis
Date & Time: 13/8/18
Signature: JEllis

Received By: Elvis P
Date & Time: 13/8/18 3:09pm
Signature:

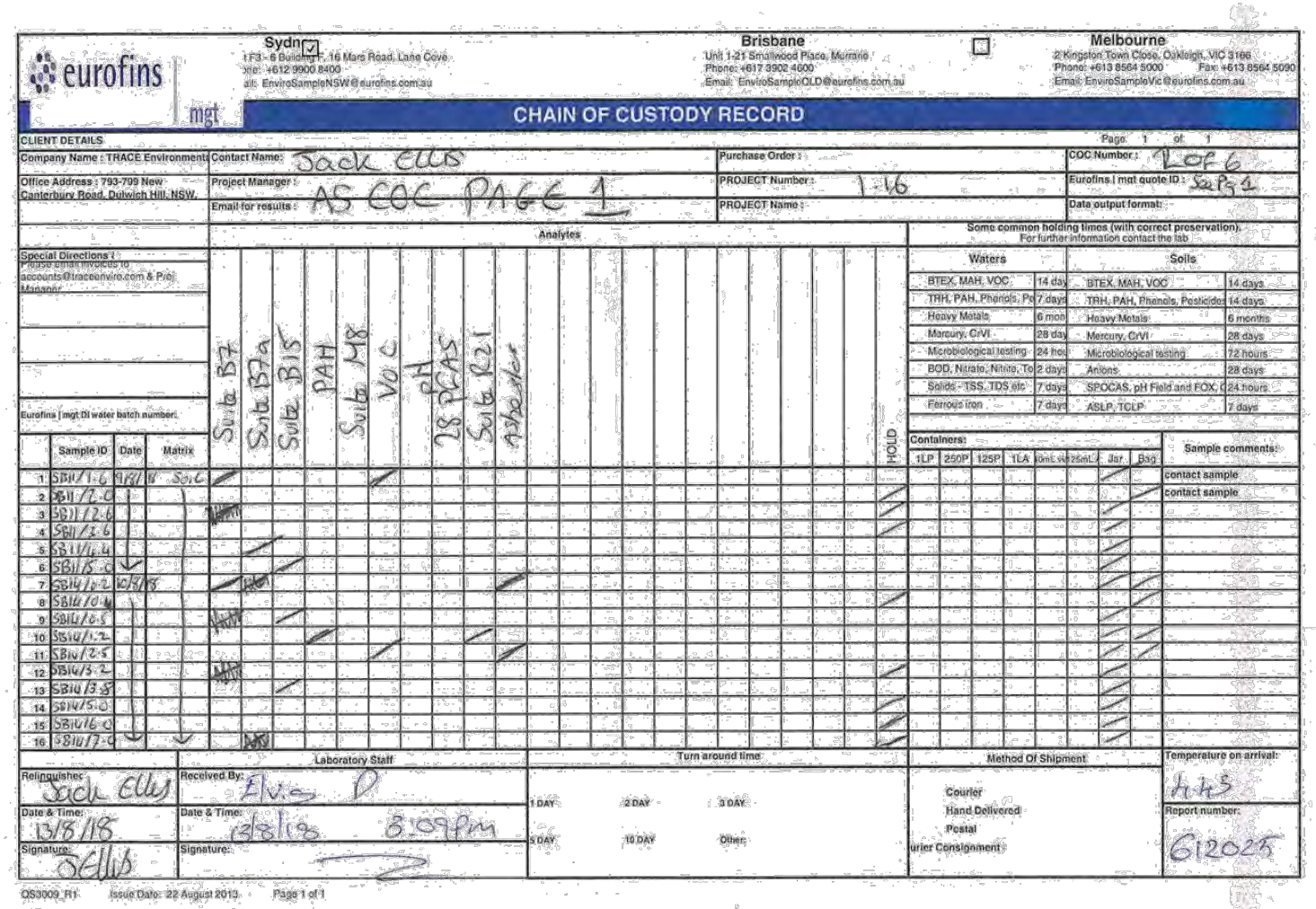
Turn around time:
1 DAY 2 DAY 3 DAY
5 DAY 10 DAY Other:

Method Of Shipment:
✓ Courier
Hand Delivered
Postal
urier Consignment

Temperature on arrival: 4.4.3

Report number: 612025

OS3009 R1 Issue Date: 22 August 2013 Page 1 of 1



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Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name : TRACE Environmental
Office Address : 793-799 New Canterbury Road, Dulwich Hill, NSW.
Contact Name: Jack Ellis
Project Manager :
Email for results : AS COC PAGE 1
Purchase Order :
PROJECT Number : 1-16
PROJECT Name :
Page 1 of 1
COC Number : 1 of 6
Eurofins | mgt quote ID : SoPg1
Data output format:

Special Directions : Please email invoices to accounts@traceenviro.com & Proj Manager

Eurofins | mgt DI water batch number:

Analytes: Suite B7 | Suite B7a | Suite B15 | PAH | Suite M8 | VOC | pH | 28 PCAS | Suite R21 | Asbestos | HOLD

	Sample ID	Date	Matrix
1	SB11/1.6	9/8/18	Soil
2	SB11/2.0		
3	SB11/2.6		
4	SB11/3.6		
5	SB11/4.4		
6	SB11/5.0		
7	SB14/0.2	10/8/18	
8	SB14/0.4		
9	SB14/0.5		
10	SB14/1.2		
11	SB14/2.5		
12	SB14/3.2		
13	SB14/3.8		
14	SB14/5.0		
15	SB14/6.0		
16	SB14/7.0		

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 day	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pe	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 mon	Heavy Metals	6 months
Mercury, CrVI	28 day	Mercury, CrVI	28 days
Microbiological testing	24 hou	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, To	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, C	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

1LP	250P	125P	1LA	40mL vial	25mL	Jar	Bag
						✓	
						✓	✓
						✓	
						✓	
						✓	
						✓	
						✓	✓
						✓	
						✓	
						✓	✓
						✓	
						✓	
						✓	
						✓	
						✓	
						✓	

Sample comments:
contact sample
contact sample

Laboratory Staff

Relinquished: Jack Ellis
Date & Time: 13/8/18
Signature:

Received By: Elvis D
Date & Time: 13/8/18 8:09pm
Signature:

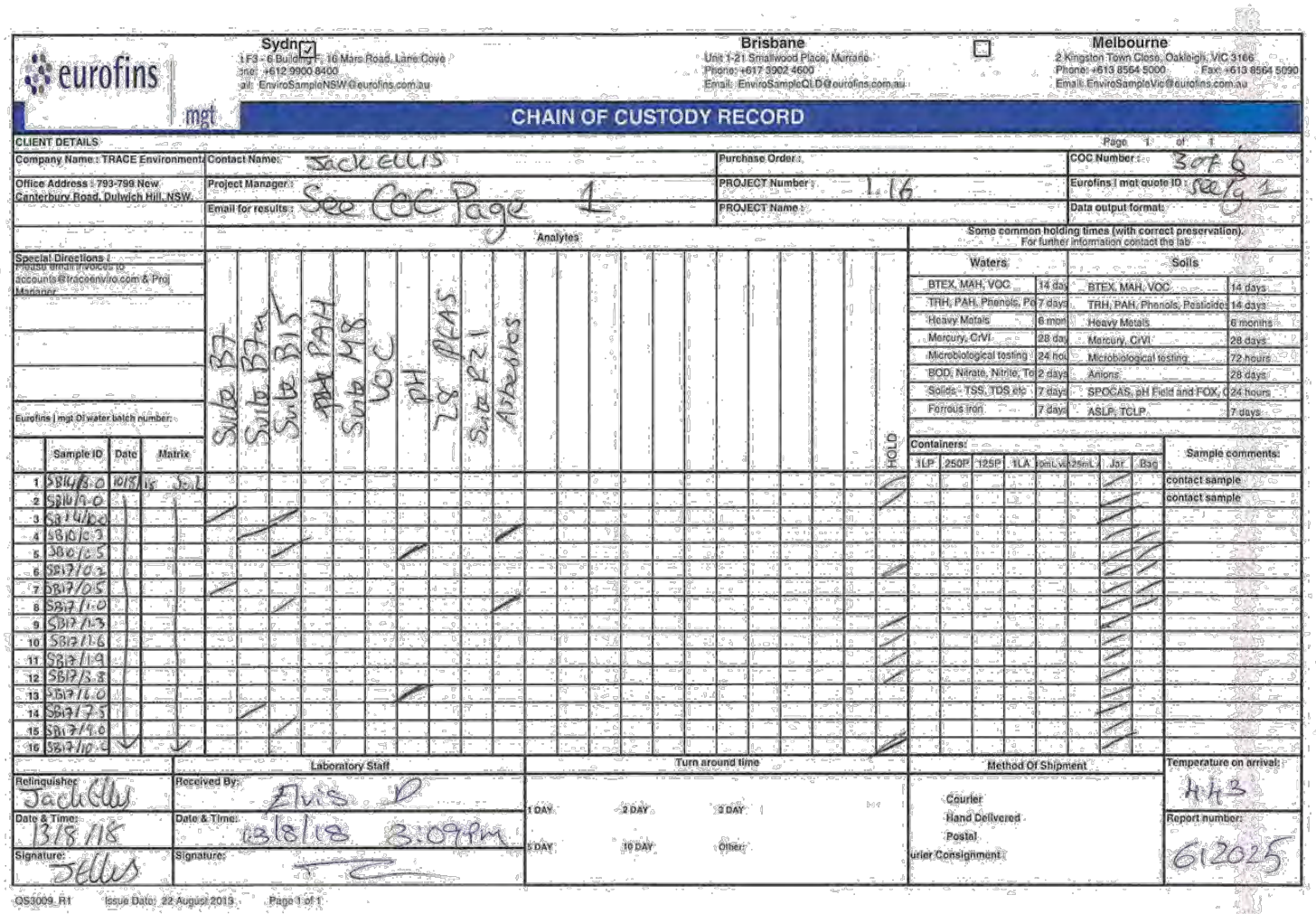
Turn around time: 1 DAY | 2 DAY | 3 DAY | 5 DAY | 10 DAY | Other:

Method Of Shipment: Courier | Hand Delivered | Postal | urier Consignment

Temperature on arrival: 4.4.5

Report number: 612025

QS3009_R1 Issue Date: 22 August 2013 Page 1 of 1



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Sydney ☑ 179 - 6 Building, 16 Mars Road, Lane Cove Phone: +612 9900 8400 Email: EnviroSampleNSW@eurofins.com.au

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CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name: TRACE Environmental | Contact Name: Jack Ellis | Purchase Order: | Page 1 of 1 | COC Number: 3076

Office Address: 793-799 New Canterbury Road, Dulwich Hill, NSW. | Project Manager: | PROJECT Number: 1.16 | Eurofins | mgt quote ID: See Pg 2

Email for results: See COC Page 1 | PROJECT Name: | Data output format:

Special Directions / Please email invoices to accounts@traceenviro.com & Proj Manager

Eurofins | mgt Of water batch number:

Analytes: Suite B7 | Suite B7a | Suite B15 | PAH | Suite M8 | VOC | pH | 28 PFAS | Suite 221 | Asbestos | HOLD

	Sample ID	Date	Matrix	Containers: 1LP	250P	125P	1LA	40mL via 25mL	Jar	Bag	Sample comments:
1	SB14/0.0	10/8/18	S								contact sample
2	SB19/0.0										contact sample
3	SB14/0.2										
4	SB10/0.3										
5	SB6/0.5										
6	SB17/0.2										
7	SB17/0.5										
8	SB17/1.0										
9	SB17/1.3										
10	SB17/1.6										
11	SB17/1.9										
12	SB17/3.8										
13	SB17/6.0										
14	SB17/7.5										
15	SB17/9.0										
16	SB17/10.2	✓	✓								

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pe	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 mon	Heavy Metals	6 months
Mercury, CrVI	28 day	Mercury, CrVI	28 days
Microbiological testing	24 hou	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Te	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, C	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Laboratory Staff

Relinquished: Jack Ellis | Received By: Elvis D

Date & Time: 13/8/18 | Date & Time: 13/8/18 3.09pm

Signature: Ellis | Signature:

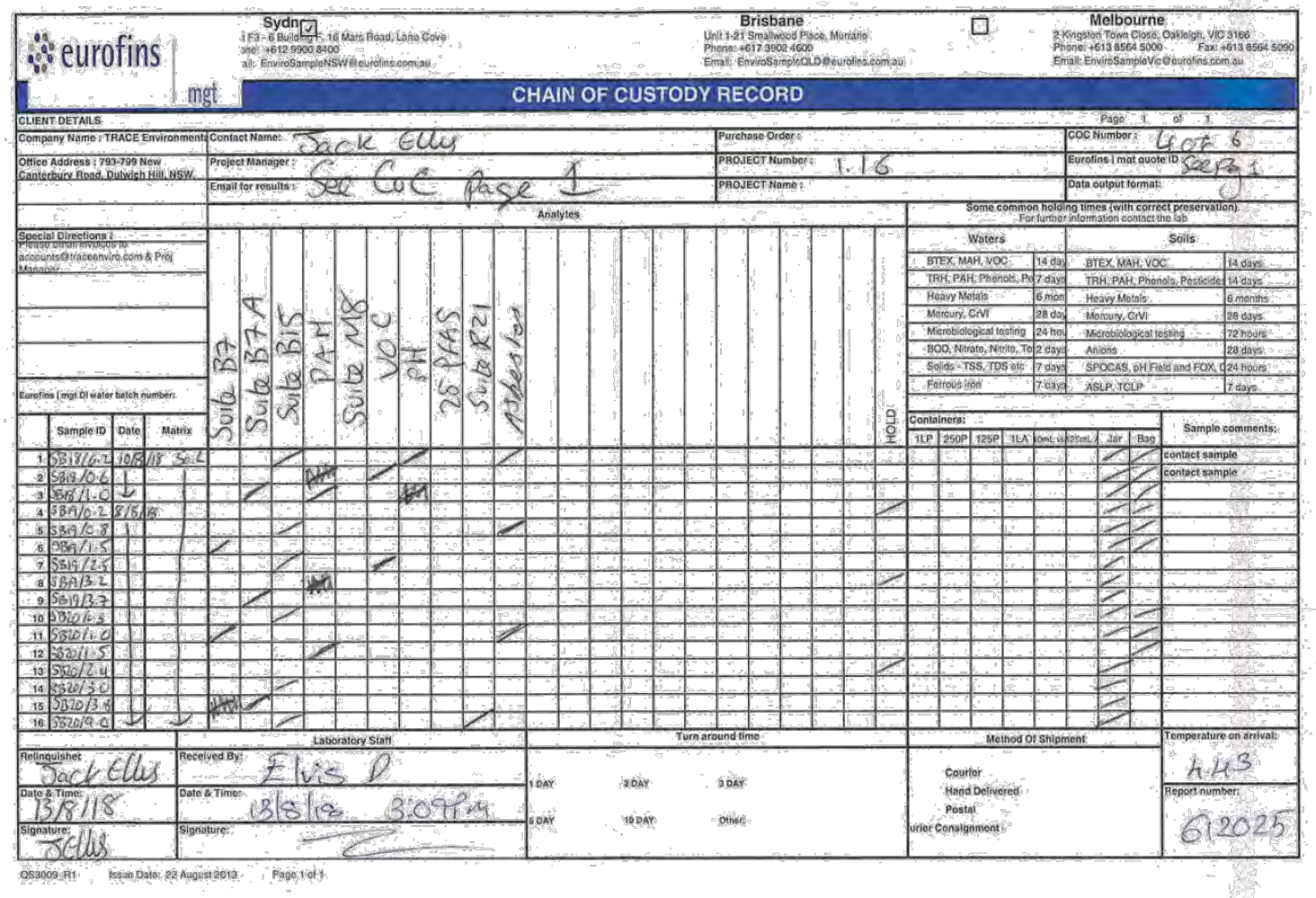
Turn around time: 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 DAY ☐ 10 DAY ☐ Other: ☐

Method Of Shipment: Courier ☐ Hand Delivered ☐ Postal ☐ urier Consignment ☐

Temperature on arrival: 4.4.3

Report number: 612025

QS3009_R1 Issue Date: 22 August 2013 Page 1 of 1



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CHAIN OF CUSTODY RECORD

Page 1 of 1

CLIENT DETAILS

Company Name : TRACE Environmental

Office Address : 793-799 New Canterbury Road, Dulwich Hill, NSW.

Contact Name: Jack Ellis

Project Manager :

Email for results : See CoC page 1

Purchase Order :

PROJECT Number : 1.16

PROJECT Name :

COC Number : 4 of 6

Eurofins | mgt quote ID : See pg 1

Data output format:

Special Directions : Please email invoices to accounts@traceenvire.com & Proj Manager

Eurofins | mgt DI water batch number:

Analytes

	Sample ID	Date	Matrix	Suite B7	Suite B7A	Suite B15	PAH	Suite M8	VOC	pH	25 PFAS	Suite E21	Asbestos	HOLD
1	SB17/0.2	10/8/18	Soil			✓			✓	✓		✓		
2	SB17/0.6	↓					AM							
3	SB17/1.0	↓		✓		✓				AM				
4	SB19/0.2	8/8/18												✓
5	SB19/0.8					✓						✓		
6	SB19/1.5			✓		✓								
7	SB19/2.5					✓			✓					
8	SB19/3.2						AM							✓
9	SB19/3.7				✓	✓								
10	SB20/0.5					✓								
11	SB20/1.0			✓		✓						✓		
12	SB20/1.5						✓							✓
13	SB20/2.4													
14	SB20/3.0					✓								
15	SB20/3.8	↓		AM	✓	✓								
16	SB20/9.0	↓	↓			✓						✓		

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 day	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pe	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 mon	Heavy Metals	6 months
Mercury, CrVI	28 day	Mercury, CrVI	28 days
Microbiological testing	24 hou	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Te	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, C	24 hours
Ferrous Iron	7 days	ASLP, TCLP	7 days

Containers:

1LP	250P	125P	1LA	40mL vial	125mL Jar	Bag
					✓	✓
					✓	✓
					✓	
					✓	
					✓	
					✓	
					✓	
					✓	
					✓	✓
					✓	
					✓	
					✓	
					✓	
					✓	
					✓	
					✓	

Sample comments:

1 contact sample
2 contact sample

Laboratory Staff

Relinquished: Jack Ellis
Date & Time: 13/8/18
Signature: JEllis

Received By: Elvis D
Date & Time: 13/8/18 3:07pm
Signature:

Turn around time

1 DAY ☐ 2 DAY ☐ 3 DAY ☐
5 DAY ☐ 10 DAY ☐ Other ☐

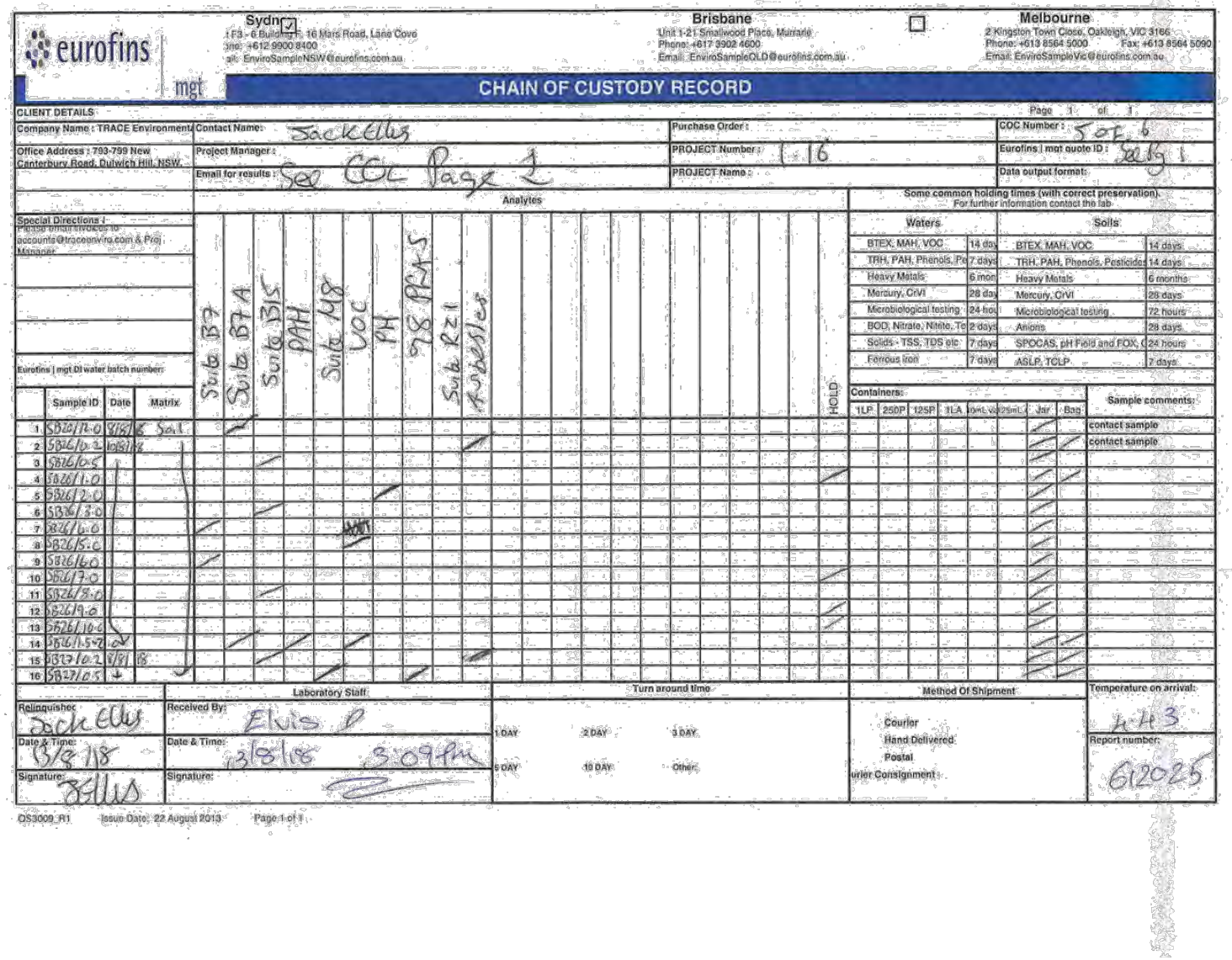
Method Of Shipment

Courier ☐
Hand Delivered ☐
Postal ☐
Courier Consignment ☐

Temperature on arrival: 4.4°C

Report number: 612025

QS3009_R1 Issue Date: 22 August 2013 Page 1 of 1



eurofins | mgt

Sydney ☑ 179 - 6 Building, 16 Mars Road, Lane Cove
Phone: +612 9900 8400
Email: EnviroSampleNSW@eurofins.com.au

☐ Brisbane
Unit 1-21 Smallwood Place, Murarrie
Phone: +617 3902 4600
Email: EnviroSampleQLD@eurofins.com.au

☐ Melbourne
2 Kingston Town Close, Oakleigh, VIC 3166
Phone: +613 8564 5000 Fax: +613 8564 5090
Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name : TRACE Environmental
Office Address : 793-799 New Canterbury Road, Dulwich Hill, NSW.
Contact Name: Jack Ellis
Project Manager :
Email for results : See COC Page 2
Purchase Order :
PROJECT Number : 16
PROJECT Name :
Page 1 of 1
COC Number : 5 of 6
Eurofins | mgt quote ID : See pg 1
Data output format:

Special Directions :
Please email invoices to accounts@traceenviro.com & Proj Manager

Eurofins | mgt DI water batch number:

Analytes: Sub B7 | Sub B7 A | Sub B15 PAH | Sub 48 VOC | PH | 28 PAHS | Sub Rz1 Asbestos | HOLD

	Sample ID	Date	Matrix
1	SB26/0.0	9/8/18	Soil
2	SB26/0.2	10/8/18	
3	SB26/0.5		
4	SB26/1.0		
5	SB26/2.0		
6	SB26/3.0		
7	SB26/4.0		
8	SB26/5.0		
9	SB26/6.0		
10	SB26/7.0		
11	SB26/8.0		
12	SB26/9.0		
13	SB26/10.0		
14	SB26/15.0	↓	
15	SB27/0.2	9/8/18	
16	SB27/0.5	↓	

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 day	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pe	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 mon	Heavy Metals	6 months
Mercury, CrVI	28 day	Mercury, CrVI	28 days
Microbiological testing	24 hou	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Te	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, C	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

1LP	250P	125P	1LA	40mL Vo	125mL J	Jar	Bag

Sample comments:
contact sample
contact sample

Laboratory Staff

Relinquished: Jack Ellis
Date & Time: 13/8/18
Signature: Ellis

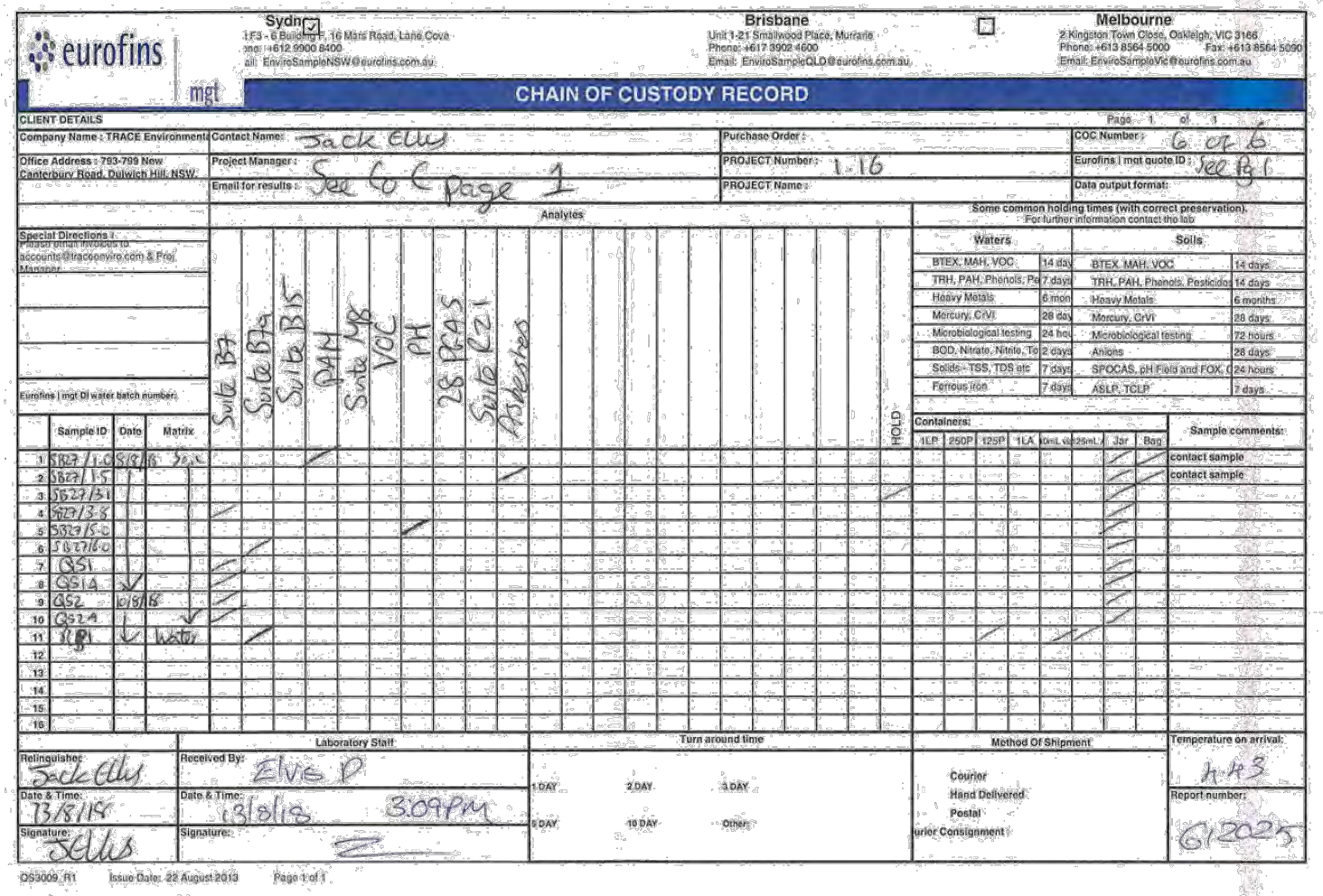
Received By: Elvis D
Date & Time: 13/8/18 3:09pm
Signature:

Turn around time: 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 DAY ☐ 10 DAY ☐ Other ☐

Method Of Shipment: Courier ☐ Hand Delivered ☐ Postal ☐ urier Consignment ☐

Temperature on arrival: 4.4.3
Report number: 612025

QS3009_R1 Issue Date: 22 August 2013 Page 1 of 1



eurofins | mgt

Sydney ☑
1F3 - 6 Building F, 16 Mars Road, Lane Cove
Phone: +612 9900 8400
Email: EnviroSampleNSW@eurofins.com.au

Brisbane ☐
Unit 1-21 Smallwood Place, Murrarie
Phone: +617 3902 4600
Email: EnviroSampleQLD@eurofins.com.au

Melbourne
2 Kingston Town Close, Oakleigh, VIC 3166
Phone: +613 8564 5000 Fax: +613 8564 5090
Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name : TRACE Environmental
Office Address : 793-799 New Canterbury Road, Dulwich Hill, NSW
Contact Name : Jack Ellis
Project Manager :
Email for results : See C of C page 1
Purchase Order :
PROJECT Number : 1.16
PROJECT Name :
Page 1 of 1
COC Number : 6 of 6
Eurofins | mgt quote ID : See Pg 1
Data output format:

Special Directions :
Please email invoices to accounts@traceenviro.com & Proj Manager

Eurofins | mgt DI water batch number:

Analytes: Suite B7 | Suite B7a | Suite B15 | PAH | Suite M8 VOC | PH | 28 PFAS | Suite L21 Asbestos | HOLD

	Sample ID	Date	Matrix
1	SB27/1.0	9/8/18	Soil
2	SB27/1.5		
3	SB27/3.1		
4	SB27/3.8		
5	SB27/5.0		
6	SB27/6.0		
7	QS1		
8	QS1A		
9	QS2	9/8/18	
10	QS2A		
11	TB1		Water
12			
13			
14			
15			
16			

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pe	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 mon	Heavy Metals	6 months
Mercury, CrVI	28 day	Mercury, CrVI	28 days
Microbiological testing	24 hou	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, To	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, C	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

1LP	250P	125P	1LA	40mL vial	125mL Jar	Bag

Sample comments:
1 contact sample
2 contact sample

Laboratory Staff

Relinquished: Jack Ellis
Date & Time: 13/8/18
Signature: Ellis

Received By: Elvis D
Date & Time: 13/8/18 3.09PM
Signature:

Turn around time: 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 DAY ☐ 10 DAY ☐ Other ☐

Method Of Shipment: Courier ☐ Hand Delivered ☐ Postal ☐ urier Consignment ☐

Temperature on arrival: 4.4 3
Report number: 612025

OS3009_R1 Issue Date: 22 August 2013 Page 1 of 1

Alena Bounkeua

From: Nibha Vaidya
Sent: Tuesday, 14 August 2018 4:54 PM
To: Alena Bounkeua
Subject: FW: Eurofins | mgt - Report 612025 : Site MASCOT (1.16)
Attachments: 612025_COC.pdf; 612025_sample_receipt_coc.pdf; 612025_summary.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

From: Ken Henderson
Sent: Tuesday, 14 August 2018 4:52:53 PM (UTC+10:00) Canberra, Melbourne, Sydney
To: Nibha Vaidya
Cc: Jack Ellis
Subject: FW: Eurofins | mgt - Report 612025 : Site MASCOT (1.16)

EXTERNAL EMAIL*

Hi Nibha,

Can I please amend a few things for this job:

1. For all samples in which we have requested asbestos, we would like the NEPM/WA quantification method.
2. Please analyse metals (M8) for samples SB1/0.5, SB10/0.5, SB11/1.2 and SB14/1.2;
3. Please analyse NEPM Screen for Soil Classification for sample SB6/2.6;
4. Please analyse metals (M8) and PAHs for samples SB18/0.2, SB19/0.8 and SB20/0.3;
5. Please analyse Suite B7 for sample SB26/0.2;
6. Please analyse the trip blank and trip spike samples for vTPH & BTEXN.

Please also HOLD the PFAS analysis for sample SB27/0.5.

Finally, please FORWARD samples QS1A and QS2A to ALS for analysis of BTEXN/TRH, PAHs, and 8 metals. These were meant to be the triplicate samples and should not be analysed by Eurofins.

Thank you, please ring if any questions/issues.

Regards,
Ken

1

From: EnviroSampleNSW@eurofins.com <EnviroSampleNSW@eurofins.com>
Sent: Tuesday, 14 August 2018 3:54 PM
To: Jack Ellis <jack@traceenviro.com>
Cc: Ken Henderson <ken@traceenviro.com>
Subject: Eurofins | mgt - Report 612025 : Site MASCOT (1.16)

Dear Valued Client,
Jars not received for SB10/0.3(only asbestos analysis conducted) & SB10/0.5 (analysis conducted from bag). Jar not received for SB17/1.6. Trip spike and blank received and placed on hold.
Please find attached a Sample Receipt Advice (SRA), a Summary Sheet and a scanned copy of your Chain-of-Custody (COC). It is important that you check this documentation to ensure that the details are correct such as the Client Job Number, Turn Around Time, any comments in the Notes section and sample numbers as well as the requested analysis. If there are any irregularities then please contact your Eurofins | mgt Analytical Services Manager as soon as possible to make certain that they get changed.

Regards

Elvis Dsouza
Sample Receipt

Eurofins | mgt
Unit F3, Parkview Building
16 Mars Road
LANE COVE WEST NSW 2066
AUSTRALIA
Phone: +61 29900 8492
Email: EnviroSampleNSW@eurofins.com
Website:environment.eurofins.com.au

EnviroNote 1076 - PFAS Biota
EnviroNote 1077 - Soil Vapour Sampling – NATA Accreditation

Alena Bounkeua

From: Nibha Vaidya
Sent: Tuesday, 14 August 2018 4:54 PM
To: Alena Bounkeua
Subject: FW: Eurofins | mgt - Report 612025 : Site MASCOT (1.16)
Attachments: 612025_COC.pdf; 612025_sample_receipt_coc.pdf; 612025_summary.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

From: Ken Henderson
Sent: Tuesday, 14 August 2018 4:52:53 PM (UTC+10:00) Canberra, Melbourne, Sydney
To: Nibha Vaidya
Cc: Jack Ellis
Subject: FW: Eurofins | mgt - Report 612025 : Site MASCOT (1.16)

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Hi Nibha,

Can I please amend a few things for this job:

1. For all samples in which we have requested asbestos, we would like the NEPM/WA quantification method.
2. Please analyse metals (M8) for samples SB1/0.5, SB10/0.5, SB11/1.2 and SB14/1.2;
3. Please analyse NEPM Screen for Soil Classification for sample SB6/2.6;
4. Please analyse metals (M8) and PAHs for samples SB18/0.2, SB19/0.8 and SB20/0.3;
5. Please analyse Suite B7 for sample SB26/0.2;
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Finally, please FORWARD samples QS1A and QS2A to ALS for analysis of BTEXN/TRH, PAHs, and 8 metals. These were meant to be the triplicate samples and should not be analysed by Eurofins.

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Regards,
Ken

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Sent: Tuesday, 14 August 2018 3:54 PM
To: Jack Ellis <jack@traceenviro.com>
Cc: Ken Henderson <ken@traceenviro.com>
Subject: Eurofins | mgt - Report 612025 : Site MASCOT (1.16)

Dear Valued Client,
Jars not received for SB10/0.3(only asbestos analysis conducted) & SB10/0.5 (analysis conducted from bag). Jar not received for SB17/1.6. Trip spike and blank received and placed on hold.
Please find attached a Sample Receipt Advice (SRA), a Summary Sheet and a scanned copy of your Chain-of-Custody (COC). It is important that you check this documentation to ensure that the details are correct such as the Client Job Number, Turn Around Time, any comments in the Notes section and sample numbers as well as the requested analysis. If there are any irregularities then please contact your Eurofins | mgt Analytical Services Manager as soon as possible to make certain that they get changed.

Regards

Elvis Dsouza
Sample Receipt

Eurofins | mgt
Unit F3, Parkview Building
16 Mars Road
LANE COVE WEST NSW 2066
AUSTRALIA
Phone: +61 29900 8492
Email: EnviroSampleNSW@eurofins.com
Website:environment.eurofins.com.au

EnviroNote 1076 - PFAS Biota
EnviroNote 1077 - Soil Vapour Sampling – NATA Accreditation

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eurofins | mgt

30 years Testing For Life

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1 217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests calibrations and or measurements included in this document are traceable to Australian national standards.

Trace Environmental P/L
Shop 2, 7 3 7 New Canterbury Road
Dulwich Hill
NSW 2203

Attention: K en Henderson

Report 61242 S
Pro ect name MASCO T
Pro ect ID 1.1
Received Date Aug 15 2018

Client Sample ID			SB 6/2.0	SB 6/4.0	SB 6/ .0	SB 13/0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1 47	S1 Au1	4 S1	Au1 4 S1 Au1 0
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 13, 201
T est Reference	LO R	nit				
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg				0.5
Ben o a pyrene T EQ medium bound	0.5	mg kg				0.
Ben o a pyrene T EQ upper bound	0.5	mg kg				1.2
Acenaphthene	0.5	mg kg				0.5
Acenaphthylene	0.5	mg kg				0.5
Anthracene	0.5	mg kg				0.5
Ben a anthracene	0.5	mg kg				0.5
Ben o a pyrene	0.5	mg kg				0.5
Ben o b fluoranthene	0.5	mg kg				0.5
Ben o g.h.i perylene	0.5	mg kg				0.5
Ben o k fluoranthene	0.5	mg kg				0.5
Chrysene	0.5	mg kg				0.5
Diben a.h anthracene	0.5	mg kg				0.5
Fluoranthene	0.5	mg kg				0.5
Fluorene	0.5	mg kg				0.5
Indeno 1.2. cd pyrene	0.5	mg kg				0.5
Naphthalene	0.5	mg kg				0.5
Phenanthrene	0.5	mg kg				0.5
Pyrene	0.5	mg kg				0.5
T otal PAH	0.5	mg kg				0.5
2 Fluorobiphenyl surr.	1					101
p T erphenyl d1 surr.	1					
M oisture	1					11
Acid Sulfate Soils Field pH Test						
pH F Field pH test	0.1	pH nits	.8	.	.	
pH FO X Field pH Peroxide test	0.1	pH nits	5.	.	.	
Reaction Rating^{05}		comment	.0	1.0	1.0	

Client Sample ID			SB 14/6.0	SB 14/ .0	SB 14/10.0	SB 17/3.
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1	2 S1 Au1	3 S1	Au1 4 S1 Au1
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Acid Sulfate Soils Field pH Test						
pH F Field pH test	0.1	pH nits	.	.	.	8.2
pH FO X Field pH Peroxide test	0.1	pH nits	.	2.	.2	.
Reaction Rating^{05}		comment	1.0	.0	.0	.0

Client Sample ID			SB 17/6.0	SB 17/ .0	SB 17/10.0	SB 20/ .0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1	6 S1 Au1	7 S1	Au1 S1 Au1
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 0 , 201
T est Reference	LO R	nit				
Acid Sulfate Soils Field pH Test						
pH F Field pH test	0.1	pH nits	.5	.	.	.2
pH FO X Field pH Peroxide test	0.1	pH nits	.8	2.	.0	.1
Reaction Rating^{05}		comment	2.0	2.0	2.0	2.0

Client Sample ID			SB 20/ .0	SB 20/10.0	SB 20/12.0	SB 21/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1 60	S1 Au1	61 S1 Au1	62 S1 Au1 63
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 13, 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg				20
T RH C10 C1	20	mg kg				20
T RH C15 C28	50	mg kg				50
T RH C2 C	50	mg kg				50
T RH C10 T otal	50	mg kg				50
B TEX						
Ben ene	0.1	mg kg				0.1
T oluene	0.1	mg kg				0.1
Ethylben ene	0.1	mg kg				0.1
m p X ylenes	0.2	mg kg				0.2
o X ylene	0.1	mg kg				0.1
X ylenes T otal	0.	mg kg				0.
Bromofluoroben ene surr.	1					1
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene^{N02}	0.5	mg kg				0.5
T RH C C10	20	mg kg				20
T RH C C10 less BT EX^{N0} F1	20	mg kg				20
T RH C10 C1	50	mg kg				50
T RH C10 C1 less Naphthalene^{N01} F2	50	mg kg				50
T RH C1 C	100	mg kg				100
T RH C C 0	100	mg kg				100
T RH C10 C 0 total	100	mg kg				100

Client Sample ID			SB 20/ .0	SB 20/10.0	SB 20/12.0	SB 21/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1 60	S1 Au1 61	S1 Au1 62	S1 Au1 63
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 13, 201
T est Reference	LO R	nit				
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg				0.5
Ben o a pyrene T EQ medium bound	0.5	mg kg				0.
Ben o a pyrene T EQ upper bound	0.5	mg kg				1.2
Acenaphthene	0.5	mg kg				0.5
Acenaphthylene	0.5	mg kg				0.5
Anthracene	0.5	mg kg				0.5
Ben a anthracene	0.5	mg kg				0.5
Ben o a pyrene	0.5	mg kg				0.5
Ben o b fluoranthene	0.5	mg kg				0.5
Ben o g.h.i perylene	0.5	mg kg				0.5
Ben o k fluoranthene	0.5	mg kg				0.5
Chrysene	0.5	mg kg				0.5
Diben a.h anthracene	0.5	mg kg				0.5
Fluoranthene	0.5	mg kg				0.5
Fluorene	0.5	mg kg				0.5
Indeno 1.2. cd pyrene	0.5	mg kg				0.5
Naphthalene	0.5	mg kg				0.5
Phenanthrene	0.5	mg kg				0.5
Pyrene	0.5	mg kg				0.5
T otal PAH	0.5	mg kg				0.5
2 Fluorobiphenyl surr.	1					11
p T erphenyl d1 surr.	1					88
Phenols (Halogenated)						
2 Chlorophenol	0.5	mg kg				0.5
2. Dichlorophenol	0.5	mg kg				0.5
2. .5 T richlorophenol	1	mg kg				1
2. . T richlorophenol	1.0	mg kg				1
2. Dichlorophenol	0.5	mg kg				0.5
Chloro methylphenol	1.0	mg kg				1
Pentachlorophenol	1.0	mg kg				1
T etrachlorophenols T otal	1.0	mg kg				1
T otal Halogenated Phenol	1	mg kg				1
Phenols (non Halogenated)						
2 Cyclohexyl . dinitrophenol	20	mg kg				20
2 Methyl . dinitrophenol	5	mg kg				5
2 Methylphenol o Cresol	0.2	mg kg				0.2
2 Nitrophenol	1.0	mg kg				1
2. Dimethylphenol	0.5	mg kg				0.5
2. Dinitrophenol	5	mg kg				5
Methylphenol m p Cresol	0.	mg kg				0.
Nitrophenol	5	mg kg				5
Dinoseb	20	mg kg				20
Phenol	0.5	mg kg				0.5
T otal Non Halogenated Phenol	20	mg kg				20
Phenol d surr.	1					122
Moisture	1					5.5

Client Sample ID			SB 20/ .0	SB 20/10.0	SB 20/12.0	SB 21/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1 60	S1 Au1 61	S1 Au1 62	S1 Au1 63
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 13, 201
T est Reference	LO R	nit				
Heavy Metals						
Arsenic	2	mg kg				.8
Cadmium	0.	mg kg				0.
Chromium	5	mg kg				1
Copper	5	mg kg				220
Lead	5	mg kg				10
Mercury	0.1	mg kg				0.2
Nickel	5	mg kg				2
inc	5	mg kg				5 0
Acid Sulfate Soils Field pH Test						
pH F Field pH test	0.1	pH nits	.1	.2	.1	
pH FO X Field pH Peroxide test	0.1	pH nits	2.2	.2	2.8	
Reaction Rating[S05]		comment	1.0	1.0	.0	

Client Sample ID			SB 22/0.1	SB 22/1.3	SB 22/3.0	SB 22/ .0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1 6	S1 Au1	66 S1	Au1 67 S1 Au1 6
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg		20		
T RH C10 C1	20	mg kg		20		
T RH C15 C28	50	mg kg		50		
T RH C2 C	50	mg kg		50		
T RH C10 T otal	50	mg kg		50		
B TEX						
Ben ene	0.1	mg kg		0.1		
T oluene	0.1	mg kg		0.1		
Ethylben ene	0.1	mg kg		0.1		
m p X ylenes	0.2	mg kg		0.2		
o X ylene	0.1	mg kg		0.1		
X ylenes T otal	0.	mg kg		0.		
Bromofluoroben ene surr.	1			8		
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg		0.5		
T RH C C10	20	mg kg		20		
T RH C C10 less BT EX[N0] F1	20	mg kg		20		
T RH C10 C1	50	mg kg		50		
T RH C10 C1 less Naphthalene[N01] F2	50	mg kg		50		
T RH C1 C	100	mg kg		100		
T RH C C 0	100	mg kg		100		
T RH C10 C 0 total	100	mg kg		100		
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg		0.5		
Ben o a pyrene T EQ medium bound	0.5	mg kg		0.		
Ben o a pyrene T EQ upper bound	0.5	mg kg		1.2		
Acenaphthene	0.5	mg kg		0.5		
Acenaphthylene	0.5	mg kg		0.5		
Anthracene	0.5	mg kg		0.5		

Client Sample ID			SB 22/0.1	SB 22/1.3	SB 22/3.0	SB 22/ .0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1 6	S1 Au1	66 S1	Au1 67 S1 Au1 6
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Polycyclic Aromatic Hydrocarbons						
Ben a anthracene	0.5	mg kg		0.5		
Ben o a pyrene	0.5	mg kg		0.5		
Ben o b fluoranthene	0.5	mg kg		0.5		
Ben o g.h.i perylene	0.5	mg kg		0.5		
Ben o k fluoranthene	0.5	mg kg		0.5		
Chrysene	0.5	mg kg		0.5		
Diben a.h anthracene	0.5	mg kg		0.5		
Fluoranthene	0.5	mg kg		0.5		
Fluorene	0.5	mg kg		0.5		
Indeno 1.2. cd pyrene	0.5	mg kg		0.5		
Naphthalene	0.5	mg kg		0.5		
Phenanthrene	0.5	mg kg		0.5		
Pyrene	0.5	mg kg		0.5		
T otal PAH	0.5	mg kg		0.5		
2 Fluorobiphenyl surr.	1			101		
p T erphenyl d1 surr.	1			80		
Organochlorine Pesticides						
Chlordanes T otal	0.1	mg kg	0.1			
. DDD	0.05	mg kg	0.05			
. DDE	0.05	mg kg	0.05			
. DDT	0.05	mg kg	0.05			
a BHC	0.05	mg kg	0.05			
Aldrin	0.05	mg kg	0.05			
b BHC	0.05	mg kg	0.05			
d BHC	0.05	mg kg	0.05			
Dieldrin	0.05	mg kg	0.05			
Endosulfan I	0.05	mg kg	0.05			
Endosulfan II	0.05	mg kg	0.05			
Endosulfan sulphate	0.05	mg kg	0.05			
Endrin	0.05	mg kg	0.05			
Endrin aldehyde	0.05	mg kg	0.05			
Endrin ketone	0.05	mg kg	0.05			
g BHC Lindane	0.05	mg kg	0.05			
Heptachlor	0.05	mg kg	0.05			
Heptachlor epoxide	0.05	mg kg	0.05			
Hexachloroben ene	0.05	mg kg	0.05			
Methoxychlor	0.05	mg kg	0.05			
T oxaphene	1	mg kg	1			
Aldrin and Dieldrin T otal	0.05	mg kg	0.05			
DDT DDE DDD T otal	0.05	mg kg	0.05			
V ic EPA IWRG 21 O CP T otal	0.1	mg kg	0.1			
V ic EPA IWRG 21 O ther O CP T otal	0.1	mg kg	0.1			
Dibutylchlorendate surr.	1		1			
T etrachloro m xylene surr.	1		101			
Organophosphorus Pesticides						
A inphos 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			

Client Sample ID			SB 22/0.1	SB 22/1.3	SB 22/3.0	SB 22/ .0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1 6	S1 Au1	66 S1	Au1 67 S1 Au1 6
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Organophosphorus Pesticides						
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			
Dia inon	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			
Naled	0.2	mg kg	0.2			
O methoate	2	mg kg	2			
Phorate	0.2	mg kg	0.2			
Pirimiphos methyl	0.2	mg kg	0.2			
Pyra ophos	0.2	mg kg	0.2			
Ronnel	0.2	mg kg	0.2			
T erbufos	0.2	mg kg	0.2			
T etrachlorvinphos	0.2	mg kg	0.2			
T okuthion	0.2	mg kg	0.2			
T richloronate	0.2	mg kg	0.2			
T riphenylphosphate surr.	1		10			
Polychlorinated B iphenyls						
Aroclor 101	0.1	mg kg	0.1			
Aroclor 1221	0.1	mg kg	0.1			
Aroclor 12 2	0.1	mg kg	0.1			
Aroclor 12 2	0.1	mg kg	0.1			
Aroclor 12 8	0.1	mg kg	0.1			
Aroclor 125	0.1	mg kg	0.1			
Aroclor 12 0	0.1	mg kg	0.1			
T otal PCB	0.1	mg kg	0.1			
Dibutylchlorendate surr.	1		1			
T etrachloro m xylene surr.	1		101			
Phenols (Halogenated)						
2 Chlorophenol	0.5	mg kg		0.5		
2. Dichlorophenol	0.5	mg kg		0.5		
2. .5 T richlorophenol	1	mg kg		1		
2. . T richlorophenol	1.0	mg kg		1		
2. Dichlorophenol	0.5	mg kg		0.5		
Chloro methylphenol	1.0	mg kg		1		

Client Sample ID			SB 22/0.1	SB 22/1.3	SB 22/3.0	SB 22/ .0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1 6	S1 Au1	66 S1	Au1 67 S1 Au1 6
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Phenols (Halogenated)						
Pentachlorophenol	1.0	mg kg		1		
T etrachlorophenols T otal	1.0	mg kg		1		
T otal Halogenated Phenol	1	mg kg		1		
Phenols (non Halogenated)						
2 Cyclohexyl . dinitrophenol	20	mg kg		20		
2 Methyl . dinitrophenol	5	mg kg		5		
2 Methylphenol o Cresol	0.2	mg kg		0.2		
2 Nitrophenol	1.0	mg kg		1		
2. Dimethylphenol	0.5	mg kg		0.5		
2. Dinitrophenol	5	mg kg		5		
Methylphenol m p Cresol	0.	mg kg		0.		
Nitrophenol	5	mg kg		5		
Dinoseb	20	mg kg		20		
Phenol	0.5	mg kg		0.5		
T otal Non Halogenated Phenol	20	mg kg		20		
Phenol d surr.	1			112		
Clay	1			1		
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS cm		10		
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH nits		.2		
T otal O rganic Carbon	0.1			0.		
Moisture	1		11	.2		
Heavy Metals						
Arsenic	2	mg kg		2		
Cadmium	0.	mg kg		0.		
Chromium	5	mg kg		5		
Copper	5	mg kg		.		
Iron	20	mg kg		2 00		
Lead	5	mg kg		25		
Mercury	0.1	mg kg		0.1		
Nickel	5	mg kg		5		
inc	5	mg kg		2 0		
Heavy Metals						
Iron	0.01			0.2		
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq 100g		11		
Acid Sulfate Soils Field pH Test						
pH F Field pH test	0.1	pH nits			.1	.0
pH FO X Field pH Peroxide test	0.1	pH nits			5.1	.
Reaction Rating[695]		comment			.0	1.0

eurofins | mgt

Client Sample ID			SB 22/6.0	SB 22/7.0	SB 26/2.0	SB 26/4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1 6	S1 Au1	70 S1	Au1 71 S1 Au1 72
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg	20			
T RH C10 C1	20	mg kg	20			
T RH C15 C28	50	mg kg	50			
T RH C2 C	50	mg kg	50			
T RH C10 T otal	50	mg kg	50			
B TEX						
Ben ene	0.1	mg kg	0.1			
T oluene	0.1	mg kg	0.1			
Ethylben ene	0.1	mg kg	0.1			
m p X ylenes	0.2	mg kg	0.2			
o X ylene	0.1	mg kg	0.1			
X ylenes T otal	0.	mg kg	0.			
Bromofluoroben ene surr.	1					
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg	0.5			
T RH C C10	20	mg kg	20			
T RH C C10 less BT EX[N0] F1	20	mg kg	20			
T RH C10 C1	50	mg kg	50			
T RH C10 C1 less Naphthalene[N01] F2	50	mg kg	50			
T RH C1 C	100	mg kg	100			
T RH C C 0	100	mg kg	100			
T RH C10 C 0 total	100	mg kg	100			
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg	0.5			
Ben o a pyrene T EQ medium bound	0.5	mg kg	0.			
Ben o a pyrene T EQ upper bound	0.5	mg kg	1.2			
Acenaphthene	0.5	mg kg	0.5			
Acenaphthylene	0.5	mg kg	0.5			
Anthracene	0.5	mg kg	0.5			
Ben a anthracene	0.5	mg kg	0.5			
Ben o a pyrene	0.5	mg kg	0.5			
Ben o b fluoranthene	0.5	mg kg	0.5			
Ben o g.h.i perylene	0.5	mg kg	0.5			
Ben o k fluoranthene	0.5	mg kg	0.5			
Chrysene	0.5	mg kg	0.5			
Diben a.h anthracene	0.5	mg kg	0.5			
Fluoranthene	0.5	mg kg	0.5			
Fluorene	0.5	mg kg	0.5			
Indeno 1.2. cd pyrene	0.5	mg kg	0.5			
Naphthalene	0.5	mg kg	0.5			
Phenanthrene	0.5	mg kg	0.5			
Pyrene	0.5	mg kg	0.5			
T otal PAH	0.5	mg kg	0.5			
2 Fluorobiphenyl surr.	1					
p T erphenyl d1 surr.	1		110			
M oisture	1		18			

eurofins | mgt

Client Sample ID			SB 22/6.0	SB 22/7.0	SB 26/2.0	SB 26/4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1 6	S1 Au1	70 S1	Au1 71 S1 Au1 72
Date Sampled			Aug 0 , 201	Aug 0 , 201	Aug 0 , 201	Aug 0 , 201
T est Reference	LO R	nit				
Heavy Metals						
Arsenic	2	mg kg	2			
Cadmium	0.	mg kg	0.			
Chromium	5	mg kg	5			
Copper	5	mg kg	5			
Lead	5	mg kg	5			
Mercury	0.1	mg kg	0.1			
Nickel	5	mg kg	5			
inc	5	mg kg	.1			
Acid Sulfate Soils Field pH Test						
pH F Field pH test	0.1	pH nits		.	.1	.
pH FO X Field pH Peroxide test	0.1	pH nits		.5	.	5.1
Reaction Ratings[005]		comment		1.0	1.0	1.0

Client Sample ID			SB 26/6.0	SB 26/ .0	SB 26/10.0	Q S3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1 73	S1 Au1	74 S1	Au1 7 S1 Au1 77
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 13, 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg				20
T RH C10 C1	20	mg kg				20
T RH C15 C28	50	mg kg				50
T RH C2 C	50	mg kg				50
T RH C10 T otal	50	mg kg				50
B TEX						
Ben ene	0.1	mg kg				0.1
T oluene	0.1	mg kg				0.1
Ethylben ene	0.1	mg kg				0.1
m p X ylenes	0.2	mg kg				0.2
o X ylene	0.1	mg kg				0.1
X ylenes T otal	0.	mg kg				0.
Bromofluoroben ene surr.	1					
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg				0.5
T RH C C10	20	mg kg				20
T RH C C10 less BT EX[N0] F1	20	mg kg				20
T RH C10 C1	50	mg kg				50
T RH C10 C1 less Naphthalene[N01] F2	50	mg kg				50
T RH C1 C	100	mg kg				100
T RH C C 0	100	mg kg				100
T RH C10 C 0 total	100	mg kg				100
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg				0.5
Ben o a pyrene T EQ medium bound	0.5	mg kg				0.
Ben o a pyrene T EQ upper bound	0.5	mg kg				1.2
Acenaphthene	0.5	mg kg				0.5
Acenaphthylene	0.5	mg kg				0.5
Anthracene	0.5	mg kg				0.5

eurofins | mgt

Client Sample ID			SB 26/6.0	SB 26/ .0	SB 26/10.0	Q S3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1 73	S1 Au1	74 S1 Au1	7 S1 Au1 77
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 13, 201
T est Reference	LO R	nit				
Polycyclic Aromatic Hydrocarbons						
Ben a anthracene	0.5	mg kg				0.5
Ben o a pyrene	0.5	mg kg				0.5
Ben o b fluoranthene	0.5	mg kg				0.5
Ben o g.h.i perylene	0.5	mg kg				0.5
Ben o k fluoranthene	0.5	mg kg				0.5
Chrysene	0.5	mg kg				0.5
Diben a.h anthracene	0.5	mg kg				0.5
Fluoranthene	0.5	mg kg				0.5
Fluorene	0.5	mg kg				0.5
Indeno 1.2. cd pyrene	0.5	mg kg				0.5
Naphthalene	0.5	mg kg				0.5
Phenanthrene	0.5	mg kg				0.5
Pyrene	0.5	mg kg				0.5
T otal PAH	0.5	mg kg				0.5
2 Fluorobiphenyl surr.	1					
p T erphenyl d1 surr.	1					112
M oisture	1					1
Heavy Metals						
Arsenic	2	mg kg				2
Cadmium	0.	mg kg				0.
Chromium	5	mg kg				5
Copper	5	mg kg				5
Lead	5	mg kg				5
M ercury	0.1	mg kg				0.1
Nickel	5	mg kg				5
Inc	5	mg kg				11
Acid Sulfate Soils Field pH Test						
pH F Field pH test	0.1	pH nits	5.	.8	.	
pH FO X Field pH Peroxide test	0.1	pH nits	2.	2.8	2.	
Reaction Ratings[S05]		comment	2.0	.0	.0	

Client Sample ID			SB 4/0.2	SB 7/0.2	SB /0.1	SB /0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1	0 S1 Au1	1 S1	Au1 2 S1 Au1 3
Date Sampled			Aug 14, 201	Aug 14, 201	Aug 14, 201	Aug 14, 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg	20	20	20	20
T RH C10 C1	20	mg kg	120	22	20	20
T RH C15 C28	50	mg kg	00	120	50	50
T RH C2 C	50	mg kg	10	1 0	50	5
T RH C10 T otal	50	mg kg	8 0	282	50	5
B TEX						
Ben ene	0.1	mg kg	0.1	0.1	0.1	0.1
T oluene	0.1	mg kg	0.1	0.	0.1	0.1
Ethylben ene	0.1	mg kg	0.1	0.1	0.1	0.1
m p X ylenes	0.2	mg kg	0.2	0.2	0.2	0.2

Client Sample ID			SB 4/0.2	SB 7/0.2	SB /0.1	SB /0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1	0 S1 Au1	1 S1	Au1 2 S1 Au1 3
Date Sampled			Aug 14, 201	Aug 14, 201	Aug 14, 201	Aug 14, 201
T est Reference	LO R	nit				
B TEX						
o X ylene	0.1	mg kg	0.1	0.1	0.1	0.1
X ylenes T otal	0.	mg kg	0.	0.	0.	0.
Bromofluoroben ene surr.	1		8	1	8	8
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg kg	0.5	0.5	0.5	0.5
T RH C C10	20	mg kg	20	20	20	20
T RH C C10 less BT EX[N0] F1	20	mg kg	20	20	20	20
T RH C10 C1	50	mg kg	1 0	50	50	50
T RH C10 C1 less Naphthalene[N01] F2	50	mg kg	1 0	50	50	50
T RH C1 C	100	mg kg	80	2 0	100	100
T RH C C 0	100	mg kg	150	110	100	100
T RH C10 C 0 total	100	mg kg	0	50	100	100
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg	0.5	0.8	0.5	0.5
Ben o a pyrene T EQ medium bound	0.5	mg kg	0.	1.1	0.	0.
Ben o a pyrene T EQ upper bound	0.5	mg kg	1.2	1.	1.2	1.2
Acenaphthene	0.5	mg kg	0.5	0.5	0.5	0.5
Acenaphthylene	0.5	mg kg	0.5	0.5	0.5	0.5
Anthracene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben a anthracene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o a pyrene	0.5	mg kg	0.5	0.	0.5	0.5
Ben o b fluoranthene[N0]	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o g.h.i perylene	0.5	mg kg	0.5	0.8	0.5	0.5
Ben o k fluoranthene	0.5	mg kg	0.5	0.	0.5	0.5
Chrysene	0.5	mg kg	0.5	0.	0.5	0.5
Diben a.h anthracene	0.5	mg kg	0.5	0.5	0.5	0.5
Fluoranthene	0.5	mg kg	0.5	1.0	0.5	0.5
Fluorene	0.5	mg kg	0.5	0.5	0.5	0.5
Indeno 1.2. cd pyrene	0.5	mg kg	0.5	0.	0.5	0.5
Naphthalene	0.5	mg kg	0.5	0.5	0.5	0.5
Phenanthrene	0.5	mg kg	0.5	0.5	0.5	0.5
Pyrene	0.5	mg kg	0.5	1.1	0.5	0.5
T otal PAH	0.5	mg kg	0.5	5.8	0.5	0.5
2 Fluorobiphenyl surr.	1		80	12	122	11
p T erphenyl d1 surr.	1		81	11	12	11
Phenols (Halogenated)						
2 Chlorophenol	0.5	mg kg	0.5	0.5	0.5	0.5
2. Dichlorophenol	0.5	mg kg	0.5	0.5	0.5	0.5
2. .5 T richlorophenol	1	mg kg	1	1	1	1
2. . T richlorophenol	1.0	mg kg	1	1	1	1
2. Dichlorophenol	0.5	mg kg	0.5	0.5	0.5	0.5
Chloro methylphenol	1.0	mg kg	1	1	1	1
Pentachlorophenol	1.0	mg kg	1	1	1	1
T etrachlorophenols T otal	1.0	mg kg	1	1	1	1
T otal Halogenated Phenol	1	mg kg	1	1	1	1

Client Sample ID			SB 4/0.2	SB 7/0.2	SB /0.1	SB /0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1	0 S1 Au1	1 S1	Au1 2 S1 Au1 3
Date Sampled			Aug 14, 201	Aug 14, 201	Aug 14, 201	Aug 14, 201
T est Reference	LO R	nit				
Phenols (non Halogenated)						
2 Cyclohexyl . dinitrophenol	20	mg kg	20	20	20	20
2 Methyl . dinitrophenol	5	mg kg	5	5	5	5
2 Methylphenol o Cresol	0.2	mg kg	0.2	0.2	0.2	0.2
2 Nitrophenol	1.0	mg kg	1	1	1	1
2. Dimethylphenol	0.5	mg kg	0.5	0.5	0.5	0.5
2. Dinitrophenol	5	mg kg	5	5	5	5
Methylphenol m p Cresol	0.	mg kg	0.	0.	0.	0.
Nitrophenol	5	mg kg	5	5	5	5
Dinoseb	20	mg kg	20	20	20	20
Phenol	0.5	mg kg	0.5	0.5	0.5	0.5
T otal Non Halogenated Phenol	20	mg kg	20	20	20	20
Phenol d surr.	1		2	11	120	10
Moisture	1		1	.1	2.	11
Heavy Metals						
Arsenic	2	mg kg	15	2	.2	.0
Cadmium	0.	mg kg	0.	0.	0.	0.
Chromium	5	mg kg	1	120	.5	12
Copper	5	mg kg		5	1	18
Lead	5	mg kg	8	2 0		2
Mercury	0.1	mg kg	0.1	0.1	0.1	0.1
Nickel	5	mg kg	8.5	1 0	1	11
inc	5	mg kg	220	1 00	2 0	1

Client Sample ID			SB 23/0.4	SB 24/0.3	SB 2 /0.2	SB 22/0.
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1	4 S1 Au1	S1	Au1 6 S1 Au20 1
Date Sampled			Aug 14, 201	Aug 14, 201	Aug 14, 201	Aug 13, 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 1 NEPM Fractions						
T RH C C	20	mg kg	20	20	20	
T RH C10 C1	20	mg kg	20	20	20	
T RH C15 C28	50	mg kg	50	50	50	
T RH C2 C	50	mg kg	50	50	50	
T RH C10 T otal	50	mg kg	50	50	50	
B TEX						
Ben ene	0.1	mg kg	0.1	0.1	0.1	
T oluene	0.1	mg kg	0.1	0.1	0.1	
Ethylben ene	0.1	mg kg	0.1	0.1	0.1	
m p X ylenes	0.2	mg kg	0.2	0.2	0.2	
o X ylene	0.1	mg kg	0.1	0.1	0.1	
X ylenes T otal	0.	mg kg	0.	0.	0.	
Bromofluoroben ene surr.	1		8		8	
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
Naphthalene[#02]	0.5	mg kg	0.5	0.5	0.5	
T RH C C10	20	mg kg	20	20	20	
T RH C C10 less BT EX[N0] F1	20	mg kg	20	20	20	
T RH C10 C1	50	mg kg	50	50	50	

Client Sample ID			SB 23/0.4	SB 24/0.3	SB 2 /0.2	SB 22/0.
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1	4 S1 Au1	S1	Au1 6 S1 Au20 1
Date Sampled			Aug 14, 201	Aug 14, 201	Aug 14, 201	Aug 13, 201
T est Reference	LO R	nit				
Total Recoverable Hydrocarbons 2013 NEPM Fractions						
T RH C10 C1 less Naphthalene[#01] F2	50	mg kg	50	50	50	
T RH C1 C	100	mg kg	100	100	100	
T RH C C 0	100	mg kg	100	100	100	
T RH C10 C 0 total	100	mg kg	100	100	100	
Polycyclic Aromatic Hydrocarbons						
Ben o a pyrene T EQ lower bound	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o a pyrene T EQ medium bound	0.5	mg kg	0.	0.	0.	0.
Ben o a pyrene T EQ upper bound	0.5	mg kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg kg	0.5	0.5	0.5	0.5
Acenaphthylene	0.5	mg kg	0.5	0.5	0.5	0.5
Anthracene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben a anthracene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o a pyrene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o b fluoranthene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o g.h.i perylene	0.5	mg kg	0.5	0.5	0.5	0.5
Ben o k fluoranthene	0.5	mg kg	0.5	0.5	0.5	0.5
Chrysene	0.5	mg kg	0.5	0.5	0.5	0.5
Diben a.h anthracene	0.5	mg kg	0.5	0.5	0.5	0.5
Fluoranthene	0.5	mg kg	0.5	0.5	0.5	0.5
Fluorene	0.5	mg kg	0.5	0.5	0.5	0.5
Indeno 1.2. cd pyrene	0.5	mg kg	0.5	0.5	0.5	0.5
Naphthalene	0.5	mg kg	0.5	0.5	0.5	0.5
Phenanthrene	0.5	mg kg	0.5	0.5	0.5	0.
Pyrene	0.5	mg kg	0.5	0.5	0.5	0.5
T otal PAH	0.5	mg kg	0.5	0.5	0.5	0.
2 Fluorobiphenyl surr.	1		100	11	11	105
p T erphenyl d1 surr.	1		105	12	128	121
Phenols (Halogenated)						
2 Chlorophenol	0.5	mg kg	0.5	0.5	0.5	
2. Dichlorophenol	0.5	mg kg	0.5	0.5	0.5	
2. .5 T richlorophenol	1	mg kg	1	1	1	
2. . T richlorophenol	1.0	mg kg	1	1	1	
2. Dichlorophenol	0.5	mg kg	0.5	0.5	0.5	
Chloro methylphenol	1.0	mg kg	1	1	1	
Pentachlorophenol	1.0	mg kg	1	1	1	
T etrachlorophenols T otal	1.0	mg kg	1	1	1	
T otal Halogenated Phenol	1	mg kg	1	1	1	
Phenols (non Halogenated)						
2 Cyclohexyl . dinitrophenol	20	mg kg	20	20	20	
2 Methyl . dinitrophenol	5	mg kg	5	5	5	
2 Methylphenol o Cresol	0.2	mg kg	0.2	0.2	0.2	
2 Nitrophenol	1.0	mg kg	1	1	1	
2. Dimethylphenol	0.5	mg kg	0.5	0.5	0.5	
2. Dinitrophenol	5	mg kg	5	5	5	
Methylphenol m p Cresol	0.	mg kg	0.	0.	0.	
Nitrophenol	5	mg kg	5	5	5	
Dinoseb	20	mg kg	20	20	20	
Phenol	0.5	mg kg	0.5	0.5	0.5	
T otal Non Halogenated Phenol	20	mg kg	20	20	20	
Phenol d surr.	1		5	10	111	

Client Sample ID			SB 23/0.4	SB 24/0.3	SB 2 /0.2	SB 22/0.
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S1 Au1	4 S1 Au1	S1	Au1 6 S1 Au20 1
Date Sampled			Aug 14, 201	Aug 14, 201	Aug 14, 201	Aug 13, 201
T est Reference	LO R	nit				
Moisture	1		.	.1	.	.5
Heavy Metals						
Arsenic	2	mg kg	2.0	2.	.	.
Cadmium	0.	mg kg	0.	0.	0.	0.
Chromium	5	mg kg	5	12	1	1
Copper	5	mg kg	1	10	12	2
Lead	5	mg kg		50		150
Mercury	0.1	mg kg	0.1	0.1	0.1	0.1
Nickel	5	mg kg	.1	1	12	12
Inc	5	mg kg	200	1 0	520	10

Sample History

Where samples are submitted analysed over several days the last date of extraction and analysis is reported.
A recent review of our LIM S has resulted in the correction or clarification of some method identifications. Due to this some of the method reference information on reports has changed. However no substantive change has been made to our laboratory methods and as such there is no change in the validity of current or previous results regarding both quality and NAT A accreditation .

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 mgt Suite B A			
T otal Recoverable Hydrocarbons 1 NEPM Fractions	Melbourne	Aug 21 2018	1 Day
Method: LT M O RG 2010 T RH C C			
BT EX	Melbourne	Aug 21 2018	1 Day
Method: T RH C C 0 LT M O RG 2010			
T otal Recoverable Hydrocarbons 201 NEPM Fractions	Melbourne	Aug 21 2018	1 Day
Method: T RH C C 0 LT M O RG 2010			
T otal Recoverable Hydrocarbons 201 NEPM Fractions	Melbourne	Aug 21 2018	1 Day
Method: T RH C C 0 LT M O RG 2010			
Polycyclic Aromatic Hydrocarbons	Melbourne	Aug 21 2018	1 Day
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Phenols Halogenated	Melbourne	Aug 21 2018	1 Days
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Phenols non Halogenated	Melbourne	Aug 21 2018	1 Day
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Metals M8	Melbourne	Aug 21 2018	28 Days
Method: LT M MET 0 0 Metals in Waters Soils Sediments by ICP M S			
Eurofins mgt Suite B15			
O rganochlorine Pesticides	Melbourne	Aug 20 2018	1 Day
Method: LT M O RG 2220 O CP PCB in Soil and Water			
O rganophosphorus Pesticides	Melbourne	Aug 20 2018	1 Day
Method: LT M O RG 2200 O rganophosphorus Pesticides by G C M S			
Polychlorinated Biphenyls	Melbourne	Aug 20 2018	28 Days
Method: LT M O RG 2220 O CP PCB in Soil and Water			
NEPM Screen for Soil Classification			
Clay	Brisbane	Aug 20 2018	Day
Method: LT M G EN 0 0			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Aug 20 2018	Day
Method: LT M INO 0 0 Conductivity			
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Melbourne	Aug 20 2018	Day
Method: LT M G EN 0 0 pH in soil by ISE			
T otal O rganic Carbon	Melbourne	Aug 21 2018	28 Day
Method: APHA 5 10B T otal O rganic Carbon			
Heavy Metals	Melbourne	Aug 20 2018	180 Day
Method: LT M MET 0 0 Metals in Waters Soils Sediments by ICP M S			
Cation Exchange Capacity	Melbourne	Aug 21 2018	180 Days
Method: LT M MET 0 0 Cation Exchange Capacity by bases Exchangeable Sodium Percentage			
Moisture	Melbourne	Aug 1 2018	1 Day
Method: LT M G EN 080 Moisture			
Acid Sulfate Soils Field pH T est	Brisbane	Aug 20 2018	Day
Method: LT M G EN 0 0			

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Company Name: T race Environmental P L
Address: Shop 2 New Canterbury Road
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NSW 220

Project Name: MASCO T
Project ID: 1.1

Order No.:
Report : 12 28
Phone: 02 8 0 0555
Fax:

Received: Aug 15 2018 5: 1 PM
Due: Aug 2 2018
Priority: 5 Day
Contact Name: K en Henderson

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail	Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271			X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217	X	X									X	X
B risbane Laboratory NATA Site 207 4				X					X	X		
Perth Laboratory NATA Site 23736												
External Laboratory												

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID										
1	SB 2.0	Aug 0	2018	Soil	S18 Au188								X		
2	SB .0	Aug 0	2018	Soil	S18 Au188 8								X		
	SB 5.0	Aug 0	2018	Soil	S18 Au188								X		
	SB1 0.	Aug 1	2018	Soil	S18 Au18850	X	X			X					
5	SB1 .0	Aug 10	2018	Soil	S18 Au18851		X								
	SB1 .0	Aug 10	2018	Soil	S18 Au18852								X		
	SB1 8.0	Aug 10	2018	Soil	S18 Au1885								X		
8	SB1 10.0	Aug 10	2018	Soil	S18 Au1885								X		
	SB1 .8	Aug 10	2018	Soil	S18 Au18855								X		

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Melbourne Laboratory NATA Site 12 4 & 14271							X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217					X	X									X	X
B risbane Laboratory NATA Site 207 4								X					X	X		
Perth Laboratory NATA Site 23736																
10	SB1 .0	Aug 10 2018	Soil	S18 Au1885									X			
11	SB1 8.0	Aug 10 2018	Soil	S18 Au1885									X			
12	SB1 10.0	Aug 10 2018	Soil	S18 Au18858									X			
1	SB20 5.0	Aug 08 2018	Soil	S18 Au1885									X			
1	SB20 8.0	Aug 08 2018	Soil	S18 Au188 0									X			
15	SB20 10.0	Aug 08 2018	Soil	S18 Au188 1									X			
1	SB20 12.0	Aug 08 2018	Soil	S18 Au188 2									X			
1	SB21 0.15	Aug 1 2018	Soil	S18 Au188								X				X
18	SB21 0.	Aug 08 2018	Soil	S18 Au188	X											
1	SB22 0.1	Aug 08 2018	Soil	S18 Au188 5							X	X				
20	SB22 1.	Aug 08 2018	Soil	S18 Au188								X		X		X
21	SB22 .0	Aug 08 2018	Soil	S18 Au188									X			

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Address:	Shop 2 New Canterbury Road	Report :	12 28	Due:	Aug 2 2018
	Dulwich Hill	Phone:	02 8 0 0555	Priority:	5 Day
	NSW 220	Fax:		Contact Name:	K en Henderson
Project Name:	MASCO T				
Project ID:	1.1				

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail					Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271							X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217					X	X									X	X
B risbane Laboratory NATA Site 207 4								X					X	X		
Perth Laboratory NATA Site 23736																
22	SB22 5.0	Aug 08 2018	Soil	S18 Au188 8									X			
2	SB22 .0	Aug 08 2018	Soil	S18 Au188								X			X	
2	SB22 .0	Aug 08 2018	Soil	S18 Au188 0									X			
25	SB2 2.0	Aug 08 2018	Soil	S18 Au188 1									X			
2	SB2 .0	Aug 08 2018	Soil	S18 Au188 2									X			
2	SB2 .0	Aug 10 2018	Soil	S18 Au188									X			
28	SB2 8.0	Aug 10 2018	Soil	S18 Au188									X			
2	SB2 10.0	Aug 10 2018	Soil	S18 Au188 5									X			
0	Q A1	Aug 1 2018	Soil	S18 Au188	X											
1	Q S	Aug 1 2018	Soil	S18 Au188								X			X	
2	RB2	Aug 1 2018	Water	S18 Au188 8							X					
	RB	Aug 1 2018	Water	S18 Au188							X					

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	Dulwich Hill	Phone:	02 8 0 0555
	NSW 220	Fax:	
Project Name:	M ASCO T		
Project ID:	1.1		

Received:	Aug 15 2018 5:	1 PM
Due:	Aug 2 2018	
Priority:	5 Day	
Contact Name:	K en Henderson	

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail							Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271																		
Sydney Laboratory NATA Site 1 217							X	X										
B risbane Laboratory NATA Site 207 4									X						X	X	X	X
Perth Laboratory NATA Site 23736																		
	SB 0.2	Aug 1	2018	Soil	S18	Au18880	X				X			X				X
5	SB 0.25	Aug 1	2018	Soil	S18	Au18881	X							X				X
	SB8 0.15	Aug 1	2018	Soil	S18	Au18882								X				X
	SB 0.25	Aug 1	2018	Soil	S18	Au1888	X							X				X
8	SB2 0.	Aug 1	2018	Soil	S18	Au1888	X							X				X
	SB2 0.	Aug 1	2018	Soil	S18	Au18885	X							X				X
0	SB25 0.25	Aug 1	2018	Soil	S18	Au1888	X							X				X
1	Q A2	Aug 1	2018	Soil	S18	Au1888	X											
2	RB	Aug 1	2018	Water	S18	Au18886												X
	SB1 0.5	Aug 0	2018	Soil	S18	Au1888			X									
	SB 0.	Aug 0	2018	Soil	S18	Au188					X							
5	SB .0	Aug 0	2018	Soil	S18	Au188					X							

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Address:	Shop 2 New Canterbury Road Dulwich Hill NSW 220	Report :	12 28	Due:	Aug 2 2018
		Phone:	02 8 0 0555	Priority:	5 Day
		Fax:		Contact Name:	K en Henderson
Project Name:	MASCO T				
Project ID:	1.1				

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail	Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271			X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217	X	X									X	X
B risbane Laboratory NATA Site 207 4				X					X	X		
Perth Laboratory NATA Site 23736												
SB10 0.5 Aug 10 2018 Soil S18 Au188 2				X								
SB11 0.5 Aug 0 2018 Soil S18 Au188				X								
8 SB11 .8 Aug 0 2018 Soil S18 Au188				X								
SB1 0.5 Aug 10 2018 Soil S18 Au188 5				X								
50 SB1 1.2 Aug 10 2018 Soil S18 Au188				X								
51 SB1 2.0 Aug 10 2018 Soil S18 Au188				X								
52 SB1 .0 Aug 10 2018 Soil S18 Au188 8				X								
5 SB1 5.0 Aug 10 2018 Soil S18 Au188				X								
5 SB1 .0 Aug 10 2018 Soil S18 Au18 00				X								
55 SB1 .0 Aug 10 2018 Soil S18 Au18 01				X								
5 SB1 0.5 Aug 10 2018 Soil S18 Au18 02				X								
5 SB1 5.0 Aug 10 2018 Soil S18 Au18 0				X								

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Company Name:	T race Environmental P L	Order No.:	Received: Aug 15 2018 5: 1 PM
Address:	Shop 2 New Canterbury Road Dulwich Hill NSW 220	Report : 12 28 Phone: 02 8 0 0555 Fax:	Due: Aug 2 2018 Priority: 5 Day Contact Name: K en Henderson
Project Name:	MASCO T		
Project ID:	1.1		Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271								X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217						X	X									X	X
B risbane Laboratory NATA Site 207 4									X					X	X		
Perth Laboratory NATA Site 23736																	
58	SB1 .0	Aug 10 2018	Soil	S18 Au18 0					X								
5	SB1 .0	Aug 10 2018	Soil	S18 Au18 05					X								
0	SB20 0.	Aug 08 2018	Soil	S18 Au18 0					X								
1	SB20 1.0	Aug 08 2018	Soil	S18 Au18 0					X								
2	SB20 2.2	Aug 08 2018	Soil	S18 Au18 08					X								
	SB20 2.	Aug 08 2018	Soil	S18 Au18 0					X								
	SB20 .0	Aug 08 2018	Soil	S18 Au18 10					X								
5	SB20 .0	Aug 08 2018	Soil	S18 Au18 11					X								
	SB20 .0	Aug 08 2018	Soil	S18 Au18 12					X								
	SB20 11.0	Aug 08 2018	Soil	S18 Au18 1					X								
8	SB21 0.5	Aug 1 2018	Soil	S18 Au18 1				X									
	SB21 0.8	Aug 1 2018	Soil	S18 Au18 15				X									

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Murarrie Q LD 1 2
Phone : 1 02 00
NAT A 12 1 Site 20

[redacted]
2 1 Leach Highway
K ewdale WA 105
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Site 2

Company Name:	T race Environmental P L	Order No.:	Received: Aug 15 2018 5: 1 PM
Address:	Shop 2 New Canterbury Road Dulwich Hill NSW 220	Report : 12 28 Phone: 02 8 0 0555 Fax:	Due: Aug 2 2018 Priority: 5 Day Contact Name: K en Henderson
Project Name:	MASCO T		
Project ID:	1.1		Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271								X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217						X	X									X	X
B risbane Laboratory NATA Site 207 4									X					X	X		
Perth Laboratory NATA Site 23736																	
0	SB22 0.	Aug 1	2018	Soil	S18 Au18 1			X									
1	SB22 1.0	Aug 1	2018	Soil	S18 Au18 1				X								
2	SB22 2.0	Aug 1	2018	Soil	S18 Au18 1			X									
	SB22 2.	Aug 1	2018	Soil	S18 Au18 1			X									
	SB22 .0	Aug 1	2018	Soil	S18 Au18 20			X									
5	SB2 0.2	Aug 1	2018	Soil	S18 Au18 21				X								
	SB2 1.0	Aug 1	2018	Soil	S18 Au18 22				X								
	SB2 .0	Aug 1	2018	Soil	S18 Au18 2				X								
8	SB2 5.0	Aug 1	2018	Soil	S18 Au18 2				X								
	SB2 .0	Aug 10	2018	Soil	S18 Au18 25				X								
80	SB2 .0	Aug 10	2018	Soil	S18 Au18 2				X								
81	SB2 0.2	Aug 08	2018	Soil	S18 Au18 2				X								

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K ewdale WA 105
Phone : 18 251 00
NAT A 12 1
Site 2

Company Name: T race Environmental P L
Address: Shop 2 New Canterbury Road
Dulwich Hill
NSW 220

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Sample Detail					Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271							X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217					X	X									X	X
B risbane Laboratory NATA Site 207 4								X					X	X		
Perth Laboratory NATA Site 23736																
82	SB2 1.0	Aug 08 2018	Soil	S18 Au18 25				X								
8	SB2 .1	Aug 08 2018	Soil	S18 Au18 2				X								
8	SB2 5.0	Aug 08 2018	Soil	S18 Au18	0			X								
85	SB2 .0	Aug 08 2018	Soil	S18 Au18	1			X								
8	SB2 0.2	Aug 1 2018	Soil	S18 Au18	2			X								
8	SB22 0.5	Aug 1 2018	Soil	S18 Au20518	X				X	X		X				
88	SB8 0.	Aug 1 2018	Soil	S18 Au2051	X											
8	SB1 1.2	Aug 10 2018	Soil	S18 Au20522				X								
0	SB20 .0	Aug 08 2018	Soil	S18 Au2052				X								
1	SB20 .8	Aug 08 2018	Soil	S18 Au2052				X								
Test Counts					12	2				2	1		1	22	1	2

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks Duplicates Matrix Spikes and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis unless otherwise stated.
   - All biota food results are reported on a wet weight basis on the edible portion unless otherwise stated.
   - 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.
   - SVOC analysis on waters are performed on homogenised unfiltered samples unless noted otherwise.
   - Samples were analysed on an as received basis.
8. This report replaces any interim results previously issued.

Holding Times

Please refer to Sample Preservation and Container Guide for holding times QS 001 .
For samples received on the last day of holding time notification of testing requirements should have been received at least 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 days however for all other VOCs such as BTEX or C 10 TRH then the holding time is 1 days.
NOTE H duplicates are reported as a range NOT as RPD

Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample reported as percent recovery.
CRM	Certified Reference Material 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.
Surr Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	nited States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 S Department of Defense
CP	Client Parent QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 0 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 0
Surrogate Recoveries: Recoveries must lie between 50 150 Phenols PFASs
PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.
WA DWER n 10 : PFBA PFPeA PFHxA PFHpA PFOA PFBS PFHxS PFOS :2 FTSA 8:2 FTSA

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.
   - Organochlorine Pesticide analysis where reporting LCS data Toxaphene Chlordane are not added to the LCS.
   - Organochlorine Pesticide analysis where reporting Spike data Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons where reporting Spike LCS data a single spike of commercial Hydrocarbon products in the range of C12 C 0 is added and its Total Recovery is reported in the C10 C1 cell of the Report.
   - pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 0 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
   - Recovery Data Spikes Surrogates where chromatographic interference does not allow the determination of Recovery the term " INT " appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 12 0 in Matrix Spikes and LCS.
   - For Matrix Spikes and LCS results a dash " " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

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Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons 1 NEPM Fractions							
TRH C C	mg kg	20			20	Pass	
TRH C10 C1	mg kg	20			20	Pass	
TRH C15 C28	mg kg	50			50	Pass	
TRH C2 C	mg kg	50			50	Pass	
Method Blank							
BTEX							
Benene	mg kg	0.1			0.1	Pass	
Toluene	mg kg	0.1			0.1	Pass	
Ethylbenene	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.			0.	Pass	
Method Blank							
Total Recoverable Hydrocarbons 2013 NEPM Fractions							
Naphthalene	mg kg	0.5			0.5	Pass	
TRH C C10	mg kg	20			20	Pass	
TRH C10 C1	mg kg	50			50	Pass	
TRH C1 C	mg kg	100			100	Pass	
TRH C C 0	mg kg	100			100	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	
Ben a anthracene	mg kg	0.5			0.5	Pass	
Ben o a pyrene	mg kg	0.5			0.5	Pass	
Ben o b fluoranthene	mg kg	0.5			0.5	Pass	
Ben o g.h.i perylene	mg kg	0.5			0.5	Pass	
Ben o k fluoranthene	mg kg	0.5			0.5	Pass	
Chrysene	mg kg	0.5			0.5	Pass	
Diben 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. 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	
. DDD	mg kg	0.05			0.05	Pass	
. DDE	mg kg	0.05			0.05	Pass	
. DDT	mg kg	0.05			0.05	Pass	
a BHC	mg kg	0.05			0.05	Pass	
Aldrin	mg kg	0.05			0.05	Pass	
b BHC	mg kg	0.05			0.05	Pass	
d BHC	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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg kg	0.05			0.05	Pass	
Endrin	mg kg	0.05			0.05	Pass	
Endrin aldehyde	mg kg	0.05			0.05	Pass	
Endrin ketone	mg kg	0.05			0.05	Pass	
g BHC 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	
Hexachloroben ene	mg kg	0.05			0.05	Pass	
Methoxychlor	mg kg	0.05			0.05	Pass	
T oxaphene	mg kg	1			1	Pass	
Method B lank							
Organophosphorus Pesticides							
A inphos 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	
Dia inon	mg kg	0.2			0.2	Pass	
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	
O methoate	mg kg	2			2	Pass	
Phorate	mg kg	0.2			0.2	Pass	
Pirimiphos methyl	mg kg	0.2			0.2	Pass	
Pyra ophos	mg kg	0.2			0.2	Pass	
Ronnel	mg kg	0.2			0.2	Pass	
T erbufos	mg kg	0.2			0.2	Pass	
T etrachlorvinphos	mg kg	0.2			0.2	Pass	
T okuthion	mg kg	0.2			0.2	Pass	
T richloronate	mg kg	0.2			0.2	Pass	
Method B lank							
Polychlorinated B iphenyls							
Aroclor 101	mg kg	0.1			0.1	Pass	
Aroclor 1221	mg kg	0.1			0.1	Pass	
Aroclor 12 2	mg kg	0.1			0.1	Pass	
Aroclor 12 2	mg kg	0.1			0.1	Pass	
Aroclor 12 8	mg kg	0.1			0.1	Pass	
Aroclor 125	mg kg	0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor 12 0	mg kg	0.1			0.1	Pass	
T otal PCB	mg kg	0.1			0.1	Pass	
Method B lank							
Phenols (Halogenated)							
2 Chlorophenol	mg kg	0.5			0.5	Pass	
2. Dichlorophenol	mg kg	0.5			0.5	Pass	
2. .5 T richlorophenol	mg kg	1			1	Pass	
2. . T richlorophenol	mg kg	1			1.0	Pass	
2. Dichlorophenol	mg kg	0.5			0.5	Pass	
Chloro methylphenol	mg kg	1			1.0	Pass	
Pentachlorophenol	mg kg	1			1.0	Pass	
T etrachlorophenols T otal	mg kg	1			1.0	Pass	
Method B lank							
Phenols (non Halogenated)							
2 Cyclohexyl . dinitrophenol	mg kg	20			20	Pass	
2 Methyl . dinitrophenol	mg kg	5			5	Pass	
2 Methylphenol o Cresol	mg kg	0.2			0.2	Pass	
2 Nitrophenol	mg kg	1			1.0	Pass	
2. Dimethylphenol	mg kg	0.5			0.5	Pass	
2. Dinitrophenol	mg kg	5			5	Pass	
Methylphenol m p Cresol	mg kg	0.			0.	Pass	
Nitrophenol	mg kg	5			5	Pass	
Dinoseb	mg kg	20			20	Pass	
Phenol	mg kg	0.5			0.5	Pass	
Method B lank							
Clay		1			1	Pass	
T otal O rganic Carbon		0.1			0.1	Pass	
Method B lank							
Heavy Metals							
Arsenic	mg kg	2			2	Pass	
Cadmium	mg kg	0.			0.	Pass	
Chromium	mg kg	5			5	Pass	
Copper	mg kg	5			5	Pass	
Iron	mg kg	20			20	Pass	
Lead	mg kg	5			5	Pass	
Mercury	mg kg	0.1			0.1	Pass	
Nickel	mg kg	5			5	Pass	
inc	mg kg	5			5	Pass	
Method B lank							
Cation Exchange Capacity							
Cation Exchange Capacity	meq 100g	0.05			0.05	Pass	
LCS Recovery							
Total Recoverable Hydrocarbons 1 NEPM Fractions							
T RH C C		85			0 1 0	Pass	
T RH C10 C1		110			0 1 0	Pass	
LCS Recovery							
B TEX							
Ben ene		88			0 1 0	Pass	
T oluene		5			0 1 0	Pass	
Ethylben ene		100			0 1 0	Pass	
m p X ylenes		5			0 1 0	Pass	
X ylenes T otal					0 1 0	Pass	
LCS Recovery							
Total Recoverable Hydrocarbons 2013 NEPM Fractions							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene					0 1 0	Pass	
T RH C C10		81			0 1 0	Pass	
T RH C10 C1		12			0 1 0	Pass	
LCS Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene		0			0 1 0	Pass	
Acenaphthylene		0			0 1 0	Pass	
Anthracene		8			0 1 0	Pass	
Ben a anthracene		85			0 1 0	Pass	
Ben o a pyrene		0			0 1 0	Pass	
Ben o b fluoranthene		101			0 1 0	Pass	
Ben o g.h.i perylene		88			0 1 0	Pass	
Ben o k fluoranthene					0 1 0	Pass	
Chrysene		1			0 1 0	Pass	
Diben a.h anthracene					0 1 0	Pass	
Fluoranthene		102			0 1 0	Pass	
Fluorene		0			0 1 0	Pass	
Indeno 1.2. cd pyrene					0 1 0	Pass	
Naphthalene					0 1 0	Pass	
Phenanthrene					0 1 0	Pass	
Pyrene		100			0 1 0	Pass	
LCS Recovery							
Organochlorine Pesticides							
. DDD		10			0 1 0	Pass	
. DDE		112			0 1 0	Pass	
. DDT		2			0 1 0	Pass	
a BHC		10			0 1 0	Pass	
Aldrin		115			0 1 0	Pass	
b BHC		112			0 1 0	Pass	
d BHC		10			0 1 0	Pass	
Dieldrin		11			0 1 0	Pass	
Endosulfan I		115			0 1 0	Pass	
Endosulfan II		105			0 1 0	Pass	
Endosulfan sulphate		10			0 1 0	Pass	
Endrin		120			0 1 0	Pass	
Endrin aldehyde		10			0 1 0	Pass	
Endrin ketone		102			0 1 0	Pass	
g BHC Lindane		11			0 1 0	Pass	
Heptachlor		10			0 1 0	Pass	
Heptachlor epoxide		115			0 1 0	Pass	
Hexachloroben ene		11			0 1 0	Pass	
Methoxychlor		8			0 1 0	Pass	
LCS Recovery							
Organophosphorus Pesticides							
Dia inon		108			0 1 0	Pass	
Dimethoate					0 1 0	Pass	
Ethion		12			0 1 0	Pass	
Fenitrothion		102			0 1 0	Pass	
Methyl parathion		11			0 1 0	Pass	
Mevinphos		125			0 1 0	Pass	
LCS Recovery							
Polychlorinated B iphenyls							
Aroclor 12 0		100			0 1 0	Pass	
LCS Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenols (Halogenated)							
2 Chlorophenol					0 1 0	Pass	
2. Dichlorophenol					0 1 0	Pass	
2. .5 T richlorophenol					0 1 0	Pass	
2. . T richlorophenol		5			0 1 0	Pass	
2. Dichlorophenol		82			0 1 0	Pass	
Chloro methylphenol		8			0 1 0	Pass	
Pentachlorophenol		5			0 1 0	Pass	
T etrachlorophenols T otal					0 1 0	Pass	
LCS Recovery							
Phenols (non Halogenated)							
2 Methyl . dinitrophenol					0 1 0	Pass	
2 Methylphenol o Cresol		8			0 1 0	Pass	
2 Nitrophenol		8			0 1 0	Pass	
2. Dimethylphenol					0 1 0	Pass	
2. Dinitrophenol		1			0 1 0	Pass	
Methylphenol m p Cresol		82			0 1 0	Pass	
Nitrophenol		52			0 1 0	Pass	
Dinoseb					0 1 0	Pass	
Phenol		88			0 1 0	Pass	
LCS Recovery							
Clay		8			0 1 0	Pass	
T otal O rganic Carbon		101			0 1 0	Pass	
LCS Recovery							
Heavy Metals							
Arsenic		112			80 120	Pass	
Cadmium		101			80 120	Pass	
Chromium		100			80 120	Pass	
Copper		11			80 120	Pass	
Lead		11			80 120	Pass	
Mercury		10			5 125	Pass	
Nickel		11			80 120	Pass	
inc		111			80 120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S18 Au2 2	NCP		8			0 1 0	Pass	
Acenaphthylene	S18 Au2 2	NCP		8			0 1 0	Pass	
Anthracene	S18 Au2 2	NCP		8			0 1 0	Pass	
Ben a anthracene	S18 Au2 2	NCP		8			0 1 0	Pass	
Ben o a pyrene	S18 Au2 2	NCP					0 1 0	Pass	
Ben o b fluoranthene	S18 Au2 2	NCP					0 1 0	Pass	
Ben o g.h.i perylene	S18 Au2 2	NCP			1		0 1 0	Pass	
Ben o k fluoranthene	S18 Au2 2	NCP		8			0 1 0	Pass	
Chrysene	S18 Au2 2	NCP		8			0 1 0	Pass	
Diben a.h anthracene	S18 Au2 2	NCP		85			0 1 0	Pass	
Fluoranthene	S18 Au2 2	NCP					0 1 0	Pass	
Fluorene	S18 Au2 2	NCP			2		0 1 0	Pass	
Indeno 1.2. cd pyrene	S18 Au2 2	NCP			1		0 1 0	Pass	
Naphthalene	S18 Au2 2	NCP		8			0 1 0	Pass	
Phenanthrene	S18 Au2 2	NCP			1		0 1 0	Pass	
Pyrene	S18 Au2 2	NCP			5		0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons 1 NEPM Fractions				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
T RH C C	M18 Au22 80	NCP		81			0 1 0	Pass	
T RH C10 C1	S18 Au188	CP		105			0 1 0	Pass	
Spike Recovery									
B TEX				Result 1					
Ben ene	M18 Au22 80	NCP					0 1 0	Pass	
T oluene	M18 Au22 80	NCP		85			0 1 0	Pass	
Ethylben ene	M18 Au22 80	NCP		8			0 1 0	Pass	
m p X ylenes	M18 Au22 80	NCP		1			0 1 0	Pass	
o X ylene	M18 Au22 80	NCP					0 1 0	Pass	
X ylenes T otal	M18 Au22 80	NCP		1			0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons	2013 NEPM Fractions			Result 1					
Naphthalene	M18 Au22 80	NCP					0 1 0	Pass	
T RH C C10	M18 Au22 80	NCP		8			0 1 0	Pass	
T RH C10 C1	S18 Au188	CP		128			0 1 0	Pass	
Spike Recovery									
Phenols (Halogenated)				Result 1					
2 Chlorophenol	M18 Au222	NCP		1			0 1 0	Pass	
2. Dichlorophenol	M18 Au222	NCP		82			0 1 0	Pass	
2. .5 T richlorophenol	M18 Au222	NCP		8			0 1 0	Pass	
2. . T richlorophenol	M18 Au222	NCP		81			0 1 0	Pass	
2. Dichlorophenol	M18 Au222	NCP		8			0 1 0	Pass	
Chloro methylphenol	M18 Au222	NCP		8			0 1 0	Pass	
Pentachlorophenol	M18 Au222	NCP		2			0 1 0	Pass	
T etrachlorophenols T otal	M18 Au222	NCP		8			0 1 0	Pass	
Spike Recovery									
Phenols (non Halogenated)				Result 1					
2 Methyl . dinitrophenol	M18 Au22	NCP			2		0 1 0	Pass	
2 Methylphenol o Cresol	M18 Au222	NCP		82			0 1 0	Pass	
2 Nitrophenol	M18 Au222	NCP		2			0 1 0	Pass	
2. Dimethylphenol	M18 Au222	NCP		1			0 1 0	Pass	
2. Dinitrophenol	M18 Au222	NCP		5			0 1 0	Pass	
Methylphenol m p Cresol	M18 Au222	NCP			8		0 1 0	Pass	
Nitrophenol	M18 Au222	NCP		5			0 1 0	Pass	
Dinoseb	M18 Au222	NCP		5			0 1 0	Pass	
Phenol	M18 Au222	NCP		122			0 1 0	Pass	
Spike Recovery									
Heavy Metals				Result 1					
Arsenic	M18 Au21 1	NCP		8			5 125	Pass	
Cadmium	M18 Au21 1	NCP		100			5 125	Pass	
Chromium	M18 Au2 12	NCP		10			5 125	Pass	
Copper	M18 Au21 1	NCP		111			5 125	Pass	
Lead	M18 Au21 1	NCP		10			5 125	Pass	
Mercury	M18 Au21 1	NCP		10			0 1 0	Pass	
Nickel	M18 Au2 12	NCP		102			5 125	Pass	
inc	M18 Au21 1	NCP		122			5 125	Pass	
Spike Recovery									
Organochlorine Pesticides				Result 1					
. DDD	S18 Au2 85	NCP					0 1 0	Pass	
. DDE	S18 Au2 85	NCP		8			0 1 0	Pass	
. DDT	S18 Au2 85	NCP		82			0 1 0	Pass	
a BHC	S18 Au2 85	NCP		8			0 1 0	Pass	
Aldrin	S18 Au2 85	NCP		102			0 1 0	Pass	
b BHC	S18 Au2 85	NCP					0 1 0	Pass	

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Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
d BHC	S18 Au2 85	NCP		8			0 1 0	Pass	
Dieldrin	S18 Au2 85	NCP		100			0 1 0	Pass	
Endosulfan I	S18 Au2 85	NCP					0 1 0	Pass	
Endosulfan II	S18 Au2 85	NCP		8			0 1 0	Pass	
Endosulfan sulphate	S18 Au2 85	NCP		8			0 1 0	Pass	
Endrin	S18 Au2 85	NCP		128			0 1 0	Pass	
Endrin aldehyde	S18 Au2 85	NCP		85			0 1 0	Pass	
Endrin ketone	S18 Au2 85	NCP		8			0 1 0	Pass	
g BHC Lindane	S18 Au2 85	NCP					0 1 0	Pass	
Heptachlor	S18 Au2 85	NCP					0 1 0	Pass	
Heptachlor epoxide	S18 Au2 85	NCP		8			0 1 0	Pass	
Hexachloroben ene	S18 Au2 85	NCP		100			0 1 0	Pass	
Methoxychlor	S18 Au2 85	NCP					0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons 1 NEPM Fractions				Result 1					
T RH C10 C1	S18 Au188	CP		80			0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons 2013 NEPM Fractions				Result 1					
T RH C10 C1	S18 Au188	CP					0 1 0	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Acid Sulfate Soils Field pH Test				Result 1	Result 2	RPD			
pH F Field pH test	S18 Au188	CP	pH nits	8	.	pass	0	Pass	
pH FOX Field pH Peroxide test	S18 Au188	CP	pH nits	5.	5.	pass	0	Pass	
Reaction Ratings	S18 Au188	CP	comment	.0	.0	pass	0	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Acenaphthylene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Anthracene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Ben a anthracene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Ben o a pyrene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Ben o b fluoranthene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Ben o g.h.i perylene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Ben o k fluoranthene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Chrysene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Diben a.h anthracene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Fluoranthene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Fluorene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Indeno 1.2. cd pyrene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Naphthalene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Phenanthrene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Pyrene	S18 Au2 22	NCP	mg kg	0.5	0.5	1	0	Pass	
Duplicate									
Acid Sulfate Soils Field pH Test				Result 1	Result 2	RPD			
pH F Field pH test	S18 Au1885	CP	pH nits	.2	.	pass	0	Pass	
pH FOX Field pH Peroxide test	S18 Au1885	CP	pH nits	.1	.2	pass	0	Pass	
Reaction Ratings	S18 Au1885	CP	comment	2.0	2.0	pass	0	Pass	
Duplicate									
Total Recoverable Hydrocarbons 1 NEPM Fractions				Result 1	Result 2	RPD			
T RH C10 C1	M18 Au22555	NCP	mg kg	20	20	1	0	Pass	
T RH C15 C28	M18 Au22555	NCP	mg kg	110	1 0	20	0	Pass	
T RH C2 C	M18 Au22555	NCP	mg kg		110	11	0	Pass	

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Duplicate												
Total Recoverable Hydrocarbons	2013 NEPM Fractions					Result 1	Result 2	RPD				
T RH C10 C1	M18	Au22555	NCP	mg	kg	50		50	1	0	Pass	
T RH C1 C	M18	Au22555	NCP	mg	kg	210	250	1		0	Pass	
T RH C C 0	M18	Au22555	NCP	mg	kg	100		100	1	0	Pass	
Duplicate												
Phenols (Halogenated)						Result 1	Result 2	RPD				
2 Chlorophenol	M18	Au2225	NCP	mg	kg	0.5		0.5	1	0	Pass	
2. Dichlorophenol	M18	Au2225	NCP	mg	kg	0.5		0.5	1	0	Pass	
2. .5 T richlorophenol	M18	Au2225	NCP	mg	kg	1		1	1	0	Pass	
2. . T richlorophenol	M18	Au2225	NCP	mg	kg	1		1	1	0	Pass	
2. Dichlorophenol	M18	Au2225	NCP	mg	kg	0.5		0.5	1	0	Pass	
Chloro methylphenol	M18	Au2225	NCP	mg	kg	1		1	1	0	Pass	
Pentachlorophenol	M18	Au2225	NCP	mg	kg	1		1	1	0	Pass	
T etrachlorophenols T otal	M18	Au2225	NCP	mg	kg	1		1	1	0	Pass	
Duplicate												
Phenols (non Halogenated)						Result 1	Result 2	RPD				
2 Cyclohexyl . dinitrophenol	M18	Au2225	NCP	mg	kg	20		20	1	0	Pass	
2 Methyl . dinitrophenol	M18	Au2225	NCP	mg	kg	5		5	1	0	Pass	
2 Methylphenol o Cresol	M18	Au2225	NCP	mg	kg	0.2		0.2	1	0	Pass	
2 Nitrophenol	M18	Au2225	NCP	mg	kg	1		1	1	0	Pass	
2. Dimethylphenol	M18	Au2225	NCP	mg	kg	0.5		0.5	1	0	Pass	
2. Dinitrophenol	M18	Au2225	NCP	mg	kg	5		5	1	0	Pass	
Methylphenol m p Cresol	M18	Au2225	NCP	mg	kg	0.		0.	1	0	Pass	
Nitrophenol	M18	Au2225	NCP	mg	kg	5		5	1	0	Pass	
Dinoseb	M18	Au2225	NCP	mg	kg	20		20	1	0	Pass	
Phenol	M18	Au2225	NCP	mg	kg	0.5		0.5	1	0	Pass	
Duplicate												
Organochlorine Pesticides						Result 1	Result 2	RPD				
Chlordanes T otal	S18	Au188 5	CP	mg	kg	0.1		0.1	1	0	Pass	
. DDD	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
. DDE	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
. DDT	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
a BHC	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
Aldrin	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
b BHC	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
d BHC	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
Dieldrin	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
Endosulfan I	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
Endosulfan II	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
Endosulfan sulphate	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
Endrin	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
Endrin aldehyde	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
Endrin ketone	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
g BHC Lindane	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
Heptachlor	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
Heptachlor epoxide	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
Hexachloroben ene	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
Methoxychlor	S18	Au188 5	CP	mg	kg	0.05		0.05	1	0	Pass	
T oxaphene	S18	Au188 5	CP	mg	kg	1		1	1	0	Pass	
Duplicate												
Polychlorinated B iphenyls						Result 1	Result 2	RPD				
Aroclor 101	S18	Au188 5	CP	mg	kg	0.1		0.1	1	0	Pass	
Aroclor 1221	S18	Au188 5	CP	mg	kg	0.1		0.1	1	0	Pass	
Aroclor 12 2	S18	Au188 5	CP	mg	kg	0.1		0.1	1	0	Pass	
Aroclor 12 2	S18	Au188 5	CP	mg	kg	0.1		0.1	1	0	Pass	

Duplicate										
Polychlorinated B iphenyls					Result 1	Result 2	RPD			
Aroclor 12 8	S18 Au188 5	CP	mg	kg	0.1	0.1		1	0	Pass
Aroclor 125	S18 Au188 5	CP	mg	kg	0.1	0.1		1	0	Pass
Aroclor 12 0	S18 Au188 5	CP	mg	kg	0.1	0.1		1	0	Pass
T otal PCB	S18 Au188 5	CP	mg	kg	0.1	0.1		1	0	Pass
Duplicate										
					Result 1	Result 2	RPD			
Clay	S18 Au1 1	NCP				1	1	1	0	Pass
Conductivity 1:5 aqueous extract at 25°C as rec.)	M18 Au22 05	NCP	uS	cm	10	00		2	0	Pass
T otal O rganic Carbon	M18 Au1	NCP				.	.	.	0	Pass
Duplicate										
Heavy Metals					Result 1	Result 2	RPD			
Iron	M18 Au2 1	NCP	mg	kg	000	000		1	0	Pass
Duplicate										
					Result 1	Result 2	RPD			
Moisture	S18 Au188	CP			18	18	2.0	0		Pass
Duplicate										
Acid Sulfate Soils Field pH Test					Result 1	Result 2	RPD			
pH F Field pH test	S18 Au188	CP	pH	nits	8	.		pass	0	Pass
pH FO X Field pH Peroxide test	S18 Au188	CP	pH	nits	2.8	2.		pass	0	Pass
Reaction Ratings	S18 Au188	CP	comment		.0	.0	pass		0	Pass
Duplicate										
Heavy Metals					Result 1	Result 2	RPD			
Arsenic	S18 Au18881	CP	mg	kg	2	2		1	0	Pass
Cadmium	S18 Au18881	CP	mg	kg	0.	0.		1	0	Pass
Chromium	S18 Au18881	CP	mg	kg	120	120	2.0	0		Pass
Copper	S18 Au18881	CP	mg	kg	5	5	1.0	0		Pass
Lead	S18 Au18881	CP	mg	kg	2 0	2	0	1	0	Pass
Mercury	S18 Au18881	CP	mg	kg	0.1	0.1		1	0	Pass
Nickel	S18 Au18881	CP	mg	kg	1 0	1	0	1.0	0	Pass
inc	S18 Au18881	CP	mg	kg	1 00	1	00	1	0	Pass
Duplicate										
Total Recoverable Hydrocarbons 1	NEPM Fractions				Result 1	Result 2	RPD			
T RH C C	S18 Au1888	CP	mg	kg	20	20		1	0	Pass
Duplicate										
B TEX					Result 1	Result 2	RPD			
Ben ene	S18 Au1888	CP	mg	kg	0.1	0.1		1	0	Pass
T oluene	S18 Au1888	CP	mg	kg	0.1	0.1		1	0	Pass
Ethylben ene	S18 Au1888	CP	mg	kg	0.1	0.1		1	0	Pass
m p X ylenes	S18 Au1888	CP	mg	kg	0.2	0.2		1	0	Pass
o X ylene	S18 Au1888	CP	mg	kg	0.1	0.1		1	0	Pass
X ylenes T otal	S18 Au1888	CP	mg	kg	0.	0.		1	0	Pass
Duplicate										
Total Recoverable Hydrocarbons	2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S18 Au1888	CP	mg	kg	0.5	0.5		1	0	Pass
T RH C C10	S18 Au1888	CP	mg	kg	20	20		1	0	Pass
Duplicate										
Total Recoverable Hydrocarbons 1	NEPM Fractions				Result 1	Result 2	RPD			
T RH C C	S18 Au1888	CP	mg	kg	20	20		1	0	Pass

Duplicate									
B TEX				Result 1	Result 2	RPD			
Ben ene	S18 Au1888	CP	mg	kg	0.1	0.1	1	0	Pass
T oluene	S18 Au1888	CP	mg	kg	0.1	0.1	1	0	Pass
Ethylben ene	S18 Au1888	CP	mg	kg	0.1	0.1	1	0	Pass
m p X ylenes	S18 Au1888	CP	mg	kg	0.2	0.2	1	0	Pass
o X ylene	S18 Au1888	CP	mg	kg	0.1	0.1	1	0	Pass
X ylenes T otal	S18 Au1888	CP	mg	kg	0.	0.	1	0	Pass
Duplicate									
Total Recoverable Hydrocarbons	2013 NEPM Fractions			Result 1	Result 2	RPD			
Naphthalene	S18 Au1888	CP	mg	kg	0.5	0.5	1	0	Pass
T RH C C10	S18 Au1888	CP	mg	kg	20	20	1	0	Pass

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Comments

Sample Integrity

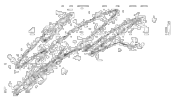
Custody Seals Intact if used	N A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingT ime	Yes
Some samples have been subcontracted	No

Q ualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the " naphthalene" value from the " C10 C1 " value. T he naphthalene value used in this calculation is obtained from volatiles Purge T rap analysis .
N02	Where we have reported both volatile P T G CM S and semivolatile G CM S 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 Q AQ C acceptance criteria and are entirely technically valid.
N0	F1 is determined by arithmetically subtracting the " T otal BT EX " value from the " C C10" value. T he " T otal BT EX " value is obtained by summing the concentrations of BT EX analytes. T he " C C10" value is obtained by quantitating against a standard of mixed aromatic aliphatic analytes.
N0	Please note: T hese two PAH isomers closely co elute using the most contemporary analytical methods and both the reported concentration and the T EQ apply specifically to the total of the two co eluting PAHs
S05	Field Screen uses the following fi rating to classify the rate the samples reacted to the peroxide: 1.0 No reaction to slight. 2.0 Moderate reaction. .0 Strong reaction with persistent froth. .0 Extreme reaction.

Authorised B y

Nibha V aidya	Analytical Services M anager
Alex Petridis	Senior Analyst M etal V IC
Harry Bacalis	Senior Analyst V olatile V IC
onathon Angell	Senior Analyst Inorganic Q LD
oseph Edouard	Senior Analyst O rganic V IC
M ichael Brancati	Senior Analyst Inorganic V IC
Nibha V aidya	Senior Analyst Asbestos N SW



G lenn J ackson
National Operations Manager

Final report - this Report replaces any previously issued Report

Indicates Not Requested

Indicates NAT A accreditation does not cover the performance of this service

M easurement uncertainty of test data is available on request or please here.

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30 years Testing For Life

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1 217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests calibrations and or measurements included in this document are traceable to Australian national standards.

Trace Environmental P/L
Shop 2, 7 3 7 New Canterbury Road
Dulwich Hill
NSW 2203

Attention:	**K en Henderson**
Report	**12 28 AID**
Project Name	**MASCO T**
Project ID	**1.1**
Received Date	**Aug 15 2018**
Date Reported	**Aug 2 2018**

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 LT M ASB 8020 by polarised light microscopy PLM and dispersion staining DS techniques.
OT E Positive T race Analysis results indicate the sample contains detectable respirable fibres.

nknown M ineral Fibres

M ineral fibres of unknown type as determined by PLM with DS may require another analytical technique such as Electron M icroscopy to confirm unequivocal identity.
OT E hile Actinolite, Anthophyllite and T remolite asbestos may be detected by PLM ith DS , due to variability in the optical properties of these materials, AS 9 re uires that these are reported as MF unless confirmed by an independent techni ue.

Subsampling Soil Samples

T he 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 0 to 0g then a sub sampling routine based on ISO 082:200 E is employed.
OT E Depending on the nature and si e of the soil sample, the sub 2 mm residue material may need to be sub sampled for trace analysis, in accordance ith AS 9 200 .

Bonded asbestos containing material ACM

T he 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.T he resultant material is then further examined in accordance with AS 200 .
OT E Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos containing bui materials using PLM and DS . T his is due to the lo 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. V inyl asbestos floor tiles, some asbestos containing sealants and mastics, asbestos containing epo y resins and some ore samples are e amples of these types of material, hich are difficult to analyse.

Limit of Reporting

T he performance limitation of the AS method for inhomogeneous samples is around 0.1 g kg 0.01 w w . W no asbestos is found by PLM and DS including T race Analysis where required this is considered to be at the nominal reporting limit of 0.01 w w .T he examination of large sample si es 500 mL is recommended may improve the likelihood of identifying ACM in the 2mm fraction.T he NEPM screening level of 0.001 w w asbestos in soil for FA friable asbestos and AF asbestos fines then applies where they are able to be quantified by gravimetric procedures.T his quantitative screening is not generally applicable to FF free fibres and results of T race Analysis are referred.
NOTE: NATA News March 2014, p.7, states in relation to AS4964: "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". Accordingly, AT A Accreditation does not cover the performance of this service (indicated ith an asteris).
T his report is consistent ith the analytical procedures and reporting recommendations in the ational Environment Protection (Assessment of S ite Contamination) Measure, 201 (as amended) and the estern Australia Guidelines for the Assessment, R emediation and Management of Asbestos Contaminated S ites in estern Australia, 2009, including supporting document R ecommended Procedures for Laboratory Analysis of Asbestos in S oil, une 2011.

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Accredited for compliance with ISO/IEC 17025–Testing. The results of the tests, calibrations and/or measurements included in this document are traceable to Australian national standards.

Project Name: MASCOT
Project ID: 1.1
Date Sampled: Aug 08 2018 to Aug 1 2018
Report: 12 28 AID

Client Sample ID	Eurofins mgt Sample No.	Date Sampled	Sample Description	Result
SB1 0.	18 Au18850	Aug 1 2018	Approximate Sample g Sample consisted of: Brown fine grained sandy soil	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB21 0.	18 Au188	Aug 08 2018	Approximate Sample g Sample consisted of: Brown fine grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
QA1	18 Au188	Aug 1 2018	Approximate Sample 28g Sample consisted of: Brown coarse grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB 0.2	18 Au18880	Aug 1 2018	Approximate Sample 251g Sample consisted of: Brown coarse grained soil and organic debris	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB 0.25	18 Au18881	Aug 1 2018	Approximate Sample 1 g Sample consisted of: Brwon coarse grained sandy soil and rocks	FA: Chrysotile asbestos detected in weathered fibre cement fragments. Approximate raw weight of FA 0.0 5g Estimated asbestos content in FA 0.0 2g Total estimated asbestos concentration in FA 0.00 w w Organic fibre detected. No respirable fibres detected.
SB 0.25	18 Au1888	Aug 1 2018	Approximate Sample 5 g Sample consisted of: Brown coarse grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB2 0.	18 Au1888	Aug 1 2018	Approximate Sample 88g Sample consisted of: Brown coarse grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB2 0.	18 Au18885	Aug 1 2018	Approximate Sample 5 g Sample consisted of: Brown coarse grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.
SB25 0.25	18 Au1888	Aug 1 2018	Approximate Sample 2 g Sample consisted of: Brown coarse grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. Organic fibre detected. No respirable fibres detected.

NATA Accredited
Accreditation Number 1261
Site Number 1 217

Accredited for compliance with ISO/IEC 17025—Testing
The results in this report apply to the sample(s) as received. All
measurements included in this document are traceable
to Australian national standards.

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
Q A2	18 Au1888	Aug 1 2018	Approximate Sample g Sample consisted of: Brown coarse grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. O rganic fibre detected. No respirable fibres detected.
SB22 0.5	18 Au20518	Aug 1 2018	Approximate Sample 5 8g Sample consisted of: Brown coarse grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001 w w. O rganic fibre detected. No respirable fibres detected.
SB8 0.	18 Au2051	Aug 1 2018	Approximate Sample 09g Sample consisted of: Brown coarse grained sandy soil and rocks	AF: Chrysotile asbestos detected in the form of loose fibre bundles. Approximate raw weight of AF 0.005 g Estimated asbestos content in AF 0.005 g T otal estimated asbestos concentration in AF 0.0008 w w No asbestos detected at the reporting limit of 0.001 w w. O rganic fibre detected. No respirable fibres detected.

First Reported: Aug 2 2018
Date Reported: Aug 2 2018

Eurofins mgt nit F Building F 1 Mars Road Lane Cove West NSW Australia 20
ABN : 50 005 085 521 T elephone: 12 00 8 00

Page of 1
Report Number: 12 28 AID

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Sample History

Where samples are submitted analysed over several days the last date of extraction and analysis is reported. A recent review of our LIM S has resulted in the correction or clarification of some method identifications. Due to this some of the method reference information on reports has changed. However no substantive change has been made to our laboratory methods and as such there is no change in the validity of current or previous results regarding both quality and NAT A accreditation .

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 LT M ASB 8020	Sydney	Aug 1 2018	Indefinite

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B risbane
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Phone : 1 02 00
NAT A 12 1 Site 20

Perth
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K ewdale WA 105
Phone : 18 251 00
NAT A 12 1
Site 2

Company Name: T race Environmental P L
Address: Shop 2 New Canterbury Road
Dulwich Hill
NSW 220

Project Name: MASCO T
Project ID: 1.1

Order No.:
Report : 12 28
Phone: 02 8 0 0555
Fax:

Received: Aug 15 2018 5: 1 PM
Due: Aug 2 2018
Priority: 5 Day
Contact Name: K en Henderson

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail	Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271			X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217	X	X									X	X
B risbane Laboratory NATA Site 207 4				X					X	X		
Perth Laboratory NATA Site 23736												
External Laboratory												

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID											
1	SB 2.0	Aug 0	2018	Soil	S18 Au188									X			
2	SB .0	Aug 0	2018	Soil	S18 Au188 8									X			
	SB 5.0	Aug 0	2018	Soil	S18 Au188									X			
	SB1 0.	Aug 1	2018	Soil	S18 Au18850	X	X			X			X				
5	SB1 .0	Aug 10	2018	Soil	S18 Au18851		X										
	SB1 .0	Aug 10	2018	Soil	S18 Au18852									X			
	SB1 8.0	Aug 10	2018	Soil	S18 Au1885									X			
8	SB1 10.0	Aug 10	2018	Soil	S18 Au1885									X			
	SB1 .8	Aug 10	2018	Soil	S18 Au18855									X			

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Company Name:	T race Environmental P L	Order No.:	
Address:	Shop 2	Report :	12 28
	Dulwich Hill	Phone:	02 8 0 0555
	NSW 220	Fax:	
Project Name:	M ASCO T		
Project ID:	1.1		

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Melbourne Laboratory	NATA Site	12 4 & 14271																
Sydney Laboratory	NATA Site	1 217					X	X										
B risbane Laboratory	NATA Site	207 4								X					X		X	X
Perth Laboratory	NATA Site	23736																
10	SB1	.0	Aug 10 2018	Soil	S18	Au1885									X			
11	SB1	8.0	Aug 10 2018	Soil	S18	Au1885									X			
12	SB1	10.0	Aug 10 2018	Soil	S18	Au18858									X			
1	SB20	5.0	Aug 08 2018	Soil	S18	Au1885									X			
1	SB20	8.0	Aug 08 2018	Soil	S18	Au188 0									X			
15	SB20	10.0	Aug 08 2018	Soil	S18	Au188 1									X			
1	SB20	12.0	Aug 08 2018	Soil	S18	Au188 2									X			
1	SB21	0.15	Aug 1 2018	Soil	S18	Au188								X				X
18	SB21	0.	Aug 08 2018	Soil	S18	Au188	X						X	X				
1	SB22	0.1	Aug 08 2018	Soil	S18	Au188 5								X		X		X
20	SB22	1.	Aug 08 2018	Soil	S18	Au188									X			
21	SB22	.0	Aug 08 2018	Soil	S18	Au188									X			

First Reported: Aug 2 2018
Date Reported: Aug 2 2018

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Page of 1
Report Number: 12 28 AID

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Melbourne Laboratory NATA Site 12 4 & 14271							X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217					X	X									X	X
B risbane Laboratory NATA Site 207 4								X					X	X		
Perth Laboratory NATA Site 23736																
22	SB22 5.0	Aug 08 2018	Soil	S18 Au188									X			
2	SB22 .0	Aug 08 2018	Soil	S18 Au188								X			X	
2	SB22 .0	Aug 08 2018	Soil	S18 Au188									X			
25	SB2 2.0	Aug 08 2018	Soil	S18 Au188									X			
2	SB2 .0	Aug 08 2018	Soil	S18 Au188									X			
2	SB2 .0	Aug 10 2018	Soil	S18 Au188									X			
28	SB2 8.0	Aug 10 2018	Soil	S18 Au188									X			
2	SB2 10.0	Aug 10 2018	Soil	S18 Au188									X			
0	Q A1	Aug 1 2018	Soil	S18 Au188	X											
1	Q S	Aug 1 2018	Soil	S18 Au188								X			X	
2	RB2	Aug 1 2018	Water	S18 Au188							X					
	RB	Aug 1 2018	Water	S18 Au188							X					

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Melbourne Laboratory NATA Site 12 4 & 14271								X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217						X	X									X	X
B risbane Laboratory NATA Site 207 4									X					X	X		
Perth Laboratory NATA Site 23736																	
	SB 0.2	Aug 1	2018	Soil	S18 Au18880	X							X				X
5	SB 0.25	Aug 1	2018	Soil	S18 Au18881	X							X				X
	SB8 0.15	Aug 1	2018	Soil	S18 Au18882								X				X
	SB 0.25	Aug 1	2018	Soil	S18 Au1888	X							X				X
8	SB2 0.	Aug 1	2018	Soil	S18 Au1888	X							X				X
	SB2 0.	Aug 1	2018	Soil	S18 Au18885	X							X				X
0	SB25 0.25	Aug 1	2018	Soil	S18 Au1888	X							X				X
1	Q A2	Aug 1	2018	Soil	S18 Au1888	X											
2	RB	Aug 1	2018	Water	S18 Au18888												X
	SB1 0.5	Aug 0	2018	Soil	S18 Au1888				X								
	SB 0.	Aug 0	2018	Soil	S18 Au188 0				X								
5	SB .0	Aug 0	2018	Soil	S18 Au188 1				X								

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Melbourne Laboratory NATA Site 12 4 & 14271							X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217					X	X									X	X
B risbane Laboratory NATA Site 207 4								X					X	X		
Perth Laboratory NATA Site 23736																
	SB10 0.5	Aug 10 2018	Soil	S18 Au188 2				X								
	SB11 0.5	Aug 0 2018	Soil	S18 Au188				X								
8	SB11 .8	Aug 0 2018	Soil	S18 Au188				X								
	SB1 0.5	Aug 10 2018	Soil	S18 Au188 5				X								
50	SB1 1.2	Aug 10 2018	Soil	S18 Au188				X								
51	SB1 2.0	Aug 10 2018	Soil	S18 Au188				X								
52	SB1 .0	Aug 10 2018	Soil	S18 Au188 8				X								
5	SB1 5.0	Aug 10 2018	Soil	S18 Au188				X								
5	SB1 .0	Aug 10 2018	Soil	S18 Au18 00				X								
55	SB1 .0	Aug 10 2018	Soil	S18 Au18 01				X								
5	SB1 0.5	Aug 10 2018	Soil	S18 Au18 02				X								
5	SB1 5.0	Aug 10 2018	Soil	S18 Au18 0				X								

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Melbourne Laboratory NATA Site 12 4 & 14271							X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217					X	X									X	X
B risbane Laboratory NATA Site 207 4								X					X	X		
Perth Laboratory NATA Site 23736																
58	SB1 .0	Aug 10 2018	Soil	S18 Au18 0				X								
5	SB1 .0	Aug 10 2018	Soil	S18 Au18 05				X								
0	SB20 0.	Aug 08 2018	Soil	S18 Au18 0				X								
1	SB20 1.0	Aug 08 2018	Soil	S18 Au18 0				X								
2	SB20 2.2	Aug 08 2018	Soil	S18 Au18 08				X								
	SB20 2.	Aug 08 2018	Soil	S18 Au18 0				X								
	SB20 .0	Aug 08 2018	Soil	S18 Au18 10				X								
5	SB20 .0	Aug 08 2018	Soil	S18 Au18 11				X								
	SB20 .0	Aug 08 2018	Soil	S18 Au18 12				X								
	SB20 11.0	Aug 08 2018	Soil	S18 Au18 1				X								
8	SB21 0.5	Aug 1 2018	Soil	S18 Au18 1			X									
	SB21 0.8	Aug 1 2018	Soil	S18 Au18 15			X									

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Melbourne Laboratory NATA Site 12 4 & 14271								X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217						X	X									X	X
B risbane Laboratory NATA Site 207 4									X					X	X		
Perth Laboratory NATA Site 23736																	
0	SB22 0.	Aug 1 2018	Soil	S18 Au18 1				X									
1	SB22 1.0	Aug 1 2018	Soil	S18 Au18 1					X								
2	SB22 2.0	Aug 1 2018	Soil	S18 Au18 18				X									
	SB22 2.	Aug 1 2018	Soil	S18 Au18 1				X									
	SB22 .0	Aug 1 2018	Soil	S18 Au18 20				X									
5	SB2 0.2	Aug 1 2018	Soil	S18 Au18 21					X								
	SB2 1.0	Aug 1 2018	Soil	S18 Au18 22					X								
	SB2 .0	Aug 1 2018	Soil	S18 Au18 2					X								
8	SB2 5.0	Aug 1 2018	Soil	S18 Au18 2					X								
	SB2 .0	Aug 10 2018	Soil	S18 Au18 25					X								
80	SB2 .0	Aug 10 2018	Soil	S18 Au18 2					X								
81	SB2 0.2	Aug 08 2018	Soil	S18 Au18 2					X								

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Company Name:	T race Environmental P L	Order No.:	
Address:	Shop 2 New Canterbury Road Dulwich Hill NSW 220	Report :	12 28
		Phone:	02 8 0 0555
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Project Name:	MASCO T		
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Received:	Aug 15 2018 5: 1 PM	
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Eurofins mgt Analytical Services Manager : Nibha V aidya

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Melbourne Laboratory NATA Site 12 4 & 14271							X		X	X	X	X		X	X	X	
Sydney Laboratory NATA Site 1 217					X	X									X	X	
B risbane Laboratory NATA Site 207 4								X					X	X			
Perth Laboratory NATA Site 23736																	
82	SB2 1.0	Aug 08 2018	Soil	S18 Au18 25				X									
8	SB2 .1	Aug 08 2018	Soil	S18 Au18 2				X									
8	SB2 5.0	Aug 08 2018	Soil	S18 Au18	0			X									
85	SB2 .0	Aug 08 2018	Soil	S18 Au18	1			X									
8	SB2 0.2	Aug 1 2018	Soil	S18 Au18	2			X									
8	SB22 0.5	Aug 1 2018	Soil	S18 Au20518	X				X	X		X					
88	SB8 0.	Aug 1 2018	Soil	S18 Au2051	X												
8	SB1 1.2	Aug 10 2018	Soil	S18 Au20522				X									
0	SB20 .0	Aug 08 2018	Soil	S18 Au2052				X									
1	SB20 .8	Aug 08 2018	Soil	S18 Au2052				X									
Test Counts					12	2				2	1		1	22	1	2	10

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. This report replaces any interim results previously issued.

Holding Times

Please refer to Sample Preservation and Container Guide for holding times QS 001.

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

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: weight for weight basis	grams per kilogram
Filter loading:	fibres 100 graticule areas
Reported Concentration:	fibres mL
Flowrate:	L min

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Western Australia Department of Health
NOHSC	National Occupational Health and Safety Commission
ACM	Bonded asbestos containing material means any material containing more than 1 asbestos and comprises asbestos containing material which is in sound condition although possibly broken or fragmented and where the asbestos is bound in a matrix such as cement or resin. Common examples of ACM include but are not limited to: pipe and boiler insulation sprayed on fireproofing troweled on acoustical plaster floor tile and mastic floor linoleum transite shingles roofing materials wall and ceiling plaster ceiling tiles and gasket materials. This term is restricted to material that cannot pass a mm x mm sieve. This sieve size is selected because it approximates the thickness of common asbestos cement sheeting and for fragments to be smaller than this would imply a high degree of damage and hence potential for fibre release.
FA	FA comprises friable asbestos material and includes severely weathered cement sheet insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded crumbling.
PACM	Presumed Asbestos Containing Material means thermal system insulation and surfacing material found in buildings vessels and vessel sections constructed no later than 1 80 that are assumed to contain greater than one percent asbestos but have not been sampled or analyzed to verify or negate the presence of asbestos.
AF	Asbestos fines AF are defined as free fibres or fibre bundles smaller than mm. It is the free fibres which present the greatest risk to human health although very small fibres 5 microns in length are not considered to be such a risk. AF also includes small fragments of bonded ACM that pass through a mm x mm sieve. Note that for bonded ACM fragments to pass through a mm x mm sieve implies a substatntial degree of damage which increases the potential for fibre release.
AC	Asbestos cement means a mixture of cement and asbestos fibres typically 0:10 ratios.

Comments

Samples Au18850 Au18880 and Au1888 received were less than the nominal 500mL as recommended in Section .10 of the NEPM Schedule B1 G uideline on Investigation Levels for Soil and G roundwater.

Sample Integrity

Custody Seals Intact if used	N A
Attempt to Chill was evident	Y es
Sample correctly preserved	Y es
Appropriate sample containers have been used	Y es
Sample containers for volatile analysis received with minimal headspace	Y es
Samples received within HoldingT ime	Y es
Some samples have been subcontracted	No

Q ualifier Codes/Comments

Code	Description
N A	Not applicable

Asbestos Counter/Identifier:

Sayeed Abu	Senior Analyst	Asbestos	NSW

Authorised by:

Laxman Dias	Senior Analyst	Asbestos	NSW

G lenn J ackson
National Operations Manager

Final Report – this report replaces any previously issued Report

Indicates Not Requested

Indicates NAT A accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please here.

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30 years Testing For Life

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1 217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests calibrations and or measurements included in this document are traceable to Australian national standards.

Trace Environmental P/L
Shop 2, 7 3 7 New Canterbury Road
Dulwich Hill
NSW 2203

Attention: K en Henderson

Report 61242 W
Pro ect name **MASCO T**
Pro ect ID **1.1**
Received Date **Aug 15 2018**

Client Sample ID			RB 2	RB 3	RB 4
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S1 Au1 7	S1 Au1	7 S1 Au1
Date Sampled			Aug 13, 201	Aug 14, 201	Aug 14, 201
T est Reference	LO R	nit			
Total Recoverable Hydrocarbons 1 NEPM Fractions					
T RH C C	0.02	mg L			0.02
T RH C10 C1	0.05	mg L			0.05
T RH C15 C28	0.1	mg L			0.1
T RH C2 C	0.1	mg L			0.1
T RH C10 T otal	0.1	mg L			0.1
B TEX					
Ben ene	0.001	mg L			0.001
T oluene	0.001	mg L			0.001
Ethylben ene	0.001	mg L			0.001
m p X ylenes	0.002	mg L			0.002
o X ylene	0.001	mg L			0.001
X ylenes T otal	0.00	mg L			0.00
Bromofluoroben ene surr.	1				111
Total Recoverable Hydrocarbons 2013 NEPM Fractions					
Naphthalene[N02]	0.01	mg L			0.01
T RH C C10	0.02	mg L			0.02
T RH C C10 less BT EX[N0] F1	0.02	mg L			0.02
T RH C10 C1	0.05	mg L			0.05
T RH C10 C1 less Naphthalene[N01] F2	0.05	mg L			0.05
T RH C1 C	0.1	mg L			0.1
T RH C C 0	0.1	mg L			0.1
T RH C10 C 0 total	0.1	mg L			0.1
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg L			0.001
Acenaphthylene	0.001	mg L			0.001
Anthracene	0.001	mg L			0.001
Ben a anthracene	0.001	mg L			0.001
Ben o a pyrene	0.001	mg L			0.001
Ben o b fluoranthene	0.001	mg L			0.001
Ben o g.h.i perylene	0.001	mg L			0.001
Ben o k fluoranthene	0.001	mg L			0.001
Chrysene	0.001	mg L			0.001
Diben a.h anthracene	0.001	mg L			0.001
Fluoranthene	0.001	mg L			0.001
Fluorene	0.001	mg L			0.001

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test Reference	LOR	nit	RB 2 Water S1 Au1 7 Aug 13, 201	RB 3 Water S1 Au1 Aug 14, 201	RB 4 Water 7 S1 Au1 Aug 14, 201
Polycyclic Aromatic Hydrocarbons					
Indeno 1.2. cd pyrene	0.001	mg L			0.001
Naphthalene	0.001	mg L			0.001
Phenanthrene	0.001	mg L			0.001
Pyrene	0.001	mg L			0.001
Total PAH	0.001	mg L			0.001
2 Fluorobiphenyl surr.	1				80
p Terphenyl d1 surr.	1				1
Organochlorine Pesticides					
Chlordanes Total	0.001	mg L	0.001	0.001	
. DDD	0.0001	mg L	0.0001	0.0001	
. DDE	0.0001	mg L	0.0001	0.0001	
. DDT	0.0001	mg L	0.0001	0.0001	
a BHC	0.0001	mg L	0.0001	0.0001	
Aldrin	0.0001	mg L	0.0001	0.0001	
b BHC	0.0001	mg L	0.0001	0.0001	
d BHC	0.0001	mg L	0.0001	0.0001	
Dieldrin	0.0001	mg L	0.0001	0.0001	
Endosulfan I	0.0001	mg L	0.0001	0.0001	
Endosulfan II	0.0001	mg L	0.0001	0.0001	
Endosulfan sulphate	0.0001	mg L	0.0001	0.0001	
Endrin	0.0001	mg L	0.0001	0.0001	
Endrin aldehyde	0.0001	mg L	0.0001	0.0001	
Endrin ketone	0.0001	mg L	0.0001	0.0001	
g BHC Lindane	0.0001	mg L	0.0001	0.0001	
Heptachlor	0.0001	mg L	0.0001	0.0001	
Heptachlor epoxide	0.0001	mg L	0.0001	0.0001	
Hexachloroben ene	0.0001	mg L	0.0001	0.0001	
Methoxychlor	0.0001	mg L	0.0001	0.0001	
Toxaphene	0.01	mg L	0.01	0.01	
Aldrin and Dieldrin Total	0.0001	mg L	0.0001	0.0001	
DDT DDE DDD Total	0.0001	mg L	0.0001	0.0001	
Vic EPA IWRG 21 OCP Total	0.001	mg L	0.001	0.001	
Vic EPA IWRG 21 Other OCP Total	0.001	mg L	0.001	0.001	
Dibutylchlorendate surr.	1		81		
Tetrachloro m xylene surr.	1		1	102	
Organophosphorus Pesticides					
Azinphos methyl	0.002	mg L	0.002	0.002	
Bolstar	0.002	mg L	0.002	0.002	
Chlorfenvinphos	0.002	mg L	0.002	0.002	
Chlorpyrifos	0.02	mg L	0.02	0.02	
Chlorpyrifos methyl	0.002	mg L	0.002	0.002	
Coumaphos	0.02	mg L	0.02	0.02	
Demeton S	0.02	mg L	0.02	0.02	
Demeton O	0.002	mg L	0.002	0.002	
Diazinon	0.002	mg L	0.002	0.002	
Dichlorvos	0.002	mg L	0.002	0.002	
Dimethoate	0.002	mg L	0.002	0.002	
Disulfoton	0.002	mg L	0.002	0.002	
EPN	0.002	mg L	0.002	0.002	

Client Sample ID			RB 2	RB 3	RB 4	
Sample Matrix			Water	Water	Water	
Eurofins mgt Sample No.			S1 Au1 7	S1 Au1	7 S1	Au1
Date Sampled			Aug 13, 201	Aug 14, 201	Aug 14, 201	
T est Reference	LO R	nit				
Organophosphorus Pesticides						
Ethion	0.002	mg L	0.002	0.002		
Ethoprop	0.002	mg L	0.002	0.002		
Ethyl parathion	0.002	mg L	0.002	0.002		
Fenitrothion	0.002	mg L	0.002	0.002		
Fensulfothion	0.002	mg L	0.002	0.002		
Fenthion	0.002	mg L	0.002	0.002		
Malathion	0.002	mg L	0.002	0.002		
Merphos	0.002	mg L	0.002	0.002		
Methyl parathion	0.002	mg L	0.002	0.002		
Mevinphos	0.002	mg L	0.002	0.002		
Monocrotophos	0.002	mg L	0.002	0.002		
Naled	0.002	mg L	0.002	0.002		
O methoate	0.002	mg L	0.002	0.002		
Phorate	0.002	mg L	0.002	0.002		
Pirimiphos methyl	0.02	mg L	0.02	0.02		
Pyra ophos	0.002	mg L	0.002	0.002		
Ronnel	0.002	mg L	0.002	0.002		
T erbufos	0.002	mg L	0.002	0.002		
T etrachlorvinphos	0.002	mg L	0.002	0.002		
T okuthion	0.002	mg L	0.002	0.002		
T richloronate	0.002	mg L	0.002	0.002		
T riphenylphosphate surr.	1		8	8		
Polychlorinated B iphenyls						
Aroclor 101	0.001	mg L	0.001	0.001		
Aroclor 1221	0.001	mg L	0.001	0.001		
Aroclor 12 2	0.001	mg L	0.001	0.001		
Aroclor 12 2	0.001	mg L	0.001	0.001		
Aroclor 12 8	0.001	mg L	0.001	0.001		
Aroclor 125	0.001	mg L	0.001	0.001		
Aroclor 12 0	0.001	mg L	0.001	0.001		
T otal PCB	0.001	mg L	0.001	0.001		
Dibutylchlorendate surr.	1		81			
T etrachloro m xylene surr.	1		1	102		
Phenols (Halogenated)						
2 Chlorophenol	0.00	mg L			0.00	
2. Dichlorophenol	0.00	mg L			0.00	
2. .5 T richlorophenol	0.01	mg L			0.01	
2. . T richlorophenol	0.01	mg L			0.01	
2. Dichlorophenol	0.00	mg L			0.00	
Chloro methylphenol	0.01	mg L			0.01	
Pentachlorophenol	0.01	mg L			0.01	
T etrachlorophenols T otal	0.0	mg L			0.0	
T otal Halogenated Phenol	0.01	mg L			0.01	
Phenols (non Halogenated)						
2 Cyclohexyl . dinitrophenol	0.1	mg L			0.1	
2 Methyl . dinitrophenol	0.0	mg L			0.0	
2 Methylphenol o Cresol	0.00	mg L			0.00	
2 Nitrophenol	0.01	mg L			0.01	
2. Dimethylphenol	0.00	mg L			0.00	

Client Sample ID			RB 2	RB 3	RB 4
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S1 Au1 7	S1 Au1	7 S1 Au1
Date Sampled			Aug 13, 201	Aug 14, 201	Aug 14, 201
Test Reference	LOR	nit			
Phenols (non Halogenated)					
2. Dinitrophenol	0.0	mg L			0.0
Methylphenol m p Cresol	0.00	mg L			0.00
Nitrophenol	0.0	mg L			0.0
Dinoseb	0.1	mg L			0.1
Phenol	0.00	mg L			0.00
Total Non Halogenated Phenol	0.1	mg L			0.1
Phenol d surr.	1				0
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
inc	0.005	mg L			0.005

Sample History

Where samples are submitted analysed over several days the last date of extraction and analysis is reported.
A recent review of our LIM S has resulted in the correction or clarification of some method identifications. Due to this some of the method reference information on reports has changed. However no substantive change has been made to our laboratory methods and as such there is no change in the validity of current or previous results regarding both quality and NAT A accreditation .

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 mgt Suite B A			
T otal Recoverable Hydrocarbons 1 NEPM Fractions	Melbourne	Aug 21 2018	Day
Method: LT M O RG 2010 T RH C C			
BT EX	Melbourne	Aug 18 2018	1 Day
Method: T RH C C 0 LT M O RG 2010			
T otal Recoverable Hydrocarbons 201 NEPM Fractions	Melbourne	Aug 18 2018	Day
Method: T RH C C 0 LT M O RG 2010			
T otal Recoverable Hydrocarbons 201 NEPM Fractions	Melbourne	Aug 21 2018	Day
Method: T RH C C 0 LT M O RG 2010			
Polycyclic Aromatic Hydrocarbons	Melbourne	Aug 21 2018	Day
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Phenols Halogenated	Melbourne	Aug 21 2018	Days
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Phenols non Halogenated	Melbourne	Aug 21 2018	Day
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Metals M 8	Melbourne	Aug 18 2018	28 Days
Method: LT M MET 0 0 Metals in Waters Soils Sediments by ICP M S			
Eurofins mgt Suite B15			
O rganochlorine Pesticides	Melbourne	Aug 21 2018	Day
Method: LT M O RG 2220 O CP PCB in Soil and Water			
O rganophosphorus Pesticides	Melbourne	Aug 21 2018	Day
Method: LT M O RG 2200 O rganophosphorus Pesticides by G C M S			
Polychlorinated Biphenyls	Melbourne	Aug 21 2018	Days
Method: LT M O RG 2220 O CP PCB in Soil and Water			

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2 1 Leach Highway
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Company Name: T race Environmental P L
Address: Shop 2 New Canterbury Road
Dulwich Hill
NSW 220

Project Name: MASCO T
Project ID: 1.1

Order No.:
Report : 12 28
Phone: 02 8 0 0555
Fax:

Received: Aug 15 2018 5: 1 PM
Due: Aug 2 2018
Priority: 5 Day
Contact Name: K en Henderson

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail	Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271			X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217	X	X									X	X
B risbane Laboratory NATA Site 207 4				X					X	X		
Perth Laboratory NATA Site 23736												
External Laboratory												

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID										
1	SB 2.0	Aug 0	2018	Soil	S18 Au188								X		
2	SB .0	Aug 0	2018	Soil	S18 Au188 8								X		
	SB 5.0	Aug 0	2018	Soil	S18 Au188								X		
	SB1 0.	Aug 1	2018	Soil	S18 Au18850	X	X			X					
5	SB1 .0	Aug 10	2018	Soil	S18 Au18851		X								
	SB1 .0	Aug 10	2018	Soil	S18 Au18852								X		
	SB1 8.0	Aug 10	2018	Soil	S18 Au1885								X		
8	SB1 10.0	Aug 10	2018	Soil	S18 Au1885								X		
	SB1 .8	Aug 10	2018	Soil	S18 Au18855								X		

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Company Name:	T race Environmental P L	Order No.:	Received: Aug 15 2018 5: 1 PM
Address:	Shop 2 New Canterbury Road Dulwich Hill NSW 220	Report : 12 28 Phone: 02 8 0 0555 Fax:	Due: Aug 2 2018 Priority: 5 Day Contact Name: K en Henderson
Project Name:	MASCO T		
Project ID:	1.1		Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail					Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271							X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217					X	X									X	X
B risbane Laboratory NATA Site 207 4								X					X	X		
Perth Laboratory NATA Site 23736																
10	SB1 .0	Aug 10 2018	Soil	S18 Au1885									X			
11	SB1 8.0	Aug 10 2018	Soil	S18 Au1885									X			
12	SB1 10.0	Aug 10 2018	Soil	S18 Au18858									X			
1	SB20 5.0	Aug 08 2018	Soil	S18 Au1885									X			
1	SB20 8.0	Aug 08 2018	Soil	S18 Au188 0									X			
15	SB20 10.0	Aug 08 2018	Soil	S18 Au188 1									X			
1	SB20 12.0	Aug 08 2018	Soil	S18 Au188 2									X			
1	SB21 0.15	Aug 1 2018	Soil	S18 Au188								X				X
18	SB21 0.	Aug 08 2018	Soil	S18 Au188	X											
1	SB22 0.1	Aug 08 2018	Soil	S18 Au188 5							X	X				
20	SB22 1.	Aug 08 2018	Soil	S18 Au188								X		X		X
21	SB22 .0	Aug 08 2018	Soil	S18 Au188									X			

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Address:	Shop 2 New Canterbury Road	Report :	12 28
	Dulwich Hill	Phone:	02 8 0 0555
	NSW 220	Fax:	
Project Name:	MASCO T	Received:	Aug 15 2018 5: 1 PM
Project ID:	1.1	Due:	Aug 2 2018
		Priority:	5 Day
		Contact Name:	K en Henderson

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail					Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271							X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217					X	X									X	X
B risbane Laboratory NATA Site 207 4								X					X	X		
Perth Laboratory NATA Site 23736																
22	SB22 5.0	Aug 08 2018	Soil	S18 Au188 8									X			
2	SB22 .0	Aug 08 2018	Soil	S18 Au188								X			X	
2	SB22 .0	Aug 08 2018	Soil	S18 Au188 0									X			
25	SB2 2.0	Aug 08 2018	Soil	S18 Au188 1									X			
2	SB2 .0	Aug 08 2018	Soil	S18 Au188 2									X			
2	SB2 .0	Aug 10 2018	Soil	S18 Au188									X			
28	SB2 8.0	Aug 10 2018	Soil	S18 Au188									X			
2	SB2 10.0	Aug 10 2018	Soil	S18 Au188 5									X			
0	Q A1	Aug 1 2018	Soil	S18 Au188	X											
1	Q S	Aug 1 2018	Soil	S18 Au188								X			X	
2	RB2	Aug 1 2018	Water	S18 Au188 8							X					
	RB	Aug 1 2018	Water	S18 Au188							X					

Page of 2
R eport um ber 12 2

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Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271								X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217						X	X									X	X
B risbane Laboratory NATA Site 207 4									X					X	X		
Perth Laboratory NATA Site 23736																	
	SB 0.2	Aug 1	2018	Soil	S18 Au18880	X							X				X
5	SB 0.25	Aug 1	2018	Soil	S18 Au18881	X							X				X
	SB8 0.15	Aug 1	2018	Soil	S18 Au18882								X				X
	SB 0.25	Aug 1	2018	Soil	S18 Au1888	X							X				X
8	SB2 0.	Aug 1	2018	Soil	S18 Au1888	X							X				X
	SB2 0.	Aug 1	2018	Soil	S18 Au18885	X							X				X
0	SB25 0.25	Aug 1	2018	Soil	S18 Au1888	X							X				X
1	Q A2	Aug 1	2018	Soil	S18 Au1888	X											
2	RB	Aug 1	2018	Water	S18 Au18888												X
	SB1 0.5	Aug 0	2018	Soil	S18 Au1888				X								
	SB 0.	Aug 0	2018	Soil	S18 Au188 0				X								
5	SB .0	Aug 0	2018	Soil	S18 Au188 1				X								

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Address:	Shop 2 New Canterbury Road Dulwich Hill NSW 220	Report : 12 28 Phone: 02 8 0 0555 Fax:	Due: Aug 2 2018 Priority: 5 Day Contact Name: K en Henderson
Project Name:	MASCO T		
Project ID:	1.1		Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271								X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217						X	X									X	X
B risbane Laboratory NATA Site 207 4									X					X	X		
Perth Laboratory NATA Site 23736																	
	SB10 0.5	Aug 10 2018	Soil	S18 Au188 2					X								
	SB11 0.5	Aug 0 2018	Soil	S18 Au188					X								
8	SB11 .8	Aug 0 2018	Soil	S18 Au188					X								
	SB1 0.5	Aug 10 2018	Soil	S18 Au188 5					X								
50	SB1 1.2	Aug 10 2018	Soil	S18 Au188					X								
51	SB1 2.0	Aug 10 2018	Soil	S18 Au188					X								
52	SB1 .0	Aug 10 2018	Soil	S18 Au188 8					X								
5	SB1 5.0	Aug 10 2018	Soil	S18 Au188					X								
5	SB1 .0	Aug 10 2018	Soil	S18 Au18 00					X								
55	SB1 .0	Aug 10 2018	Soil	S18 Au18 01					X								
5	SB1 0.5	Aug 10 2018	Soil	S18 Au18 02					X								
5	SB1 5.0	Aug 10 2018	Soil	S18 Au18 0					X								

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Company Name:	T race Environmental P L	Order No.:	Received: Aug 15 2018 5: 1 PM
Address:	Shop 2 New Canterbury Road Dulwich Hill NSW 220	Report : 12 28 Phone: 02 8 0 0555 Fax:	Due: Aug 2 2018 Priority: 5 Day Contact Name: K en Henderson
Project Name:	MASCO T		
Project ID:	1.1		Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271								X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217						X	X									X	X
B risbane Laboratory NATA Site 207 4									X					X	X		
Perth Laboratory NATA Site 23736																	
58	SB1 .0	Aug 10 2018	Soil	S18 Au18 0					X								
5	SB1 .0	Aug 10 2018	Soil	S18 Au18 05					X								
0	SB20 0.	Aug 08 2018	Soil	S18 Au18 0					X								
1	SB20 1.0	Aug 08 2018	Soil	S18 Au18 0					X								
2	SB20 2.2	Aug 08 2018	Soil	S18 Au18 05					X								
	SB20 2.	Aug 08 2018	Soil	S18 Au18 0					X								
	SB20 .0	Aug 08 2018	Soil	S18 Au18 10					X								
5	SB20 .0	Aug 08 2018	Soil	S18 Au18 11					X								
	SB20 .0	Aug 08 2018	Soil	S18 Au18 12					X								
	SB20 11.0	Aug 08 2018	Soil	S18 Au18 1					X								
8	SB21 0.5	Aug 1 2018	Soil	S18 Au18 1				X									
	SB21 0.8	Aug 1 2018	Soil	S18 Au18 15				X									

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1 21 Smallwood Place
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2 1 Leach Highway
K ewdale WA 105
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Melbourne Laboratory NATA Site 12 4 & 14271								X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217						X	X									X	X
B risbane Laboratory NATA Site 207 4									X					X	X		
Perth Laboratory NATA Site 23736																	
0	SB22 0.	Aug 1	2018	Soil	S18 Au18 1			X									
1	SB22 1.0	Aug 1	2018	Soil	S18 Au18 1				X								
2	SB22 2.0	Aug 1	2018	Soil	S18 Au18 1			X									
	SB22 2.	Aug 1	2018	Soil	S18 Au18 1			X									
	SB22 .0	Aug 1	2018	Soil	S18 Au18 20			X									
5	SB2 0.2	Aug 1	2018	Soil	S18 Au18 21				X								
	SB2 1.0	Aug 1	2018	Soil	S18 Au18 22				X								
	SB2 .0	Aug 1	2018	Soil	S18 Au18 2				X								
8	SB2 5.0	Aug 1	2018	Soil	S18 Au18 2				X								
	SB2 .0	Aug 10	2018	Soil	S18 Au18 25				X								
80	SB2 .0	Aug 10	2018	Soil	S18 Au18 2				X								
81	SB2 0.2	Aug 08	2018	Soil	S18 Au18 2				X								

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Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271								X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217						X	X									X	X
B risbane Laboratory NATA Site 207 4									X					X	X		
Perth Laboratory NATA Site 23736																	
82	SB2 1.0	Aug 08 2018	Soil	S18 Au18 25					X								
8	SB2 .1	Aug 08 2018	Soil	S18 Au18 2					X								
8	SB2 5.0	Aug 08 2018	Soil	S18 Au18	0				X								
85	SB2 .0	Aug 08 2018	Soil	S18 Au18	1				X								
8	SB2 0.2	Aug 1 2018	Soil	S18 Au18	2				X								
8	SB22 0.5	Aug 1 2018	Soil	S18 Au20518	X					X	X		X				
88	SB8 0.	Aug 1 2018	Soil	S18 Au2051	X												
8	SB1 1.2	Aug 10 2018	Soil	S18 Au20522					X								
0	SB20 .0	Aug 08 2018	Soil	S18 Au2052					X								
1	SB20 .8	Aug 08 2018	Soil	S18 Au2052					X								
Test Counts						12	2				2	1		1	22	1	2 10

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks Duplicates Matrix Spikes and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis unless otherwise stated.
   - All biota food results are reported on a wet weight basis on the edible portion unless otherwise stated.
   - 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.
   - SVOC analysis on waters are performed on homogenised unfiltered samples unless noted otherwise.
   - Samples were analysed on an as received basis.
8. This report replaces any interim results previously issued.

Holding Times

Please refer to Sample Preservation and Container Guide for holding times QS 001 .
For samples received on the last day of holding time notification of testing requirements should have been received at least 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 days however for all other VOCs such as BTEX or C 10 TRH then the holding time is 1 days.
NOTE H duplicates are reported as a range NOT as RPD

Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample reported as percent recovery.
CRM	Certified Reference Material 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.
Surr Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	nited States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 S Department of Defense
CP	Client Parent QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 0 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 0
Surrogate Recoveries: Recoveries must lie between 50 150 Phenols PFASs
PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.
WA DWER n 10 : PFBA PFPeA PFHxA PFHpA PFOA PFBS PFHxS PFOS :2 FTSA 8:2 FTSA

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.
   - Organochlorine Pesticide analysis where reporting LCS data Toxaphene Chlordane are not added to the LCS.
   - Organochlorine Pesticide analysis where reporting Spike data Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons where reporting Spike LCS data a single spike of commercial Hydrocarbon products in the range of C12 C 0 is added and its Total Recovery is reported in the C10 C1 cell of the Report.
   - pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 0 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
   - Recovery Data Spikes Surrogates where chromatographic interference does not allow the determination of Recovery the term " INT " appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 12 0 in Matrix Spikes and LCS.
   - For Matrix Spikes and LCS results a dash " " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Q uality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Q ualifying Code
Method B lank							
Total Recoverable Hydrocarbons 1 NEPM Fractions							
T RH C C	mg L	0.02			0.02	Pass	
T RH C10 C1	mg L	0.05			0.05	Pass	
T RH C15 C28	mg L	0.1			0.1	Pass	
T RH C2 C	mg L	0.1			0.1	Pass	
Method B lank							
B TEX							
Ben ene	mg L	0.001			0.001	Pass	
T oluene	mg L	0.001			0.001	Pass	
Ethylben ene	mg L	0.001			0.001	Pass	
m p X ylenes	mg L	0.002			0.002	Pass	
o X ylene	mg L	0.001			0.001	Pass	
X ylenes T otal	mg L	0.00			0.00	Pass	
Method B lank							
Total Recoverable Hydrocarbons 2013 NEPM Fractions							
Naphthalene	mg L	0.01			0.01	Pass	
T RH C C10	mg L	0.02			0.02	Pass	
T RH C10 C1	mg L	0.05			0.05	Pass	
T RH C1 C	mg L	0.1			0.1	Pass	
T RH C C 0	mg L	0.1			0.1	Pass	
Method B lank							
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	
Ben a anthracene	mg L	0.001			0.001	Pass	
Ben o a pyrene	mg L	0.001			0.001	Pass	
Ben o b fluoranthene	mg L	0.001			0.001	Pass	
Ben o g.h.i perylene	mg L	0.001			0.001	Pass	
Ben o k fluoranthene	mg L	0.001			0.001	Pass	
Chrysene	mg L	0.001			0.001	Pass	
Diben 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. 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 B lank							
Organochlorine Pesticides							
Chlordanes T otal	mg L	0.001			0.001	Pass	
. DDD	mg L	0.0001			0.0001	Pass	
. DDE	mg L	0.0001			0.0001	Pass	
. DDT	mg L	0.0001			0.0001	Pass	
a BHC	mg L	0.0001			0.0001	Pass	
Aldrin	mg L	0.0001			0.0001	Pass	
b BHC	mg L	0.0001			0.0001	Pass	
d BHC	mg L	0.0001			0.0001	Pass	
Dieldrin	mg L	0.0001			0.0001	Pass	
Endosulfan I	mg L	0.0001			0.0001	Pass	
Endosulfan II	mg L	0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg L	0.0001			0.0001	Pass	
Endrin	mg L	0.0001			0.0001	Pass	
Endrin aldehyde	mg L	0.0001			0.0001	Pass	
Endrin ketone	mg L	0.0001			0.0001	Pass	
g BHC Lindane	mg L	0.0001			0.0001	Pass	
Heptachlor	mg L	0.0001			0.0001	Pass	
Heptachlor epoxide	mg L	0.0001			0.0001	Pass	
Hexachloroben ene	mg L	0.0001			0.0001	Pass	
Methoxychlor	mg L	0.0001			0.0001	Pass	
T oxaphene	mg L	0.01			0.01	Pass	
Method B lank							
Organophosphorus Pesticides							
A inphos methyl	mg L	0.002			0.002	Pass	
Bolstar	mg L	0.002			0.002	Pass	
Chlorfenvinphos	mg L	0.002			0.002	Pass	
Chlorpyrifos	mg L	0.02			0.02	Pass	
Chlorpyrifos methyl	mg L	0.002			0.002	Pass	
Coumaphos	mg L	0.02			0.02	Pass	
Demeton S	mg L	0.02			0.02	Pass	
Demeton O	mg L	0.002			0.002	Pass	
Dia inon	mg L	0.002			0.002	Pass	
Dichlorvos	mg L	0.002			0.002	Pass	
Dimethoate	mg L	0.002			0.002	Pass	
Disulfoton	mg L	0.002			0.002	Pass	
EPN	mg L	0.002			0.002	Pass	
Ethion	mg L	0.002			0.002	Pass	
Ethoprop	mg L	0.002			0.002	Pass	
Ethyl parathion	mg L	0.002			0.002	Pass	
Fenitrothion	mg L	0.002			0.002	Pass	
Fensulfothion	mg L	0.002			0.002	Pass	
Fenthion	mg L	0.002			0.002	Pass	
Malathion	mg L	0.002			0.002	Pass	
Merphos	mg L	0.002			0.002	Pass	
Methyl parathion	mg L	0.002			0.002	Pass	
Mevinphos	mg L	0.002			0.002	Pass	
Monocrotophos	mg L	0.002			0.002	Pass	
Naled	mg L	0.002			0.002	Pass	
O methoate	mg L	0.002			0.002	Pass	
Phorate	mg L	0.002			0.002	Pass	
Pirimiphos methyl	mg L	0.02			0.02	Pass	
Pyra ophos	mg L	0.002			0.002	Pass	
Ronnel	mg L	0.002			0.002	Pass	
T erbufos	mg L	0.002			0.002	Pass	
T etrachlorvinphos	mg L	0.002			0.002	Pass	
T okuthion	mg L	0.002			0.002	Pass	
T richloronate	mg L	0.002			0.002	Pass	
Method B lank							
Polychlorinated B iphenyls							
Aroclor 101	mg L	0.001			0.001	Pass	
Aroclor 1221	mg L	0.001			0.001	Pass	
Aroclor 12 2	mg L	0.001			0.001	Pass	
Aroclor 12 2	mg L	0.001			0.001	Pass	
Aroclor 12 8	mg L	0.001			0.001	Pass	
Aroclor 125	mg L	0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor 12 0	mg L	0.001			0.001	Pass	
T otal PCB	mg L	0.001			0.001	Pass	
Method B lank							
Phenols (Halogenated)							
2 Chlorophenol	mg L	0.00			0.00	Pass	
2. Dichlorophenol	mg L	0.00			0.00	Pass	
2. .5 T richlorophenol	mg L	0.01			0.01	Pass	
2. . T richlorophenol	mg L	0.01			0.01	Pass	
2. Dichlorophenol	mg L	0.00			0.00	Pass	
Chloro methylphenol	mg L	0.01			0.01	Pass	
Pentachlorophenol	mg L	0.01			0.01	Pass	
T etrachlorophenols T otal	mg L	0.0			0.0	Pass	
Method B lank							
Phenols (non Halogenated)							
2 Cyclohexyl . dinitrophenol	mg L	0.1			0.1	Pass	
2 Methyl . dinitrophenol	mg L	0.0			0.0	Pass	
2 Methylphenol o Cresol	mg L	0.00			0.00	Pass	
2 Nitrophenol	mg L	0.01			0.01	Pass	
2. Dimethylphenol	mg L	0.00			0.00	Pass	
2. Dinitrophenol	mg L	0.0			0.0	Pass	
Methylphenol m p Cresol	mg L	0.00			0.00	Pass	
Nitrophenol	mg L	0.0			0.0	Pass	
Dinoseb	mg L	0.1			0.1	Pass	
Phenol	mg L	0.00			0.00	Pass	
Method B lank							
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	
inc	mg L	0.005			0.005	Pass	
LCS Recovery							
Total Recoverable Hydrocarbons 1 NEPM Fractions							
T RH C C		110			0 1 0	Pass	
T RH C10 C1		112			0 1 0	Pass	
LCS Recovery							
B TEX							
Ben ene		10			0 1 0	Pass	
T oluene		10			0 1 0	Pass	
Ethylben ene		10			0 1 0	Pass	
m p X ylenes		110			0 1 0	Pass	
X ylenes T otal		10			0 1 0	Pass	
LCS Recovery							
Total Recoverable Hydrocarbons 2013 NEPM Fractions							
Naphthalene		120			0 1 0	Pass	
T RH C C10		112			0 1 0	Pass	
T RH C10 C1		11			0 1 0	Pass	
LCS Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene		101			0 1 0	Pass	
Acenaphthylene		8			0 1 0	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Anthracene		10			0 1 0	Pass	
Ben a anthracene		100			0 1 0	Pass	
Ben o a pyrene		110			0 1 0	Pass	
Ben o b fluoranthene		118			0 1 0	Pass	
Ben o g.h.i perylene		11			0 1 0	Pass	
Ben o k fluoranthene		112			0 1 0	Pass	
Chrysene		118			0 1 0	Pass	
Diben a.h anthracene		0			0 1 0	Pass	
Fluoranthene		122			0 1 0	Pass	
Fluorene		105			0 1 0	Pass	
Indeno 1.2. cd pyrene		8			0 1 0	Pass	
Naphthalene					0 1 0	Pass	
Phenanthrene		10			0 1 0	Pass	
Pyrene		12			0 1 0	Pass	
LCS Recovery							
Organochlorine Pesticides							
Chlordanes T otal		101			0 1 0	Pass	
. DDD					0 1 0	Pass	
. DDE		10			0 1 0	Pass	
. DDT					0 1 0	Pass	
a BHC		108			0 1 0	Pass	
Aldrin		10			0 1 0	Pass	
b BHC		102			0 1 0	Pass	
d BHC		8			0 1 0	Pass	
Dieldrin		110			0 1 0	Pass	
Endosulfan I		8			0 1 0	Pass	
Endosulfan II		8			0 1 0	Pass	
Endosulfan sulphate		8			0 1 0	Pass	
Endrin					0 1 0	Pass	
Endrin aldehyde		1			0 1 0	Pass	
Endrin ketone		5			0 1 0	Pass	
g BHC Lindane		110			0 1 0	Pass	
Heptachlor		85			0 1 0	Pass	
Heptachlor epoxide		100			0 1 0	Pass	
Hexachloroben ene					0 1 0	Pass	
M ethoxychlor		8			0 1 0	Pass	
LCS Recovery							
Organophosphorus Pesticides							
Dia inon		111			0 1 0	Pass	
Dimethoate		2			0 1 0	Pass	
Ethion		10			0 1 0	Pass	
Fenitrothion					0 1 0	Pass	
M ethyl parathion					0 1 0	Pass	
M evinphos		8			0 1 0	Pass	
LCS Recovery							
Phenols (Halogenated)							
2 Chlorophenol		8			0 1 0	Pass	
2. Dichlorophenol					0 1 0	Pass	
2. .5 T richlorophenol					0 1 0	Pass	
2. . T richlorophenol		8			0 1 0	Pass	
2. Dichlorophenol		0			0 1 0	Pass	
Chloro methylphenol					0 1 0	Pass	
Pentachlorophenol					0 1 0	Pass	
T etrachlorophenols T otal		0			0 1 0	Pass	

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Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS Recovery							
Phenols (non Halogenated)							
2 Cyclohexyl . dinitrophenol					0 1 0	Pass	
2 Methyl . dinitrophenol		8			0 1 0	Pass	
2 Methylphenol o Cresol					0 1 0	Pass	
2 Nitrophenol					0 1 0	Pass	
2. Dimethylphenol					0 1 0	Pass	
2. Dinitrophenol		1			0 1 0	Pass	
Methylphenol m p Cresol					0 1 0	Pass	
Dinoseb		8			0 1 0	Pass	
Phenol		2			0 1 0	Pass	
LCS Recovery							
Heavy Metals							
Arsenic		11			80 120	Pass	
Cadmium		110			80 120	Pass	
Chromium		112			80 120	Pass	
Copper		11			80 120	Pass	
Lead		115			80 120	Pass	
Mercury		11			5 125	Pass	
Nickel		11			80 120	Pass	
inc		11			80 120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes T otal	M18 Au225		NCP	8			0 1 0	Pass	
. DDD	M18 Au225		NCP	82			0 1 0	Pass	
. DDE	M18 Au225		NCP				0 1 0	Pass	
. DDT	M18 Au225		NCP	8			0 1 0	Pass	
a BHC	M18 Au225		NCP	2			0 1 0	Pass	
Aldrin	M18 Au225		NCP	85			0 1 0	Pass	
b BHC	M18 Au225		NCP	2			0 1 0	Pass	
d BHC	M18 Au225		NCP	2			0 1 0	Pass	
Dieldrin	M18 Au225		NCP	10			0 1 0	Pass	
Endosulfan I	M18 Au225		NCP	88			0 1 0	Pass	
Endosulfan II	M18 Au225		NCP	8			0 1 0	Pass	
Endosulfan sulphate	M18 Au225		NCP	5			0 1 0	Pass	
Endrin	M18 Au225		NCP	88			0 1 0	Pass	
Endrin aldehyde	M18 Au225		NCP	88			0 1 0	Pass	
Endrin ketone	M18 Au225		NCP				0 1 0	Pass	
g BHC Lindane	M18 Au225		NCP	8			0 1 0	Pass	
Heptachlor	M18 Au225		NCP				0 1 0	Pass	
Heptachlor epoxide	M18 Au225		NCP	1			0 1 0	Pass	
Hexachloroben ene	M18 Au225		NCP	1			0 1 0	Pass	
Methoxychlor	M18 Au225		NCP	12			0 1 0	Pass	
Spike Recovery									
Organophosphorus Pesticides				Result 1					
Dia inon	M18 Au11	1	NCP	10			0 1 0	Pass	
Dimethoate	M18 Au11	1	NCP	82			0 1 0	Pass	
Ethion	M18 Au11	1	NCP	110			0 1 0	Pass	
Fenitrothion	M18 Au11	1	NCP	0			0 1 0	Pass	
Methyl parathion	M18 Au11	1	NCP	8			0 1 0	Pass	
Mevinphos	M18 Au11	1	NCP	81			0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons 1	NEPM Fractions			Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
T RH C10 C1	M18 Au21208	NCP		110			0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons	2013 NEPM Fractions			Result 1					
T RH C10 C1	M18 Au21208	NCP		10			0 1 0	Pass	
Spike Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M18 Au2050	NCP		11			0 1 0	Pass	
Acenaphthylene	M18 Au2050	NCP		11			0 1 0	Pass	
Anthracene	M18 Au2050	NCP		12			0 1 0	Pass	
Ben a anthracene	M18 Au2050	NCP					0 1 0	Pass	
Ben o a pyrene	M18 Au2050	NCP		101			0 1 0	Pass	
Ben o b fluoranthene	M18 Au2050	NCP		101			0 1 0	Pass	
Ben o g.h.i perylene	M18 Au2050	NCP		10			0 1 0	Pass	
Ben o k fluoranthene	M18 Au2050	NCP		12			0 1 0	Pass	
Chrysene	M18 Au2050	NCP		111			0 1 0	Pass	
Diben a.h anthracene	M18 Au2050	NCP		8			0 1 0	Pass	
Fluoranthene	M18 Au2050	NCP		11			0 1 0	Pass	
Fluorene	M18 Au2050	NCP		121			0 1 0	Pass	
Indeno 1.2. cd pyrene	M18 Au2050	NCP		8			0 1 0	Pass	
Naphthalene	M18 Au2050	NCP		10			0 1 0	Pass	
Phenanthrene	M18 Au2050	NCP		12			0 1 0	Pass	
Pyrene	M18 Au2050	NCP		11			0 1 0	Pass	
Spike Recovery									
Phenols (Halogenated)				Result 1					
2 Chlorophenol	M18 Au2050	NCP		2			0 1 0	Pass	
2. Dichlorophenol	M18 Au2050	NCP		8			0 1 0	Pass	
2. .5 T richlorophenol	M18 Au2050	NCP					0 1 0	Pass	
2. . T richlorophenol	M18 Au2050	NCP					0 1 0	Pass	
2. Dichlorophenol	M18 Au2050	NCP		85			0 1 0	Pass	
Chloro methylphenol	M18 Au2050	NCP		85			0 1 0	Pass	
Pentachlorophenol	M18 Au2050	NCP					0 1 0	Pass	
T etrachlorophenols T otal	M18 Au2050	NCP		5			0 1 0	Pass	
Spike Recovery									
Phenols (non Halogenated)				Result 1					
2 Cyclohexyl . dinitrophenol	M18 Au2050	NCP			8		0 1 0	Pass	
2 Methylphenol o Cresol	M18 Au2050	NCP		8			0 1 0	Pass	
2 Nitrophenol	M18 Au2050	NCP		5			0 1 0	Pass	
2. Dimethylphenol	M18 Au2050	NCP		85			0 1 0	Pass	
Methylphenol m p Cresol	M18 Au2050	NCP			81		0 1 0	Pass	
Dinoseb	M18 Au2050	NCP		8			0 1 0	Pass	
Phenol	M18 Au2050	NCP					0 1 0	Pass	
Spike Recovery									
Heavy Metals				Result 1					
Arsenic	M18 Au18211	NCP		110			5 125	Pass	
Cadmium	M18 Au18211	NCP					5 125	Pass	
Chromium	M18 Au18211	NCP		100			5 125	Pass	
Copper	M18 Au18211	NCP					5 125	Pass	
Lead	M18 Au18211	NCP		8			5 125	Pass	
M ercury	M18 Au18211	NCP					0 1 0	Pass	
Nickel	M18 Au18211	NCP		100			5 125	Pass	
inc	M18 Au18211	NCP		10			5 125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes T otal	S18 Au1 8		NCP mg	L	0.001	0.001	1	0	Pass
. DDD	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
. DDE	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
. DDT	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
a BHC	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
Aldrin	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
b BHC	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
d BHC	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
Dieldrin	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
Endosulfan I	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
Endosulfan II	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
Endosulfan sulphate	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
Endrin	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
Endrin aldehyde	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
Endrin ketone	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
g BHC Lindane	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
Heptachlor	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
Heptachlor epoxide	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
Hexachloroben ene	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
M ethoxychlor	S18 Au1 8		NCP mg	L	0.0001	0.0001	1	0	Pass
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
A inphos methyl	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Bolstar	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Chlorfenvinphos	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Chlorpyrifos	S18 Au1 8		NCP mg	L	0.02	0.02	1	0	Pass
Chlorpyrifos methyl	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Coumaphos	S18 Au1 8		NCP mg	L	0.02	0.02	1	0	Pass
Demeton S	S18 Au1 8		NCP mg	L	0.02	0.02	1	0	Pass
Demeton O	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Dia inon	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Dichlorvos	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Dimethoate	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Disulfoton	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
EPN	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Ethion	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Ethoprop	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Ethyl parathion	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Fenitrothion	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Fensulfothion	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Fenthion	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
M alathion	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
M erphos	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
M ethyl parathion	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
M evinphos	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
M onocrotophos	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Naled	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
O methoate	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Phorate	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Pirimiphos methyl	S18 Au1 8		NCP mg	L	0.02	0.02	1	0	Pass
Pyra ophos	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass
Ronnel	S18 Au1 8		NCP mg	L	0.002	0.002	1	0	Pass

Duplicate										
Organophosphorus Pesticides					Result 1	Result 2	RPD			
T erbufos	S18 Au1 8	NCP	mg	L	0.002	0.002		1	0	Pass
T etrachlorvinphos	S18 Au1 8	NCP	mg	L	0.002	0.002		1	0	Pass
T okuthion	S18 Au1 8	NCP	mg	L	0.002	0.002		1	0	Pass
T richloronate	S18 Au1 8	NCP	mg	L	0.002	0.002		1	0	Pass
Duplicate										
Total Recoverable Hydrocarbons 1	NEPM Fractions				Result 1	Result 2	RPD			
T RH C C	S18 Au18888	CP	mg	L	0.02	0.02		1	0	Pass
T RH C10 C1	M18 Au2120	NCP	mg	L	0.05	0.05		1	0	Pass
T RH C15 C28	M18 Au2120	NCP	mg	L	0.1	0.1		1	0	Pass
T RH C2 C	M18 Au2120	NCP	mg	L	0.1	0.1		1	0	Pass
Duplicate										
B TEX					Result 1	Result 2	RPD			
Ben ene	S18 Au18888	CP	mg	L	0.001	0.001		1	0	Pass
T oluene	S18 Au18888	CP	mg	L	0.001	0.001		1	0	Pass
Ethylben ene	S18 Au18888	CP	mg	L	0.001	0.001		1	0	Pass
m p X ylenes	S18 Au18888	CP	mg	L	0.002	0.002		1	0	Pass
o X ylene	S18 Au18888	CP	mg	L	0.001	0.001		1	0	Pass
X ylenes T otal	S18 Au18888	CP	mg	L	0.00	0.00		1	0	Pass
Duplicate										
Total Recoverable Hydrocarbons	2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S18 Au18888	CP	mg	L	0.01	0.01		1	0	Pass
T RH C C10	S18 Au18888	CP	mg	L	0.02	0.02		1	0	Pass
T RH C10 C1	M18 Au2120	NCP	mg	L	0.05	0.05		1	0	Pass
T RH C1 C	M18 Au2120	NCP	mg	L	0.1	0.1		1	0	Pass
T RH C C 0	M18 Au2120	NCP	mg	L	0.1	0.1		1	0	Pass
Duplicate										
Polycyclic Aromatic Hydrocarbons					Result 1	Result 2	RPD			
Acenaphthene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Acenaphthylene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Anthracene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Ben a anthracene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Ben o a pyrene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Ben o b fluoranthene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Ben o g.h.i perylene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Ben o k fluoranthene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Chrysene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Diben a.h anthracene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Fluoranthene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Fluorene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Indeno 1.2. cd pyrene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Naphthalene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Phenanthrene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Pyrene	M18 Au20508	NCP	mg	L	0.001	0.001		1	0	Pass
Duplicate										
Phenols (Halogenated)					Result 1	Result 2	RPD			
2 Chlorophenol	M18 Au20508	NCP	mg	L	0.00	0.00		1	0	Pass
2. Dichlorophenol	M18 Au20508	NCP	mg	L	0.00	0.00		1	0	Pass
2. .5 T richlorophenol	M18 Au20508	NCP	mg	L	0.01	0.01		1	0	Pass
2. . T richlorophenol	M18 Au20508	NCP	mg	L	0.01	0.01		1	0	Pass
2. Dichlorophenol	M18 Au20508	NCP	mg	L	0.00	0.00		1	0	Pass
Chloro methylphenol	M18 Au20508	NCP	mg	L	0.01	0.01		1	0	Pass
Pentachlorophenol	M18 Au20508	NCP	mg	L	0.01	0.01		1	0	Pass
T etrachlorophenols T otal	M18 Au20508	NCP	mg	L	0.0	0.0		1	0	Pass

Duplicate											
Phenols (non Halogenated)					Result 1	Result 2	RPD				
2 Cyclohexyl . dinitrophenol	M18	Au20508	NCP	mg	L	0.1	0.1	1		0	Pass
2 Methyl . dinitrophenol	M18	Au20508	NCP	mg	L	0.0	0.0	1	0	Pass	
2 Methylphenol o Cresol	M18	Au20508	NCP	mg	L	0.00	0.00	1	0	Pass	
2 Nitrophenol	M18	Au20508	NCP	mg	L	0.01	0.01	1	0	Pass	
2. Dimethylphenol	M18	Au20508	NCP	mg	L	0.00	0.00	1	0	Pass	
2. Dinitrophenol	M18	Au20508	NCP	mg	L	0.0	0.0	1	0	Pass	
Methylphenol m p Cresol	M18	Au20508	NCP	mg	L	0.00	0.00	1	0	Pass	
Nitrophenol	M18	Au20508	NCP	mg	L	0.0	0.0	1	0	Pass	
Dinoseb	M18	Au20508	NCP	mg	L	0.1	0.1	1	0	Pass	
Phenol	M18	Au20508	NCP	mg	L	0.00	0.00	1	0	Pass	
Duplicate											
Heavy Metals					Result 1	Result 2	RPD				
Arsenic	M18	Au18211	NCP	mg	L	0.001	0.001	8.0	0	Pass	
Cadmium	M18	Au18211	NCP	mg	L	0.0002	0.0002	1	0	Pass	
Chromium	M18	Au18211	NCP	mg	L	0.002	0.002	2.0	0	Pass	
Copper	M18	Au18211	NCP	mg	L	0.00	0.00	12	0	Pass	
Lead	M18	Au18211	NCP	mg	L	0.002	0.002	.0	0	Pass	
Mercury	M18	Au18211	NCP	mg	L	0.0001	0.0001	1	0	Pass	
Nickel	M18	Au18211	NCP	mg	L	0.00	0.00	.0	0	Pass	
inc	M18	Au18211	NCP	mg	L	0.0 5	0.0 5	2.0	0	Pass	

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Comments

Sample Integrity

Custody Seals Intact if used	N A
Attempt to Chill was evident	Y es
Sample correctly preserved	Y es
Appropriate sample containers have been used	Y es
Sample containers for volatile analysis received with minimal headspace	Y es
Samples received within HoldingT ime	Y es
Some samples have been subcontracted	No

Q ualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the " naphthalene" value from the " C10 C1 " value. T he naphthalene value used in this calculation is obtained from volatiles Purge T rap analysis .
N02	Where we have reported both volatile P T G CM S and semivolatile G CM S 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 Q AQ C acceptance criteria and are entirely technically valid.
N0	F1 is determined by arithmetically subtracting the " T otal BT EX " value from the " C C10" value. T he " T otal BT EX " value is obtained by summing the concentrations of BT EX analytes. T he " C C10" value is obtained by quantitating against a standard of mixed aromatic aliphatic analytes.
N0	Please note: T hese two PAH isomers closely co elute using the most contemporary analytical methods and both the reported concentration and the T EQ apply specifically to the total of the two co eluting PAHs

Authorised B y

Nibha V aidya	Analytical Services M anager
Alex Petridis	Senior Analyst M etal V IC
oseph Edouard	Senior Analyst O rganic V IC
Harry Bacalis	Senior Analyst V olatile V IC

G lenn J ackson
National Operations Manager

Final report - this Report replaces any previously issued Report

Indicates Not Requested
Indicates NAT A accreditation does not cover the performance of this service

M easurement uncertainty of test data is available on request or please here.

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Company Name:	T race Environmental P L	Order No.:	
Address:	Shop 2 New Canterbury Road	Report :	12 28
	Dulwich Hill	Phone:	02 8 0 0555
	NSW 220	Fax:	
Project Name:	MASCOT		
Project ID:	1.1		

Received:	Aug 15 2018 5: 1 PM
Due:	Aug 2 2018
Priority:	5 Day
Contact Name:	ack Ellis

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH Test	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271								X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217						X	X									X	X
Brisbane Laboratory NATA Site 207 4									X					X	X		
Perth Laboratory NATA Site 23736																	
External Laboratory																	
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID												
1	SB 2.0	Aug 0 2018		Soil	S18 Au188									X			
2	SB .0	Aug 0 2018		Soil	S18 Au188 8									X			
	SB 5.0	Aug 0 2018		Soil	S18 Au188									X			
	SB1 0.	Aug 1 2018		Soil	S18 Au18850	X	X			X			X				
5	SB1 .0	Aug 10 2018		Soil	S18 Au18851		X										
	SB1 .0	Aug 10 2018		Soil	S18 Au18852									X			
	SB1 8.0	Aug 10 2018		Soil	S18 Au1885									X			
8	SB1 10.0	Aug 10 2018		Soil	S18 Au1885									X			
	SB1 .8	Aug 10 2018		Soil	S18 Au18855									X			

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NAT A 12 1 Site 20

Perth
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K ewdale WA 125
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NAT A 12 1
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Company Name:	T race Environmental P L	Order No.:	
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	Dulwich Hill	Phone:	02 8 0 0555
	NSW 220	Fax:	
Project Name:	M ASCO T		
Project ID:	1.1		

Received:	Aug 15	2018 5: 1 PM
Due:	Aug 2	2018
Priority:	5 Day	
Contact Name:	ack Ellis	

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail							Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271																		
Sydney Laboratory NATA Site 1 217							X	X									X	X
B risbane Laboratory NATA Site 207 4																		
Perth Laboratory NATA Site 23736																		
10	SB1	.0	Aug 10	2018	Soil	S18 Au1885												
11	SB1	8.0	Aug 10	2018	Soil	S18 Au1885												
12	SB1	10.0	Aug 10	2018	Soil	S18 Au18858												
1	SB20	5.0	Aug 08	2018	Soil	S18 Au1885												
1	SB20	8.0	Aug 08	2018	Soil	S18 Au188 0												
15	SB20	10.0	Aug 08	2018	Soil	S18 Au188 1												
1	SB20	12.0	Aug 08	2018	Soil	S18 Au188 2												
1	SB21	0.15	Aug 1	2018	Soil	S18 Au188												X
18	SB21	0.	Aug 08	2018	Soil	S18 Au188	X											
1	SB22	0.1	Aug 08	2018	Soil	S18 Au188 5												
20	SB22	1.	Aug 08	2018	Soil	S18 Au188												X
21	SB22	.0	Aug 08	2018	Soil	S18 Au188												

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Site 2

Company Name:	T race Environmental P L	Order No.:		Received:	Aug 15 2018 5: 1 PM
Address:	Shop 2 New Canterbury Road	Report :	12 28	Due:	Aug 2 2018
	Dulwich Hill	Phone:	02 8 0 0555	Priority:	5 Day
	NSW 220	Fax:		Contact Name:	ack Ellis
Project Name:	MASCO T				
Project ID:	1.1				

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail					Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271							X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217					X	X									X	X
Brisbane Laboratory NATA Site 207 4								X					X	X		
Perth Laboratory NATA Site 23736																
22	SB22 5.0	Aug 08 2018	Soil	S18 Au188 8									X			
2	SB22 .0	Aug 08 2018	Soil	S18 Au188								X			X	
2	SB22 .0	Aug 08 2018	Soil	S18 Au188 0									X			
25	SB2 2.0	Aug 08 2018	Soil	S18 Au188 1									X			
2	SB2 .0	Aug 08 2018	Soil	S18 Au188 2									X			
2	SB2 .0	Aug 10 2018	Soil	S18 Au188									X			
28	SB2 8.0	Aug 10 2018	Soil	S18 Au188									X			
2	SB2 10.0	Aug 10 2018	Soil	S18 Au188 5									X			
0	Q A1	Aug 1 2018	Soil	S18 Au188	X											
1	Q S	Aug 1 2018	Soil	S18 Au188								X			X	
2	RB2	Aug 1 2018	Water	S18 Au188 3							X					
	RB	Aug 1 2018	Water	S18 Au188							X					

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ABN– 50 005 085 521
e-mail : EnviroSales eurofins.com
web : www.eurofins.com.au

NAMEAddress
2 5 K ingston T own Close
Oakleigh V IC 85 5000
Phone : 1
NAT A 12 1
Site 125 1 2 1

Sydney
nit 2
1 Mars Road
Lane Cove West NSW 20
Phone : 12
NAT A 12 1 Site 1621

Brisbane
1 21 Smallwood Place
Murarrie Q LD 1 2 02 00
Phone : 1
NAT A 12 1 Site 20 00

Perth
2 1 Leach Highway
K ewdale WA 135
Phone : 1 8 251 00
NAT A 12 1
Site 2

Company Name:	T race Environmental P L	Order No.:	
Address:	Shop 2	Report :	12 28
	Dulwich Hill	Phone:	02 8 0 0555
	NSW 220	Fax:	
Project Name:	M ASCO T		
Project ID:	1.1		

Received:	Aug 15	2018 5:	1 PM
Due:	Aug 2	2018	
Priority:	5 Day		
Contact Name:	ack Ellis		

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271																	
Sydney Laboratory NATA Site 1 217						X	X										
B risbane Laboratory NATA Site 297 4									X					X		X	X
Perth Laboratory NATA Site 23736															X		
	SB 0.2	Aug 1	2018	Soil	S18 Au18880	X							X				X
5	SB 0.25	Aug 1	2018	Soil	S18 Au18881	X							X				X
	SB8 0.15	Aug 1	2018	Soil	S18 Au18882								X				X
	SB 0.25	Aug 1	2018	Soil	S18 Au1888	X							X				X
8	SB2 0.	Aug 1	2018	Soil	S18 Au1888	X							X				X
	SB2 0.	Aug 1	2018	Soil	S18 Au18885	X							X				X
0	SB25 0.25	Aug 1	2018	Soil	S18 Au1888	X							X				X
1	Q A2	Aug 1	2018	Soil	S18 Au1888	X											
2	RB	Aug 1	2018	Water	S18 Au18886												X
	SB1 0.5	Aug 0	2018	Soil	S18 Au1888				X								
	SB 0.	Aug 0	2018	Soil	S18 Au188				X								
5	SB .0	Aug 0	2018	Soil	S18 Au188				X								

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NATA 12 1 Site 1821

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Phone : 1 02 00
NATA 12 1 Site 20

Perth
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Phone : 1 8 251 00
NATA 12 1
Site 2

Company Name:	Trace Environmental P L	Order No.:		Received:	Aug 15 2018 5: 1 PM
Address:	Shop 2 New Canterbury Road Dulwich Hill NSW 220	Report :	12 28	Due:	Aug 2 2018
		Phone:	02 8 0 0555	Priority:	5 Day
		Fax:		Contact Name:	ack Ellis
Project Name:	MASCOT				
Project ID:	1.1				

Eurofins mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH Test	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271								X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217						X	X									X	X
Brisbane Laboratory NATA Site 207 4									X					X	X		
Perth Laboratory NATA Site 23736																	
	SB10	0.5	Aug 10 2018	Soil	S18 Au188 2				X								
	SB11	0.5	Aug 0 2018	Soil	S18 Au188				X								
8	SB11	.8	Aug 0 2018	Soil	S18 Au188				X								
	SB1	0.5	Aug 10 2018	Soil	S18 Au188 5				X								
50	SB1	1.2	Aug 10 2018	Soil	S18 Au188				X								
51	SB1	2.0	Aug 10 2018	Soil	S18 Au188				X								
52	SB1	.0	Aug 10 2018	Soil	S18 Au188 8				X								
5	SB1	5.0	Aug 10 2018	Soil	S18 Au188				X								
5	SB1	.0	Aug 10 2018	Soil	S18 Au18 00				X								
55	SB1	.0	Aug 10 2018	Soil	S18 Au18 01				X								
5	SB1	0.5	Aug 10 2018	Soil	S18 Au18 02				X								
5	SB1	5.0	Aug 10 2018	Soil	S18 Au18 0				X								

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Phone : 1
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Perth
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K ewdale WA 125
Phone : 1 8 251 00
NAT A 12 1
Site 2

Company Name:	T race Environmental P L	Order No.:	
Address:	Shop 2	Report :	12 28
	Dulwich Hill	Phone:	02 8 0 0555
	NSW 220	Fax:	
Project Name:	M ASCO T		
Project ID:	1.1		

Received:	Aug 15	2018 5: 1 PM
Due:	Aug 2	2018
Priority:	5 Day	
Contact Name:	ack Ellis	

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail								Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271										X									
Sydney Laboratory NATA Site 1 217								X	X										
B risbane Laboratory NATA Site 207 4											X					X	X		
Perth Laboratory NATA Site 23736																			
58	SB1	.0	Aug 10	2018	Soil	S18	Au18	0			X								
5	SB1	.0	Aug 10	2018	Soil	S18	Au18	05			X								
0	SB20	0.	Aug 08	2018	Soil	S18	Au18	0			X								
1	SB20	1.0	Aug 08	2018	Soil	S18	Au18	0			X								
2	SB20	2.2	Aug 08	2018	Soil	S18	Au18	08			X								
	SB20	2.	Aug 08	2018	Soil	S18	Au18	0			X								
	SB20	.0	Aug 08	2018	Soil	S18	Au18	10			X								
5	SB20	.0	Aug 08	2018	Soil	S18	Au18	11			X								
	SB20	.0	Aug 08	2018	Soil	S18	Au18	12			X								
	SB20	11.0	Aug 08	2018	Soil	S18	Au18	1			X								
8	SB21	0.5	Aug 1	2018	Soil	S18	Au18	1		X									
	SB21	0.8	Aug 1	2018	Soil	S18	Au18	15			X								

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NAT A 12 1 Site 20

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K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1
Site 2

Company Name: T race Environmental P L
Address: Shop 2 New Canterbury Road
Dulwich Hill
NSW 220

Project Name: M ASCO T
Project ID: 1.1

Order No.:
Report : 12 28
Phone: 02 8 0 0555
Fax:

Received: Aug 15 2018 5: 1 PM
Due: Aug 2 2018
Priority: 5 Day
Contact Name: ack Ellis

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail					Asbestos WA guidelines	CANCELLED	HO LD	HO LD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271							X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217					X	X									X	X
B risbane Laboratory NATA Site 207 4								X					X	X		
Perth Laboratory NATA Site 23736																
0	SB22 0.	Aug 1 2018	Soil	S18 Au18 1			X									
1	SB22 1.0	Aug 1 2018	Soil	S18 Au18 1				X								
2	SB22 2.0	Aug 1 2018	Soil	S18 Au18 18			X									
	SB22 2.	Aug 1 2018	Soil	S18 Au18 1			X									
	SB22 .0	Aug 1 2018	Soil	S18 Au18 20			X									
5	SB2 0.2	Aug 1 2018	Soil	S18 Au18 21				X								
	SB2 1.0	Aug 1 2018	Soil	S18 Au18 22				X								
	SB2 .0	Aug 1 2018	Soil	S18 Au18 2				X								
8	SB2 5.0	Aug 1 2018	Soil	S18 Au18 2				X								
	SB2 .0	Aug 10 2018	Soil	S18 Au18 25				X								
80	SB2 .0	Aug 10 2018	Soil	S18 Au18 2				X								
81	SB2 0.2	Aug 08 2018	Soil	S18 Au18 2				X								

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Brisbane
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Murarrie Q LD 1 2
Phone : 1 02 00
NAT A 12 1 Site 20

Perth
2 1 Leach Highway
K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1
Site 2

Company Name:	T race Environmental P L	Order No.:		Received:	Aug 15 2018 5: 1 PM
Address:	Shop 2 New Canterbury Road	Report :	12 28	Due:	Aug 2 2018
	Dulwich Hill	Phone:	02 8 0 0555	Priority:	5 Day
	NSW 220	Fax:		Contact Name:	ack Ellis
Project Name:	MASCO T				
Project ID:	1.1				

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail					Asbestos WA guidelines	CANCELLED	HOLD	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B15	Moisture Set	Acid Sulfate Soils Field pH T est	NEPM Screen for Soil Classification	Eurofins mgt Suite B	Eurofins mgt Suite B A
Melbourne Laboratory NATA Site 12 4 & 14271							X		X	X	X	X		X	X	X
Sydney Laboratory NATA Site 1 217					X	X									X	X
Brisbane Laboratory NATA Site 207 4								X					X	X		
Perth Laboratory NATA Site 23736																
82	SB2 1.0	Aug 08 2018	Soil	S18 Au18 28				X								
8	SB2 .1	Aug 08 2018	Soil	S18 Au18 2				X								
8	SB2 5.0	Aug 08 2018	Soil	S18 Au18 0				X								
85	SB2 .0	Aug 08 2018	Soil	S18 Au18 1				X								
8	SB2 0.2	Aug 1 2018	Soil	S18 Au18 2				X								
8	SB22 0.5	Aug 1 2018	Soil	S18 Au20518	X				X	X		X				
88	SB8 0.	Aug 1 2018	Soil	S18 Au2051	X											
8	SB1 1.2	Aug 10 2018	Soil	S18 Au20522				X								
0	SB20 .0	Aug 08 2018	Soil	S18 Au2052				X								
1	SB20 .8	Aug 08 2018	Soil	S18 Au2052				X								
Test Counts					12	2				2	1		1	22	1	2

10

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ne Cove West NSW 20
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NAT A 12 1 Site 20
NAT A 12 1 Site 1821

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NAT A 12 1 Site 2
M urarrie Q LD 1 2
Phone : 1 02 0

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name: T race Environmental P L

Contact name: ack Ellis
Pro ect name: M ASCO T
Pro ect ID: 1.1
CO C number: Not provided
T urn around time: 5 Day
Date T ime received: Aug 15 2018 5: 1 PM
Eurofins mgt reference: 12122828228

Sample information

☑ A detailed list of analytes logged into our LIM S is included in the attached summary table.

☑ Sample T emperature of a random sample selected from the batch as recorded by Eurofins mgt Sample Receipt : 2. degrees Celsius.

☑ All samples have been received as described on the above CO C.

☑ CO C 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 ero headspace.

☑ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

[redacted] N/A Custody Seals intact if used .

Q A1A Q A2A Q S A Forwarded to ALS for analysis. Additional ASSpH bags for SB20 .0 SB20 .8 placed on hold. ASSpH bag not received for SB22 2.0 SB1 0. ASSpH analysis cancelled SB1 .0 ASSpH analysis cancelled .

Contact notes

If you have any questions with respect to these samples please contact:

Nibha V aidya on Phone : 1 2 00 8 15 or by e.mail: NibhaV aidya eurofins.com

Results will be delivered electronically via e.mail to ack Ellis ack traceenviro.com.

NATA ACCREDITATION

Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis

NAT A Accreditation
Stack Emission Sampling Analysis
T rade Waste Sampling Analysis
G roundwater Sampling Analysis

38 Years of Environmental Analysis & Experience

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CHAIN OF CUSTODY RECORD

Page 1 of 1

CLIENT DETAILS			
Company Name : TRACE Environmental	Contact Name: Jack Ellis	Purchase Order :	COC Number : 180802TRAap
Office Address : 793-799 New Canterbury Road, Dulwich Hill, NSW	Project Manager : Kerna Henderson	PROJECT Number : 116	Eurofins | mgt quote ID : 1 of 6
	Email for results : ken@traceenviro.com	PROJECT Name : Mascot	Data output format:

Special Directions : Please email invoices to: accounts@traceenviro.com & Proj Manager

Eurofins | mgt DI water batch number:

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 day	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pe	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 mon	Heavy Metals	6 months
Mercury, CrVI	28 day	Mercury, CrVI	28 days
Microbiological testing	24 hou	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, To	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, C	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Analytes / Containers:

No.	Sample ID	Date	Matrix	Asbestos (WA/NEPM)	Suite B7	Suite B7A	Suite B15	PAH	Asbestos Suite M8	VOC	* Field pH & pH (fox)	28 SPOCAS	Suite R21	HOLD	1LP	250P	125P	1LA	40mL vial	125mL	Jar	Bag	Sample comments
1	SB1/0.5	9/8/18	Soil																			/	contact sample
2	SB6/0.4	↓	↓																			/	contact sample
3	SB6/2.0	↓	↓								/											/	
4	SB6/3.0	↓	↓																			/	
5	SB6/4.0	↓	↓								/											/	
6	SB6/5.0	↓	↓								/											/	
7	SB10/0.5	10/8/18	↓																			/	
8	SB11/0.5	9/8/18	↓																			/	
9	SB11/4.8	↓	↓																			/	
10	SB13/0.3	13/8/18	↓	/				/	/												/	/	
11	SB14/0.5	10/8/18	↓																			/	
12	SB14/1.2	↓	↓																			/	
13	SB14/2.0	↓	↓								[scribbled out]											/	
14	SB14/3.0	↓	↓																			/	
15	SB14/4.0	↓	↓								/											/	
16	SB14/5.0	↓	↓																			/	

Relinquished	Laboratory Staff	Turn around time	Method Of Shipment	Temperature on arrival:
Jack Ellis	Received By: [signature]	1 DAY / 2 DAY / 3 DAY	Courier	
Date & Time: J Ellis	Date & Time: 15/08/18 ~ 4PM	5 DAY / 10 DAY / Other:	Hand Delivered	Report number: #612428
Signature: 14/8/18	Signature: [signature]		Postal / Courier Consignment	

QS3009_R1 Issue Date: 22 August 2013 Page 1 of 1

* pH fox only (SPOCAS ASS method) "field test" - ASS pH (NATA method - ASSNATA pH)

All ASS bags have been frozen.

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CHAIN OF CUSTODY RECORD

Page 1 of 1

CLIENT DETAILS

Company Name : TRACE Environmental	Contact Name: Jack Ellis	Purchase Order :	COC Number : 2 of 6
Office Address : 793-799 New Canterbury Road, Dulwich Hill, NSW.	Project Manager : See COC Page 1	PROJECT Number : 1.16	Eurofins | mgt quote ID : See Pg 1
	Email for results : See COC Page 1	PROJECT Name : Mascot	Data output format:

Special Directions : Please email invoices to accounts@traceenviro.com & Proj Manager

Eurofins | mgt DI water batch number:

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pe	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 mon	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hou	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, To	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, C	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

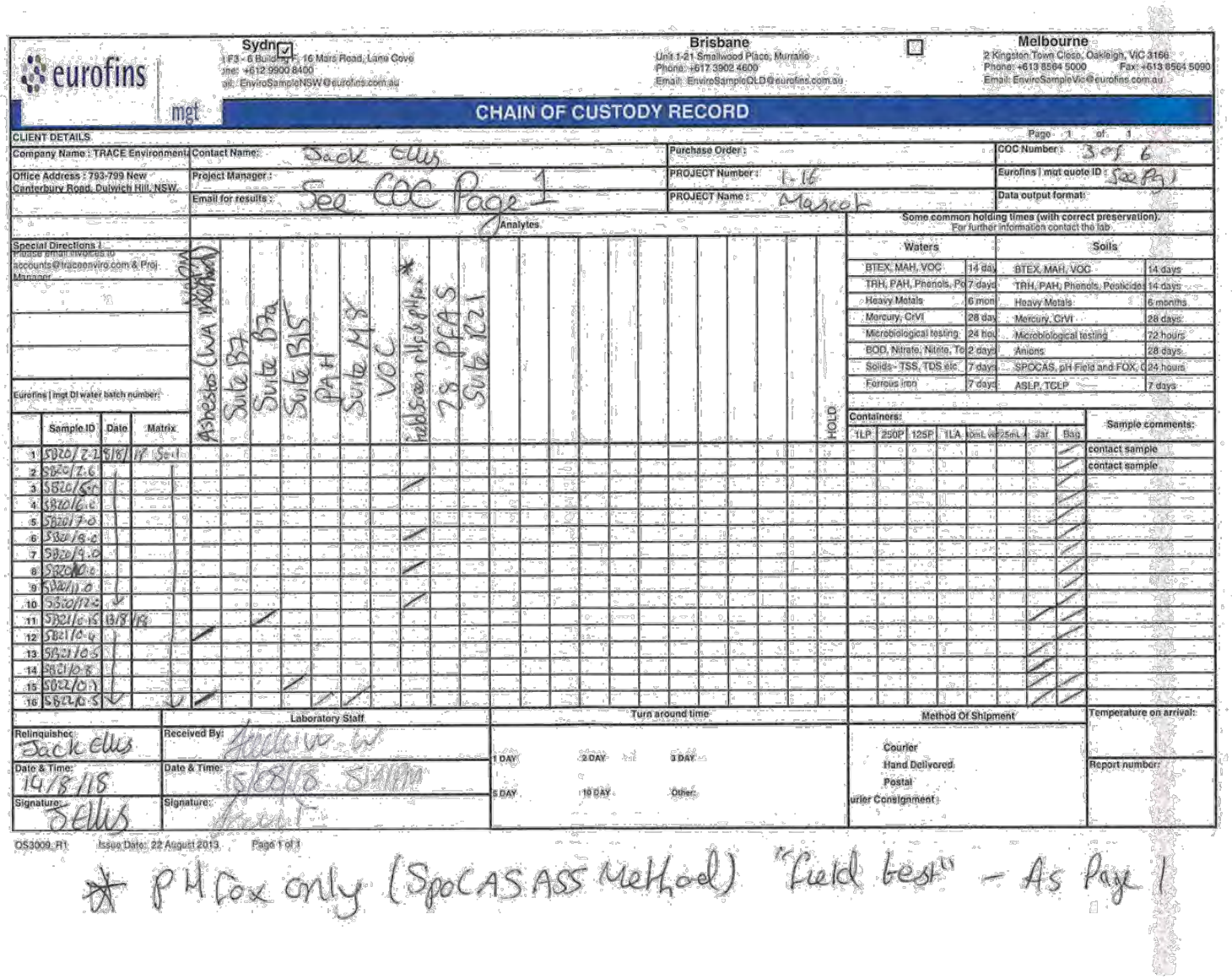
Analytes

	Sample ID	Date	Matrix	Asbestos (WA NEPM)	Suite B7	Suite B7a	Suite B15	PAH	Suite M8	VOC	Field Screen pH_F & pH_FOX *	28 PFAS	Suite RZ1	HOLD	1LP	250P	125P	1LA	40mL vial	125mL A	Jar	Bag	Sample comments:
1	SB14/6.0	10/8/18	Soil								/			X								/	contact sample
2	SB14/7.0													X								/	contact sample
3	SB14/8.0										/			X								/	
4	SB14/9.0													X								/	
5	SB14/10.0										/											/	
6	SB17/0.5																					/	
7	SB17/1.2																					/	
8	SB17/3.8										/											/	
9	SB17/5.0																					/	
10	SB17/6.0										/											/	
11	SB17/7.0																					/	
12	SB17/8.0										/											/	
13	SB17/9.0																					/	
14	SB17/10.0										/											/	
15	SB20/0.3	8/8/18																				/	
16	SB20/1.0																					/	

	Laboratory Staff	Turn around time	Method Of Shipment	Temperature on arrival:
Relinquished: Jack Ellis	Received By: [signature]	1 DAY 2 DAY 3 DAY	Courier	
Date & Time: 14/8/18	Date & Time: 15/8/18 8:41AM	5 DAY 10 DAY Other:	Hand Delivered	Report number:
Signature: JEllis	Signature: [signature]		Postal / Courier Consignment	

QS3009_R1 Issue Date: 22 August 2013 Page 1 of 1

* pH Fox only (SPOCAS ASS Method) "field test" – As Page 1



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Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

Page 1 of 1

CLIENT DETAILS
Company Name : TRACE Environmental
Contact Name: Jack Ellis
Office Address : 793-799 New Canterbury Road, Dulwich Hill, NSW.
Project Manager :
Email for results : See COC Page 1
Purchase Order :
PROJECT Number : L16
PROJECT Name : Mascot
COC Number : 3 of 6
Eurofins | mgt quote ID : See Pg 1
Data output format:

Special Directions :
Please email invoices to accounts@traceenviro.com & Proj Manager.
Eurofins | mgt DI water batch number:

Analytes: Asbestos (WA WORK) | Suite B7 | Suite B7a | Suite B15 | PAH | Suite 4.8 | VOC | * | 28 PFAS | Suite 12.1 | HOLD

	Sample ID	Date	Matrix
1	SB20/2-2.5	13/8/18	Soil
2	SB20/2.6		
3	SB20/3.0		
4	SB20/6.0		
5	SB20/7.0		
6	SB20/8.0		
7	SB20/9.0		
8	SB20/10.0		
9	SB21/1.0		
10	SB20/12.0	↓	
11	SB21/0.15	13/8/18	
12	SB21/0.4		
13	SB21/0.5		
14	SB21/0.8		
15	SB22/0.1		
16	SB22/0.5	↓	↓

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 day	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Po	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 mon	Heavy Metals	6 months
Mercury, CrVI	28 day	Mercury, CrVI	28 days
Microbiological testing	24 hou	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, To	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, C	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

1LP	250P	125P	1LA	40mL vial	25mL vial	Jar	Bag

Sample comments:
contact sample
contact sample

Laboratory Staff
Relinquished: Jack Ellis
Date & Time: 14/8/18
Signature: JEllis
Received By:
Date & Time: 15/8/18
Signature:

Turn around time
1 DAY 2 DAY 3 DAY
5 DAY 10 DAY Other:

Method Of Shipment
Courier
Hand Delivered
Postal
urier Consignment

Temperature on arrival:
Report number:

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* PH Fox only (SpoCAS ASS Method) "Field test" - As Page 1

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CHAIN OF CUSTODY RECORD

Page 1 of 1

CLIENT DETAILS

Company Name : TRACE Environmental	Contact Name: Jack Ellis	Purchase Order :	COC Number : 4 of 6
Office Address : 793-799 New Canterbury Road, Dulwich Hill, NSW.	Project Manager : See CCE page 1	PROJECT Number :	Eurofins | mgt quote ID : See Pg 1
	Email for results :	PROJECT Name :	Data output format:

Special Directions / Please email invoices to accounts@traceenviro.com & Proj Manager

Eurofins | mgt DI water batch number:

Analytes

	Sample ID	Date	Matrix	Asbestos (WA NEPM)	Suite B7	Suite B7a	Suite B15	PAH	Suite M8	VOC	Lab screen pH Fox*	28 PFAS	Suite B21	HOLD
1	SB22/0.9	13/8/18	Soil											
2	SB22/1.0	↓												
3	SB22/1.3					✓							✓	
4	SB22/2.0													
5	SB22/2.6													
6	SB22/3.0										✓			
7	SB22/4.0													
8	SB22/5.0										✓			
9	SB22/6.0				✓									
10	SB22/7.0	↓									✓			
11	SB26/0.2													
12	SB26/1.0													
13	SB26/2.0										✓			
14	SB26/3.0													
15	SB26/4.0										✓			
16	SB26/5.0													

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous Iron	7 days	ASLP, TCLP	7 days

Containers: 1LP | 250P | 125P | 1LA | 40mL vial | 125mL | Jar | Bag

Sample comments: contact sample; contact sample

Relinquished	Laboratory Staff	Turn around time	Method Of Shipment	Temperature on arrival:
Jack Ellis	Received By: Ayla W	1 DAY 2 DAY 3 DAY	Courier	
Date & Time: 14/8/18	Date & Time: 15/08/18 5:41PM	5 DAY 10 DAY Other:	Hand Delivered	Report number:
Signature: J Ellis	Signature: [illegible]		Postal	
			Courier Consignment	

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* pH fox only (SPOCAS/ASS Method) "Field test" - As Page 1

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☐ **Brisbane**
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☐ **Melbourne**
2 Kingston Town Close, Oakleigh, VIC 3166
Phone: +613 8564 5000 Fax: +613 8564 5090
Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

Page 1 of 1

CLIENT DETAILS

Company Name : TRACE Environmental	Contact Name: Jack Ellis	Purchase Order :	COC Number : Sop 6
Office Address : 793-799 New Canterbury Road, Dulwich Hill, NSW, 2203	Project Manager : See COC Page 1	PROJECT Number :	Eurofins | mgt quote ID : see page 1
	Email for results :	PROJECT Name :	Data output format:

Special Directions & Comments: Please email invoices to accounts@traceenviro.com & Proj Manager

Eurofins | mgt DI water batch number:

Analytes: Asbestos (w/w %) | Suite B7 | Suite B7a | Suite B15 | PAH | Suite M8 | VOC | Fieldscreen pH + pHfox* | 28 PFAS | Suite B21 | Send to ALS | HOLD

	Sample ID	Date	Matrix	Asbestos (w/w %)	Suite B7	Suite B7a	Fieldscreen pH + pHfox*	Send to ALS	Containers	Bag	Sample comments
1	SB26/6.0	10/8/18	Soil				/			/	contact sample
2	SB26/7.0	↓	↓				/			/	contact sample
3	SB26/8.0	↓	↓				/			/	
4	SB26/9.0	↓	↓				/			/	
5	SB26/10.0	↓	↓				/			/	
6	SB27/0.2	8/8/18	↓							/	
7	SB27/1.0	↓	↓							/	
8	SB27/3.1	↓	↓							/	
9	SB27/5.0	↓	↓							/	
10	SB27/6.0	↓	↓							/	
11	QA1	13/8/18	↓	/						/	
12	QA1A	↓	↓	/				/		/	
13	QS3	↓	↓		/				/		
14	QS3A	↓	↓		/			/	/		
15	RB2	↓	Water		/	/			/ / /		
16	RB3	14/8/18	Water			/					

Containers: 1LP | 250P | 125P | 1LA | 40mL vial | 125mL A | Jar | Bag

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Relinquished	Laboratory Staff	Turn around time	Method Of Shipment	
Relinquished: Jack Ellis	Received By: [signature]	☐ 1 DAY ☐ 2 DAY ☐ 3 DAY	☐ Courier ☐ Hand Delivered ☐ Postal	Temperature on arrival:
Date & Time: 14/8/18	Date & Time: 15/08/18 5:41AM	☐ 5 DAY ☐ 10 DAY Other:	Courier Consignment	Report number:
Signature: J Ellis	Signature: [signature]			

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* pH fox only (SPOCAS ASS Method) "field test" - As page 1

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CHAIN OF CUSTODY RECORD

Page 1 of 1

CLIENT DETAILS

Company Name : TRACE Environmental	Contact Name: Jack Ellis	Purchase Order :	COC Number : 6 of 6
Office Address : 793-799 New Canterbury Road, Dulwich Hill, NSW, 2203	Project Manager : * See CC page 1	PROJECT Number : 1.16	Eurofins | mgt quote ID : [illegible]
	Email for results :	PROJECT Name : Mascot	Data output format:

Special Directions & Con
Please email invoices to accounts@traceenviro.com & Proj Manager

Eurofins | mgt DI water batch number:

Analytes

	Sample ID	Date	Matrix	Asbestos (WA NEPM)	Suite B7	Suite B7a	Suite B15	PAH	Suite M8	VOC	Field Screen pH pHfox*	2S PCAS	Suite K21	Send to ALS	HOLD	Jar	Bag	Sample comments
1	SD4/0.2	14/8/18	Soil	✓		✓										✓	✓	contact sample
2	SB7/0.25	14/8/18		✓		✓										✓	✓	contact sample
3	SB8/0.15					✓										✓	✓	
4	SB8/0.3			✓												✓	✓	
5	SB9/0.15			✓		✓										✓	✓	
6	SB23/0.2															✓	✓	
7	SB23/0.4			✓		✓										✓	✓	
8	SB24/0.3			✓		✓										✓	✓	
9	SB25/0.25			✓		✓										✓	✓	
10	QA2			✓													✓	
11	QA2A			✓										✓			✓	sent to ALS
12	RB4	8/8/18	Water			✓												
13																		
14																		
15																		
16																		

Containers: 1LP | 250P | 125P | 1LA | mL vial | 125mL A | Jar | Bag

Some common holding times (with correct preservation). For further information contact the lab.

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Relinquished: Jack Ellis	Laboratory Staff — Received By: [signature]	Turn around time: 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 DAY ☐ 10 DAY ☐ Other:	Method Of Shipment: Courier / Hand Delivered / Postal / Courier Consignment:	Temperature on arrival:
Date & Time: 14/8/18	Date & Time: 15/08/18 5:41pm			Report number:
Signature: JEllis	Signature: [signature]			

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* PHfox only (SPOCAS Method) "Field test" - As Page 1

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Testing For Life

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 207 4

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests calibrations and or measurements included in this document are traceable to Australian national standards.

Trace Environmental P/L
Shop 2, 7 3 7 New Canterbury Road
Dulwich Hill
NSW 2203

Attention: K en Henderson

Report 61424 S
Pro ect name **MASCO T**
Pro ect ID **1.1**
Received Date **Aug 2 2018**

Client Sample ID			SB 6/2.0	SB 6/ .0	SB 14/ .0	SB 17/10.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			B 1 Au33126	B 1 Au33127	B 1 Au3312	B 1 Au3312
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
T est Reference	LO R	nit				
SPOCAS Suite						
pH K CL	0.1	pH nits	.	5.8	5.	5.
pH O X	0.1	pH nits	.8	.	.0	.2
Acid trail T itratable Actual Acidity	2	mol H t	2	2.	.8	2
Acid trail T itratable Peroxide Acidity	2	mol H t	2	10	5	2
Acid trail T itratable Sulfidic Acidity	2	mol H t	2	2	8	2
sulfidic T AA equiv. S pyrite	0.02	pyrite S	0.02	0.02	0.02	0.02
sulfidic T PA equiv. S pyrite	0.02	pyrite S	0.02	0.02	0.08	0.0
sulfidic T SA equiv. S pyrite	0.02	pyrite S	0.02	0.02	0.08	0.0
Sulfur K Cl Extractable	0.02	S	0.02	0.02	0.02	0.02
Sulfur Peroxide	0.02	S	0.02	0.02	0.0	0.0
Sulfur Peroxide O xidisable Sulfur	0.02	S	0.02	0.02	0.0	0.0
acidity Peroxide O xidisable Sulfur	10	mol H t	10	10		20
HCl Extractable Sulfur	0.02	S	n a	n a	n a	n a
Net Acid soluble sulfur	0.02	S	n a	n a	n a	n a
Net Acid soluble sulfur acidity units	10	mol H t	n a	n a	n a	n a
Net Acid soluble sulfur equivalent S pyrite	0.02	S	n a	n a	n a	n a
Calcium K Cl Extractable	0.02	Ca	0.0	0.02	0.02	0.02
Calcium Peroxide	0.02	Ca	0.12	0.02	0.02	0.02
Acid Reacted Calcium	0.02	Ca	0.08	0.02	0.02	0.02
acidity Acid Reacted Calcium	10	mol H t	0	10	10	11
sulfidic Acid Reacted Ca equiv. S pyrite	0.02	S	0.0	0.02	0.02	0.02
Magnesium K Cl Extractable	0.02	Mg	0.02	0.02	0.02	0.02
Magnesium Peroxide	0.02	Mg	0.02	0.02	0.02	0.02
Acid Reacted Magnesium	0.02	Mg	0.02	0.02	0.02	0.02
acidity Acid Reacted Magnesium	10	mol H t	10	10	10	10
sulfidic Acid Reacted Mg equiv. S pyrite	0.02	S	0.02	0.02	0.02	0.02
Acid Neutralising Capacity ANCE	0.02	CaCO	0.25	n a	n a	n a
Acid Neutralising Capacity Acidity units a ANCE	10	mol H t		n a	n a	n a
Acid Neutralising Capacity equivalent S pyrite ANCE	0.02	S	0.08	n a	n a	n a
ANC Fineness Factor		factor	1.5	1.5	1.5	1.5
SPO CAS Net Acidity Sulfur nits	0.02	S	0.02	0.02	0.08	0.0
SPO CAS Net Acidity Acidity nits	10	mol H t	10	10	51	20
SPO CAS Liming rate	1	kg CaCO t	1	1	.0	2.0

Client Sample ID			SB 6/2.0	SB 6/ .0	SB 14/ .0	SB 17/10.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			B 1 Au33126	B 1 Au33127	B 1 Au3312	B 1 Au3312
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
T est Reference	LO R	nit				
Chromium Suite						
pH K CL	0.1	pH nits	.	5.8	5.	5.
Acid trail T itratable Actual Acidity	2	mol H	t 2	2.	.8	2
sulfidic T AA equiv. S pyrite	0.02	pyrite S	0.02	0.02	0.02	0.02
Chromium Reducible Sulfur	0.005	S	0.005	0.005	0.051	0.022
Chromium Reducible Sulfur acidity units		mol H	t		2	1
Sulfur K Cl Extractable	0.02	S	0.02	0.02	0.02	0.02
HCl Extractable Sulfur	0.02	S	n a	n a	n a	n a
Net Acid soluble sulfur	0.02	S	n a	n a	n a	n a
Net Acid soluble sulfur acidity units	10	mol H	t n a	n a	n a	n a
Net Acid soluble sulfur equivalent S pyrite	0.02	S	n a	n a	n a	n a
Acid Neutralising Capacity ANCbt	0.01	CaCO	0.12	n a	n a	n a
Acid Neutralising Capacity acidity a ANCbt	2	mol H	t 2	n a	n a	n a
Acid Neutralising Capacity equivalent S pyrite ANCbt	s 0.02	S	0.0	n a	n a	n a
ANC Fineness Factor		factor	1.5	1.5	1.5	1.5
CRS Suite Net Acidity Sulfur nits	0.02	S	0.02	0.02	0.05	0.02
CRS Suite Net Acidity Acidity nits	10	mol H	t 10	10		1
CRS Suite Liming Rate	1	kg CaCO	t 1	1	2.	1.0
Extraneous Material						
2mm Fraction	0.005	g	1 0			110
2mm Fraction	0.005	g	0.005	0.005	0.005	0.005
Analysed Material	0.1		100	100	100	100
Extraneous Material	0.1		0.1	0.1	0.1	0.1
Moisture	1		1.	1	1	15

Client Sample ID			SB 20/ .0	SB 20/12.0	SB 22/ .0	SB 26/2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			B 1 Au33130	B 1 Au33131	B 1 Au33132	B 1 Au33133
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
T est Reference	LO R	nit				
SPOCAS Suite						
pH K CL	0.1	pH nits	5.	5.2	5.	8.2
pH O X	0.1	pH nits	2.8	.2	.2	.2
Acid trail T itratable Actual Acidity	2	mol H	t .0	8.2	.	2
Acid trail T itratable Peroxide Acidity	2	mol H	t	82	2	2
Acid trail T itratable Sulfidic Acidity	2	mol H	t		1	2
sulfidic T AA equiv. S pyrite	0.02	pyrite S	0.02	0.02	0.02	0.02
sulfidic T PA equiv. S pyrite	0.02	pyrite S	0.12	0.1	0.0	0.02
sulfidic T SA equiv. S pyrite	0.02	pyrite S	0.11	0.12	0.0	0.02
Sulfur K Cl Extractable	0.02	S	0.02	0.02	0.02	0.02
Sulfur Peroxide	0.02	S	0.0	0.08	0.02	0.0
Sulfur Peroxide O xidisable Sulfur	0.02	S	0.0	0.08	0.02	0.0
acidity Peroxide O xidisable Sulfur	10	mol H	t 1	8	10	21
HCl Extractable Sulfur	0.02	S	n a	n a	n a	n a
Net Acid soluble sulfur	0.02	S	n a	n a	n a	n a
Net Acid soluble sulfur acidity units	10	mol H	t n a	n a	n a	n a
Net Acid soluble sulfur equivalent S pyrite	0.02	S	n a	n a	n a	n a

Client Sample ID			SB 20/ .0	SB 20/12.0	SB 22/ .0	SB 26/2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			B 1 Au33130	B 1 Au33131	B 1 Au33132	B 1 Au33133
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
T est Reference	LO R	nit				
SPOCAS Suite						
Calcium K Cl Extractable	0.02	Ca	0.02	0.02	0.0	0.05
Calcium Peroxide	0.02	Ca	0.02	0.02	0.0	0.05
Acid Reacted Calcium	0.02	Ca	0.02	0.02	0.02	0.02
acidity Acid Reacted Calcium	10	mol H	t 10	10	10	10
sulfidic Acid Reacted Ca equiv. S pyrite	0.02	S	0.02	0.02	0.02	0.02
Magnesium K Cl Extractable	0.02	Mg	0.02	0.02	0.02	0.02
Magnesium Peroxide	0.02	Mg	0.02	0.02	0.02	0.02
Acid Reacted Magnesium	0.02	Mg	0.02	0.02	0.02	0.02
acidity Acid Reacted Magnesium	10	mol H	t 10	10	10	10
sulfidic Acid Reacted Mg equiv. S pyrite	0.02	S	0.02	0.02	0.02	0.02
Acid Neutralising Capacity ANCE	0.02	CaCO	n a	n a	n a	n a
Acid Neutralising Capacity Acidity units a ANCE		10	mol H t	n an a	n a	n a
Acid Neutralising Capacity equivalent S pyrite ANCE	s 0.02	S	n a	n a	n a	n a
ANC Fineness Factor		factor	1.5	1.5	1.5	1.5
SPO CAS Net Acidity Sulfur nits	0.02	S	0.0	0.0	0.02	0.02
SPO CAS Net Acidity Acidity nits	10	mol H	t 2	5	10	10
SPO CAS Liming rate	1	kg CaCO	t 2.0	.0	1	1.0
Chromium Suite						
pH K CL	0.1	pH nits	5.	5.2	5.	8.2
Acid trail T itratable Actual Acidity	2	mol H	t .0	8.2	.	2
sulfidic T AA equiv. S pyrite	0.02	pyrite S	0.02	0.02	0.02	0.02
Chromium Reducible Sulfur	0.005	S	0.005	0.051	0.005	0.0 1
Chromium Reducible Sulfur acidity units		mol H	t	2		20
Sulfur K Cl Extractable	0.02	S	0.02	0.02	0.02	0.02
HCl Extractable Sulfur	0.02	S	n a	n a	n a	n a
Net Acid soluble sulfur	0.02	S	n a	n a	n a	n a
Net Acid soluble sulfur acidity units	10	mol H	t n a	n a	n a	n a
Net Acid soluble sulfur equivalent S pyrite	0.02	S	n a	n a	n a	n a
Acid Neutralising Capacity ANCbt	0.01	CaCO	n a	n a	n a	0.51
Acid Neutralising Capacity acidity a ANCbt	2	mol H	t n a	n a	n a	100
Acid Neutralising Capacity equivalent S pyrite ANCbt	s 0.02	S	n a	n a	n a	0.1
ANC Fineness Factor		factor	1.5	1.5	1.5	1.5
CRS Suite Net Acidity Sulfur nits	0.02	S	0.02	0.05	0.02	0.02
CRS Suite Net Acidity Acidity nits	10	mol H	t 10	0	10	10
CRS Suite Liming Rate	1	kg CaCO	t 1	.0	1	1
Extraneous Material						
2mm Fraction	0.005	g		120	1 0	120
2mm Fraction	0.005	g	0.005	0.005	0.005	0.005
Analysed Material	0.1		100	100	100	100
Extraneous Material	0.1		0.1	0.1	0.1	0.1
Moisture	1		1	1	1	1

eurofins | mgt

Client Sample ID			SB 26/6.0	SB 26/10.0	SB 14/6.0	SB 17/3.	
Sample Matrix			Soil	Soil	Soil	Soil	
Eurofins mgt Sample No.			B 1 Au33134	B 1 Au3313	B 1 Au33136	B 1	Au33137
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided	
Test Reference	LOR	nit					
SPOCAS Suite							
pH KCL	0.1	pH nits	5.	.	.	.	
pH OX	0.1	pH nits	2.	2.5	5.	.	
Acid trail Titratable Actual Acidity	2	mol H t	.	2	2	2	
Acid trail Titratable Peroxide Acidity	2	mol H t	5	1 0	2	2	
Acid trail Titratable Sulfidic Acidity	2	mol H t	51	1 0	2	2	
sulfidic TAA equiv. S pyrite	0.02	pyrite S	0.02	0.0	0.02	0.02	
sulfidic TPA equiv. S pyrite	0.02	pyrite S	0.0	0.2	0.02	0.02	
sulfidic TSA equiv. S pyrite	0.02	pyrite S	0.08	0.2	0.02	0.02	
Sulfur KCl Extractable	0.02	S	0.02	0.02	0.02	0.02	
Sulfur Peroxide	0.02	S	0.0	0.1	0.02	0.05	
Sulfur Peroxide Oxidisable Sulfur	0.02	S	0.0	0.1	0.02	0.05	
acidity Peroxide Oxidisable Sulfur	10	mol H t	20	0	10		
HCl Extractable Sulfur	0.02	S	n a	n a	n a	n a	
Net Acid soluble sulfur	0.02	S	n a	n a	n a	n a	
Net Acid soluble sulfur acidity units	10	mol H t	n a	n a	n a	n a	
Net Acid soluble sulfur equivalent S pyrite [502]	0.02	S	n a	n a	n a	n a	
Calcium KCl Extractable	0.02	Ca	0.02	0.02	0.02	0.1	
Calcium Peroxide	0.02	Ca	0.0	0.02	0.02	0. 0	
Acid Reacted Calcium	0.02	Ca	0.02	0.02	0.02	0.12	
acidity Acid Reacted Calcium	10	mol H t	10	10	10	1	
sulfidic Acid Reacted Ca equiv. S pyrite	0.02	S	0.02	0.02	0.02	0.10	
Magnesium KCl Extractable	0.02	Mg	0.02	0.02	0.02	0.02	
Magnesium Peroxide	0.02	Mg	0.02	0.02	0.02	0.02	
Acid Reacted Magnesium	0.02	Mg	0.02	0.02	0.02	0.02	
acidity Acid Reacted Magnesium	10	mol H t	10	10	10	10	
sulfidic Acid Reacted Mg equiv. S pyrite	0.02	S	0.02	0.02	0.02	0.02	
Acid Neutralising Capacity ANCE	0.02	CaCO	n a	n a	n a	0.	
Acid Neutralising Capacity Acidity units a ANCE		10	mol H t	n an a	n a	8	
Acid Neutralising Capacity equivalent S pyrite s ANCE	0.02	S	n a	n a	n a	0.1	
ANC Fineness Factor		factor	1.5	1.5	1.5	1.5	
SPOCAS Net Acidity Sulfur nits	0.02	S	0.0	0.1	0.02	0.02	
SPOCAS Net Acidity Acidity nits	10	mol H t	2	120	10	10	
SPOCAS Liming rate	1	kg CaCO t	2.0	.0	1	1	
Chromium Suite							
pH KCL	0.1	pH nits	5.	.			
Acid trail Titratable Actual Acidity	2	mol H t	.	2			
sulfidic TAA equiv. S pyrite	0.02	pyrite S	0.02	0.0			
Chromium Reducible Sulfur [22]	0.005	S	0.011	0.0 8			
Chromium Reducible Sulfur acidity units		mol H t					
Sulfur KCl Extractable	0.02	S	0.02	0.02			
HCl Extractable Sulfur	0.02	S	n a	n a			
Net Acid soluble sulfur	0.02	S	n a	n a			
Net Acid soluble sulfur acidity units	10	mol H t	n a	n a			
Net Acid soluble sulfur equivalent S pyrite [502]	0.02	S	n a	n a			
Acid Neutralising Capacity ANCbt	0.01	CaCO	n a	n a			
Acid Neutralising Capacity acidity a ANCbt	2	mol H t	n a	n a			
Acid Neutralising Capacity equivalent S pyrite s ANCbt [50]	0.02	S	n a	n a			
ANC Fineness Factor		factor	1.5	1.5			

Client Sample ID			SB 26/6.0	SB 26/10.0	SB 14/6.0	SB 17/3.	
Sample Matrix			Soil	Soil	Soil	Soil	
Eurofins mgt Sample No.			B 1 Au33134	B 1 Au3313	B 1 Au33136	B 1	Au33137
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided	
T est Reference	LO R	nit					
Chromium Suite							
CRS Suite Net Acidity Sulfur nits	0.02	S	0.02	0.12			
CRS Suite Net Acidity Acidity nits	10	mol H	t 1	5			
CRS Suite Liming Rate	1	kg CaCO	t 1.0	5.			
Extraneous Material							
2mm Fraction	0.005	g	8	110		110	
2mm Fraction	0.005	g	0.005	0.005	0.005	1.5	
Analysed Material	0.1		100	100	100		
Extraneous Material	0.1		0.1	0.1	0.1	1.	
Moisture	1		1	1	1	15	

Client Sample ID			SB 26/ .0	SB 14/10.0	SB 17/ .0	SB 20/ .0	
Sample Matrix			Soil	Soil	Soil	Soil	
Eurofins mgt Sample No.			B 1 Au3313	B 1 Au3313	B 1 Au33140	B 1	Au33141
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided	
T est Reference	LO R	nit					
SPOCAS Suite							
pH K CL	0.1	pH nits	5.				
pH O X	0.1	pH nits	.0				
Acid trail T itratable Actual Acidity	2	mol H	t .0				
Acid trail T itratable Peroxide Acidity	2	mol H	t 2				
Acid trail T itratable Sulfidic Acidity	2	mol H	t 2				
sulfidic T AA equiv. S pyrite	0.02	pyrite S	0.02				
sulfidic T PA equiv. S pyrite	0.02	pyrite S	0.02				
sulfidic T SA equiv. S pyrite	0.02	pyrite S	0.02				
Sulfur K Cl Extractable	0.02	S	0.02				
Sulfur Peroxide	0.02	S	0.08				
Sulfur Peroxide O xidisable Sulfur	0.02	S	0.08				
acidity Peroxide O xidisable Sulfur	10	mol H	t 8				
HCl Extractable Sulfur	0.02	S	n a				
Net Acid soluble sulfur	0.02	S	n a				
Net Acid soluble sulfur acidity units	10	mol H	t n a				
Net Acid soluble sulfur equivalent S pyrite	0.02	S	n a				
Calcium K Cl Extractable	0.02	Ca	0.02				
Calcium Peroxide	0.02	Ca	0.02				
Acid Reacted Calcium	0.02	Ca	0.02				
acidity Acid Reacted Calcium	10	mol H	t 10				
sulfidic Acid Reacted Ca equiv. S pyrite	0.02	S	0.02				
Magnesium K Cl Extractable	0.02	Mg	0.02				
Magnesium Peroxide	0.02	Mg	0.02				
Acid Reacted Magnesium	0.02	Mg	0.02				
acidity Acid Reacted Magnesium	10	mol H	t 10				
sulfidic Acid Reacted Mg equiv. S pyrite	0.02	S	0.02				
Acid Neutralising Capacity ANCE	0.02	CaCO	n a				
Acid Neutralising Capacity Acidity units a ANCE	10	mol H	t	n a			
Acid Neutralising Capacity equivalent S pyrite s ANCE	0.02	S	n a				
ANC Fineness Factor		factor	1.5				

Client Sample ID			SB 26/ .0	SB 14/10.0	SB 17/ .0	SB 20/ .0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			B 1 Au3313	B 1 Au3313	B 1 Au33140	B 1 Au33141
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
T est Reference	LO R	nit				
SPOCAS Suite						
SPO CAS Net Acidity Sulfur nits	0.02	S	0.0			
SPO CAS Net Acidity Acidity nits	10	mol H	t 5			
SPO CAS Liming rate	1	kg CaCO	t .0			
Chromium Suite						
pH K CL	0.1	pH nits		5.	5.	5.
Acid trail T itratable Actual Acidity	2	mol H	t	2.	2	.5
sulfidic T AA equiv. S pyrite	0.02	pyrite S		0.02	0.02	0.02
Chromium Reducible Sulfur	0.005	S		0.01	0.00	0.005
Chromium Reducible Sulfur acidity units		mol H	t			
Sulfur K Cl Extractable	0.02	S		n a	n a	n a
HCl Extractable Sulfur	0.02	S		n a	n a	n a
Net Acid soluble sulfur	0.02	S		n a	n a	n a
Net Acid soluble sulfur acidity units	10	mol H	t	n a	n a	n a
Net Acid soluble sulfur equivalent S pyrite	0.02	S		n a	n a	n a
Acid Neutralising Capacity ANCbt	0.01	CaCO		n a	n a	n a
Acid Neutralising Capacity acidity a ANCbt	2	mol H	t	n a	n a	n a
Acid Neutralising Capacity equivalent S pyrite s ANCbt	0.02	S		n a	n a	n a
ANC Fineness Factor		factor		1.5	1.5	1.5
CRS Suite Net Acidity Sulfur nits	0.02	S		0.02	0.02	0.02
CRS Suite Net Acidity Acidity nits	10	mol H	t	12	10	10
CRS Suite Liming Rate	1	kg CaCO	t	1	1	1
Extraneous Material						
2mm Fraction	0.005	g	120	110	120	110
2mm Fraction	0.005	g	0.005	0.005	0.005	0.005
Analysed M aterial	0.1		100	100	100	100
Extraneous M aterial	0.1		0.1	0.1	0.1	0.1
M oisture	1		18	1	1	1

Client Sample ID			SB 22/3.0
Sample Matrix			Soil
Eurofins mgt Sample No.			B 1 Au33142
Date Sampled			Not Provided
T est Reference	LO R	nit	
Chromium Suite			
pH K CL	0.1	pH nits	.1
Acid trail T itratable Actual Acidity	2	mol H	t 2
sulfidic T AA equiv. S pyrite	0.02	pyrite S	0.02
Chromium Reducible Sulfur	0.005	S	0.005
Chromium Reducible Sulfur acidity units		mol H	t
Sulfur K Cl Extractable	0.02	S	n a
HCl Extractable Sulfur	0.02	S	n a
Net Acid soluble sulfur	0.02	S	n a
Net Acid soluble sulfur acidity units	10	mol H	t n a
Net Acid soluble sulfur equivalent S pyrite	0.02	S	n a
Acid Neutralising Capacity ANCbt	0.01	CaCO	n a

Client Sample ID			SB 22/3.0
Sample Matrix			Soil
Eurofins mgt Sample No.			B 1 Au33142
Date Sampled			Not Provided
T est Reference	LO R	nit	
Chromium Suite			
Acid Neutralising Capacity acidity a ANCbt	2	mol H	t n a
Acid Neutralising Capacity equivalent S pyrite ANCbt [50]	s 0.02	S	n a
ANC Fineness Factor		factor	1.5
CRS Suite Net Acidity Sulfur nits	0.02	S	0.02
CRS Suite Net Acidity Acidity nits	10	mol H	t 10
CRS Suite Liming Rate [501]	1	kg CaCO	t 1
Extraneous Material			
2mm Fraction	0.005	g	100
2mm Fraction	0.005	g	0.005
Analysed M aterial	0.1		100
Extraneous M aterial	0.1		0.1
M oisture	1		2.5

Sample History

Where samples are submitted analysed over several days the last date of extraction and analysis is reported.
A recent review of our LIM S has resulted in the correction or clarification of some method identifications. Due to this some of the method reference information on reports has changed. However no substantive change has been made to our laboratory methods and as such there is no change in the validity of current or previous results regarding both quality and NAT A accreditation .

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
SPO CAS Suite			
SPO CAS Suite	Brisbane	Aug 28 2018	Week
Method: LT M GEN 050			
Chromium Reducible Sulfur Suite			
Chromium Suite	Brisbane	Aug 28 2018	Week
Method: LT M GEN 0 0			
Extraneous Material	Brisbane	Aug 28 2018	Week
Method: LT M GEN 050 0 0			
Moisture	Brisbane	Aug 2 2018	1 Day
Method: LT M GEN 080 Moisture			

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Site 125 1 2 1

nit F Building F
1 Mars Road
Lane Cove West NSW 20
Phone : 1 2 00 8 00
NAT A 12 1 Site 1621

1 21 Smallwood Place
Murarrie Q LD 1 2
Phone : 1 02 00
NAT A 12 1 Site 20

2 1 Leach Highway
K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1
Site 2

Company Name:	T race Environmental P L	Order No.:	Received: Aug 2 2018 11:20 AM
Address:	Shop 2 New Canterbury Road Dulwich Hill NSW 220	Report : 1 2 5 Phone: 02 8 0 0555 Fax:	Due: Sep 2018 Priority: 5 Day Contact Name: K en Henderson
Project Name:	MASCO T		
Project ID:	1.1		

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						SPO CAS Suite	Chromium Reducible Sulfur Suite	Moisture Set
Melbourne Laboratory NATA Site 12 4 & 14271								
Sydney Laboratory NATA Site 1 217								
B risbane Laboratory NATA Site 207 4						X	X	X
Perth Laboratory NATA Site 23736								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	SB 2.0	Not Provided		Soil	B18 Au 12	X	X	X
2	SB 5.0	Not Provided		Soil	B18 Au 12	X	X	X
	SB1 8.0	Not Provided		Soil	B18 Au 128	X	X	X
	SB1 10.0	Not Provided		Soil	B18 Au 12	X	X	X
5	SB20 8.0	Not Provided		Soil	B18 Au 1	0X	X	X
	SB20 12.0	Not Provided		Soil	B18 Au 1	1X	X	X
	SB22 5.0	Not Provided		Soil	B18 Au 1	2X	X	X
8	SB2 2.0	Not Provided		Soil	B18 Au 1	X	X	X
	SB2 .0	Not Provided		Soil	B18 Au 1	X	X	X

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NATA 12 1 Site 1821

1 21 Smallwood Place
Murarrie QLD 1 2
Phone : 1 02 00
NATA 12 1 Site 20

2 1 Leach Highway
Kewdale WA 105
Phone : 18 251 00
NATA 12 1
Site 2

Company Name:	Trace Environmental P L	Order No.:	
Address:	Shop 2 New Canterbury Road Dulwich Hill NSW 220	Report :	1 2 5
		Phone:	02 8 0 0555
		Fax:	
Project Name:	MASCOT		
Project ID:	1.1		

Received:	Aug 2 2018 11:20 AM	
Due:	Sep 2018	
Priority:	5 Day	
Contact Name:	Ken Henderson	

Eurofins mgt Analytical Services Manager : Nibha Vaidya

Sample Detail							SPOCAS Suite	Chromium Reducible Sulfur Suite	Moisture Set
Melbourne Laboratory NATA Site 12 4 & 14271									
Sydney Laboratory NATA Site 1 217									
Brisbane Laboratory NATA Site 207 4							X	X	X
Perth Laboratory NATA Site 23736									
10	SB2	10.0	Not Provided	Soil	B18 Au 1	5	X	X	X
11	SB1	.0	Not Provided	Soil	B18 Au 1		X		X
12	SB1	.8	Not Provided	Soil	B18 Au 1		X		X
1	SB2	8.0	Not Provided	Soil	B18 Au 1	8	X		X
1	SB1	10.0	Not Provided	Soil	B18 Au 1			X	X
15	SB1	8.0	Not Provided	Soil	B18 Au 1	0	X	X	X
1	SB20	5.0	Not Provided	Soil	B18 Au 1	1	X	X	X
1	SB22	.0	Not Provided	Soil	B18 Au 1	2	X	X	X
Test Counts							1	1	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks Duplicates Matrix Spikes and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis unless otherwise stated.
   - All biota food results are reported on a wet weight basis on the edible portion unless otherwise stated.
   - 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.
   - SVOC analysis on waters are performed on homogenised unfiltered samples unless noted otherwise.
   - Samples were analysed on an as received basis.
8. This report replaces any interim results previously issued.

Holding Times

Please refer to Sample Preservation and Container Guide for holding times QS 001 .
For samples received on the last day of holding time notification of testing requirements should have been received at least 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 days however for all other VOCs such as BTEX or C 10 TRH then the holding time is 1 days.
NOTE H duplicates are reported as a range NOT as RPD

Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample reported as percent recovery.
CRM	Certified Reference Material 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.
Surr Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	nited States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 S Department of Defense
CP	Client Parent QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 0 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 0
Surrogate Recoveries: Recoveries must lie between 50 150 Phenols PFASs
PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.
WA DWER n 10 : PFBA PFPeA PFHxA PFHpA PFOA PFBS PFHxS PFOS :2 FTSA 8:2 FTSA

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.
   - Organochlorine Pesticide analysis where reporting LCS data Toxaphene Chlordane are not added to the LCS.
   - Organochlorine Pesticide analysis where reporting Spike data Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons where reporting Spike LCS data a single spike of commercial Hydrocarbon products in the range of C12 C 0 is added and its Total Recovery is reported in the C10 C1 cell of the Report.
   - pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 0 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
   - Recovery Data Spikes Surrogates where chromatographic interference does not allow the determination of Recovery the term " INT " appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 12 0 in Matrix Spikes and LCS.
   - For Matrix Spikes and LCS results a dash " " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

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Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS Recovery							
Chromium Suite							
Chromium Reducible Sulfur					0 1 0	Pass	
Acid Neutralising Capacity ANCbt					0 1 0	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
				Result 1	Result 2	RPD			
Moisture	B18 Au 12		CP	1.	1.		1	0	Pass
Duplicate									
SPOCAS Suite				Result 1	Result 2	RPD			
pH KCL	B18 Au 1	2	CP pH	nits 5	5.		1	0	Pass
pH OX	B18 Au 1	2	CP pH	nits .2	.1		1.0	0	Pass
Acid trail Titratable Actual Acidity	B18 Au	1 2	CP	mol H t .	.		.	0	Pass
Acid trail Titratable Peroxide Acidity	B18 Au 1	2	CP mol H	t 2	2		1.0	0	Pass
Acid trail Titratable Sulfidic Acidity	B18 Au	1 2	CP	mol H t 1	1		1	0	Pass
sulfidic TAA equiv. S pyrite	B18 Au	1 2	CP	pyrite S 0.02	0.02	1	0	Pass	
sulfidic TPA equiv. S pyrite	B18 Au	1 2	CP	pyrite S 0.0	0.0	1.0	0	Pass	
sulfidic TSA equiv. S pyrite	B18 Au	1 2	CP	pyrite S 0.0	0.0	1	0	Pass	
Sulfur Peroxide	B18 Au 1	2	CP	S 0.02	0.02	1	0	Pass	
Sulfur Peroxide Oxidisable Sulfur	B18 Au	1 2	CP	S 0.02	0.02	1	0	Pass	
acidity Peroxide Oxidisable Sulfur	B18 Au	1 2	CP	mol H t 10	10	1	0	Pass	
Calcium KCl Extractable	B18 Au 1	2	CP	Ca 0.0	0.0	1.0	0	Pass	
Calcium Peroxide	B18 Au 1	2	CP	Ca 0.0	0.05	5.0	0	Pass	
Acid Reacted Calcium	B18 Au 1	2	CP	Ca 0.02	0.02	1	0	Pass	
acidity Acid Reacted Calcium	B18 Au	1 2	CP	mol H t 10	10	1	0	Pass	
sulfidic Acid Reacted Ca equiv. S pyrite	B18 Au 1	2	CP	S 0.02	0.02	1	0	Pass	
Magnesium KCl Extractable	B18 Au	1 2	CP	Mg 0.02	0.02	1	0	Pass	
Magnesium Peroxide	B18 Au 1	2	CP	Mg 0.02	0.02	1	0	Pass	
Acid Reacted Magnesium	B18 Au 1	2	CP	Mg 0.02	0.02	1	0	Pass	
acidity Acid Reacted Magnesium	B18 Au	1 2	CP	mol H t 10	10	1	0	Pass	
sulfidic Acid Reacted Mg equiv. S pyrite	B18 Au 1	2	CP	S 0.02	0.02	1	0	Pass	
Acid Neutralising Capacity ANCE	B18 Au	1 2	CP	CaCO n a	n a	n a		0	Pass
Acid Neutralising Capacity Acidity units a ANCE	B18 Au 1	2	CP mol H	t n a	n a	n a	0	Pass	
ANC Fineness Factor	B18 Au 1	2	CP	factor 1.5	1.5	1	0	Pass	
SPOCAS Liming rate	B18 Au 1	2	CP	kg CaCO t 1	1	1	0	Pass	
Duplicate									
Chromium Suite				Result 1	Result 2	RPD			
Chromium Reducible Sulfur	B18 Au	1 2	CP	S 0.005	0.005	1	0	Pass	
Chromium Reducible Sulfur acidity units	B18 Au 1	2	CP	mol H t		1	0	Pass	
Acid Neutralising Capacity ANCbt	B18 Au	1 2	CP	CaCO n a	n a	n a		0	Pass
Acid Neutralising Capacity equivalent S pyrite s ANCbt	B18 Au	1 2	CP	S n a	n a	n a		0	Pass
CRS Suite Net Acidity Sulfur nits	B18 Au 1	2	CP	S 0.02	0.02	1	0	Pass	
CRS Suite Net Acidity Acidity nits	B18 Au 1	2	CP mol H	t 10	10	1	0	Pass	
CRS Suite Liming Rate	B18 Au 1	2	CP	kg CaCO t 1	1	1	0	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Moisture	B18 Au 1		CP	1		1	2.0	0	Pass

Comments

Sample Integrity

Custody Seals Intact if used	N A
Attempt to Chill was evident	Y es
Sample correctly preserved	Y es
Appropriate sample containers have been used	Y es
Sample containers for volatile analysis received with minimal headspace	Y es
Samples received within HoldingT ime	Y es
Some samples have been subcontracted	No

Q ualifier Codes/Comments

Code	Description
S01	Liming rate is calculated and reported on a dry weight basis assuming use of fine agricultural lime CaCO and using a safety factor of 1.5 to allow for non homogeneous mixing and poor reactivity of lime. For conversion of Liming Rate from kg t dry weight to kg m in situ soil multiply reported results x wet bulk density of soil in t m
S02	Retained Acidity is Reported when the pHK Cl is less than pH .5
S0	Acid Neutralising Capacity is only required if the pHK Cl if greater than or equal to pH .5
S0	Acid Sulfate Soil Samples have a 2 hour holding time unless fro en or dried within that period

Authorised B y

Nibha V aidya	Analytical Services M anager
Steven T rout	Senior Analyst M etal Q LD

G lenn J ackson
National Operations Manager

Final report - this Report replaces any previously issued Report

Indicates Not Requested

Indicates NAT A accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please here.

eurofins | mgt

ABN– 50 005 085 521
e.mail : EnviroSales eurofins.com
web : www.eurofins.com.au

Melbourne
2 5 Kingston Town Close
Oakleigh VIC 1
Phone : 1 85 5000
NATA 12 1
Site 125 1 2 1

Sydney
nit F Building F
1 Mars Road
Lane Cove West NSW 20
Phone : 1 2 00 8 00
NATA 12 1 Site 1821

Brisbane
1 21 Smallwood Place
Murarrie QLD 1 2
Phone : 1 02 00
NATA 12 1 Site 20

Perth
2 1 Leach Highway
Kewdale WA 105
Phone : 1 8 251 00
NATA 12 1
Site 2

Company Name:	Trace Environmental P L	Order No.:		Received:	Aug 2 2018 11:20 AM
Address:	Shop 2 New Canterbury Road	Report :	1 2 5	Due:	Sep 2018
	Dulwich Hill	Phone:	02 8 0 0555	Priority:	5 Day
	NSW 220	Fax:		Contact Name:	Ken Henderson
Project Name:	MASCOT				
Project ID:	1.1				

Eurofins mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						SPO CAS Suite	Chromium Reducible Sulfur Suite	Moisture Set
Melbourne Laboratory NATA Site 12 4 & 14271								
Sydney Laboratory NATA Site 1 217								
Brisbane Laboratory NATA Site 207 4						x	x	x
Perth Laboratory NATA Site 23736								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	SB 2.0	Not Provided		Soil	B18 Au 12	x	x	x
2	SB 5.0	Not Provided		Soil	B18 Au 12	x	x	x
	SB1 8.0	Not Provided		Soil	B18 Au 128	x	x	x
	SB1 10.0	Not Provided		Soil	B18 Au 12	x	x	x
5	SB20 8.0	Not Provided		Soil	B18 Au 1	0x	x	x
	SB20 12.0	Not Provided		Soil	B18 Au 1	1x	x	x
	SB22 5.0	Not Provided		Soil	B18 Au 1	2x	x	x
8	SB2 2.0	Not Provided		Soil	B18 Au 1	x	x	x
	SB2 .0	Not Provided		Soil	B18 Au 1	x	x	x

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web : www.eurofins.com.au

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1 21 Smallwood Place
Murarrie Q LD 1 2
Phone : 1 02 00
NAT A 12 1 Site 20

Perth
2 1 Leach Highway
K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1
Site 2

Company Name:	T race Environmental P L	Order No.:	
Address:	Shop 2 New Canterbury Road	Report :	1 2 5
	Dulwich Hill	Phone:	02 8 0 0555
	NSW 220	Fax:	
Project Name:	MASCO T		
Project ID:	1.1		

Received:	Aug 2 2018 11:20 AM
Due:	Sep 2018
Priority:	5 Day
Contact Name:	K en Henderson

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail							SPO CAS Suite	Chromium Reducible Sulfur Suite	Moisture Set
Melbourne Laboratory NATA Site 12 4 & 14271									
Sydney Laboratory NATA Site 1 217									
B risbane Laboratory NATA Site 207 4							x	x	x
Perth Laboratory NATA Site 23736									
10	SB2 10.0	Not Provided	Soil	B18	Au	1	5X	x	x
11	SB1 .0	Not Provided	Soil	B18	Au	1	x		x
12	SB1 .8	Not Provided	Soil	B18	Au	1	x		x
1	SB2 8.0	Not Provided	Soil	B18	Au	1	8X		x
1	SB1 10.0	Not Provided	Soil	B18	Au	1		x	x
15	SB1 8.0	Not Provided	Soil	B18	Au	1	0	x	x
1	SB20 5.0	Not Provided	Soil	B18	Au	1	1	x	x
1	SB22 .0	Not Provided	Soil	B18	Au	1	2	x	x
Test Counts							1	1	1

5 K ingston T own Closenit F Building F
O akleigh V ic 1 1 M ars Road
Phone : 1 85 5008ne Cove West N SW 20
NAT A 12 1 Phone : 1 2 00 8 0NAT A
Site 125 1 2 1 NAT A 12 1 Site 1821

1 21 Smallwood Place
M urarrie Q LD 1 2
Phone : 1 02 0
NAT A 12 1 Site 20

2 1 Leach Highway
K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1 Site 2

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name: **T race Environmental P L**

Contact name: K en Henderson
Pro ect name: M ASCO T
Pro ect ID: 1.1
CO C number: Not provided
T urn around time: 5 Day
Date T ime received: Aug 2 2018 11:20 AM
Eurofins mgt reference: 1 12 15 15 25 5

Sample information

- ☑ A detailed list of analytes logged into our LIM S is included in the attached summary table.
- ☑ Sample T emperature of a random sample selected from the batch as recorded by Eurofins mgt Sample Receipt : 2. degrees Celsius.
- ☑ All samples have been received as described on the above CO C.
- ☑ CO C 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.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact if used .

Contact notes

If you have any questions with respect to these samples please contact:

Nibha V aidya on Phone : 1 2 00 8 15 or by e.mail: NibhaV aidya eurofins.com

Results will be delivered electronically via e.mail to K en Henderson ken traceenviro.com.

Enviro Sample Bris

From: Andrew Black
Sent: Monday, 27 August 2018 11:27 AM
To: Enviro Sample Bris
Subject: 5 DAY TAT ADDITIONAL: FW: Eurofins | mgt Test Results, Invoice - Report 612428 : Site MASCOT (1.16)

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Team

Additional acid sulphate testing please for this job on standard TAT.

Andrew Black
Phone: +61 410 220 750
Email: AndrewBlack@eurofins.com

From: Ken Henderson [mailto:ken@traceenviro.com]
Sent: Monday, 27 August 2018 11:18 AM
To: Andrew Black
Cc: Jack Ellis
Subject: RE: Eurofins | mgt Test Results, Invoice - Report 612428 : Site MASCOT (1.16)

EXTERNAL EMAIL*

Hi Andrew,

For this work order, can I please have additional assessment for Acid Sulfate as follows:

- SPOCAS & Cr Suite – samples SB6/2.0; SB6/5.0; SB14/8.0; SB17/10.0; SB20/8.0; SB20/12.0; SB22/5.0; SB26/2.0; SB26/6.0; and SB26/10.0
- SPOCAS only – samples SB14/6.0; SB17/3.8; and SB26/8.0
- Cr Suite only – samples SB14/10.0; SB17/8.0; SB20/5.0; and SB22/3.0

Standard TAT is requested.

Thank you, please ring if any questions.

Regards,
Ken

27/8/18
11:30 AM

TRACE ENVIRONMENTAL

Ken Henderson
Principal Environmental Scientist
TRACE Environmental
02 8960 0555 0432 382 141
Shop 2, 793-799 New Canterbury Road
Dulwich Hill NSW 2203
www.traceenviro.com ken@traceenviro.com

From: AndrewBlack@eurofins.com <AndrewBlack@eurofins.com>
Sent: Monday, 27 August 2018 9:40 AM
To: Ken Henderson <ken@traceenviro.com>
Cc: Ramya Tunikipati <ramya@traceenviro.com>
Subject: Eurofins | mgt Test Results, Invoice - Report 612428 : Site MASCOT (1.16)

Regards

Andrew Black
Analytical Services Manager

Eurofins | mgt
Unit 7
7 Friesian Close
SANDGATE NSW 2304
AUSTRALIA
Phone: +61 299 008 490
Mobile: +61 410 220 750
Email: AndrewBlack@eurofins.com
Website:environment.eurofins.com.au
EnviroNote 1078 - Targeting the Unknowns ?
EnviroNote 1077 - Soil Vapour Sampling – NATA Accreditation

Are you on TOP of PFASs? Find out more by reading Eurofins | mgt's Environote by clicking here

EnviroNote 1075 – for Eurofins | mgt Christmas Shutdown Dates, click here

eurofins | mgt

30 years Testing For Life

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 12 4

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests calibrations and or measurements included in this document are traceable to Australian national standards.

Trace Environmental P/L
Shop 2, 7 3 7 New Canterbury Road
Dulwich Hill
NSW 2203

Attention: K en Henderson

Report 61 646 L
Pro ect name **MASCO T**
Pro ect ID **1.1**
Received Date **Sep 0 2018**

Client Sample ID			SB 21/0.1	SB 07/0.2
Sample Matrix			US Leachate	US Leachate
Eurofins mgt Sample No.			M1 Se03012	M1 Se03013
Date Sampled			Aug 13, 201	Aug 13, 201
T est Reference	**LO R**	**nit**		
Heavy Metals				
Chromium	**0.01**	**mg L**		**0.01**
Lead	**0.01**	**mg L**	**0.10**	**0.**
Nickel	**0.01**	**mg L**		**0.1**
USA Leaching Procedure				
Leachate Fluid[201]		**comment**	**1.0**	**1.0**
pH initial	**0.1**	**pH nits**	**.**	**.**
pH Leachate fluid	**0.1**	**pH nits**	**5.1**	**5.1**
pH off	**0.1**	**pH nits**	**5.1**	**5.**
pH SA HCl addition	**0.1**	**pH nits**	**2.0**	**2.0**

Sample History

Where samples are submitted analysed over several days the last date of extraction and analysis is reported.
A recent review of our LIM S has resulted in the correction or clarification of some method identifications. Due to this some of the method reference information on reports has changed. However no substantive change has been made to our laboratory methods and as such there is no change in the validity of current or previous results regarding both quality and NAT A accreditation .

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
Heavy Metals	Melbourne	Sep 0 2018	180 Day

Method: LT M MET 0 0 Metals in Waters Soils Sediments by ICP M S

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1 21 Smallwood Place
Murarrie Q LD 1 2
Phone : 1 02 00
NAT A 12 1 Site 20

2 1 Leach Highway
K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1
Site 2

Company Name:	T race Environmental P L	Order No.:	Received: Sep 2018 : AM
Address:	Shop 2 New Canterbury Road Dulwich Hill NSW 220	Report : 15 Phone: 02 8 0 0555 Fax:	Due: Sep 2018 Priority: Day Contact Name: K en Henderson
Project Name:	MASCO T		
Project ID:	1.1		

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Chromium	Lead	Nickel	SA Leaching Procedure
Melbourne Laboratory NATA Site 12 4 & 14271						X	X	X	X
Sydney Laboratory NATA Site 1 217									
B risbane Laboratory NATA Site 207 4									
Perth Laboratory NATA Site 23736									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SB21 0.15	Aug 1 2018		S Leachate	M18 Se0 012		X		X
2	SB0 0.25	Aug 1 2018		S Leachate	M18 Se0 01	X	X	X	X
Test Counts						1	2	1	2

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks Duplicates Matrix Spikes and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis unless otherwise stated.
   . All biota food results are reported on a wet weight basis on the edible portion unless otherwise stated.
   . 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.
   . SVOC analysis on waters are performed on homogenised unfiltered samples unless noted otherwise.
   . Samples were analysed on an as received basis.
8. This report replaces any interim results previously issued.

Holding Times

Please refer to Sample Preservation and Container Guide for holding times QS 001 .
For samples received on the last day of holding time notification of testing requirements should have been received at least 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 days however for all other VOCs such as BTEX or C 10 TRH then the holding time is 1 days.
NOTE H duplicates are reported as a range NOT as RPD

Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample reported as percent recovery.
CRM	Certified Reference Material 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.
Surr Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	nited States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 S Department of Defense
CP	Client Parent QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 0 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 0
Surrogate Recoveries: Recoveries must lie between 50 150 Phenols PFASs
PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.
WA DWER n 10 : PFBA PFPeA PFHxA PFHpA PFOA PFBS PFHxS PFOS :2 FTSA 8:2 FTSA

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.
   . Organochlorine Pesticide analysis where reporting LCS data Toxaphene Chlordane are not added to the LCS.
   . Organochlorine Pesticide analysis where reporting Spike data Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons where reporting Spike LCS data a single spike of commercial Hydrocarbon products in the range of C12 C 0 is added and its Total Recovery is reported in the C10 C1 cell of the Report.
   . pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 0 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
   . Recovery Data Spikes Surrogates where chromatographic interference does not allow the determination of Recovery the term " INT " appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 12 0 in Matrix Spikes and LCS.
   . For Matrix Spikes and LCS results a dash " " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

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Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Chromium	mg L	0.01			0.01	Pass	
Lead	mg L	0.01			0.01	Pass	
Nickel	mg L	0.01			0.01	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike Recovery									
Heavy Metals				Result 1					
Lead	M18 Se0 18	NCP		101			5 125	Pass	
Spike Recovery									
Heavy Metals				Result 1					
Chromium	M18 Se0 18	NCP		101			5 125	Pass	
Nickel	M18 Se0 18	NCP					5 125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	M18 Se0 18	NCP	mg L	0.0	0.05	2.0	0	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Chromium	M18 Se0 18	NCP	mg L	0.01	0.01	1	0	Pass	
Nickel	M18 Se0 18	NCP	mg L	0.01	0.01	1	0	Pass	

Comments

Sample Integrity

Custody Seals Intact if used	N A
Attempt to Chill was evident	Y es
Sample correctly preserved	Y es
Appropriate sample containers have been used	Y es
Sample containers for volatile analysis received with minimal headspace	Y es
Samples received within HoldingT ime	Y es
Some samples have been subcontracted	No

Q ualifier Codes/Comments

Code	Description
C01	Leachate Fluid K ey: 1 pH 5.0 2 pH 2. pH .2 Reagent DI water 5 Client sample other

Authorised B y

Nibha V aidya Analytical Services M anager
Alex Petridis Senior Analyst M etal V IC

G lenn J ackson
National Operations Manager
Final report - this Report replaces any previously issued Report

Indicates Not Requested
Indicates NAT A accreditation does not cover the performance of this service
M easurement uncertainty of test data is available on request or pl click here.

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NATA 12 1 Site 20

Perth
2 1 Leach Highway
Kewdale WA 105
Phone : 1 8 251 00
NATA 12 1
Site 2

Company Name:	Trace Environmental P L	Order No.:	
Address:	Shop 2 New Canterbury Road	Report :	15
	Dulwich Hill	Phone:	02 8 0 0555
	NSW 220	Fax:	
Project Name:	MASCOT	Received:	Sep 2018 : AM
Project ID:	1.1	Due:	Sep 2018
		Priority:	Day
		Contact Name:	Ken Henderson

Eurofins mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Chromium	Lead	Nickel	SA Leaching Procedure
Melbourne Laboratory NATA Site 12 4 & 14271						X	X	X	X
Sydney Laboratory NATA Site 1 217									
Brisbane Laboratory NATA Site 207 4									
Perth Laboratory NATA Site 23736									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SB21 0.15	Aug 1 2018		S Leachate	M18 Se0 012		X		X
2	SB0 0.25	Aug 1 2018		S Leachate	M18 Se0 01	X	X	X	X
Test Counts						1	2	1	2

5 K ingston T own Closenit F Building F
O akleigh V ic 1
Phone : 1 85 5008
NAT A 12 1
Site 125 1 2 1
1 Mars Road
ne Cove West N SW 20
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K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1 Site 2

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name: **T race Environmental P L**

Contact name: K en Henderson
Pro ect name: M ASCO T
Pro ect ID: 1.1
CO C number: Not provided
T urn around time: Day
Date T ime received: Sep 2018 : AM
Eurofins mgt reference: 15 15 15 15

Sample information

- ☑ A detailed list of analytes logged into our LIM S is included in the attached summary table.
- ☑ All samples have been received as described on the above CO C.
- ☑ CO C 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.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact if used .

Contact notes

If you have any questions with respect to these samples please contact:

Nibha V aidya on Phone : 1 2 00 8 15 or by e.mail: NibhaV aidya eurofins.com

Results will be delivered electronically via e.mail to K en Henderson ken traceenviro.com.

Enviro Sample Vic

From: Nibha Vaidya
Sent: Tuesday, 4 September 2018 9:43 AM
To: Enviro Sample Vic
Subject: 3 DAY TAT - FW: Eurofins | mgt Test Results, Invoice - Report 612428 : Site MASCOT (1.16)
Attachments: 612428-S_report.pdf; image002.jpg

Another additional TCLP please – 3 day TAT

Kind Regards,

Nibha Vaidya
Phone : +61 2 9900 8415
Mobile : +61 499 900 805
Email : NibhaVaidya@eurofins.com

From: Ken Henderson [mailto:ken@traceenviro.com]
Sent: Tuesday, 4 September 2018 8:10 AM
To: Nibha Vaidya
Cc: Jack Ellis
Subject: FW: Eurofins | mgt Test Results, Invoice - Report 612428 : Site MASCOT (1.16)

EXTERNAL EMAIL*

Hi Nibha,

For this report, can I please have TCLP analysis for the following:

- Sample SB21/0.15 – TCLP Lead A418563
- Sample SB7/0.25 – TCLP Chromium, TCLP Lead and TCLP Nickel A418581 } G546

Would we be able to get 3-day TAT?

Thank you.

Regards,
Ken

G Gank 4/9
615246

1

eurofins | mgt

Testing For Life

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 12 4

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests calibrations and or measurements included in this document are traceable to Australian national standards.

Trace Environmental P/L
Shop 2, 7 3 7 New Canterbury Road
Dulwich Hill
NSW 2203

Attention: K en Henderson

Report 61 672 L
Pro ect name **MASCO T**
Pro ect ID **1.1**
Received Date **Sep 0 2018**

Client Sample ID			SB 1/0.	SB 6/1.0	SB 14/1.2	SB 1 /1.0
Sample Matrix			US Leachate	US Leachate	US Leachate	US Leachate
Eurofins mgt Sample No.			M1 Se03174	M1 Se0317	M1 Se03176	M1 Se03177
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg L			0.001	
Acenaphthylene	0.001	mg L			0.001	
Anthracene	0.001	mg L			0.001	
Ben a anthracene	0.001	mg L			0.001	
Ben o a pyrene	0.001	mg L			0.001	
Ben o b fluoranthene	0.001	mg L			0.001	
Ben o g.h.i perylene	0.001	mg L			0.001	
Ben o k fluoranthene	0.001	mg L			0.001	
Chrysene	0.001	mg L			0.001	
Diben a.h anthracene	0.001	mg L			0.001	
Fluoranthene	0.001	mg L			0.001	
Fluorene	0.001	mg L			0.001	
Indeno 1.2. cd pyrene	0.001	mg L			0.001	
Naphthalene	0.001	mg L			0.001	
Phenanthrene	0.001	mg L			0.001	
Pyrene	0.001	mg L			0.001	
T otal PAH	0.001	mg L			0.001	
2 Fluorobiphenyl surr.	1					
p T erphenyl d1 surr.	1				10	
Heavy Metals						
Lead	0.01	mg L	0.2	0.0	1.1	1.
Nickel	0.01	mg L		0. 1		
USA Leaching Procedure						
Leachate Fluid[01]		comment	1.0	1.0	1.0	1.0
pH initial	0.1	pH nits	.0	.5	.1	8.
pH Leachate fluid	0.1	pH nits	5.1	5.1	5.1	5.1
pH off	0.1	pH nits	5.	5.	5.	5.
pH SA HCl addition	0.1	pH nits	2.0	1.8	1.	1.

Client Sample ID			SB 1 /1.	SB 20/1.0	SB 26/1. 2.0
Sample Matrix			US Leachate	US Leachate	US Leachate
Eurofins mgt Sample No.			M1 Se0317	M1 Se0317	M1 Se031 0
Date Sampled			Aug 10, 201	Aug 10, 201	Aug 10, 201
T est Reference	LO R	nit			
Heavy Metals					
Lead	0.01	mg L			.
Nickel	0.01	mg L	0.2	0.	0.28
USA Leaching Procedure					
Leachate Fluid[01]		comment	1.0	1.0	1.0
pH initial	0.1	pH nits	8.0	.	.
pH Leachate fluid	0.1	pH nits	5.1	5.1	5.1
pH off	0.1	pH nits	5.	5.1	5.
pH SA HCl addition	0.1	pH nits	2.0	2.0	2.0

Sample History

Where samples are submitted analysed over several days the last date of extraction and analysis is reported.
A recent review of our LIM S has resulted in the correction or clarification of some method identifications. Due to this some of the method reference information on reports has changed. However no substantive change has been made to our laboratory methods and as such there is no change in the validity of current or previous results regarding both quality and NAT A accreditation .

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
Polycyclic Aromatic Hydrocarbons	Melbourne	Sep 0 2018	Day
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Heavy Metals	Melbourne	Sep 0 2018	180 Day
Method: LT M MET 0 0 Metals in Waters Soils Sediments by ICP M S			

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ABN– 50 005 085 521
e.mail : EnviroSales eurofins.com
web : www.eurofins.com.au

2 5 K ingston T own Close
O akleigh V IC 1 5000
Phone : 1 85 5000
NAT A 12 1
Site 125 1 2 1

nit F Building F
1 Mars Road
Lane Cove West NSW 20
Phone : 1 2 00 8 00
NAT A 12 1 Site 1621

1 21 Smallwood Place
Murarrie Q LD 1 2
Phone : 1 02 00
NAT A 12 1 Site 20

2 1 Leach Highway
K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1
Site 2

Company Name: T race Environmental P L
Address: Shop 2 New Canterbury Road
Dulwich Hill
NSW 220

Project Name: MASCO T
Project ID: 1.1

Order No.:
Report : 15 2
Phone: 02 8 0 0555
Fax:

Received: Sep 2018 :5 AM
Due: Sep 2018
Priority: Day
Contact Name: K en Henderson

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Lead	Nickel	Polycyclic Aromatic Hydrocarbons	SA Leaching Procedure
Melbourne Laboratory NATA Site 12 4 & 14271						X	X	X	X
Sydney Laboratory NATA Site 1 217									
B risbane Laboratory NATA Site 207 4									
Perth Laboratory NATA Site 23736									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SB1 0.5	Aug 10 2018		S Leachate	M18 Se0 1	X			X
2	SB 1.0	Aug 10 2018		S Leachate	M18 Se0 1	X	X		X
	SB 1 1.2	Aug 10	2018	S Leachate	M18 Se0 1	X		X	X
	SB18 1.0	Aug 10 2018		S Leachate	M18 Se0 1	X			X
5	SB1 1.5	Aug 10 2018		S Leachate	M18 Se0 1	8	X		X
	SB20 1.0	Aug 10 2018		S Leachate	M18 Se0 1		X		X
	SB2 1.5 2.0	Aug 10	2018	S Leachate	M18 Se0 1	30x	X		X
Test Counts						5		1	

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks Duplicates Matrix Spikes and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis unless otherwise stated.
   - All biota food results are reported on a wet weight basis on the edible portion unless otherwise stated.
   - 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.
   - SVOC analysis on waters are performed on homogenised unfiltered samples unless noted otherwise.
   - Samples were analysed on an as received basis.
8. This report replaces any interim results previously issued.

Holding Times

Please refer to Sample Preservation and Container Guide for holding times QS 001 .
For samples received on the last day of holding time notification of testing requirements should have been received at least 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 days however for all other VOCs such as BTEX or C 10 TRH then the holding time is 1 days.
NOTE H duplicates are reported as a range NOT as RPD

Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample reported as percent recovery.
CRM	Certified Reference Material 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.
Surr Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	nited States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 S Department of Defense
CP	Client Parent QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 0 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 0
Surrogate Recoveries: Recoveries must lie between 50 150 Phenols PFASs
PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.
WA DWER n 10 : PFBA PFPeA PFHxA PFHpA PFOA PFBS PFHxS PFOS :2 FTSA 8:2 FTSA

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.
   - Organochlorine Pesticide analysis where reporting LCS data Toxaphene Chlordane are not added to the LCS.
   - Organochlorine Pesticide analysis where reporting Spike data Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons where reporting Spike LCS data a single spike of commercial Hydrocarbon products in the range of C12 C 0 is added and its Total Recovery is reported in the C10 C1 cell of the Report.
   - pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 0 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
   - Recovery Data Spikes Surrogates where chromatographic interference does not allow the determination of Recovery the term " INT " appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 12 0 in Matrix Spikes and LCS.
   - For Matrix Spikes and LCS results a dash " " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

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Quality Control Results

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
Method Blank										
Heavy Metals										
Lead			mg/L	0.01			0.01	Pass		
Nickel			mg/L	0.01			0.01	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
Spike Recovery										
Heavy Metals				Result 1						
Lead	M18 Se0 18	NCP		101			5 125	Pass		
Spike Recovery										
Heavy Metals				Result 1						
Nickel	M18 Se0 180	CP					5 125	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
Duplicate										
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD				
Acenaphthene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Acenaphthylene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Anthracene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Ben a anthracene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Ben o a pyrene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Ben o b fluoranthene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Ben o g.h.i perylene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Ben o k fluoranthene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Chrysene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Diben a.h anthracene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Fluoranthene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Fluorene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Indeno 1.2. cd pyrene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Naphthalene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Phenanthrene	M18 Au 0	NCP	mg/L	0.001	0.001		5	0	Fail	Q15
Pyrene	M18 Au 0	NCP	mg/L	0.001	0.001		1	0	Pass	
Duplicate										
Heavy Metals				Result 1	Result 2	RPD				
Lead	M18 Se0 180	CP	mg/L				1	0	Pass	
Nickel	M18 Se0 180	CP	mg/L	0.23	0.2	2.0		0	Pass	

Comments

Sample Integrity

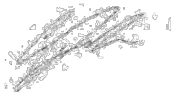
Custody Seals Intact if used	N A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
C01	Leachate Fluid Key: 1 pH 5.0 2 pH 2. pH .2 Reagent DI water 5 Client sample other
N0	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
Q15	The RPD reported passes Eurofins mgt s QC Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Nibha Vaidya	Analytical Services Manager
Alex Petridis	Senior Analyst Metal VIC
oseph Edouard	Senior Analyst Organic VIC



Glenn Jackson
National Operations 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 here.

eurofins mgt

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web : www.eurofins.com.au

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2 5 Kingston Town Close
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Phone : 1 85 5000
NATA 12 1
Site 125 1 2 1

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Lane Cove West NSW 20
Phone : 1 2 00 8 00
NATA 12 1 Site 1821

Brisbane
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Murarrie QLD 1 2
Phone : 1 02 00
NATA 12 1 Site 20

Perth
2 1 Leach Highway
Kewdale WA 105
Phone : 1 8 251 00
NATA 12 1
Site 2

Company Name:	Trace Environmental P L	Order No.:		Received:	Sep 2018 :5 AM
Address:	Shop 2 New Canterbury Road	Report :	15 2	Due:	Sep 2018
	Dulwich Hill	Phone:	02 8 0 0555	Priority:	Day
	NSW 220	Fax:		Contact Name:	Ken Henderson
Project Name:	MASCOT				
Project ID:	1.1				

Eurofins mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Lead	Nickel	Polycyclic Aromatic Hydrocarbons	SA Leaching Procedure
Melbourne Laboratory NATA Site 12 4 & 14271						X	X	X	X
Sydney Laboratory NATA Site 1 217									
Brisbane Laboratory NATA Site 207 4									
Perth Laboratory NATA Site 23736									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SB1 0.5	Aug 10 2018		S Leachate	M18 Se0 1	X			X
2	SB 1.0	Aug 10 2018		S Leachate	M18 Se0 1	X	X		X
	SB 1 1.2	Aug 10 2018		S Leachate	M18 Se0 1	X		X	X
	SB18 1.0	Aug 10 2018		S Leachate	M18 Se0 1	X			X
5	SB1 1.5	Aug 10 2018		S Leachate	M18 Se0 1	8	X		X
	SB20 1.0	Aug 10 2018		S Leachate	M18 Se0 1		X		X
	SB2 1.5 2.0	Aug 10 2018		S Leachate	M18 Se0 180	X	X		X
Test Counts						5		1	

5 K ingston T own Closenit F Building F
O akleigh V ic 1 1 M ars Road
Phone : 1 85 5008ne Cove West N SW 20
NAT A 12 1 Phone : 1 2 00 8 0NAT A
Site 125 1 2 1 NAT A 12 1 Site 1821

1 21 Smallwood Place
M urarrie Q LD 1 2
Phone : 1 02 0
NAT A 12 1 Site 20

2 1 Leach Highway
K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1 Site 2

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name: **T race Environmental P L**

Contact name: K en Henderson
Pro ect name: M ASCO T
Pro ect ID: 1.1
CO C number: Not provided
T urn around time: Day
Date T ime received: Sep 2018 :5 AM
Eurofins mgt reference: 15 15 15 15 2 2

Sample information

☑ A detailed list of analytes logged into our LIM S is included in the attached summary table.

☑ All samples have been received as described on the above CO C.

☑ CO C 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.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact if used .

Contact notes

If you have any questions with respect to these samples please contact:

Nibha V aidya on Phone : 1 2 00 8 15 or by e.mail: NibhaV aidya eurofins.com

Results will be delivered electronically via e.mail to K en Henderson ken traceenviro.com.

Enviro Sample Vic

From: Nibha Vaidya
Sent: Tuesday, 4 September 2018 9:40 AM
To: Enviro Sample Vic
Subject: 3 DAY TAT - FW: Eurofins | mgt Test Results, Invoice - Report 612025 : Site MASCOT (1.16)
Attachments: 612025-S_report.pdf; image001.jpg

Additional TCLP please – 3 day TAT

Kind Regards,

Nibha Vaidya
Phone : +61 2 9900 8415
Mobile : +61 499 900 805
Email : NibhaVaidya@eurofins.com

From: Ken Henderson [mailto:ken@traceenviro.com]
Sent: Tuesday, 4 September 2018 7:57 AM
To: Nibha Vaidya
Cc: Jack Ellis
Subject: FW: Eurofins | mgt Test Results, Invoice - Report 612025 : Site MASCOT (1.16)

EXTERNAL EMAIL*

Hi Nibha,

D.S. 10/8

For this report, can I please have TCLP analysis for the following:

- Sample SB1/0.5 – TCLP Lead
- Sample SB6/1.0 – TCLP Lead and TCLP Nickel
- Sample SB-14/1.2 – TCLP Lead and TCLP PAHs
- Sample SB18/1.0 – TCLP Lead
- Sample SB19/1.5 - TCLP Nickel
- Sample SB20/1.0 – TCLP Nickel
- Sample SB26/1.5-2.0 – TCLP Lead and TCLP Nickel

Au16413 } G496
Au16415 }
Au16427 }
Au16440 } G497
Au16442 }
Au16446 } G498
Au16460 }

Would we be able to get 3-day TAT?

Thank you.

Regards,
Ken

Jaipa Patel
4/9/18 7:57 AM
615672

1

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EM1813052**	Page	: 1 of 6
Client	: **TRACE ENVIRONMENTAL PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: MR KEN HENDERSON	Contact	: Customer Services EM
Address	: Shop 2 793-799 New Canterbury Road Dulwich Hill NSW 2203	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +61-3-8549 9600
Project	: 1.16	Date Samples Received	: 15-Aug-2018 15:00
Order number	:	Date Analysis Commenced	: 16-Aug-2018
C-O-C number	: ----	Issue Date	: 20-Aug-2018 13:18
Sampler	: JE		
Site	: MASCOT		
Quote number	: EN/222/17		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Nancy Wang	2IC Organic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC

Page	: 2 of 6
Work Order	: EM1813052
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.

Page	: 3 of 6
Work Order	: EM1813052
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QS1A	QS2A	----	----	----
				Client sampling date / time	08-Aug-2018 00:00	10-Aug-2018 00:00	---	---	---
Compound	CAS Number	LOR	Unit		EM1813052-001	EM1813052-002	------	------	------
					Result	Result	---	---	---
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		9.3	7.4	---	---	---
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	---	---	---
Cadmium	7440-43-9	1	mg/kg		<1	<1	---	---	---
Chromium	7440-47-3	2	mg/kg		2	2	---	---	---
Copper	7440-50-8	5	mg/kg		<5	<5	---	---	---
Lead	7439-92-1	5	mg/kg		<5	<5	---	---	---
Nickel	7440-02-0	2	mg/kg		4	<2	---	---	---
Zinc	7440-66-6	5	mg/kg		10	17	---	---	---
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	---	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	---	---	---
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	---	---	---
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	---	---	---
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	---	---	---
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	---	---	---
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	---	---	---
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	---	---	---
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	---	---	---
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	---	---	---
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	---	---	---
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	---	---	---
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	---	---	---
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	---	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	---	---	---
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	---	---	---
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	---	---	---
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	---	---	---
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	---	---	---
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		0.6	0.6	---	---	---
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		1.2	1.2	---	---	---
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	---	---	---

Page	: 4 of 6
Work Order	: EM1813052
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QS1A	QS2A	----	----	----
				Client sampling date / time	08-Aug-2018 00:00	10-Aug-2018 00:00	---	---	---
Compound	CAS Number	LOR	Unit		EM1813052-001	EM1813052-002	———	———	———
					Result	Result	---	---	---
EP080/071: Total Petroleum Hydrocarbons - Continued									
C10 - C14 Fraction	----	50	mg/kg		<50	<50	---	---	---
C15 - C28 Fraction	----	100	mg/kg		<100	<100	---	---	---
C29 - C36 Fraction	----	100	mg/kg		<100	<100	---	---	---
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	---	---	---
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	---	---	---
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	---	---	---
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	---	---	---
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	---	---	---
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	---	---	---
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	---	---	---
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	---	---	---
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	---	---	---
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	---	---	---
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	---	---	---
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	---	---	---
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	---	---	---
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	---	---	---
Naphthalene	91-20-3	1	mg/kg		<1	<1	---	---	---
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		93.4	95.4	---	---	---
2-Chlorophenol-D4	93951-73-6	0.5	%		103	105	---	---	---
2.4.6-Tribromophenol	118-79-6	0.5	%		82.0	85.6	---	---	---
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		106	106	---	---	---
Anthracene-d10	1719-06-8	0.5	%		110	112	---	---	---
4-Terphenyl-d14	1718-51-0	0.5	%		104	107	---	---	---
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		86.4	88.4	---	---	---
Toluene-D8	2037-26-5	0.2	%		85.8	83.9	---	---	---

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Work Order	: EM1813052
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QS1A	QS2A	----	----	----
				Client sampling date / time	08-Aug-2018 00:00	10-Aug-2018 00:00	---	---	---
Compound	CAS Number	LOR	Unit		EM1813052-001	EM1813052-002	-----	-----	-----
					Result	Result	---	---	---
EP080S: TPH(V)/BTEX Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.2	%		109	106	---	---	---

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Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	54	125
2-Chlorophenol-D4	93951-73-6	65	123
2.4.6-Tribromophenol	118-79-6	34	122
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-06-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	51	125
Toluene-D8	2037-26-5	55	125
4-Bromofluorobenzene	460-00-4	56	124

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **EM1813052**	Page	: 1 of 6
Client	: **TRACE ENVIRONMENTAL PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: MR KEN HENDERSON	Contact	: Customer Services EM
Address	: Shop 2 793-799 New Canterbury Road Dulwich Hill NSW 2203	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +61-3-8549 9600
Project	: 1.16	Date Samples Received	: 15-Aug-2018
Order number	:	Date Analysis Commenced	: 16-Aug-2018
C-O-C number	: ----	Issue Date	: 20-Aug-2018
Sampler	: JE		
Site	: MASCOT		
Quote number	: EN/222/17		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.
This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Nancy Wang	2IC Organic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC

Page	: 2 of 6
Work Order	: EM1813052
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 1879219)									
EM1813015-005	Anonymous	EA055: Moisture Content	----	0.1	%	23.6	23.8	0.536	0% - 20%
EM1813059-004	Anonymous	EA055: Moisture Content	----	0.1	%	3.8	4.1	7.56	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 1879990)									
EM1812960-090	Anonymous	EA055: Moisture Content	----	0.1	%	16.4	18.0	8.94	0% - 50%
EM1813055-025	Anonymous	EA055: Moisture Content	----	0.1	%	21.9	21.6	1.10	0% - 20%
EG005T: Total Metals by ICP-AES (QC Lot: 1877609)									
EM1813052-001	QS1A	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	2	2	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	4	<2	59.9	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	10	13	23.6	No Limit
EM1813059-004	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	17	16	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	12	11	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	14	13	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	7	6	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	22	21	5.86	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 1877608)									
EM1813052-001	QS1A	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EM1813059-004	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 1881052)									

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Work Order : EM1813052
Client : TRACE ENVIRONMENTAL PTY LTD
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Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 1881052) - continued									
EM1813029-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	1.3	<0.5	86.8	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	1.3	<0.5	87.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	1.1	<0.5	73.2	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1877045)									
EM1812960-090	Anonymous	EP080: C6 - C9 Fraction	---	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1881053)									
EM1813029-001	Anonymous	EP071: C15 - C28 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	---	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 1877045)									
EM1812960-090	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 1881053)									
EM1813029-001	Anonymous	EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
		EP071: >C10 - C40 Fraction (sum)	---	50	mg/kg	<50	<50	0.00	No Limit
EP080: BTEXN (QC Lot: 1877045)									
EM1812960-090	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit

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Work Order : EM1813052
Client : TRACE ENVIRONMENTAL PTY LTD
Project : 1.16

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

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

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 1877609)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	91.0	79	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	86.1	85	109
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	85.0	83	109
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	90.8	78	108
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	94.0	78	106
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	91.9	82	111
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	90.9	82	111
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1877608)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	93.0	77	104
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1881052)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	104	75	131
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	102	70	132
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	102	80	128
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	102	70	128
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	105	80	128
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	1.6 mg/kg	105	72	126
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	103	70	128
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	107	80	125
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	92.4	70	130
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	103	80	126
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	3 mg/kg	90.0	71	124
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	102	75	125
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	89.3	70	125
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	72.6	71	128
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	72.3	72	126
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	73.7	68	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1877045)								
EP080: C6 - C9 Fraction	---	10	mg/kg	<10	36 mg/kg	99.5	70	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1881053)								
EP071: C10 - C14 Fraction	---	50	mg/kg	<50	806 mg/kg	99.2	80	120
EP071: C15 - C28 Fraction	---	100	mg/kg	<100	3006 mg/kg	105	84	115
EP071: C29 - C36 Fraction	---	100	mg/kg	<100	1584 mg/kg	93.8	80	112
EP071: C10 - C36 Fraction (sum)	---	50	mg/kg	<50	---	---	---	---

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Work Order : EM1813052
Client : TRACE ENVIRONMENTAL PTY LTD
Project : 1.16

Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1877045)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	96.4	68	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1881053)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	1160 mg/kg	98.8	83	117
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	3978 mg/kg	99.3	82	114
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	313 mg/kg	89.1	73	115
EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080: BTEXN (QCLot: 1877045)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	98.0	74	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	98.3	77	125
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	98.5	73	125
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	99.3	77	128
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	101	81	128
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	89.8	66	130

Matrix Spike (MS) Report

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

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005T: Total Metals by ICP-AES (QCLot: 1877609)							
EM1813052-002	QS2A	EG005T: Arsenic	7440-38-2	50 mg/kg	98.5	78	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	93.6	84	116
		EG005T: Chromium	7440-47-3	50 mg/kg	93.0	79	121
		EG005T: Copper	7440-50-8	50 mg/kg	94.4	82	124
		EG005T: Lead	7439-92-1	50 mg/kg	100	76	124
		EG005T: Nickel	7440-02-0	50 mg/kg	95.4	78	120
		EG005T: Zinc	7440-66-6	50 mg/kg	106	74	128
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1877608)							
EM1813052-002	QS2A	EG035T: Mercury	7439-97-6	5 mg/kg	79.2	76	116
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1881052)							
EM1813029-002	Anonymous	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	98.2	67	117
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	104	52	148
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1877045)							
EM1812960-091	Anonymous	EP080: C6 - C9 Fraction	----	28 mg/kg	110	42	131

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Work Order	: EM1813052
Client	: TRACE ENVIRONMENTAL PTY LTD
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Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1881053)							
EM1813029-003	Anonymous	EP071: C10 - C14 Fraction	----	806 mg/kg	82.6	53	123
		EP071: C15 - C28 Fraction	----	3006 mg/kg	92.9	70	124
		EP071: C29 - C36 Fraction	----	1584 mg/kg	83.2	64	118
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1877045)							
EM1812960-091	Anonymous	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	106	39	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1881053)							
EM1813029-003	Anonymous	EP071: >C10 - C16 Fraction	----	1160 mg/kg	84.8	65	123
		EP071: >C16 - C34 Fraction	----	3978 mg/kg	89.3	67	121
		EP071: >C34 - C40 Fraction	----	313 mg/kg	73.0	44	126
EP080: BTEXN (QCLot: 1877045)							
EM1812960-091	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	122	50	136
		EP080: Toluene	108-88-3	2 mg/kg	120	56	139

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EM1813052	Page	: 1 of 5
Client	: TRACE ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: MR KEN HENDERSON	Telephone	: +61-3-8549 9600
Project	: 1.16	Date Samples Received	: 15-Aug-2018
Site	: MASCOT	Issue Date	: 20-Aug-2018
Sampler	: JE	No. of samples received	: 2
Order number	:	No. of samples analysed	: 2

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

- NO Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- NO Quality Control Sample Frequency Outliers exist.

Page	: 2 of 5
Work Order	: EM1813052
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) QS1A	08-Aug-2018	---	---	---	16-Aug-2018	22-Aug-2018	✓
Soil Glass Jar - Unpreserved (EA055) QS2A	10-Aug-2018	---	---	---	17-Aug-2018	24-Aug-2018	✓
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) QS1A	08-Aug-2018	16-Aug-2018	04-Feb-2019	✓	16-Aug-2018	04-Feb-2019	✓
Soil Glass Jar - Unpreserved (EG005T) QS2A	10-Aug-2018	16-Aug-2018	06-Feb-2019	✓	16-Aug-2018	06-Feb-2019	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) QS1A	08-Aug-2018	16-Aug-2018	05-Sep-2018	✓	17-Aug-2018	05-Sep-2018	✓
Soil Glass Jar - Unpreserved (EG035T) QS2A	10-Aug-2018	16-Aug-2018	07-Sep-2018	✓	17-Aug-2018	07-Sep-2018	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) QS1A	08-Aug-2018	17-Aug-2018	22-Aug-2018	✓	17-Aug-2018	26-Sep-2018	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) QS2A	10-Aug-2018	17-Aug-2018	24-Aug-2018	✓	17-Aug-2018	26-Sep-2018	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) QS1A	08-Aug-2018	16-Aug-2018	22-Aug-2018	✓	16-Aug-2018	22-Aug-2018	✓
Soil Glass Jar - Unpreserved (EP071) QS1A	08-Aug-2018	17-Aug-2018	22-Aug-2018	✓	17-Aug-2018	26-Sep-2018	✓
Soil Glass Jar - Unpreserved (EP080) QS2A	10-Aug-2018	16-Aug-2018	24-Aug-2018	✓	16-Aug-2018	24-Aug-2018	✓
Soil Glass Jar - Unpreserved (EP071) QS2A	10-Aug-2018	17-Aug-2018	24-Aug-2018	✓	17-Aug-2018	26-Sep-2018	✓

Page	: 3 of 5
Work Order	: EM1813052
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) QS1A	08-Aug-2018	16-Aug-2018	22-Aug-2018	✓	16-Aug-2018	22-Aug-2018	✓
Soil Glass Jar - Unpreserved (EP071) QS1A	08-Aug-2018	17-Aug-2018	22-Aug-2018	✓	17-Aug-2018	26-Sep-2018	✓
Soil Glass Jar - Unpreserved (EP080) QS2A	10-Aug-2018	16-Aug-2018	24-Aug-2018	✓	16-Aug-2018	24-Aug-2018	✓
Soil Glass Jar - Unpreserved (EP071) QS2A	10-Aug-2018	17-Aug-2018	24-Aug-2018	✓	17-Aug-2018	26-Sep-2018	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) QS1A	08-Aug-2018	16-Aug-2018	22-Aug-2018	✓	16-Aug-2018	22-Aug-2018	✓
Soil Glass Jar - Unpreserved (EP080) QS2A	10-Aug-2018	16-Aug-2018	24-Aug-2018	✓	16-Aug-2018	24-Aug-2018	✓

Page	: 4 of 5
Work Order	: EM1813052
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16

Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	5	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	5	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	5	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Page	: 5 of 5
Work Order	: EM1813052
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM amended 2013.
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270D. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260B. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM amended 2013.

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **EM1813052**		
Client	: **TRACE ENVIRONMENTAL PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: MR KEN HENDERSON	Contact	: Customer Services EM
Address	: Shop 2 793-799 New Canterbury Road Dulwich Hill NSW 2203	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: ken@traceenviro.com	E-mail	: MelbourneEnviroSer@alsglobal.com
Telephone	: ---	Telephone	: +61-3-8549 9600
Facsimile	: ---	Facsimile	: +61-3-8549 9626
Project	: 1.16	Page	: 1 of 2
Order number	:	Quote number	: EB2017TRAENV0001 (EN/222/17)
C-O-C number	: ---	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: MASCOT		
Sampler	: JE		

Dates

Date Samples Received	: 15-Aug-2018 15:00	Issue Date	: 16-Aug-2018
Client Requested Due Date	: 22-Aug-2018	Scheduled Reporting Date	: **21-Aug-2018**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 13.2°C - Ice Bricks present
Receipt Detail	:	No. of samples received / analysed	: 2 / 2

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Sample(s) received in non-ALS container(s).**
- **Please direct any queries related to sample condition / numbering / breakages to Client Services.**
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **Analytical work for this work order will be conducted at ALS Springvale.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**

RIGHT SOLUTIONS | RIGHT PARTNER

Issue Date	: 16-Aug-2018
Page	: 2 of 2
Work Order	: EM1813052 Amendment 0
Client	: TRACE ENVIRONMENTAL PTY LTD

Sample Container(s)/Preservation Non-Compliances

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

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	SOIL - EA055-103 Moisture Content	SOIL - S-26 8 metals/TRH/BTEX/NPAH
EM1813052-001	08-Aug-2018 00:00	QS1A	✓	✓
EM1813052-002	10-Aug-2018 00:00	QS2A	✓	✓

Proactive Holding Time Report

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

Requested Deliverables

ACCOUNTS		
- A4 - AU Tax Invoice (INV)	Email	accounts@traceenviro.com
JACK ELLIS		
- *AU Certificate of Analysis - NATA (COA)	Email	jack@traceenviro.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	jack@traceenviro.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	jack@traceenviro.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	jack@traceenviro.com
- Chain of Custody (CoC) (COC)	Email	jack@traceenviro.com
- EDI Format - XTab (XTAB)	Email	jack@traceenviro.com
KEN HENDERSON		
- *AU Certificate of Analysis - NATA (COA)	Email	ken@traceenviro.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	ken@traceenviro.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	ken@traceenviro.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	ken@traceenviro.com
- A4 - AU Tax Invoice (INV)	Email	ken@traceenviro.com
- Chain of Custody (CoC) (COC)	Email	ken@traceenviro.com
- EDI Format - XTab (XTAB)	Email	ken@traceenviro.com

Enviro Sample Vic 6

From: Alena Bounkeua
Sent: Tuesday, 14 August 2018 6:54 PM
To: Enviro Sample Vic
Cc: Enviro Sample NSW
Subject: FW: Eurofins | mgt - Report 612025 : Site MASCOT (1.16)
Attachments: 612025_COC.pdf; 612025_sample_receipt_coc.pdf; 612025_summary.pdf; image001.jpg

Hi Tony,

You will receive these samples in the morning – Can you please forward 18-Au16469 & 18-Au16471 to ALS as per client request?

I have already removed them off the report.

Thanks!

RQ: MARK Eurofins mgt 15/8 1:20pm

Warm Regards,

Alena Bounkeua
Eurofins | mgt
Phone: (02) 9900 8414
Email: AlenaBounkeua@eurofins.com

Environmental Division Melbourne
Work Order Reference
EM1813052

From: Nibha Vaidya
Sent: Tuesday, 14 August 2018 4:54 PM
To: Alena Bounkeua
Subject: FW: Eurofins | mgt - Report 612025 : Site MASCOT (1.16)

From: Ken Henderson Ken@traceenviro.com.au
Sent: Tuesday, 14 August 2018 4:52:53 PM (UTC+10:00) Canberra, Melbourne, Sydney
To: Nibha Vaidya
Cc: Jack Ellis
Subject: FW: Eurofins | mgt - Report 612025 : Site MASCOT (1.16)

Warm (Am) 15/8 15:00

EXTERNAL EMAIL*

Hi Nibha,

Can I please amend a few things for this job:

1. For all samples in which we have requested asbestos, we would like the NEPM/WA quantification method.
2. Please analyse metals (M8) for samples SB1/0.5, SB10/0.5, SB11/1.2 and SB14/1.2;
3. Please analyse NEPM Screen for Soil Classification for sample SB6/2.6;
4. Please analyse metals (M8) and PAHs for samples SB18/0.2, SB19/0.8 and SB20/0.3;
5. Please analyse Suite B7 for sample SB26/0.2;
6. Please analyse the trip blank and trip spike samples for vTPH & BTEXN.

Please also HOLD the PFAS analysis for sample SB27/0.5.

Finally, please FORWARD samples QS1A and QS2A to ALS for analysis of BTEXN/TRH, PAHs, and 8 metals. These were meant to be the triplicate samples and should not be analysed by Eurofins.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES1824312**	Page	: 1 of 6
Client	: **TRACE ENVIRONMENTAL PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR KEN HENDERSON	Contact	: Customer Services ES
Address	: Shop 2 793-799 New Canterbury Road Dulwich Hill NSW 2203	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 1.16 Mascot	Date Samples Received	: 17-Aug-2018 15:00
Order number	: ----	Date Analysis Commenced	: 20-Aug-2018
C-O-C number	: 180802TRACE	Issue Date	: 23-Aug-2018 16:49
Sampler	: ----		
Site	: ----		
Quote number	: EN/222/17 (Sydney Batches)		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Gerrad Morgan	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

RIGHT SOLUTIONS | RIGHT PARTNER

Page	: 2 of 6
Work Order	: ES1824312
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16 Mascot

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

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

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

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

- EA200N: Asbestos weights and percentages are not covered under the Scope of NATA Accreditation.
  Weights of Asbestos are based on extracted bulk asbestos, fibre bundles, and/or ACM and do not include respirable fibres (if present)
  The Asbestos (Fines and Fibrous) weight is calculated from the extracted Fibrous Asbestos and Asbestos Fines as an equivalent weight of 100% Asbestos
  Percentages for Asbestos content in ACM are based on the 2013 NEPM default values.
  All calculations of percentage Asbestos under this method are approximate and should be used as a guide only.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: Negative results for vinyl files should be confirmed by an independent analytical technique.
- EA200N: ALS laboratory procedures and methods used for the identification and quantitation of asbestos are consistent with AS4964-2004 and the requirements of the 2013 NEPM for Assessment of Site Contamination
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR.
  Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.

Page	: 3 of 6
Work Order	: ES1824312
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16 Mascot

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QA1A	QS3A	QA2A	---	---
				Client sampling date / time	13-Aug-2018 00:00	13-Aug-2018 00:00	14-Aug-2018 00:00	---	---
Compound	CAS Number	LOR	Unit		ES1824312-001	ES1824312-002	ES1824312-003	-----	-----
					Result	Result	Result	---	---
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		---	21.9	---	---	---
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No*	---	No	---	---
Asbestos (Trace)	1332-21-4	5	Fibres		No	---	No	---	---
Asbestos Type	1332-21-4	-	--		Ch + Am	---	-	---	---
Sample weight (dry)	----	0.01	g		728	---	560	---	---
APPROVED IDENTIFIER:	----	-	--		G.MORGAN	---	G.MORGAN	---	---
EA200N: Asbestos Quantification (non-NATA)									
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g		0.0021	---	<0.0004	---	---
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)		<0.001	---	<0.001	---	---
ø Asbestos Containing Material	1332-21-4	0.1	g		<0.1	---	<0.1	---	---
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)		<0.01	---	<0.01	---	---
ø Weight Used for % Calculation	----	0.0001	kg		0.728	---	0.560	---	---
ø Fibrous Asbestos >7mm	----	0.0004	g		<0.0004	---	<0.0004	---	---
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		---	<5	---	---	---
Cadmium	7440-43-9	1	mg/kg		---	<1	---	---	---
Chromium	7440-47-3	2	mg/kg		---	<2	---	---	---
Copper	7440-50-8	5	mg/kg		---	<5	---	---	---
Lead	7439-92-1	5	mg/kg		---	<5	---	---	---
Nickel	7440-02-0	2	mg/kg		---	<2	---	---	---
Zinc	7440-66-6	5	mg/kg		---	9	---	---	---
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		---	<0.1	---	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		---	<0.5	---	---	---
Acenaphthylene	208-96-8	0.5	mg/kg		---	<0.5	---	---	---
Acenaphthene	83-32-9	0.5	mg/kg		---	<0.5	---	---	---
Fluorene	86-73-7	0.5	mg/kg		---	<0.5	---	---	---
Phenanthrene	85-01-8	0.5	mg/kg		---	<0.5	---	---	---
Anthracene	120-12-7	0.5	mg/kg		---	<0.5	---	---	---
Fluoranthene	206-44-0	0.5	mg/kg		---	<0.5	---	---	---

Page	: 4 of 6
Work Order	: ES1824312
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16 Mascot

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QA1A	QS3A	QA2A	---	---
				Client sampling date / time	13-Aug-2018 00:00	13-Aug-2018 00:00	14-Aug-2018 00:00	---	---
Compound	CAS Number	LOR	Unit		ES1824312-001	ES1824312-002	ES1824312-003	-----	-----
					Result	Result	Result	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Pyrene	129-00-0	0.5	mg/kg	---	<0.5	---	---	---	
Benz(a)anthracene	56-55-3	0.5	mg/kg	---	<0.5	---	---	---	
Chrysene	218-01-9	0.5	mg/kg	---	<0.5	---	---	---	
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	---	<0.5	---	---	---	
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	---	<0.5	---	---	---	
Benzo(a)pyrene	50-32-8	0.5	mg/kg	---	<0.5	---	---	---	
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	---	<0.5	---	---	---	
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	---	<0.5	---	---	---	
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	---	<0.5	---	---	---	
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	---	<0.5	---	---	---	
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	---	<0.5	---	---	---	
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	---	0.6	---	---	---	
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	---	1.2	---	---	---	
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg	---	<10	---	---	---	
C10 - C14 Fraction	----	50	mg/kg	---	<50	---	---	---	
C15 - C28 Fraction	----	100	mg/kg	---	<100	---	---	---	
C29 - C36 Fraction	----	100	mg/kg	---	<100	---	---	---	
^ C10 - C36 Fraction (sum)	----	50	mg/kg	---	<50	---	---	---	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg	---	<10	---	---	---	
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	---	<10	---	---	---	
>C10 - C16 Fraction	----	50	mg/kg	---	<50	---	---	---	
>C16 - C34 Fraction	----	100	mg/kg	---	<100	---	---	---	
>C34 - C40 Fraction	----	100	mg/kg	---	<100	---	---	---	
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	---	<50	---	---	---	
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	---	<50	---	---	---	
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg	---	<0.2	---	---	---	
Toluene	108-88-3	0.5	mg/kg	---	<0.5	---	---	---	
Ethylbenzene	100-41-4	0.5	mg/kg	---	<0.5	---	---	---	
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	---	<0.5	---	---	---	
ortho-Xylene	95-47-6	0.5	mg/kg	---	<0.5	---	---	---	

Page	: 5 of 6
Work Order	: ES1824312
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16 Mascot

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QA1A	QS3A	QA2A	---	---
				Client sampling date / time	13-Aug-2018 00:00	13-Aug-2018 00:00	14-Aug-2018 00:00	---	---
Compound	CAS Number	LOR	Unit		ES1824312-001	ES1824312-002	ES1824312-003	---	---
					Result	Result	Result	---	---
EP080: BTEXN - Continued									
^ Sum of BTEX	---	0.2	mg/kg	---	<0.2	---	---	---	---
^ Total Xylenes	---	0.5	mg/kg	---	<0.5	---	---	---	---
Naphthalene	91-20-3	1	mg/kg	---	<1	---	---	---	---
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%	---	93.6	---	---	---	---
2-Chlorophenol-D4	93951-73-6	0.5	%	---	84.3	---	---	---	---
2.4.6-Tribromophenol	118-79-6	0.5	%	---	66.0	---	---	---	---
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%	---	88.2	---	---	---	---
Anthracene-d10	1719-06-8	0.5	%	---	87.2	---	---	---	---
4-Terphenyl-d14	1718-51-0	0.5	%	---	81.3	---	---	---	---
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%	---	89.1	---	---	---	---
Toluene-D8	2037-26-5	0.2	%	---	82.4	---	---	---	---
4-Bromofluorobenzene	460-00-4	0.2	%	---	85.2	---	---	---	---

Analytical Results

Descriptive Results

Sub-Matrix: SOIL

Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	QA1A - 13-Aug-2018 00:00	Mid brown sandy soil with one piece of asbestos cement sheeting approximately 3 x 3 x 2mm.
EA200: Description	QA2A - 14-Aug-2018 00:00	Mid brown sandy soil.

Page	: 6 of 6
Work Order	: ES1824312
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16 Mascot

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES1824312**	Page	: 1 of 7
Client	: **TRACE ENVIRONMENTAL PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR KEN HENDERSON	Contact	: Customer Services ES
Address	: Shop 2 793-799 New Canterbury Road Dulwich Hill NSW 2203	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 1.16 Mascot	Date Samples Received	: 17-Aug-2018
Order number	: ----	Date Analysis Commenced	: 20-Aug-2018
C-O-C number	: 180802TRACE	Issue Date	: 23-Aug-2018
Sampler	: ---		
Site	: ---		
Quote number	: EN/222/17 (Sydney Batches)		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Gerrad Morgan	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

Page	: 2 of 7
Work Order	: ES1824312
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16 Mascot

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 1887013)									
ES1824311-044	Anonymous	EA055: Moisture Content	----	0.1	%	9.6	10.1	4.56	0% - 50%
ES1824321-001	Anonymous	EA055: Moisture Content	----	0.1	%	5.6	5.7	3.09	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 1889224)									
ES1824297-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	18	22	20.4	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	10	10	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	10	12	18.4	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	35	32	6.98	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	38	39	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	1150	1200	4.19	0% - 20%
ES1824321-008	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	56	55	1.95	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	13	14	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	8	17.9	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	16	18	7.11	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	15	16	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	34	34	0.00	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 1889225)									
ES1824297-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES1824321-008	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 1883653)									
ES1824309-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Page : 3 of 7
Work Order : ES1824312
Client : TRACE ENVIRONMENTAL PTY LTD
Project : 1.16 Mascot

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 1883653) - continued									
ES1824309-001	Anonymous	EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	---	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
ES1824309-011	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	---	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1883260)									
ES1824258-001	Anonymous	EP080: C6 - C9 Fraction	---	10	mg/kg	<10	<10	0.00	No Limit
ES1824443-001	Anonymous	EP080: C6 - C9 Fraction	---	10	mg/kg	<10	<10	0.00	No Limit

Page : 4 of 7
Work Order : ES1824312
Client : TRACE ENVIRONMENTAL PTY LTD
Project : 1.16 Mascot

Sub-Matrix: SOIL

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1883654)									
ES1824309-001	Anonymous	EP071: C15 - C28 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
ES1824309-011	Anonymous	EP071: C15 - C28 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 1883260)									
ES1824258-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES1824443-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 1883654)									
ES1824309-001	Anonymous	EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
ES1824309-011	Anonymous	EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
EP080: BTEXN (QC Lot: 1883260)									
ES1824258-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
ES1824443-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit

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Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: 1.16 Mascot

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

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

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 1889224)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	104	86	126
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	99.0	83	113
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	101	76	128
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	103	86	120
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	98.5	80	114
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	106	87	123
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	111	80	122
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1889225)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	79.3	70	105
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1883653)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	89.6	77	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	97.8	72	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	91.7	73	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	93.6	72	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	96.4	75	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	90.0	77	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	90.6	73	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	97.0	74	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	95.3	69	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	93.4	75	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	98.3	68	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	93.1	74	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	91.4	70	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	92.0	61	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	92.1	62	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	96.7	63	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1883260)								
EP080: C6 - C9 Fraction	---	10	mg/kg	<10	26 mg/kg	83.7	68	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1883654)								
EP071: C10 - C14 Fraction	---	50	mg/kg	<50	300 mg/kg	97.0	75	129
EP071: C15 - C28 Fraction	---	100	mg/kg	<100	450 mg/kg	96.4	77	131
EP071: C29 - C36 Fraction	---	100	mg/kg	<100	300 mg/kg	90.0	71	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1883260)								

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Client : TRACE ENVIRONMENTAL PTY LTD
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Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1883260) - continued								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	88.3	68	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1883654)								
EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	375 mg/kg	94.3	77	125
EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	525 mg/kg	94.4	74	138
EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	225 mg/kg	99.6	63	131
EP080: BTEXN (QCLot: 1883260)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	90.8	62	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	85.2	67	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	84.1	65	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	84.1	66	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	88.2	68	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	92.3	63	119

Matrix Spike (MS) Report

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

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005T: Total Metals by ICP-AES (QCLot: 1889224)							
ES1824297-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	106	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	106	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	108	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	108	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	112	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	108	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	# Not Determined	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1889225)							
ES1824297-002	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	90.6	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1883653)							
ES1824309-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	87.5	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	94.8	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1883260)							
ES1824258-001	Anonymous	EP080: C6 - C9 Fraction	---	32.5 mg/kg	80.1	70	130

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Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1883654)							
ES1824309-001	Anonymous	EP071: C10 - C14 Fraction	----	523 mg/kg	97.6	73	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	97.9	53	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	130	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1883260)							
ES1824258-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	80.8	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1883654)							
ES1824309-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	102	73	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	124	53	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	120	52	132
EP080: BTEXN (QCLot: 1883260)							
ES1824258-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	76.1	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	75.4	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	77.1	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	75.6	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	79.5	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	81.3	70	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES1824312	Page	: 1 of 6
Client	: TRACE ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: MR KEN HENDERSON	Telephone	: +61-2-8784 8555
Project	: 1.16 Mascot	Date Samples Received	: 17-Aug-2018
Site	: ----	Issue Date	: 23-Aug-2018
Sampler	: ----	No. of samples received	: 3
Order number	: ----	No. of samples analysed	: 3

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

- NO Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- NO Quality Control Sample Frequency Outliers exist.

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Client	: TRACE ENVIRONMENTAL PTY LTD
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Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG005T: Total Metals by ICP-AES	ES1824297--002	Anonymous	**Zinc**	7440-66-6	Not Determined	---	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

Evaluation: ✗ = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) QS3A	13-Aug-2018	---	---	---	21-Aug-2018	27-Aug-2018	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag (EA200) QA1A	13-Aug-2018	---	---	---	21-Aug-2018	09-Feb-2019	✓
Snap Lock Bag (EA200) QA2A	14-Aug-2018	---	---	---	21-Aug-2018	10-Feb-2019	✓
EA200N: Asbestos Quantification (non-NATA)							
Snap Lock Bag (EA200N) QA1A	13-Aug-2018	---	---	---	21-Aug-2018	09-Feb-2019	✓
Snap Lock Bag (EA200N) QA2A	14-Aug-2018	---	---	---	21-Aug-2018	10-Feb-2019	✓
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) QS3A	13-Aug-2018	22-Aug-2018	09-Feb-2019	✓	22-Aug-2018	09-Feb-2019	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) QS3A	13-Aug-2018	22-Aug-2018	10-Sep-2018	✓	22-Aug-2018	10-Sep-2018	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) QS3A	13-Aug-2018	21-Aug-2018	27-Aug-2018	✓	22-Aug-2018	30-Sep-2018	✓

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Matrix: **SOIL** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) QS3A	13-Aug-2018	20-Aug-2018	27-Aug-2018	✓	22-Aug-2018	27-Aug-2018	✓
Soil Glass Jar - Unpreserved (EP071) QS3A	13-Aug-2018	21-Aug-2018	27-Aug-2018	✓	22-Aug-2018	30-Sep-2018	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) QS3A	13-Aug-2018	20-Aug-2018	27-Aug-2018	✓	22-Aug-2018	27-Aug-2018	✓
Soil Glass Jar - Unpreserved (EP071) QS3A	13-Aug-2018	21-Aug-2018	27-Aug-2018	✓	22-Aug-2018	30-Sep-2018	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) QS3A	13-Aug-2018	20-Aug-2018	27-Aug-2018	✓	22-Aug-2018	27-Aug-2018	✓

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Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	13	15.38	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard

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Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 - 2004 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Asbestos Classification and Quantitation per NEPM 2013	* EA200N	SOIL	Asbestos Classification and Quantitation per NEPM 2013 with Confirmation of Identification by AS 4964 - 2004 Gravimetric determination of Asbestos Containing Material, Fibrous Asbestos, Asbestos Fines and sample weight and calculation of percentage concentrations per NEPM protocols. Asbestos (Fines and Fibrous FA+AF) is reported as the equivalent weight in the sample received after accounting for sub-sampling (where applicable for the <7mm and/or <2mm fractions).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM amended 2013.
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270D. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260B. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM amended 2013.

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

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Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **ES1824312**		
Client	: **TRACE ENVIRONMENTAL PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR KEN HENDERSON	Contact	: Customer Services ES
Address	: Shop 2 793-799 New Canterbury Road Dulwich Hill NSW 2203	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: ken@traceenviro.com	E-mail	: ALSEnviro.Sydney@alsglobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 1.16 Mascot	Page	: 1 of 2
Order number	: ----	Quote number	: ----
C-O-C number	: 180802TRACE	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	:		

Dates

Date Samples Received	: 17-Aug-2018 15:00	Issue Date	: 18-Aug-2018
Client Requested Due Date	: 23-Aug-2018	Scheduled Reporting Date	: **23-Aug-2018**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 7.7'C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 3 / 3

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- **Asbestos analysis will be conducted by ALS Newcastle.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.

Issue Date	: 18-Aug-2018
Page	: 2 of 2
Work Order	: ES1824312 Amendment 0
Client	: TRACE ENVIRONMENTAL PTY LTD

Sample Container(s)/Preservation Non-Compliances

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

Method Client sample ID	Sample Container Received	Preferred Sample Container for Analysis
Asbestos Classification and Quantitation per NEPM 2013 : EA200N		
QA1A	- Snap Lock Bag	- Snap Lock Bag: Separate bag received
QA2A	- Snap Lock Bag	- Snap Lock Bag: Separate bag received

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	SOIL - EA055-103 Moisture Content	SOIL - EA200N Asbestos in Soils - (<1kg samples ONLY)	SOIL - ⊕-26 ⊕ metals/TRH/⊕TEX/NPAH
ES1824312-001	13-Aug-2018 00:00	QA1A		✓	
ES1824312-002	13-Aug-2018 00:00	QS3A	✓		✓
ES1824312-003	14-Aug-2018 00:00	QA2A		✓	

Proactive Holding Time Report

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

Requested Deliverables

ACCOUNTS < last name >		
- A4 - AU Tax Invoice (INV)	Email	accounts@traceenviro.com
KEN HENDERSON		
- *AU Certificate of Analysis - NATA (COA)	Email	ken@traceenviro.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	ken@traceenviro.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	ken@traceenviro.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	ken@traceenviro.com
- A4 - AU Tax Invoice (INV)	Email	ken@traceenviro.com
- Chain of Custody (CoC) (COC)	Email	ken@traceenviro.com
- EDI Format - ENMRG (ENMRG)	Email	ken@traceenviro.com
- EDI Format - ESDAT (ESDAT)	Email	ken@traceenviro.com

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Brisbane ☐ Unit 1-21 Smallwood Place, Murarrie; Phone: +617 3902 4600; Email: EnviroSampleQLD@eurofins.com.au

Melbourne ☐ 2 Kingston Town Close, Oakleigh, VIC 3166; Phone: +613 8564 5000; Fax: +613 8564 5090; Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

Page 1 of 1

CLIENT DETAILS			
Company Name: TRACE Environmental	Contact Name: Jack Ellis	Purchase Order:	COC Number: 1808 02TRA ag
Office Address: 783-789 New Canterbury Road, Dulwich Hill NSW	Project Manager: Ken Hartley	PROJECT Number: 116	Eurofins | mgt quote ID: 1 of 6
	Email for results: ken@traceenviro.com	PROJECT Name: Mascot	Data output format:

Special Directions: Please send invoice to accounts@traceenviro.com & Proj. Manager

Eurofins \| mgt DI water batch number:

Analyses: Asbestos (WA/NEPM); Suite B7; Suite B7A; Suite B15; PAH; Suite M8; VOC; Fieldscreen pHF & pH (fox)*; 28 PCAS; Suite R21

Environmental Division
Sydney
Work Order Reference
ES1824312

HOLD

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

	Sample ID	Date	Matrix	Asbestos	Suite B7	Suite B7A	Suite B15	PAH	Suite M8	VOC	Fieldscreen	28 PCAS	Suite R21	Bag	Sample comments
1	SB3/0.5	9/8/18	Soil											/	contact sample
2	SB6/0.4													/	contact sample
3	SB6/2.0										/			/	
4	SB6/3.0													/	
5	SB6/4.0										/			/	
6	SB6/5.0										/			/	
7	SB10/0.5	10/8/18												/	
8	SB11/0.5	9/8/18												/	
9	SB11/1.8													/	
10	SB13/0.3	13/8/18		/				/	/					/	
11	SB14/0.5	10/8/18												/	
12	SB14/1.2													/	
13	SB14/2.0										[illegible]			/	
14	SB14/3.0													/	
15	SB14/4.0										/			/	
16	SB14/5.0													/	

Containers: 1LP, 250P, 125P, 1LA, Vial 40mL/20mL, Jar, Bag

ASBESTOS NEPM / ALS NEWCASTLE

Subcon / Forward Lab / Split WO: ____
Lab / Analysis: 1, 3
Organised By / Date:
Relinquished By / Date:
Connote / Courier:
WO No: ES18 24312
Attach By PO / Internal Sheet:

	Laboratory Staff	Turn around time	Method Of Shipment	Temperature on arrival:
Relinquished: Jack Ellis	Received By: [signature]	1 DAY / 2 DAY / 3 DAY	Courier	
Date & Time: JEllis	Date & Time: 15/08/18 ~1PM	5 DAY / 10 DAY / Other	Hand Delivered	Report number:
Signature: 14/8/18	Signature: [signature]		Postal / Consignment	#612928

QS2009_R1 Issue Date: 22 August 2013 Page 1 of 1

* pH fox only (SPOCAS ASS Method) "field test" - ASS pH (NATA method - ASS NATA pH) Rec. sol 17/8/18 1500 7.7°

All ASS bags have been frozen.

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Sydney ☑ Brisbane ☐ Melbourne

CHAIN OF CUSTODY RECORD

Page 1 of 1

CLIENT DETAILS			
Company Name: TRACE Environmental	Contact Name: Jack Ellis	Purchase Order:	COC Number: 2 of 6
Office Address: 793-799 New Canterbury Road, Dulwich Hill, NSW	Project Manager:	PROJECT Number: 1.16	Eurofins | mgt quote ID: See Pg 1
	Email for results: See COC Page 1	PROJECT Name: Mascot	Data output format:

Special Directions:

Eurofins | mgt DI water batch number:

Analytes: Asbestos (WA NEPM); Suite B7; Suite B7a; Suite B15; PAH; Suite M8; VOC; Field Screen pH$_F$ & pH$_{FOX}$ *; 28 PFAS; Suite R21; HOLD

#	Sample ID	Date	Matrix	Field Screen pH$_F$ & pH$_{FOX}$ *	Bag
1	SB14/6.0	10/8/18	Soil	✓	✓
2	SB14/7.0	↓	↓		✓
3	SB14/8.0			✓	✓
4	SB14/9.0				✓
5	SB14/10.0			✓	✓
6	SB17/0.5				✓
7	SB17/1.2				✓
8	SB17/3.8			✓	✓
9	SB17/5.0				✓
10	SB17/6.0			✓	✓
11	SB17/7.0				✓
12	SB17/8.0			✓	✓
13	SB17/9.0				✓
14	SB17/10.0	↓		✓	✓
15	SB20/0.3	8/8/18			✓
16	SB20/1.2		↓		✓

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, [illegible]	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX	24 hours
Ferrous Iron	7 days	ASLP, TCLP	7 days

Containers: 1LP, 250P, 125P, 1LA, [illegible], Jar, Bag

Sample comments: contact sample; contact sample

Relinquished: Jack Ellis
Date & Time: 14/8/18
Signature: JEllis

Laboratory Staff
Received By: [illegible signature]
Date & Time: 15/8/18 8:41PM
Signature: [illegible signature]

Turn around time: 1 DAY / 2 DAY / 3 DAY / 5 DAY / 10 DAY / Other:

Method Of Shipment: Courier / Hand Delivered / Postal / Name/Consignment:

Temperature on arrival:

Report number:

CS1009_R1 Issue Date: 22 August 2013 Page 1 of 1

* pH fox only (SPOCAS ASS Method) "field test" – As Page 1

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Sydney ☑ Brisbane ☐ Melbourne

CHAIN OF CUSTODY RECORD

Page 1 of 1

CLIENT DETAILS

Company Name: TRACE Environmental | Contact Name: Jack Ellis | Purchase Order: | COC Number: 3 of 6

Office Address: 790-798 New Canterbury Road, Dulwich Hill, NSW | Project Manager: | PROJECT Number: 1.16 | Eurofins | mgt quote ID: See Pg 1

Email for results: See COC Page 1 | PROJECT Name: Mascot | Data output format:

Special Directions: accounts@tracemetro.com & Pro...

Analytes: Asbestos (WA NEPM Method); Suite B7; Suite B7a; Suite B15; PAH; Suite M8; VOC; Field Screen pHF & pHFox *; 28 PFAS; Suite R21; HOLD

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

No.	Sample ID	Date	Matrix
1	SB20/2.2	13/8/18	Soil
2	SB20/2.6		
3	SB20/5.0		
4	SB20/6.0		
5	SB20/7.0		
6	SB20/8.0		
7	SB20/9.0		
8	SB20/10.0		
9	SB20/11.0		
10	SB20/12.0		
11	SB21/0.15	13/8/18	
12	SB21/0.4		
13	SB21/0.5		
14	SB21/0.8		
15	SB22/0.1		
16	SB22/0.5		

Containers: 1LP, 250P, 125P, 1LA, ..., Jar, Bag

Sample comments: contact sample; contact sample

Relinquished: Jack Ellis | Date & Time: 14/8/18 | Signature: JEllis

Laboratory Staff — Received By: [illegible] | Date & Time: 15/08/18 5:11PM | Signature: [illegible]

Turn around time: 1 DAY, 2 DAY, 3 DAY, 5 DAY, 10 DAY, Other

Method Of Shipment: Courier, Hand Delivered, Postal, Consignment

Temperature on arrival:

Report number:

QS0000_R1 Issue Date: 22 August 2013 Page 1 of 1

* pHFox only (SPOCAS ASS Method) "Field test" – As Page 1

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Brisbane ☐ Unit 1, 21 Smallwood Place, Murarrie · Phone: +617 3902 4600 · Email: EnviroSampleQLD@eurofins.com.au

Melbourne ☐ 2 Kingston Town Close, Oakleigh, VIC 3166 · Phone: +613 8564 5000 · Fax: +613 8564 5090 · Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

Page 1 of 1

CLIENT DETAILS

Company Name: TRACE Environmental	Contact Name: Jack Ellis	Purchase Order:	COC Number: 4 of 6
Office Address: 792-790 New Canterbury Road, Dulwich Hill, NSW	Project Manager: See COC page 1	PROJECT Number:	Eurofins / mgt quote ID: see pg 1
	Email for results:	PROJECT Name:	Data output format:

Special Directions / Invoice: accounts@traceenviro.com & Proj. Manager

Eurofins / mgt DI water batch number:

Analytes:

	Sample ID	Date	Matrix	Asbestos (WA NEPM)	Suite B7	Suite B7a	Suite B15	PAH	Suite M8	VOC	Field Screen pH & pHfox*	28 PFAS	Suite B21	HOLD
1	SB?/0.9	13/8/18	Soil											
2	SB22/1.0	↓												
3	SB22/1.3					✓							✓	
4	SB22/2.0													
5	SB22/2.6													
6	SB22/3.0										✓			
7	SB22/4.0													
8	SB22/5.0										✓			
9	SB22/6.0				✓									
10	SB22/7.0										✓			
11	SB26/0.2													
12	SB26/1.0													
13	SB26/2.0										✓			
14	SB26/3.0													
15	SB26/4.0										✓			
16	SB26/5.0													

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CRS	24 hours
Ferrous Iron	7 days	ASLP, TCLP	7 days

Containers: 1LP | 250P | 125P | 1LA | [illegible] | Jar | Bag

Sample comments: contact sample; contact sample

Laboratory Staff	
Relinquished: Jack Ellis	Received By: [illegible]
Date & Time: 14/8/18	Date & Time: 15/08/18 5:41PM
Signature: [signature]	Signature: [signature]

Turn around time: 1 DAY · 2 DAY · 3 DAY · 5 DAY · 10 DAY · Other:

Method Of Shipment: Courier · Hand Delivered · Postal · Name of Courier / Consignment:

Temperature on arrival:

Report number:

QS3009_R1 · Issue Date: 22 August 2013 · Page 1 of 1

* pH fox only (Spocas PASS method) "field test" – As Page 1

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Phone: +613 8564 5000 Fax: +613 8564 5090
Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

Page 1 of 1

CLIENT DETAILS

Company Name: TRACE Environmental	Contact Name: Jack Ellis	Purchase Order:	COC Number: SOF 1
Office Address: 793-799 New Canterbury Road, Dulwich Hill NSW, 2203	Project Manager: See COC Page 1	PROJECT Number:	Eurofins | mgt quote ID: See page 1
	Email for results:	PROJECT Name:	Data output format:

Special Directions & Comments:
Please email invoices to accounts@traceenviro.com & Project Manager

Eurofins | mgt DrinkWater batch number:

Analytes: Asbestos (WA NEPM); Suite B7; Suite B7a; Suite B15; PAH; Suite M8; VOC; Fieldscreen pH$_F$ & pH$_{FOX}$*; 28 PFAS; Suite R21; Send to ALS; HOLD

	Sample ID	Date	Matrix	Sample comments
1	SB26/6.0	10/8/18	Soil	contact sample
2	SB26/7.0	↓	↓	contact sample
3	SB26/8.0	↓	↓	
4	SB26/9.0	↓	↓	
5	SB26/10.0	↓	↓	
6	SB27/0.2	8/8/18	↓	
7	SB27/1.0	↓	↓	
8	SB27/3.1	↓	↓	
9	SB27/5.0	↓	↓	
10	SB27/6.0	↓	↓	
11	QA1	13/8/18	↓	
12	QA1A (1)	↓	↓	
13	QS3	↓	↓	
14	QS3A (2)	↓	↓	
15	RB2	↓	Water	
16	RB3	14/8/18	Water	

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous Iron	7 days	ASLP, TCLP	7 days

Containers: 1LP, 250P, 125P, 1LA, 40mL vial, 125mL..., Jar, Bag

Relinquished by	Laboratory Staff: Received by
Relinquished: Jack Ellis	Received By: Jodie W
Date & Time: 14/8/18	Date & Time: 15/08/18 5:41PM
Signature: JEllis	Signature: [signature]

Turnaround time: 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 DAY ☑ 10 DAY ☐ Other:

Method Of Shipment: ☐ Courier ☐ Hand Delivered ☐ Postal Courier Consignment #:

Temperature on arrival:

Report number:

QS3009_R1 Issue Date: 22 August 2013 Page 1 of 1

* pH$_{FOX}$ only (SPOCAS ASS method) "Field test" - As Page 1

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Brisbane Unit 1-21 Smallwood Place, Murarrie; Phone: +617 3902 4600; Email: EnviroSampleQLD@eurofins.com.au

Melbourne 2 Kingston Town Close, Oakleigh, VIC 3166; Phone: +613 8564 5000; Fax: +613 8564 5090; Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

CLIENT DETAILS			Page 1 of 1
Company Name: TRACE Environmental	Contact Name: Jack Ellis	Purchase Order:	COC Number: 6 of 6
Office Address: 793-799 New Canterbury Road, Dulwich Hill, NSW, 2203	Project Manager: & See COC page 1	PROJECT Number: 1.16	Eurofins | mgt quote ID: See Pg 1
	Email for results:	PROJECT Name: Mascot	Data output format:

Special Directions & Cor: Please email invoices to accounts@traceenviro.com & Proj Manager

Eurofins \| mgt Bottle batch number:

Analytes: Asbestos (WA NEPM); Suite B7; Suite B7a; Suite B15; PAH; Suite M8; VOC; Field Screen pH$_F$ & pH$_{FOX}$ *; 28 PCAS; Suite R21; Send to ALS; HOLD

	Sample ID	Date	Matrix	Asbestos (WA NEPM)	Suite B7a	Send to ALS	Sample comments
1	SB4/0.2	14/8/18	Soil	/	/		contact sample
2	SB7/0.25	14/8/18	↓	/	/		contact sample
3	SB8/0.15	↓	↓		/		
4	SB8/0.3	↓	↓	/			
5	SB9/0.25	↓	↓	/	/		
6	SB13/0.2	↓	↓				
7	SB23/0.4	↓	↓	/	/		
8	SB24/0.3	↓	↓	/	/		
9	SB25/0.15	↓	↓	/	/		
10	QA2	↓	↓	/			
11	QA2A	↓	↓	/		/	Sent to ALS
12	RB4	16/8/18	Water		/		
13							
14							
15							
16							

Some common holding times (with correct preservation). For further information contact the lab.

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers: 1LP, 250P, 125P, 1LA, 40mL vial, 125mL A, Jar, Bag

Laboratory Staff		Turn around time	Method Of Shipment
Relinquished: Jack Ellis	Received By: Josh W	1 DAY ☐ 2 DAY ☐ 3 DAY ☐	Courier
Date & Time: 14/8/18	Date & Time: 15/08/18 5:41pm	5 DAY ☐ 10 DAY ☐ Other:	Hand Delivered
Signature: JEllis	Signature: [signature]		Postal
			Our Consignment:

QS3009_R1 Issue Date: 20 August 2013 Page 1 of 1

Tess G 16/8/18 7.7C ice

* PH$_{FOX}$ only (SPOCAS Method) "Field test" - As Page 1
Rec Sos Agh 17/8/18 1500 7.7°C

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Testing For Life

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1 217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests calibrations and or measurements included in this document are traceable to Australian national standards.

Trace Environmental P/L
Shop 2, 7 3 7 New Canterbury Road
Dulwich Hill
NSW 2203

Attention: K en Henderson

Report 612 7 W
Pro ect name **MASCO T**
Pro ect ID **1.1**
Received Date **Aug 15 2018**

Client Sample ID			MW1	MW2	MW3	MW4	
Sample Matrix			Water	Water	Water	Water	
Eurofins mgt Sample No.			S1 Au1	S1 Au1	S1	Au20000 S1	Au20001
Date Sampled			Aug 1 , 201	Aug 1 , 201	Aug 1 , 201	Aug 1 , 201	
T est Reference	LO R	nit					
Total Recoverable Hydrocarbons 2013 NEPM Fractions							
Naphthalene[N02]	0.01	mg L	0.01	0.01	0.01	0.01	
T RH C C10	0.02	mg L	0.02	0.02	0.02	0.02	
T RH C C10 less BT EX[N0] F1	0.02	mg L	0.02	0.02	0.02	0.02	
T RH C10 C1	0.05	mg L	0.05	0.05	0.05	0.05	
T RH C10 C1 less Naphthalene[N01] F2	0.05	mg L	0.05	0.05	0.05	0.05	
T RH C1 C	0.1	mg L	0.1	0.1	0.1	0.1	
T RH C C 0	0.1	mg L	0.1	0.1	0.1	0.1	
T RH C10 C 0 total	0.1	mg L	0.1	0.1	0.1	0.1	
Total Recoverable Hydrocarbons 1 NEPM Fractions							
T RH C C	0.02	mg L	0.02	0.02	0.02	0.02	
T RH C10 C1	0.05	mg L	0.05	0.05	0.05	0.05	
T RH C15 C28	0.1	mg L	0.1	0.1	0.1	0.1	
T RH C2 C	0.1	mg L	0.1	0.1	0.1	0.1	
T RH C10 T otal	0.1	mg L	0.1	0.1	0.1	0.1	
B TEX							
Ben ene	0.001	mg L	0.001	0.001	0.001	0.001	
T oluene	0.001	mg L	0.002	0.001	0.001	0.001	
Ethylben ene	0.001	mg L	0.001	0.001	0.001	0.001	
m p X ylenes	0.002	mg L	0.002	0.002	0.002	0.002	
o X ylene	0.001	mg L	0.001	0.001	0.001	0.001	
X ylenes T otal	0.00	mg L	0.00	0.00	0.00	0.00	
Bromofluoroben ene surr.	1		10	121	11	118	
V olatile 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 T richloroethane	0.001	mg L	0.001	0.001	0.001	0.001	
1.1.1.2 T etrachloroethane	0.001	mg L	0.001	0.001	0.001	0.001	
1.1.2 T richloroethane	0.001	mg L	0.001	0.001	0.001	0.001	
1.1.2.2 T etrachloroethane	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 Dichloroben ene	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. T richloropropane	0.001	mg L	0.001	0.001	0.001	0.001	
1.2. T rimethylben ene	0.001	mg L	0.001	0.001	0.001	0.001	

Client Sample ID			MW1	MW2	MW3	MW4	
Sample Matrix			Water	Water	Water	Water	
Eurofins mgt Sample No.			S1 Au1	S1 Au1	S1	Au20000 S1	Au20001
Date Sampled			Aug 1 , 201	Aug 1 , 201	Aug 1 , 201	Aug 1 , 201	
T est Reference	LO R	nit					
V olatile Organics							
1. Dichloroben ene	0.001	mg L	0.001	0.001	0.001	0.001	
1. Dichloropropane	0.001	mg L	0.001	0.001	0.001	0.001	
1. .5 T rimethylben ene	0.001	mg L	0.001	0.001	0.001	0.001	
1. Dichloroben ene	0.001	mg L	0.001	0.001	0.001	0.001	
2 Butanone MEK	0.001	mg L	0.001	0.001	0.001	0.001	
2 Propanone Acetone	0.001	mg L	0.005	0.001	0.001	0.001	
Chlorotoluene	0.001	mg L	0.001	0.001	0.001	0.001	
Methyl 2 pentanone MIBK	0.001	mg L	0.001	0.001	0.001	0.001	
Allyl chloride	0.001	mg L	0.001	0.001	0.001	0.001	
Ben ene	0.001	mg L	0.001	0.001	0.001	0.001	
Bromoben ene	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	0.001	mg L	0.001	0.001	0.001	0.001	
Carbon disulfide	0.001	mg L	0.001	0.001	0.001	0.001	
Carbon T etrachloride	0.001	mg L	0.001	0.001	0.001	0.001	
Chloroben ene	0.001	mg L	0.001	0.001	0.001	0.001	
Chloroethane	0.001	mg L	0.001	0.001	0.001	0.001	
Chloroform	0.005	mg L	0.005	0.005	0.005	0.005	
Chloromethane	0.001	mg L	0.001	0.001	0.001	0.001	
cis 1.2 Dichloroethene	0.001	mg L	0.001	0.001	0.001	0.001	
cis 1. 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	0.001	mg L	0.001	0.001	0.001	0.001	
Ethylben ene	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 ben ene Cumene	0.001	mg L	0.001	0.001	0.001	0.001	
m p X ylenes	0.002	mg L	0.002	0.002	0.002	0.002	
Methylene Chloride	0.001	mg L	0.001	0.001	0.001	0.001	
o X ylene	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	
T etrachloroethene	0.001	mg L	0.001	0.001	0.001	0.001	
T oluene	0.001	mg L	0.002	0.001	0.001	0.001	
trans 1.2 Dichloroethene	0.001	mg L	0.001	0.001	0.001	0.001	
trans 1. Dichloropropene	0.001	mg L	0.001	0.001	0.001	0.001	
T richloroethene	0.001	mg L	0.001	0.001	0.001	0.001	
T richlorofluoromethane	0.001	mg L	0.001	0.001	0.001	0.001	
V inyl chloride	0.001	mg L	0.001	0.001	0.001	0.001	
X ylenes T otal	0.00	mg L	0.00	0.00	0.00	0.00	
T otal MAH	0.00	mg L	0.00	0.00	0.00	0.00	
V ic EPA IWRG 21 CHC T otal	0.005	mg L	0.005	0.005	0.005	0.005	
V ic EPA IWRG 21 O ther CHC T otal	0.005	mg L	0.005	0.005	0.005	0.005	
Bromofluoroben ene surr.	1		10	121	11	118	
T oluene d8 surr.	1			105	102	102	

Client Sample ID			MW1	MW2	MW3	MW4	
Sample Matrix			Water	Water	Water	Water	
Eurofins mgt Sample No.			S1 Au1	S1 Au1	S1	Au20000 S1	Au20001
Date Sampled			Aug 1 , 201	Aug 1 , 201	Aug 1 , 201	Aug 1 , 201	
T est Reference	LO R	nit					
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	
Ben a anthracene	0.001	mg L	0.001	0.001	0.001	0.001	
Ben o a pyrene	0.001	mg L	0.001	0.001	0.001	0.001	
Ben o b fluoranthene	0.001	mg L	0.001	0.001	0.001	0.001	
Ben o g.h.i perylene	0.001	mg L	0.001	0.001	0.001	0.001	
Ben o 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	
Diben 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. 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	
T otal PAH	0.001	mg L	0.001	0.001	0.001	0.001	
2 Fluorobiphenyl surr.	1		5	1	55	55	
p T erphenyl d1 surr.	1				8	0	
Organochlorine Pesticides							
Chlordanes T otal	0.001	mg L	0.001	0.001	0.001	0.001	
. DDD	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
. DDE	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
. DDT	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
a BHC	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
Aldrin	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
b BHC	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
d BHC	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
Dieldrin	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
Endosulfan I	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
Endosulfan II	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
Endosulfan sulphate	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
Endrin	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
Endrin aldehyde	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
Endrin ketone	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
g BHC Lindane	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
Heptachlor	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
Heptachlor epoxide	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
Hexachloroben ene	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
M ethoxychlor	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
T oxaphene	0.01	mg L	0.01	0.01	0.01	0.01	
Aldrin and Dieldrin T otal	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
DDT DDE DDD T otal	0.0001	mg L	0.0001	0.0001	0.0001	0.0001	
V ic EPA IWRG 21 O CP T otal	0.001	mg L	0.001	0.001	0.001	0.001	
V ic EPA IWRG 21 O ther O CP T otal	0.001	mg L	0.001	0.001	0.001	0.001	
Dibutylchlorendate surr.	1		51	5	5	5	
T etrachloro m xylene surr.	1		58			5	

Client Sample ID			MW1	MW2	MW3	MW4	
Sample Matrix			Water	Water	Water	Water	
Eurofins mgt Sample No.			S1 Au1	S1 Au1	S1	Au20000 S1	Au20001
Date Sampled			Aug 1 , 201	Aug 1 , 201	Aug 1 , 201	Aug 1 , 201	
Test Reference	LOR	nit					
Organophosphorus Pesticides							
Ainphos methyl	0.002	mg L	0.002	0.002	0.002	0.002	
Bolstar	0.002	mg L	0.002	0.002	0.002	0.002	
Chlorfenvinphos	0.002	mg L	0.002	0.002	0.002	0.002	
Chlorpyrifos	0.02	mg L	0.02	0.02	0.02	0.02	
Chlorpyrifos methyl	0.002	mg L	0.002	0.002	0.002	0.002	
Coumaphos	0.02	mg L	0.02	0.02	0.02	0.02	
Demeton S	0.02	mg L	0.02	0.02	0.02	0.02	
Demeton O	0.002	mg L	0.002	0.002	0.002	0.002	
Diazinon	0.002	mg L	0.002	0.002	0.002	0.002	
Dichlorvos	0.002	mg L	0.002	0.002	0.002	0.002	
Dimethoate	0.002	mg L	0.002	0.002	0.002	0.002	
Disulfoton	0.002	mg L	0.002	0.002	0.002	0.002	
EPN	0.002	mg L	0.002	0.002	0.002	0.002	
Ethion	0.002	mg L	0.002	0.002	0.002	0.002	
Ethoprop	0.002	mg L	0.002	0.002	0.002	0.002	
Ethyl parathion	0.002	mg L	0.002	0.002	0.002	0.002	
Fenitrothion	0.002	mg L	0.002	0.002	0.002	0.002	
Fensulfothion	0.002	mg L	0.002	0.002	0.002	0.002	
Fenthion	0.002	mg L	0.002	0.002	0.002	0.002	
Malathion	0.002	mg L	0.002	0.002	0.002	0.002	
Merphos	0.002	mg L	0.002	0.002	0.002	0.002	
Methyl parathion	0.002	mg L	0.002	0.002	0.002	0.002	
Mevinphos	0.002	mg L	0.002	0.002	0.002	0.002	
Monocrotophos	0.002	mg L	0.002	0.002	0.002	0.002	
Naled	0.002	mg L	0.002	0.002	0.002	0.002	
Omethoate	0.002	mg L	0.002	0.002	0.002	0.002	
Phorate	0.002	mg L	0.002	0.002	0.002	0.002	
Pirimiphos methyl	0.02	mg L	0.02	0.02	0.02	0.02	
Pyraophos	0.002	mg L	0.002	0.002	0.002	0.002	
Ronnel	0.002	mg L	0.002	0.002	0.002	0.002	
Terbufos	0.002	mg L	0.002	0.002	0.002	0.002	
Tetrachlorvinphos	0.002	mg L	0.002	0.002	0.002	0.002	
Tokuthion	0.002	mg L	0.002	0.002	0.002	0.002	
Trichloronate	0.002	mg L	0.002	0.002	0.002	0.002	
Triphenylphosphate surr.	1			81		8	
Polychlorinated Biphenyls							
Aroclor 101	0.001	mg L	0.001	0.001	0.001	0.001	
Aroclor 1221	0.001	mg L	0.001	0.001	0.001	0.001	
Aroclor 12 2	0.001	mg L	0.001	0.001	0.001	0.001	
Aroclor 12 2	0.001	mg L	0.001	0.001	0.001	0.001	
Aroclor 12 8	0.001	mg L	0.001	0.001	0.001	0.001	
Aroclor 125	0.001	mg L	0.001	0.001	0.001	0.001	
Aroclor 12 0	0.001	mg L	0.001	0.001	0.001	0.001	
Total PCB	0.001	mg L	0.001	0.001	0.001	0.001	
Dibutylchlorendate surr.	1		51	5	5	5	
Tetrachloro m xylene surr.	1		58			5	

Client Sample ID			MW1	MW2	MW3	MW4	
Sample Matrix			Water	Water	Water	Water	
Eurofins mgt Sample No.			S1 Au1	S1 Au1	S1	Au20000 S1	Au20001
Date Sampled			Aug 1 , 201	Aug 1 , 201	Aug 1 , 201	Aug 1 , 201	
T est Reference	LO R	nit					
Phenols (Halogenated)							
2 Chlorophenol	0.00	mg L	0.00	0.00	0.00	0.00	
2. Dichlorophenol	0.00	mg L	0.00	0.00	0.00	0.00	
2. .5 T richlorophenol	0.01	mg L	0.01	0.01	0.01	0.01	
2. . T richlorophenol	0.01	mg L	0.01	0.01	0.01	0.01	
2. Dichlorophenol	0.00	mg L	0.00	0.00	0.00	0.00	
Chloro methylphenol	0.01	mg L	0.01	0.01	0.01	0.01	
Pentachlorophenol	0.01	mg L	0.01	0.01	0.01	0.01	
T etrachlorophenols T otal	0.0	mg L	0.0	0.0	0.0	0.0	
T otal Halogenated Phenol	0.01	mg L	0.01	0.01	0.01	0.01	
Phenols (non Halogenated)							
2 Cyclohexyl . dinitrophenol	0.1	mg L	0.1	0.1	0.1	0.1	
2 Methyl . dinitrophenol	0.0	mg L	0.0	0.0	0.0	0.0	
2 Methylphenol o Cresol	0.00	mg L	0.00	0.00	0.00	0.00	
2 Nitrophenol	0.01	mg L	0.01	0.01	0.01	0.01	
2. Dimethylphenol	0.00	mg L	0.00	0.00	0.00	0.00	
2. Dinitrophenol	0.0	mg L	0.0	0.0	0.0	0.0	
Methylphenol m p Cresol	0.00	mg L	0.00	0.00	0.00	0.00	
Nitrophenol	0.0	mg L	0.0	0.0	0.0	0.0	
Dinoseb	0.1	mg L	0.1	0.1	0.1	0.1	
Phenol	0.00	mg L	0.00	0.00	0.00	0.00	
T otal Non Halogenated Phenol	0.1	mg L	0.1	0.1	0.1	0.1	
Phenol d surr.	1		0		0	8	
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid PFBA	0.05	ug L	0.05	0.05	0.05	0.05	
Perfluoropentanoic acid PFPeA	0.01	ug L	0.01	NO 0.01	NO 0.02	0.01	
Perfluorohexanoic acid PFHxA	0.01	ug L	0.01	NO 0.01	NO 0.02	0.01	
Perfluoroheptanoic acid PFHpA	0.01	ug L	0.01	0.01	0.01	0.01	
Perfluorooctanoic acid PFOA	0.01	ug L	0.01	NO 0.01	NO 0.01	0.01	
Perfluorononanoic acid PFNA	0.01	ug L	0.01	0.01	0.01	0.01	
Perfluorodecanoic acid PFDA	0.01	ug L	0.01	0.01	0.01	0.01	
Perfluoroundecanoic acid PF nDA	0.01	ug L	0.01	0.01	0.01	0.01	
Perfluorododecanoic acid PFDoDA	0.01	ug L	0.01	0.01	0.01	0.01	
Perfluorotridecanoic acid PFT rDA	0.01	ug L	0.01	0.01	0.01	0.01	
Perfluorotetradecanoic acid PFT eDA	0.01	ug L	0.01	0.01	0.01	0.01	
1 C PFBA surr.	1		1	8	1		
1 C5 PFPeA surr.	1			2	5	2	
1 C5 PFHxA surr.	1		8	81		8	
1 C PFHpA surr.	1		81	82		80	
1 C8 PFO A surr.	1		8	88	82	88	
1 C5 PFNA surr.	1		0	0	82		
1 C PFDA surr.	1			108		10	
1 C2 PF nDA surr.	1		2		0		
1 C2 PFDoDA surr.	1		2		50	2	
1 C2 PFT eDA surr.	1		2		5	1	

eurofins | mgt

Client Sample ID			MW1	MW2	MW3	MW4	
Sample Matrix			Water	Water	Water	Water	
Eurofins mgt Sample No.			S1 Au1	S1 Au1	S1	Au20000 S1	Au20001
Date Sampled			Aug 1 , 201	Aug 1 , 201	Aug 1 , 201	Aug 1 , 201	
Test Reference	LOR	nit					
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide FOSA	0.05	ug L	0.05	0.05	0.05	0.05	
N methylperfluoro 1 octane sulfonamide N MeFO SA[N11]	0.05	ug L	0.05	0.05	0.05	0.05	
N ethylperfluoro 1 octane sulfonamide N EtFO SA[N11]	0.05	ug L	0.05	0.05	0.05	0.05	
2 N methylperfluoro 1 octane sulfonamido ethanol N MeFO SE[N11]	0.05	ug L	0.05	0.05	0.05	0.05	
2 N ethylperfluoro 1 octane sulfonamido ethanol N EtFO SE[N11]	0.05	ug L	0.05	0.05	0.05	0.05	
N ethyl perfluorooctanesulfonamidoacetic acid N EtFO SAA[N11]	0.05	ug L	0.05	0.05	0.05	0.05	
N methyl perfluorooctanesulfonamidoacetic acid N MeFO SAA[N11]	0.05	ug L	0.05	0.05	0.05	0.05	
1 C8 FOSA surr.	1			5	5		
D N MeFOSA surr.	1						
D5 N EtFOSA surr.	1			5	1		
D N MeFOSE surr.	1		2		1	1	
D N EtFOSE surr.	1		1	5		5	
D5 N EtFOSAA surr.	1			5			
D N MeFOSAA surr.	1		2			1	
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid PFBS	0.01	ug L	0.01	0.01	0.01	0.01	
Perfluoropentanesulfonic acid PFPeS	0.01	ug L	0.01	0.01	0.01	0.01	
Perfluorohexanesulfonic acid PFHxS	0.01	ug L	[N0] 0.01	[N0] 0.02	[N0] 0.0	[N0] 0.01	
Perfluoroheptanesulfonic acid PFHpS	0.01	ug L	0.01	0.01	0.01	0.01	
Perfluorooctanesulfonic acid PFOS	0.01	ug L	0.01	[N0] 0.0	0.01	[N0] 0.02	
Perfluorodecanesulfonic acid PFDS	0.01	ug L	0.01	0.01	0.01	0.01	
1 C PFBS surr.	1		10	10	10	10	
18O2 PFHxS surr.	1		10	105	10	10	
1 C8 PFOS surr.	1						
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[N15]	0.01	ug L	0.01	0.01	0.01	0.01	
1 C2 4:2 FTSA surr.	1		2	0	0		
1 C2 6:2 FTSA surr.	1		5	5	1	5	
1 C2 8:2 FTSA surr.	1		5			5	
PFASs Summations							
Sum PFHxS PFOS	0.01	ug L	0.01	0.05	0.0	0.0	
Sum of USEPA PFAS PFOS PFOA	0.01	ug L	0.01	0.0	0.01	0.02	
Sum of enHealth PFAS PFHxS PFOS PFOA	0.01	ug L	0.01	0.0	0.0	0.0	
Sum of WA DWER PFAS n 10	0.05	ug L	0.05	0.08	0.0	0.05	
Sum of PFASs n 28	0.1	ug L	0.1	0.1	0.1	0.1	
Heavy Metals							
Arsenic filtered	0.001	mg L	0.001	0.01	0.00	0.001	
Cadmium filtered	0.0002	mg L	0.0002	0.0002	0.0002	0.0002	
Chromium filtered	0.001	mg L	0.001	0.001	0.001	0.001	
Copper filtered	0.001	mg L	0.1	0.10	0.0	0.05	

Client Sample ID			MW1	MW2	MW3	MW4
Sample Matrix			Water	Water	Water	Water
Eurofins mgt Sample No.			S1 Au1	S1 Au1	S1	Au20000 S1 Au20001
Date Sampled			Aug 1 , 201	Aug 1 , 201	Aug 1 , 201	Aug 1 , 201
Test Reference	LOR	nit				
Heavy Metals						
Lead filtered	0.001	mg L	0.012	0.00	0.00	0.005
Mercury filtered	0.0001	mg L	0.0001	0.0001	0.0001	0.0001
Nickel filtered	0.001	mg L	0.00	0.00	0.00	0.00
inc filtered	0.005	mg L	0.18	0.21	0.1	0.05

Client Sample ID			Q W1	TRIP B LANK	[N20]TRIP SPIK E
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S1 Au20002	S1 Au20003	S1 Au20004
Date Sampled			Aug 1 , 201	Aug 1 , 201	Aug 1 , 201
Test Reference	LOR	nit			
Total Recoverable Hydrocarbons 2013 NEPM Fractions					
Naphthalene[N02]	0.01	mg L	0.01	0.01	85
TRH C C10	0.02	mg L	0.02	0.02	5
TRH C C10 less BTEX[N0] F1	0.02	mg L	0.02	0.02	
TRH C10 C1	0.05	mg L	0.05		
TRH C10 C1 less Naphthalene[N01] F2	0.05	mg L	0.05		
TRH C1 C	0.1	mg L	0.1		
TRH C C 0	0.1	mg L	0.1		
TRH C10 C 0 total	0.1	mg L	0.1		
Total Recoverable Hydrocarbons 1 NEPM Fractions					
TRH C C	0.02	mg L	0.02	0.02	1
TRH C10 C1	0.05	mg L	0.05		
TRH C15 C28	0.1	mg L	0.1		
TRH C2 C	0.1	mg L	0.1		
TRH C10 Total	0.1	mg L	0.1		
BTEX					
Benene	0.001	mg L	0.001	0.001	8
Toluene	0.001	mg L	0.001	0.001	85
Ethylbenene	0.001	mg L	0.001	0.001	80
m p Xylenes	0.002	mg L	0.002	0.002	85
o Xylene	0.001	mg L	0.001	0.001	8
Xylenes Total	0.00	mg L	0.00	0.00	8
Bromofluorobenene surr.	1		8		
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg L	0.001		
Acenaphthylene	0.001	mg L	0.001		
Anthracene	0.001	mg L	0.001		
Benaanthracene	0.001	mg L	0.001		
Benoapyrene	0.001	mg L	0.001		
Benobfluoranthene	0.001	mg L	0.001		
Benog.h.iperylene	0.001	mg L	0.001		
Benokfluoranthene	0.001	mg L	0.001		
Chrysene	0.001	mg L	0.001		
Dibena.hanthracene	0.001	mg L	0.001		
Fluoranthene	0.001	mg L	0.001		
Fluorene	0.001	mg L	0.001		
Indeno 1.2. cd pyrene	0.001	mg L	0.001		
Naphthalene	0.001	mg L	0.001		

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test Reference	LOR	nit	QW1 Water S1 Au20002 Aug 1 , 201	TRIP BLANK Water S1 Au20003 Aug 1 , 201	R20TRIP SPIKE Water S1 Au20004 Aug 1 , 201
Polycyclic Aromatic Hydrocarbons					
Phenanthrene	0.001	mg L	0.001		
Pyrene	0.001	mg L	0.001		
Total PAH	0.001	mg L	0.001		
2 Fluorobiphenyl surr.	1		1		
p Terphenyl d1 surr.	1		0		
Phenols (Halogenated)					
2 Chlorophenol	0.00	mg L	0.00		
2. Dichlorophenol	0.00	mg L	0.00		
2. .5 Trichlorophenol	0.01	mg L	0.01		
2. . Trichlorophenol	0.01	mg L	0.01		
2. Dichlorophenol	0.00	mg L	0.00		
Chloro methylphenol	0.01	mg L	0.01		
Pentachlorophenol	0.01	mg L	0.01		
Tetrachlorophenols Total	0.0	mg L	0.0		
Total Halogenated Phenol	0.01	mg L	0.01		
Phenols (non Halogenated)					
2 Cyclohexyl . dinitrophenol	0.1	mg L	0.1		
2 Methyl . dinitrophenol	0.0	mg L	0.0		
2 Methylphenol o Cresol	0.00	mg L	0.00		
2 Nitrophenol	0.01	mg L	0.01		
2. Dimethylphenol	0.00	mg L	0.00		
2. Dinitrophenol	0.0	mg L	0.0		
Methylphenol m p Cresol	0.00	mg L	0.00		
Nitrophenol	0.0	mg L	0.0		
Dinoseb	0.1	mg L	0.1		
Phenol	0.00	mg L	0.00		
Total Non Halogenated Phenol	0.1	mg L	0.1		
Phenol d surr.	1				
Heavy Metals					
Arsenic filtered	0.001	mg L	0.01		
Cadmium filtered	0.0002	mg L	0.0002		
Chromium filtered	0.001	mg L	0.001		
Copper filtered	0.001	mg L	0.05		
Lead filtered	0.001	mg L	0.00		
Mercury filtered	0.0001	mg L	0.0001		
Nickel filtered	0.001	mg L	0.005		
Inc filtered	0.005	mg L	0.1		

Sample History

Where samples are submitted analysed over several days the last date of extraction and analysis is reported.
A recent review of our LIM S has resulted in the correction or clarification of some method identifications. Due to this some of the method reference information on reports has changed. However no substantive change has been made to our laboratory methods and as such there is no change in the validity of current or previous results regarding both quality and NAT A accreditation .

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
T otal Recoverable Hydrocarbons 201 NEPM Fractions	Melbourne	Aug 1 2018	Day
Method: T RH C C 0 LT M O RG 2010			
T otal Recoverable Hydrocarbons	Melbourne	Aug 1 2018	Day
Method: T RH C C 0 LT M O RG 2010			
T otal Recoverable Hydrocarbons 1 NEPM Fractions	Melbourne	Aug 21 2018	Day
Method: LT M O RG 2010 T RH C C			
BT EX	Melbourne	Aug 1 2018	1 Day
Method: T RH C C 0 LT M O RG 2010			
Eurofins mgt Suite B A filtered metals			
T otal Recoverable Hydrocarbons 201 NEPM Fractions	Melbourne	Aug 21 2018	Day
Method: T RH C C 0 LT M O RG 2010			
Polycyclic Aromatic Hydrocarbons	Melbourne	Aug 21 2018	Day
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Phenols Halogenated	Melbourne	Aug 21 2018	Days
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Phenols non Halogenated	Melbourne	Aug 21 2018	Day
Method: LT M O RG 21 0 PAH and Phenols in Soil and Water			
Metals M 8 filtered	Melbourne	Aug 1 2018	28 Day
Method: LT M MET 0 0 Metals in Waters Soils Sediments by ICP M S			
V olatile O rganics	Melbourne	Aug 1 2018	Days
Method: LT M O RG 2150 V O Cs in Soils Liquid and other Aqueous Matrices			
Eurofins mgt Suite B15			
O rganochlorine Pesticides	Melbourne	Aug 21 2018	Day
Method: LT M O RG 2220 O CP PCB in Soil and Water			
O rganophosphorus Pesticides	Melbourne	Aug 21 2018	Day
Method: LT M O RG 2200 O rganophosphorus Pesticides by G C M S			
Polychlorinated Biphenyls	Melbourne	Aug 21 2018	Days
Method: LT M O RG 2220 O CP PCB in Soil and Water			
Per and Polyfluoroalkyl Substances PFASs			
Perfluoroalkyl carboxylic acids PFCAs	Brisbane	Aug 20 2018	1 Day
Method: LT M O RG 2100 Per and Polyfluoroalkyl Substances PFAS			
Perfluoroalkyl sulfonamido substances	Brisbane	Aug 20 2018	1 Day
Method: LT M O RG 2100 Per and Polyfluoroalkyl Substances PFAS			
Perfluoroalkyl sulfonic acids PFSAs	Brisbane	Aug 20 2018	1 Day
Method: LT M O RG 2100 Per and Polyfluoroalkyl Substances PFAS			
n:2 Fluorotelomer sulfonic acids n:2 FT SAs	Brisbane	Aug 20 2018	1 Day
Method: LT M O RG 2100 Per and Polyfluoroalkyl Substances PFAS			

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Company Name:	T race Environmental P L	Order No.:	Received: Aug 15 2018 5: 1 PM
Address:	Shop 2 New Canterbury Road Dulwich Hill NSW 220	Report : 1255 Phone: 02 8 0 0555 Fax:	Due: Aug 22 2018 Priority: 5 Day Contact Name: K en Henderson
Project Name:	MASCO T		
Project ID:	1.1		Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Eurofins mgt Suite B15	V olatile O rganics	Eurofins mgt Suite B A filtered metals	BT EX N and V olatile T RH	Per and Polyfluoroalkyl Substances PFA Ss
Melbourne Laboratory NATA Site 12 4 & 14271						X	X	X	X	X
Sydney Laboratory NATA Site 1 217										
B risbane Laboratory NATA Site 207 4										X
Perth Laboratory NATA Site 23736										
External Laboratory										
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
1	MW1	Aug 15 2018		Water	S18 Au1	X	X	X		X
2	MW2	Aug 15 2018		Water	S18 Au1	X	X	X		X
	MW	Aug 15 2018		Water	S18 Au20000	X	X	X		X
	MW	Aug 15 2018		Water	S18 Au20001	X	X	X		X
5	Q W1	Aug 15 2018		Water	S18 Au20002			X		
	T RIP BLANK	Aug 15 2018		Water	S18 Au2000				X	
	T RIP SPIK E	Aug 15 2018		Water	S18 Au2000				X	
Test Counts								5	2	

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks Duplicates Matrix Spikes and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis unless otherwise stated.
   - All biota food results are reported on a wet weight basis on the edible portion unless otherwise stated.
   - 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.
   - SVOC analysis on waters are performed on homogenised unfiltered samples unless noted otherwise.
   - Samples were analysed on an as received basis.
8. This report replaces any interim results previously issued.

Holding Times

Please refer to Sample Preservation and Container Guide for holding times QS 001 .
For samples received on the last day of holding time notification of testing requirements should have been received at least 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 days however for all other VOCs such as BTEX or C 10 TRH then the holding time is 1 days.
NOTE H duplicates are reported as a range NOT as RPD

Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample reported as percent recovery.
CRM	Certified Reference Material 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.
Surr Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	nited States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 S Department of Defense
CP	Client Parent QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 0 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 0
Surrogate Recoveries: Recoveries must lie between 50 150 Phenols PFASs
PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.
WA DWER n 10 : PFBA PFPeA PFHxA PFHpA PFOA PFBS PFHxS PFOS :2 FTSA 8:2 FTSA

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.
   - Organochlorine Pesticide analysis where reporting LCS data Toxaphene Chlordane are not added to the LCS.
   - Organochlorine Pesticide analysis where reporting Spike data Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons where reporting Spike LCS data a single spike of commercial Hydrocarbon products in the range of C12 C 0 is added and its Total Recovery is reported in the C10 C1 cell of the Report.
   - pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 0 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
   - Recovery Data Spikes Surrogates where chromatographic interference does not allow the determination of Recovery the term " INT " appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 12 0 in Matrix Spikes and LCS.
   - For Matrix Spikes and LCS results a dash " " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Q uality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Q ualifying Code
Method B lank							
Total Recoverable Hydrocarbons 2013 NEPM Fractions							
Naphthalene	mg L	0.01			0.01	Pass	
Naphthalene	mg L	0.01			0.01	Pass	
T RH C C10	mg L	0.02			0.02	Pass	
T RH C10 C1	mg L	0.05			0.05	Pass	
T RH C1 C	mg L	0.1			0.1	Pass	
T RH C C 0	mg L	0.1			0.1	Pass	
Method B lank							
Total Recoverable Hydrocarbons 1 NEPM Fractions							
T RH C C	mg L	0.02			0.02	Pass	
T RH C10 C1	mg L	0.05			0.05	Pass	
T RH C15 C28	mg L	0.1			0.1	Pass	
T RH C2 C	mg L	0.1			0.1	Pass	
Method B lank							
B TEX							
Ben ene	mg L	0.001			0.001	Pass	
T oluene	mg L	0.001			0.001	Pass	
Ethylben ene	mg L	0.001			0.001	Pass	
m p X ylenes	mg L	0.002			0.002	Pass	
o X ylene	mg L	0.001			0.001	Pass	
X ylenes T otal	mg L	0.00			0.00	Pass	
Method B lank							
V olatile Organics							
1.1 Dichloroethane	mg L	0.001			0.001	Pass	
1.1 Dichloroethene	mg L	0.001			0.001	Pass	
1.1.1 T richloroethane	mg L	0.001			0.001	Pass	
1.1.1.2 T etrachloroethane	mg L	0.001			0.001	Pass	
1.1.2 T richloroethane	mg L	0.001			0.001	Pass	
1.1.2.2 T etrachloroethane	mg L	0.001			0.001	Pass	
1.2 Dibromoethane	mg L	0.001			0.001	Pass	
1.2 Dichloroben ene	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. T richloropropane	mg L	0.001			0.001	Pass	
1.2. T rimethylben ene	mg L	0.001			0.001	Pass	
1. Dichloroben ene	mg L	0.001			0.001	Pass	
1. Dichloropropane	mg L	0.001			0.001	Pass	
1. .5 T rimethylben ene	mg L	0.001			0.001	Pass	
1. Dichloroben ene	mg L	0.001			0.001	Pass	
2 Butanone MEK	mg L	0.001			0.001	Pass	
2 Propanone Acetone	mg L	0.001			0.001	Pass	
Chlorotoluene	mg L	0.001			0.001	Pass	
Methyl 2 pentanone MIBK	mg L	0.001			0.001	Pass	
Allyl chloride	mg L	0.001			0.001	Pass	
Ben ene	mg L	0.001			0.001	Pass	
Bromoben ene	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	0.001			0.001	Pass	
Carbon disulfide	mg L	0.001			0.001	Pass	

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Test	Units	Result 1			Acceptance Limits	Pass Limits	Q ualifying Code
Carbon T etrachloride	mg L	0.001			0.001	Pass	
Chloroben ene	mg L	0.001			0.001	Pass	
Chloroethane	mg L	0.001			0.001	Pass	
Chloroform	mg L	0.005			0.005	Pass	
Chloromethane	mg L	0.001			0.001	Pass	
cis 1.2 Dichloroethene	mg L	0.001			0.001	Pass	
cis 1. 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	0.001			0.001	Pass	
Ethylben ene	mg L	0.001			0.001	Pass	
Iodomethane	mg L	0.001			0.001	Pass	
Isopropyl ben ene Cumene	mg L	0.001			0.001	Pass	
m p X ylenes	mg L	0.002			0.002	Pass	
M ethylene Chloride	mg L	0.001			0.001	Pass	
o X ylene	mg L	0.001			0.001	Pass	
Styrene	mg L	0.001			0.001	Pass	
T etrachloroethene	mg L	0.001			0.001	Pass	
T oluene	mg L	0.001			0.001	Pass	
trans 1.2 Dichloroethene	mg L	0.001			0.001	Pass	
trans 1. Dichloropropene	mg L	0.001			0.001	Pass	
T richloroethene	mg L	0.001			0.001	Pass	
T richlorofluoromethane	mg L	0.001			0.001	Pass	
V inyl chloride	mg L	0.001			0.001	Pass	
X ylenes T otal	mg L	0.00			0.00	Pass	
Method B lank							
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	
Ben a anthracene	mg L	0.001			0.001	Pass	
Ben o a pyrene	mg L	0.001			0.001	Pass	
Ben o b fluoranthene	mg L	0.001			0.001	Pass	
Ben o g.h.i perylene	mg L	0.001			0.001	Pass	
Ben o k fluoranthene	mg L	0.001			0.001	Pass	
Chrysene	mg L	0.001			0.001	Pass	
Diben 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. 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 B lank							
Organochlorine Pesticides							
Chlordanes T otal	mg L	0.001			0.001	Pass	
. DDD	mg L	0.0001			0.0001	Pass	
. DDE	mg L	0.0001			0.0001	Pass	
. DDT	mg L	0.0001			0.0001	Pass	
a BHC	mg L	0.0001			0.0001	Pass	
Aldrin	mg L	0.0001			0.0001	Pass	
b BHC	mg L	0.0001			0.0001	Pass	
d BHC	mg L	0.0001			0.0001	Pass	
Dieldrin	mg L	0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan I	mg L	0.0001			0.0001	Pass	
Endosulfan II	mg L	0.0001			0.0001	Pass	
Endosulfan sulphate	mg L	0.0001			0.0001	Pass	
Endrin	mg L	0.0001			0.0001	Pass	
Endrin aldehyde	mg L	0.0001			0.0001	Pass	
Endrin ketone	mg L	0.0001			0.0001	Pass	
g BHC Lindane	mg L	0.0001			0.0001	Pass	
Heptachlor	mg L	0.0001			0.0001	Pass	
Heptachlor epoxide	mg L	0.0001			0.0001	Pass	
Hexachloroben ene	mg L	0.0001			0.0001	Pass	
Methoxychlor	mg L	0.0001			0.0001	Pass	
T oxaphene	mg L	0.01			0.01	Pass	
Method B lank							
Organophosphorus Pesticides							
A inphos methyl	mg L	0.002			0.002	Pass	
Bolstar	mg L	0.002			0.002	Pass	
Chlorfenvinphos	mg L	0.002			0.002	Pass	
Chlorpyrifos	mg L	0.02			0.02	Pass	
Chlorpyrifos methyl	mg L	0.002			0.002	Pass	
Coumaphos	mg L	0.02			0.02	Pass	
Demeton S	mg L	0.02			0.02	Pass	
Demeton O	mg L	0.002			0.002	Pass	
Dia inon	mg L	0.002			0.002	Pass	
Dichlorvos	mg L	0.002			0.002	Pass	
Dimethoate	mg L	0.002			0.002	Pass	
Disulfoton	mg L	0.002			0.002	Pass	
EPN	mg L	0.002			0.002	Pass	
Ethion	mg L	0.002			0.002	Pass	
Ethoprop	mg L	0.002			0.002	Pass	
Ethyl parathion	mg L	0.002			0.002	Pass	
Fenitrothion	mg L	0.002			0.002	Pass	
Fensulfothion	mg L	0.002			0.002	Pass	
Fenthion	mg L	0.002			0.002	Pass	
Malathion	mg L	0.002			0.002	Pass	
Merphos	mg L	0.002			0.002	Pass	
Methyl parathion	mg L	0.002			0.002	Pass	
Mevinphos	mg L	0.002			0.002	Pass	
Monocrotophos	mg L	0.002			0.002	Pass	
Naled	mg L	0.002			0.002	Pass	
O methoate	mg L	0.002			0.002	Pass	
Phorate	mg L	0.002			0.002	Pass	
Pirimiphos methyl	mg L	0.02			0.02	Pass	
Pyra ophos	mg L	0.002			0.002	Pass	
Ronnel	mg L	0.002			0.002	Pass	
T erbufos	mg L	0.002			0.002	Pass	
T etrachlorvinphos	mg L	0.002			0.002	Pass	
T okuthion	mg L	0.002			0.002	Pass	
T richloronate	mg L	0.002			0.002	Pass	
Method B lank							
Polychlorinated B iphenyls							
Aroclor 101	mg L	0.001			0.001	Pass	
Aroclor 1221	mg L	0.001			0.001	Pass	
Aroclor 12 2	mg L	0.001			0.001	Pass	
Aroclor 12 2	mg L	0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor 12 8	mg L	0.001			0.001	Pass	
Aroclor 125	mg L	0.001			0.001	Pass	
Aroclor 12 0	mg L	0.001			0.001	Pass	
T otal PCB	mg L	0.001			0.001	Pass	
Method B lank							
Phenols (Halogenated)							
2 Chlorophenol	mg L	0.00			0.00	Pass	
2. Dichlorophenol	mg L	0.00			0.00	Pass	
2. .5 T richlorophenol	mg L	0.01			0.01	Pass	
2. . T richlorophenol	mg L	0.01			0.01	Pass	
2. Dichlorophenol	mg L	0.00			0.00	Pass	
Chloro methylphenol	mg L	0.01			0.01	Pass	
Pentachlorophenol	mg L	0.01			0.01	Pass	
T etrachlorophenols T otal	mg L	0.0			0.0	Pass	
Method B lank							
Phenols (non Halogenated)							
2 Cyclohexyl . dinitrophenol	mg L	0.1			0.1	Pass	
2 Methyl . dinitrophenol	mg L	0.0			0.0	Pass	
2 Methylphenol o Cresol	mg L	0.00			0.00	Pass	
2 Nitrophenol	mg L	0.01			0.01	Pass	
2. Dimethylphenol	mg L	0.00			0.00	Pass	
2. Dinitrophenol	mg L	0.0			0.0	Pass	
Methylphenol m p Cresol	mg L	0.00			0.00	Pass	
Nitrophenol	mg L	0.0			0.0	Pass	
Dinoseb	mg L	0.1			0.1	Pass	
Phenol	mg L	0.00			0.00	Pass	
Method B lank							
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	
Perfluoroheptanoic acid PFHpA	ug L	0.01			0.01	Pass	
Perfluorooctanoic acid PFO A	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 PF nDA	ug L	0.01			0.01	Pass	
Perfluorododecanoic acid PFDoDA	ug L	0.01			0.01	Pass	
Perfluorotridecanoic acid PFT rDA	ug L	0.01			0.01	Pass	
Perfluorotetradecanoic acid PFT eDA	ug L	0.01			0.01	Pass	
Method B lank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide FO SA	ug L	0.05			0.05	Pass	
N methylperfluoro 1 octane sulfonamide N MeFO SA	ug L	0.05			0.05	Pass	
N ethylperfluoro 1 octane sulfonamide N EtFO SA	ug L	0.05			0.05	Pass	
2 N methylperfluoro 1 octane sulfonamido ethanol N MeFO SE	ug L	0.05			0.05	Pass	
2 N ethylperfluoro 1 octane sulfonamido ethanol N EtFO SE	ug L	0.05			0.05	Pass	
N ethyl perfluorooctanesulfonamidoacetic acid N EtFO SAA	ug L	0.05			0.05	Pass	
N methyl perfluorooctanesulfonamidoacetic acid N MeFO SAA	ug L	0.05			0.05	Pass	
Method B lank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid PFBS	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	

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Test	Units	Result 1			Acceptance Limits	Pass Limits	Q ualifying Code
Perfluorooctanesulfonic acid PFO S	ug L	0.01			0.01	Pass	
Perfluorodecanesulfonic acid PFDS	ug L	0.01			0.01	Pass	
Method B lank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H perfluorohexanesulfonic acid :2 FT SA	ug L	0.01			0.01	Pass	
1H.1H.2H.2H perfluorooctanesulfonic acid :2 FT SA	ug L	0.05			0.05	Pass	
1H.1H.2H.2H perfluorodecanesulfonic acid 8:2 FT SA	ug L	0.01			0.01	Pass	
1H.1H.2H.2H perfluorododecanesulfonic acid 10:2 FT SA		ug L	0.01		0.01	Pass	
Method B lank							
Heavy Metals							
Arsenic filtered	mg L	0.001			0.001	Pass	
Cadmium filtered	mg L	0.0002			0.0002	Pass	
Chromium filtered	mg L	0.001			0.001	Pass	
Copper filtered	mg L	0.001			0.001	Pass	
Lead filtered	mg L	0.001			0.001	Pass	
Mercury filtered	mg L	0.0001			0.0001	Pass	
Nickel filtered	mg L	0.001			0.001	Pass	
inc filtered	mg L	0.005			0.005	Pass	
LCS Recovery							
Total Recoverable Hydrocarbons 2013 NEPM Fractions							
Naphthalene					0 1 0	Pass	
Naphthalene					0 1 0	Pass	
T RH C C10		122			0 1 0	Pass	
T RH C C10		122			0 1 0	Pass	
T RH C10 C1		8			0 1 0	Pass	
LCS Recovery							
Total Recoverable Hydrocarbons 1 NEPM Fractions							
T RH C C		125			0 1 0	Pass	
T RH C10 C1		8			0 1 0	Pass	
LCS Recovery							
B TEX							
Ben ene					0 1 0	Pass	
T oluene					0 1 0	Pass	
Ethylben ene		11			0 1 0	Pass	
m p X ylenes		111			0 1 0	Pass	
X ylenes T otal		112			0 1 0	Pass	
LCS Recovery							
V olatile Organics							
1.1 Dichloroethene		108			0 1 0	Pass	
1.1.1 T richloroethane					0 1 0	Pass	
1.2 Dichloroben ene		0			0 1 0	Pass	
1.2 Dichloroethane					0 1 0	Pass	
T richloroethene		0			0 1 0	Pass	
LCS Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene		8			0 1 0	Pass	
Acenaphthylene		8			0 1 0	Pass	
Anthracene					0 1 0	Pass	
Ben a anthracene		105			0 1 0	Pass	
Ben o a pyrene		5			0 1 0	Pass	
Ben o b fluoranthene		11			0 1 0	Pass	
Ben o g.h.i perylene		112			0 1 0	Pass	
Ben o k fluoranthene		112			0 1 0	Pass	
Chrysene		10			0 1 0	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Diben a.h anthracene		11			0 1 0	Pass	
Fluoranthene		100			0 1 0	Pass	
Fluorene		8			0 1 0	Pass	
Indeno 1.2. cd pyrene		115			0 1 0	Pass	
Naphthalene		82			0 1 0	Pass	
Phenanthrene		1			0 1 0	Pass	
Pyrene		10			0 1 0	Pass	
LCS Recovery							
Organochlorine Pesticides							
Chlordanes T otal		101			0 1 0	Pass	
. DDD					0 1 0	Pass	
. DDE		10			0 1 0	Pass	
. DDT					0 1 0	Pass	
a BHC		108			0 1 0	Pass	
Aldrin		10			0 1 0	Pass	
b BHC		102			0 1 0	Pass	
d BHC		8			0 1 0	Pass	
Dieldrin		110			0 1 0	Pass	
Endosulfan I		8			0 1 0	Pass	
Endosulfan II		8			0 1 0	Pass	
Endosulfan sulphate		8			0 1 0	Pass	
Endrin					0 1 0	Pass	
Endrin aldehyde		1			0 1 0	Pass	
Endrin ketone		5			0 1 0	Pass	
g BHC Lindane		110			0 1 0	Pass	
Heptachlor		85			0 1 0	Pass	
Heptachlor epoxide		100			0 1 0	Pass	
Hexachloroben ene					0 1 0	Pass	
M ethoxychlor		8			0 1 0	Pass	
LCS Recovery							
Organophosphorus Pesticides							
Dia inon		111			0 1 0	Pass	
Dimethoate		2			0 1 0	Pass	
Ethion		10			0 1 0	Pass	
Fenitrothion					0 1 0	Pass	
M ethyl parathion					0 1 0	Pass	
M evinphos		8			0 1 0	Pass	
LCS Recovery							
Phenols (Halogenated)							
2 Chlorophenol		8			0 1 0	Pass	
2. Dichlorophenol		8			0 1 0	Pass	
2. .5 T richlorophenol					0 1 0	Pass	
2. . T richlorophenol		0			0 1 0	Pass	
2. Dichlorophenol		8			0 1 0	Pass	
Chloro methylphenol		8			0 1 0	Pass	
Pentachlorophenol					0 1 0	Pass	
T etrachlorophenols T otal					0 1 0	Pass	
LCS Recovery							
Phenols (non Halogenated)							
2 Cyclohexyl . dinitrophenol					0 1 0	Pass	
2 M ethyl . dinitrophenol		0			0 1 0	Pass	
2 M ethylphenol o Cresol					0 1 0	Pass	
2 Nitrophenol		0			0 1 0	Pass	
2. Dimethylphenol		101			0 1 0	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Q ualifying Code
2. Dinitrophenol		2			0 1 0	Pass	
Methylphenol m p Cresol		5			0 1 0	Pass	
Nitrophenol		8			0 1 0	Pass	
Dinoseb		2			0 1 0	Pass	
Phenol					0 1 0	Pass	
LCS Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid PFBA					50 150	Pass	
Perfluoropentanoic acid PFPeA		10			50 150	Pass	
Perfluorohexanoic acid PFHxA					50 150	Pass	
Perfluoroheptanoic acid PFHpA		5			50 150	Pass	
Perfluorooctanoic acid PFO A		5			50 150	Pass	
Perfluorononanoic acid PFNA					50 150	Pass	
Perfluorodecanoic acid PFDA		1			50 150	Pass	
Perfluoroundecanoic acid PF nDA		5			50 150	Pass	
Perfluorododecanoic acid PFDoDA		0			50 150	Pass	
Perfluorotridecanoic acid PFT rDA		1			50 150	Pass	
Perfluorotetradecanoic acid PFT eDA					50 150	Pass	
LCS Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide FO SA		101			50 150	Pass	
N methylperfluoro 1 octane sulfonamide N MeFO SA		88			50 150	Pass	
N ethylperfluoro 1 octane sulfonamide N EtFO SA					50 150	Pass	
2 N methylperfluoro 1 octane sulfonamido ethanol N MeFO SE		8			50 150	Pass	
2 N ethylperfluoro 1 octane sulfonamido ethanol N EtFO SE				1	50 150	Pass	
N ethyl perfluorooctanesulfonamidoacetic acid N EtFO SAA			8		50 150	Pass	
N methyl perfluorooctanesulfonamidoacetic acid N MeFO SAA			5		50 150	Pass	
LCS Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid PFBS		8			50 150	Pass	
Perfluoropentanesulfonic acid PFPeS		85			50 150	Pass	
Perfluorohexanesulfonic acid PFHxS					50 150	Pass	
Perfluoroheptanesulfonic acid PFHpS		0			50 150	Pass	
Perfluorooctanesulfonic acid PFO S		5			50 150	Pass	
Perfluorodecanesulfonic acid PFDS					50 150	Pass	
LCS Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H perfluorohexanesulfonic acid :2 FT SA		5			50 150	Pass	
1H.1H.2H.2H perfluorooctanesulfonic acid :2 FT SA					50 150	Pass	
1H.1H.2H.2H perfluorodecanesulfonic acid 8:2 FT SA		2			50 150	Pass	
1H.1H.2H.2H perfluorododecanesulfonic acid 10:2 FT SA			80		50 150	Pass	
LCS Recovery							
Heavy Metals							
Arsenic filtered		108			80 120	Pass	
Cadmium filtered					80 120	Pass	
Chromium filtered		100			80 120	Pass	
Copper filtered		10			80 120	Pass	
Lead filtered		102			80 120	Pass	
Mercury filtered		10			0 1 0	Pass	
Nickel filtered		10			80 120	Pass	
inc filtered		105			80 120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M18 Au1050	NCP		101			0 1 0	Pass	
Acenaphthylene	M18 Au1050	NCP		100			0 1 0	Pass	
Anthracene	M18 Au1050	NCP		112			0 1 0	Pass	
Ben a anthracene	M18 Au1050	NCP		120			0 1 0	Pass	
Ben o a pyrene	M18 Au1050	NCP		11			0 1 0	Pass	
Ben o b fluoranthene	M18 Au1050	NCP		11			0 1 0	Pass	
Ben o g.h.i perylene	M18 Au1050	NCP		10			0 1 0	Pass	
Ben o k fluoranthene	M18 Au1050	NCP		120			0 1 0	Pass	
Chrysene	M18 Au1050	NCP		120			0 1 0	Pass	
Diben a.h anthracene	M18 Au1050	NCP		10			0 1 0	Pass	
Fluoranthene	M18 Au1050	NCP		115			0 1 0	Pass	
Fluorene	M18 Au1050	NCP		105			0 1 0	Pass	
Indeno 1.2. cd pyrene	M18 Au1050	NCP		110			0 1 0	Pass	
Naphthalene	M18 Au1050	NCP		0			0 1 0	Pass	
Phenanthrene	M18 Au1050	NCP		10			0 1 0	Pass	
Pyrene	M18 Au1050	NCP		118			0 1 0	Pass	
Spike Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes T otal	M18 Au1 08	NCP		11			0 1 0	Pass	
. DDD	M18 Au1 08	NCP		118			0 1 0	Pass	
. DDE	M18 Au1 08	NCP		12			0 1 0	Pass	
. DDT	M18 Au1 08	NCP		0			0 1 0	Pass	
a BHC	M18 Au1 08	NCP		10			0 1 0	Pass	
Aldrin	M18 Au1 08	NCP					0 1 0	Pass	
b BHC	M18 Au1 08	NCP		8			0 1 0	Pass	
d BHC	M18 Au1 08	NCP		5			0 1 0	Pass	
Dieldrin	M18 Au1 08	NCP		11			0 1 0	Pass	
Endosulfan I	M18 Au1 08	NCP		88			0 1 0	Pass	
Endosulfan II	M18 Au1 08	NCP		10			0 1 0	Pass	
Endosulfan sulphate	M18 Au1 08	NCP		100			0 1 0	Pass	
Endrin	M18 Au1 08	NCP		12			0 1 0	Pass	
Endrin aldehyde	M18 Au1 08	NCP		8			0 1 0	Pass	
Endrin ketone	M18 Au1 08	NCP		10			0 1 0	Pass	
g BHC Lindane	M18 Au1 08	NCP		5			0 1 0	Pass	
Heptachlor	M18 Au1 08	NCP		105			0 1 0	Pass	
Heptachlor epoxide	M18 Au1 08	NCP		120			0 1 0	Pass	
Hexachloroben ene	M18 Au1 08	NCP		10			0 1 0	Pass	
M ethoxychlor	M18 Au1 08	NCP					0 1 0	Pass	
Spike Recovery									
Organophosphorus Pesticides				Result 1					
Dia inon	M18 Au11	1 NCP		10			0 1 0	Pass	
Dimethoate	M18 Au11	1 NCP		82			0 1 0	Pass	
Ethion	M18 Au11	1 NCP		110			0 1 0	Pass	
Fenitrothion	M18 Au11	1 NCP		0			0 1 0	Pass	
M ethyl parathion	M18 Au11	1 NCP		8			0 1 0	Pass	
M evinphos	M18 Au11	1 NCP		81			0 1 0	Pass	
Spike Recovery									
Phenols (Halogenated)				Result 1					
2 Chlorophenol	M18 Au1050	NCP		81			0 1 0	Pass	
2. Dichlorophenol	M18 Au1050	NCP		8			0 1 0	Pass	
2. .5 T richlorophenol	M18 Au1050	NCP					0 1 0	Pass	
2. . T richlorophenol	M18 Au1050	NCP		8			0 1 0	Pass	

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Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2. Dichlorophenol	M18 Au1050	NCP		0			0 1 0	Pass	
Chloro methylphenol	M18 Au1050	NCP		5			0 1 0	Pass	
Pentachlorophenol	M18 Au1050	NCP		80			0 1 0	Pass	
T etrachlorophenols T otal	M18 Au1050	NCP		80			0 1 0	Pass	
Spike Recovery									
Phenols (non Halogenated)				Result 1					
2 Cyclohexyl . dinitrophenol	M18 Au1050	NCP					0 1 0	Pass	
2 Methyl . dinitrophenol	M18 Au1050	NCP					0 1 0	Pass	
2 Methylphenol o Cresol	M18 Au1050	NCP					0 1 0	Pass	
2 Nitrophenol	M18 Au1050	NCP		2			0 1 0	Pass	
2. Dimethylphenol	M18 Au1050	NCP		2			0 1 0	Pass	
2. Dinitrophenol	M18 Au1050	NCP		5			0 1 0	Pass	
Methylphenol m p Cresol	M18 Au1050	NCP			82		0 1 0	Pass	
Nitrophenol	M18 Au1050	NCP					0 1 0	Pass	
Dinoseb	M18 Au1050	NCP		8			0 1 0	Pass	
Phenol	M18 Au1050	NCP		5			0 1 0	Pass	
Spike Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid PFBA	B18 Au2	5	NCP		5		50 150	Pass	
Perfluoropentanoic acid PFPeA	B18 Au2	5	NCP		10		50 150	Pass	
Perfluorohexanoic acid PFHxA	B18 Au2	5	NCP				50 150	Pass	
Perfluoroheptanoic acid PFHpA	B18 Au2	5	NCP		5		50 150	Pass	
Perfluorooctanoic acid PFO A	B18 Au2	5	NCP		2		50 150	Pass	
Perfluorononanoic acid PFNA	B18 Au2	5	NCP		8		50 150	Pass	
Perfluorodecanoic acid PFDA	B18 Au2	5	NCP		88		50 150	Pass	
Perfluoroundecanoic acid PF nDA	B18 Au2	5	NCP				50 150	Pass	
Perfluorododecanoic acid PFDoDA	B18 Au2	5	NCP				50 150	Pass	
Perfluorotridecanoic acid PFT nDA	B18 Au2	5	NCP		85		50 150	Pass	
Perfluorotetradecanoic acid PFT eDA	B18 Au2	5	NCP				50 150	Pass	
Spike Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide FO SA	B18 Au2	5	NCP	101			50 150	Pass	
N methylperfluoro 1 octane sulfonamide N MeFO SA	B18 Au2	5	NCP	120			50 150	Pass	
N ethylperfluoro 1 octane sulfonamide N EtFO SA	B18 Au2	5	NCP	1 0			50 150	Pass	
2 N methylperfluoro 1 octane sulfonamido ethanol N MeFO SE	B18 Au2	5	NCP		11		50 150	Pass	
2 N ethylperfluoro 1 octane sulfonamido ethanol N EtFO SE	B18 Au2	5	NCP		118		50 150	Pass	
N ethyl perfluorooctanesulfonamidoacetic acid N EtFO SAA	B18 Au2	5	NCP	8			50 150	Pass	
N methyl perfluorooctanesulfonamidoacetic acid N MeFO SAA	B18 Au2	5	NCP	8			50 150	Pass	
Spike Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid PFBS	B18 Au2	5	NCP	80			50 150	Pass	
Perfluoropentanesulfonic acid PFPeS	B18 Au2	5	NCP	8			50 150	Pass	
Perfluorohexanesulfonic acid PFHxS	B18 Au2	5	NCP	88			50 150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroheptanesulfonic acid PFHpS	B18 Au2	5	NCP	8			50 150	Pass	
Perfluorooctanesulfonic acid PFO S	B18 Au2	5	NCP	1			50 150	Pass	
Perfluorodecanesulfonic acid PFDS	B18 Au2	5	NCP	8			50 150	Pass	
Spike Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H perfluorohexanesulfonic acid :2 FT SA	B18 Au2	5	NCP	1			50 150	Pass	
1H.1H.2H.2H perfluorooctanesulfonic acid :2 FT SA	B18 Au2	5	NCP				50 150	Pass	
1H.1H.2H.2H perfluorodecanesulfonic acid 8:2 FT SA	B18 Au2	5	NCP	82			50 150	Pass	
1H.1H.2H.2H perfluorododecanesulfonic acid 10:2 FT SA	B18 Au2	5	NCP	2			50 150	Pass	
Spike Recovery									
Heavy Metals				Result 1					
Arsenic filtered	M18 Au1820		NCP	10			0 1 0	Pass	
Cadmium filtered	M18 Au1820		NCP	8			0 1 0	Pass	
Chromium filtered	M18 Au1820		NCP	2			0 1 0	Pass	
Copper filtered	M18 Au1820		NCP	88			0 1 0	Pass	
Lead filtered	M18 Au1820		NCP	0			0 1 0	Pass	
Mercury filtered	M18 Au1820		NCP	102			0 1 0	Pass	
Nickel filtered	M18 Au1820		NCP	0			0 1 0	Pass	
inc filtered	M18 Au1820		NCP	1			0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons	2013 NEPM Fractions			Result 1					
Naphthalene	M18 Au22 00		NCP	5			0 1 0	Pass	
T RH C C10	M18 Au22 00		NCP	12			0 1 0	Pass	
Spike Recovery									
Total Recoverable Hydrocarbons	1 NEPM Fractions			Result 1					
T RH C C	M18 Au22 00		NCP	12			0 1 0	Pass	
Spike Recovery									
B TEX				Result 1					
Ben ene	M18 Au22 00		NCP	111			0 1 0	Pass	
T oluene	M18 Au22 00		NCP	112			0 1 0	Pass	
Ethylben ene	M18 Au22 00		NCP	111			0 1 0	Pass	
m p X ylenes	M18 Au22 00		NCP	10			0 1 0	Pass	
o X ylene	M18 Au22 00		NCP	10			0 1 0	Pass	
X ylenes T otal	M18 Au22 00		NCP	10			0 1 0	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons	2013 NEPM Fractions			Result 1	Result 2	RPD			
T RH C10 C1	M18 Au2002		NCP mg	L 1.	2.2	2		0	Pass
T RH C1 C	M18 Au2002		NCP mg	L 0.	0.		5.0	0	Pass
T RH C C 0	M18 Au2002		NCP mg	L 0.1	0.1		1	0	Pass
Duplicate									
Total Recoverable Hydrocarbons	1 NEPM Fractions			Result 1	Result 2	RPD			
T RH C10 C1	M18 Au2002		NCP mg	L 2.	2.		22	0	Pass
T RH C15 C28	M18 Au2002		NCP mg	L 0.	0.		5.0	0	Pass
T RH C2 C	M18 Au2002		NCP mg	L 0.1	0.1		1	0	Pass

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Acenaphthylene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Anthracene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Ben a anthracene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Ben o a pyrene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Ben o b fluoranthene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Ben o g.h.i perylene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Ben o k fluoranthene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Chrysene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Diben a.h anthracene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Fluoranthene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Fluorene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Indeno 1.2. cd pyrene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Naphthalene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Phenanthrene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Pyrene	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes T otal	S18 Au1 8	NCP	mg	L	0.001	0.001	1	0	Pass
. DDD	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
. DDE	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
. DDT	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
a BHC	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
Aldrin	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
b BHC	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
d BHC	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
Dieldrin	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
Endosulfan I	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
Endosulfan II	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
Endosulfan sulphate	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
Endrin	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
Endrin aldehyde	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
Endrin ketone	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
g BHC Lindane	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
Heptachlor	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
Heptachlor epoxide	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
Hexachloroben ene	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
M ethoxychlor	S18 Au1 8	NCP	mg	L	0.0001	0.0001	1	0	Pass
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
A inphos methyl	S18 Au1 8	NCP	mg	L	0.002	0.002	1	0	Pass
Bolstar	S18 Au1 8	NCP	mg	L	0.002	0.002	1	0	Pass
Chlorfenvinphos	S18 Au1 8	NCP	mg	L	0.002	0.002	1	0	Pass
Chlorpyrifos	S18 Au1 8	NCP	mg	L	0.02	0.02	1	0	Pass
Chlorpyrifos methyl	S18 Au1 8	NCP	mg	L	0.002	0.002	1	0	Pass
Coumaphos	S18 Au1 8	NCP	mg	L	0.02	0.02	1	0	Pass
Demeton S	S18 Au1 8	NCP	mg	L	0.02	0.02	1	0	Pass
Demeton O	S18 Au1 8	NCP	mg	L	0.002	0.002	1	0	Pass
Dia inon	S18 Au1 8	NCP	mg	L	0.002	0.002	1	0	Pass
Dichlorvos	S18 Au1 8	NCP	mg	L	0.002	0.002	1	0	Pass
Dimethoate	S18 Au1 8	NCP	mg	L	0.002	0.002	1	0	Pass
Disulfoton	S18 Au1 8	NCP	mg	L	0.002	0.002	1	0	Pass
EPN	S18 Au1 8	NCP	mg	L	0.002	0.002	1	0	Pass
Ethion	S18 Au1 8	NCP	mg	L	0.002	0.002	1	0	Pass

Duplicate									
Organophosphorus Pesticides		Result 1	Result 2	RPD					
Ethoprop	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Ethyl parathion	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Fenitrothion	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Fensulfothion	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Fenthion	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Malathion	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Merphos	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Methyl parathion	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Mevinphos	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Monocrotophos	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Naled	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Omethoate	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Phorate	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Pirimiphos methyl	S18 Au1 8 NCP mg	L	0.02	0.02	1	0	Pass		
Pyra ophos	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Ronnel	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Terbufos	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Tetrachlorvinphos	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Tokuthion	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Trichloronate	S18 Au1 8 NCP mg	L	0.002	0.002	1	0	Pass		
Duplicate									
Phenols (Halogenated)		Result 1	Result 2	RPD					
2 Chlorophenol	S18 Au1 8 NCP mg	L	0.00	0.00	1	0	Pass		
2. Dichlorophenol	S18 Au1 8 NCP mg	L	0.00	0.00	1	0	Pass		
2. .5 Trichlorophenol	S18 Au1 8 NCP mg	L	0.01	0.01	1	0	Pass		
2. . Trichlorophenol	S18 Au1 8 NCP mg	L	0.01	0.01	1	0	Pass		
2. Dichlorophenol	S18 Au1 8 NCP mg	L	0.00	0.00	1	0	Pass		
Chloro methylphenol	S18 Au1 8 NCP mg	L	0.01	0.01	1	0	Pass		
Pentachlorophenol	S18 Au1 8 NCP mg	L	0.01	0.01	1	0	Pass		
Tetrachlorophenols Total	S18 Au1 8 NCP mg	L	0.0	0.0	1	0	Pass		
Duplicate									
Phenols (non Halogenated)		Result 1	Result 2	RPD					
2 Cyclohexyl . dinitrophenol	S18 Au1 8 NCP mg	L	0.1	0.1	1	0	Pass		
2 Methyl . dinitrophenol	S18 Au1 8 NCP mg	L	0.0	0.0	1	0	Pass		
2 Methylphenol o Cresol	S18 Au1 8 NCP mg	L	0.00	0.00	1	0	Pass		
2 Nitrophenol	S18 Au1 8 NCP mg	L	0.01	0.01	1	0	Pass		
2. Dimethylphenol	S18 Au1 8 NCP mg	L	0.00	0.00	1	0	Pass		
2. Dinitrophenol	S18 Au1 8 NCP mg	L	0.0	0.0	1	0	Pass		
Methylphenol m p Cresol	S18 Au1 8 NCP mg	L	0.00	0.00	1	0	Pass		
Nitrophenol	S18 Au1 8 NCP mg	L	0.0	0.0	1	0	Pass		
Dinoseb	S18 Au1 8 NCP mg	L	0.1	0.1	1	0	Pass		
Phenol	S18 Au1 8 NCP mg	L	0.00	0.00	1	0	Pass		
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)		Result 1	Result 2	RPD					
Perfluorobutanoic acid PFBA	M18 Au20 11 NCP ug	L	0.05	0.05	1	0	Pass		
Perfluoropentanoic acid PFPeA	M18 Au20 11 NCP ug	L	0.01	0.01	1	0	Pass		
Perfluorohexanoic acid PFHxA	M18 Au20 11 NCP ug	L	0.01	0.01	1	0	Pass		
Perfluoroheptanoic acid PFHpA	M18 Au20 11 NCP ug	L	0.01	0.01	1	0	Pass		
Perfluorooctanoic acid PFOA	M18 Au20 11 NCP ug	L	0.01	0.01	1	0	Pass		
Perfluorononanoic acid PFNA	M18 Au20 11 NCP ug	L	0.01	0.01	1	0	Pass		
Perfluorodecanoic acid PFDA	M18 Au20 11 NCP ug	L	0.01	0.01	1	0	Pass		
Perfluoroundecanoic acid PFnDA	M18 Au20 11 NCP ug	L	0.01	0.01	1	0	Pass		
Perfluorododecanoic acid PFDoDA	M18 Au20 11 NCP ug	L	0.01	0.01	1	0	Pass		

Duplicate													
Perfluoroalkyl carboxylic acids (PFCAs)							Result 1	Result 2	RPD				
Perfluorotridecanoic acid PFT rDA	M18	Au20	11	NCP		ug	L	0.01	0.01	1	0	Pass	
Perfluorotetradecanoic acid PFT eDA	M18	Au20	11	NCP		ug	L	0.01	0.01	1	0	Pass	
Duplicate													
Perfluoroalkyl sulfonamido substances							Result 1	Result 2	RPD				
Perfluorooctane sulfonamide FO SA	M18	Au20	11	NCP		ug	L	0.05	0.05	1	0	Pass	
N methylperfluoro 1 octane sulfonamide N MeFO SA	M18	Au20	11	NCP		ug	L	0.05	0.05	1	0	Pass	
N ethylperfluoro 1 octane sulfonamide N EtFO SA	M18	Au20	11	NCP		ug	L	0.05	0.05	1	0	Pass	
2 N methylperfluoro 1 octane sulfonamido ethanol N MeFO SE	M18	Au20	11	NCP		ug	L	0.05	0.05	1	0	Pass	
2 N ethylperfluoro 1 octane sulfonamido ethanol N EtFO SE	M18	Au20	11	NCP		ug	L	0.05	0.05	1	0	Pass	
N ethyl perfluorooctanesulfonamidoacetic acid N EtFO SAA	M18	Au20	11	NCP		ug	L	0.05	0.05	1	0	Pass	
N methyl perfluorooctanesulfonamidoacetic acid N MeFO SAA	M18	Au20	11	NCP		ug	L	0.05	0.05	1	0	Pass	
Duplicate													
Perfluoroalkyl sulfonic acids (PFSAs)							Result 1	Result 2	RPD				
Perfluorobutanesulfonic acid PFBS	M18	Au20	11	NCP		ug	L	0.01	0.01	1	0	Pass	
Perfluoropentanesulfonic acid PFPeS	M18	Au20	11	NCP		ug	L	0.01	0.01	1	0	Pass	
Perfluorohexanesulfonic acid PFHxS	M18	Au20	11	NCP		ug	L	0.01	0.01	1	0	Pass	
Perfluoroheptanesulfonic acid PFHpS	M18	Au20	11	NCP		ug	L	0.01	0.01	1	0	Pass	
Perfluorooctanesulfonic acid PFO S	M18	Au20	11	NCP		ug	L	0.01	0.01	1	0	Pass	
Perfluorodecanesulfonic acid PFDS	M18	Au20	11	NCP		ug	L	0.01	0.01	1	0	Pass	
Duplicate													
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							Result 1	Result 2	RPD				
1H.1H.2H.2H perfluorohexanesulfonic acid :2 FT SA	M18	Au20	11	NCP		ug	L	0.01	0.01	1	0	Pass	
1H.1H.2H.2H perfluorooctanesulfonic acid :2 FT SA	M18	Au20	11	NCP		ug	L	0.05	0.05	1	0	Pass	
1H.1H.2H.2H perfluorodecanesulfonic acid 8:2 FT SA	M18	Au20	11	NCP		ug	L	0.01	0.01	1	0	Pass	
1H.1H.2H.2H perfluorododecanesulfonic acid 10:2 FT SA	M18	Au20	11	NCP		ug	L	0.01	0.01	1	0	Pass	
Duplicate													
Heavy Metals							Result 1	Result 2	RPD				
Arsenic filtered	M18	Au1820		NCP		mg	L	0.001	0.001	1	0	Pass	
Cadmium filtered	M18	Au1820		NCP		mg	L	0.0002	0.0002	1	0	Pass	
Chromium filtered	M18	Au1820		NCP		mg	L	0.001	0.001	1	0	Pass	
Copper filtered	M18	Au1820		NCP		mg	L	0.002	0.002	2.0	0	Pass	
Lead filtered	M18	Au1820		NCP		mg	L	0.001	0.001	1	0	Pass	
Mercury filtered	M18	Au1820		NCP		mg	L	0.0001	0.0001	1	0	Pass	
Nickel filtered	M18	Au1820		NCP		mg	L	0.0	0 0.0	1	1.0	0	Pass
inc filtered	M18	Au1820		NCP		mg	L	0.005	0.005	1	0	Pass	
Duplicate													
Total Recoverable Hydrocarbons 2013 NEPM Fractions							Result 1	Result 2	RPD				
Naphthalene	M18	Au1	1	NCP		mg	L	0.01	0.01	1	0	Pass	
T RH C C10	M18	Au1	1	NCP		mg	L	0.02	0.02	1	0	Pass	

Duplicate									
Total Recoverable Hydrocarbons 1 NEPM Fractions				Result 1	Result 2	RPD			
T RH C C	M18 Au1 1	NCP	mg	L	0.02	0.02	1	0	Pass
Duplicate									
B TEX				Result 1	Result 2	RPD			
Ben ene	M18 Au1 1	NCP	mg	L	0.001	0.001	1	0	Pass
T oluene	M18 Au1 1	NCP	mg	L	0.001	0.001	1	0	Pass
Ethylben ene	M18 Au1 1	NCP	mg	L	0.001	0.001	1	0	Pass
m p X ylenes	M18 Au1 1	NCP	mg	L	0.002	0.002	1	0	Pass
o X ylene	M18 Au1 1	NCP	mg	L	0.001	0.001	1	0	Pass
X ylenes T otal	M18 Au1 1	NCP	mg	L	0.00	0.00	1	0	Pass

Comments

Sample Integrity

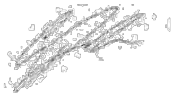
Custody Seals Intact if used	N A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingT ime	Yes
Some samples have been subcontracted	No

Q ualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the " naphthalene" value from the " C10 C1 " value. T he naphthalene value used in this calculation is obtained from volatiles Purge T rap analysis .
N02	Where we have reported both volatile P T G CM S and semivolatile G CM S 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 Q AQ C acceptance criteria and are entirely technically valid.
N0	F1 is determined by arithmetically subtracting the " T otal BT EX " value from the " C C10" value. T he " T otal BT EX " value is obtained by summing the concentrations of BT EX analytes. T he " C C10" value is obtained by quantitating against a standard of mixed aromatic aliphatic analytes.
N0	Please note: T hese two PAH isomers closely co elute using the most contemporary analytical methods and both the reported concentration and the T EQ apply specifically to the total of the two co eluting PAHs
N0	Q uantification 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 Q uantitation . T he 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 Q uantitation .
R20	T his sample is a T rip Spike and therefore all results are reported as a percentage

Authorised B y

Nibha V aidya	Analytical Services Manager
Alex Petridis	Senior Analyst Metal V IC
Harry Bacalis	Senior Analyst V olatile V IC
onathon Angell	Senior Analyst Organic Q LD
oseph Edouard	Senior Analyst Organic V IC



G lenn J ackson
National Operations Manager

Final report - this Report replaces any previously issued Report

Indicates Not Requested

Indicates NAT A accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please here.

eurofins mgt

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web : www.eurofins.com.au

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Kewdale WA 105
Phone : 1 8 251 00
NATA 12 1
Site 2

Company Name: T race Environmental P L
Address: Shop 2 New Canterbury Road
Dulwich Hill
NSW 220

Project Name: MASCO T
Project ID: 1.1

Order No.:
Report : 1255
Phone: 02 8 0 0555
Fax:

Received: Aug 15 2018 5: 1 PM
Due: Aug 22 2018
Priority: 5 Day
Contact Name: K en Henderson

Eurofins mgt Analytical Services Manager : Nibha V aidya

Sample Detail						Eurofins mgt Suite B15	V olatile O rganics	Eurofins mgt Suite B A filtered metals	BT EX N and V olatile T RH	Per and Polyfluoroalkyl Substances PFASs
Melbourne Laboratory NATA Site 12 4 & 14271						X	X	X	X	
Sydney Laboratory NATA Site 1 217										
B risbane Laboratory NATA Site 207 4										X
Perth Laboratory NATA Site 23736										
External Laboratory										
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
1	MW1	Aug 15 2018		Water	S18 Au1	X	X	X		X
2	MW2	Aug 15 2018		Water	S18 Au1	X	X	X		X
	MW	Aug 15 2018		Water	S18 Au20000	X	X	X		X
	MW	Aug 15 2018		Water	S18 Au20001	X	X	X		X
5	QW1	Aug 15 2018		Water	S18 Au20002			X		
	T RIP BLANK	Aug 15 2018		Water	S18 Au2000				X	
	T RIP SPIK E	Aug 15 2018		Water	S18 Au2000				X	
Test Counts								5	2	

eurofins | mgt

[redacted]
5 K ingston T own Closenit F Building F
O akleigh V ic 1
Phone : 1 85 5008
NAT A 12 1
Site 125 1 2 1
[redacted]
1 Mars Road
Phone : 1 2 00 8 0
NAT A 12 1 Site 1821
[redacted]
1 21 Smallwood Place
M urarrie Q LD 1 2 02
Phone : 1 02 0
NAT A 12 1 Site 20
[redacted]
2 1 Leach Highway
K ewdale WA 105
Phone : 1 8 251 00
NAT A 12 1 Site 2

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name: **T race Environmental P L**

Contact name: K en Henderson
Pro ect name: M ASCO T
Pro ect ID: 1.1
CO C number: Not provided
T urn around time: 5 Day
Date T ime received: Aug 15 2018 5: 1 PM
Eurofins mgt reference: 12[redacted]55

Sample information

- ☑ A detailed list of analytes logged into our LIM S is included in the attached summary table.
- ☑ Sample T emperature of a random sample selected from the batch as recorded by Eurofins mgt Sample Receipt : 2. degrees Celsius.
- ☑ All samples have been received as described on the above CO C.
- ☑ CO C 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 ero headspace.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.

[redacted]N/A Custody Seals intact if used .

Q W1A sent to als.

Contact notes

If you have any questions with respect to these samples please contact:

Nibha V aidya on Phone : 1 2 00 8 15 or by e.mail: NibhaV aidya eurofins.com

Results will be delivered electronically via e.mail to K en Henderson ken traceenviro.com.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES1824306**	Page	: 1 of 6
Client	: **TRACE ENVIRONMENTAL PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR JACK ELLIS	Contact	: Customer Services ES
Address	: Shop 2 793-799 New Canterbury Road Dulwich Hill NSW 2203	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: ----	Date Samples Received	: 17-Aug-2018 15:00
Order number	:	Date Analysis Commenced	: 20-Aug-2018
C-O-C number	: ----	Issue Date	: 23-Aug-2018 18:08
Sampler	: ----		
Site	: ----		
Quote number	: EN/222/17 (Sydney Batches)		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

RIGHT SOLUTIONS | RIGHT PARTNER

Page	: 2 of 6
Work Order	: ES1824306
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: ----

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.

Page : 3 of 6
Work Order : ES1824306
Client : TRACE ENVIRONMENTAL PTY LTD
Project : —

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	QW1A	---	---	---	---
				Client sampling date / time	13-Aug-2018 00:00	—	—	—	—
Compound	CAS Number	LOR	Unit	ES1824306-001	------	------	------	------	
				Result	—	—	—	—	
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L	**0.012**	—	—	—	—	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	—	—	—	—	
Chromium	7440-47-3	0.001	mg/L	<0.001	—	—	—	—	
Copper	7440-50-8	0.001	mg/L	**0.017**	—	—	—	—	
Lead	7439-92-1	0.001	mg/L	**0.001**	—	—	—	—	
Nickel	7440-02-0	0.001	mg/L	**0.003**	—	—	—	—	
Zinc	7440-66-6	0.005	mg/L	**0.114**	—	—	—	—	
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	—	—	—	—	
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	1.0	µg/L	<1.0	—	—	—	—	
2-Chlorophenol	95-57-8	1.0	µg/L	<1.0	—	—	—	—	
2-Methylphenol	95-48-7	1.0	µg/L	<1.0	—	—	—	—	
3- & 4-Methylphenol	1319-77-3	2.0	µg/L	<2.0	—	—	—	—	
2-Nitrophenol	88-75-5	1.0	µg/L	<1.0	—	—	—	—	
2.4-Dimethylphenol	105-67-9	1.0	µg/L	<1.0	—	—	—	—	
2.4-Dichlorophenol	120-83-2	1.0	µg/L	<1.0	—	—	—	—	
2.6-Dichlorophenol	87-65-0	1.0	µg/L	<1.0	—	—	—	—	
4-Chloro-3-methylphenol	59-50-7	1.0	µg/L	<1.0	—	—	—	—	
2.4.6-Trichlorophenol	88-06-2	1.0	µg/L	<1.0	—	—	—	—	
2.4.5-Trichlorophenol	95-95-4	1.0	µg/L	<1.0	—	—	—	—	
Pentachlorophenol	87-86-5	2.0	µg/L	<2.0	—	—	—	—	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	1.0	µg/L	<1.0	—	—	—	—	
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	—	—	—	—	
Acenaphthene	83-32-9	1.0	µg/L	<1.0	—	—	—	—	
Fluorene	86-73-7	1.0	µg/L	<1.0	—	—	—	—	
Phenanthrene	85-01-8	1.0	µg/L	<1.0	—	—	—	—	
Anthracene	120-12-7	1.0	µg/L	<1.0	—	—	—	—	
Fluoranthene	206-44-0	1.0	µg/L	<1.0	—	—	—	—	
Pyrene	129-00-0	1.0	µg/L	<1.0	—	—	—	—	
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	—	—	—	—	
Chrysene	218-01-9	1.0	µg/L	<1.0	—	—	—	—	
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	<1.0	—	—	—	—	

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Work Order	: ES1824306
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: ---

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	QW1A	---	---	---	---
				Client sampling date / time	13-Aug-2018 00:00	---	---	---	---
Compound	CAS Number	LOR	Unit		ES1824306-001	------	------	------	------
					Result	---	---	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		<1.0	---	---	---	---
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	---	---	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L		<1.0	---	---	---	---
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L		<1.0	---	---	---	---
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L		<1.0	---	---	---	---
^ Sum of polycyclic aromatic hydrocarbons	---	0.5	µg/L		<0.5	---	---	---	---
^ Benzo(a)pyrene TEQ (zero)	---	0.5	µg/L		<0.5	---	---	---	---
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	20	µg/L		<20	---	---	---	---
C10 - C14 Fraction	---	50	µg/L		<50	---	---	---	---
C15 - C28 Fraction	---	100	µg/L		<100	---	---	---	---
C29 - C36 Fraction	---	50	µg/L		<50	---	---	---	---
^ C10 - C36 Fraction (sum)	---	50	µg/L		<50	---	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	---	---	---	---
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	---	---	---	---
>C10 - C16 Fraction	---	100	µg/L		<100	---	---	---	---
>C16 - C34 Fraction	---	100	µg/L		<100	---	---	---	---
>C34 - C40 Fraction	---	100	µg/L		<100	---	---	---	---
^ >C10 - C40 Fraction (sum)	---	100	µg/L		<100	---	---	---	---
^ >C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L		<100	---	---	---	---
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	---	---	---	---
Toluene	108-88-3	2	µg/L		<2	---	---	---	---
Ethylbenzene	100-41-4	2	µg/L		<2	---	---	---	---
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	---	---	---	---
ortho-Xylene	95-47-6	2	µg/L		<2	---	---	---	---
^ Total Xylenes	---	2	µg/L		<2	---	---	---	---
^ Sum of BTEX	---	1	µg/L		<1	---	---	---	---
Naphthalene	91-20-3	5	µg/L		<5	---	---	---	---
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		26.7	---	---	---	---

Page	: 5 of 6
Work Order	: ES1824306
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: —

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	QW1A	----	----	----	----
				Client sampling date / time	13-Aug-2018 00:00	—	—	—	—
Compound	CAS Number	LOR	Unit	ES1824306-001	-------	-------	-------	-------	-------
				Result	—	—	—	—	—
EP075(SIM)S: Phenolic Compound Surrogates - Continued									
2-Chlorophenol-D4	93951-73-6	1.0	%	63.7	—	—	—	—	—
2.4.6-Tribromophenol	118-79-6	1.0	%	63.9	—	—	—	—	—
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%	76.0	—	—	—	—	—
Anthracene-d10	1719-06-8	1.0	%	88.8	—	—	—	—	—
4-Terphenyl-d14	1718-51-0	1.0	%	98.8	—	—	—	—	—
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%	112	—	—	—	—	—
Toluene-D8	2037-26-5	2	%	102	—	—	—	—	—
4-Bromofluorobenzene	460-00-4	2	%	99.1	—	—	—	—	—

Page	: 6 of 6
Work Order	: ES1824306
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: —

Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2.4.6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES1824306**	Page	: 1 of 6
Client	: **TRACE ENVIRONMENTAL PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR JACK ELLIS	Contact	: Customer Services ES
Address	: Shop 2 793-799 New Canterbury Road Dulwich Hill NSW 2203	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ---	Telephone	: +61-2-8784 8555
Project	: ---	Date Samples Received	: 17-Aug-2018
Order number	:	Date Analysis Commenced	: 20-Aug-2018
C-O-C number	: ---	Issue Date	: 23-Aug-2018
Sampler	: ---		
Site	: ---		
Quote number	: EN/222/17 (Sydney Batches)		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.
This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

Page	: 2 of 6
Work Order	: ES1824306
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: ---

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 1886713)									
ES1824262-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0010	<0.0010	0.00	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.010	<0.010	0.00	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.010	<0.010	0.00	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.010	<0.010	0.00	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.010	<0.010	0.00	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.010	<0.010	0.00	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.050	<0.050	0.00	No Limit
ES1824156-002	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.001	0.001	0.00	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	0.002	0.002	0.00	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.00	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 1886714)									
ES1824262-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
ES1824156-002	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1885653)									
ES1824156-001	Anonymous	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.00	No Limit
ES1824156-002	Anonymous	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 1885653)									
ES1824156-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
ES1824156-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
EP080: BTEXN (QC Lot: 1885653)									

Page : 3 of 6
Work Order : ES1824306
Client : TRACE ENVIRONMENTAL PTY LTD
Project : ---

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP080: BTEXN (QC Lot: 1885653) - continued									
ES1824156-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.00	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.00	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.00	No Limit
ES1824156-002	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.00	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.00	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.00	No Limit

Page : 4 of 6
Work Order : ES1824306
Client : TRACE ENVIRONMENTAL PTY LTD
Project : ---

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

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

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 1886713)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	87.0	85	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	88.1	84	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	86.2	85	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	87.4	81	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	85.1	83	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	85.5	82	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	87.1	81	117
EG035F: Dissolved Mercury by FIMS (QCLot: 1886714)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	92.9	83	105
EP075(SIM)A: Phenolic Compounds (QCLot: 1882905)								
EP075(SIM): Phenol	108-95-2	1	µg/L	<1.0	5 µg/L	44.5	25	62
EP075(SIM): 2-Chlorophenol	95-57-8	1	µg/L	<1.0	5 µg/L	70.2	52	90
EP075(SIM): 2-Methylphenol	95-48-7	1	µg/L	<1.0	5 µg/L	74.5	51	91
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	2	µg/L	<2.0	10 µg/L	65.8	44	88
EP075(SIM): 2-Nitrophenol	88-75-5	1	µg/L	<1.0	5 µg/L	74.0	48	100
EP075(SIM): 2.4-Dimethylphenol	105-67-9	1	µg/L	<1.0	5 µg/L	70.5	49	99
EP075(SIM): 2.4-Dichlorophenol	120-83-2	1	µg/L	<1.0	5 µg/L	77.0	53	105
EP075(SIM): 2.6-Dichlorophenol	87-65-0	1	µg/L	<1.0	5 µg/L	84.0	57	105
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	1	µg/L	<1.0	5 µg/L	71.2	53	99
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	1	µg/L	<1.0	5 µg/L	86.3	50	106
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	1	µg/L	<1.0	5 µg/L	71.9	51	105
EP075(SIM): Pentachlorophenol	87-86-5	2	µg/L	<2.0	10 µg/L	30.3	10	95
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1882905)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	75.5	50	94
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	96.5	64	114
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	89.4	62	113
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	90.7	64	115
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	98.3	63	116
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	97.5	64	116
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	97.4	64	118
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	97.4	63	118
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	91.8	64	117
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	88.6	63	116

Page : 5 of 6
Work Order : ES1824306
Client : TRACE ENVIRONMENTAL PTY LTD
Project : ---

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1882905) - continued								
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	91.4	62	119
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	95.6	63	115
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	95.7	63	117
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	97.5	60	118
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	93.9	61	117
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	90.8	59	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1882906)								
EP071: C10 - C14 Fraction	---	50	µg/L	<50	2000 µg/L	92.6	76	116
EP071: C15 - C28 Fraction	---	100	µg/L	<100	3000 µg/L	92.8	83	109
EP071: C29 - C36 Fraction	---	50	µg/L	<50	2000 µg/L	83.7	75	113
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1885653)								
EP080: C6 - C9 Fraction	---	20	µg/L	<20	260 µg/L	103	75	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1882906)								
EP071: >C10 - C16 Fraction	---	100	µg/L	<100	2500 µg/L	88.8	76	114
EP071: >C16 - C34 Fraction	---	100	µg/L	<100	3500 µg/L	86.2	81	111
EP071: >C34 - C40 Fraction	---	100	µg/L	<100	1500 µg/L	79.4	77	119
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1885653)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	104	75	127
EP080: BTEXN (QCLot: 1885653)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	114	70	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	106	69	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	107	70	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	106	69	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	109	72	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	102	70	120

Matrix Spike (MS) Report

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

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 1886713)							
ES1824156-001	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	86.8	70	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	87.7	70	130

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Work Order	: ES1824306
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: ---

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 1886713) - continued							
ES1824156-001	Anonymous	EG020A-F: Chromium	7440-47-3	1 mg/L	86.1	70	130
		EG020A-F: Copper	7440-50-8	1 mg/L	85.0	70	130
		EG020A-F: Lead	7439-92-1	1 mg/L	85.2	70	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	85.7	70	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	83.2	70	130
EG035F: Dissolved Mercury by FIMS (QCLot: 1886714)							
ES1824156-001	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	94.2	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1885653)							
ES1824156-001	Anonymous	EP080: C6 - C9 Fraction	---	325 µg/L	103	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1885653)							
ES1824156-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	103	70	130
EP080: BTEXN (QCLot: 1885653)							
ES1824156-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	106	70	130
		EP080: Toluene	108-88-3	25 µg/L	102	70	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	102	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	101	70	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	103	70	130
		EP080: Naphthalene	91-20-3	25 µg/L	99.9	70	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES1824306	Page	: 1 of 5
Client	: TRACE ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: MR JACK ELLIS	Telephone	: +61-2-8784 8555
Project	: ----	Date Samples Received	: 17-Aug-2018
Site	: ----	Issue Date	: 23-Aug-2018
Sampler	: ----	No. of samples received	: 1
Order number	:	No. of samples analysed	: 1

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

- NO Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers exist - please see following pages for full details.

Page	: 2 of 5
Work Order	: ES1824306
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: —

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count QC	Count Regular	Rate (%) Actual	Rate (%) Expected	Quality Control Specification
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	13	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	20	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	13	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	20	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

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

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

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

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

Matrix: **WATER** Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation: Date extracted	Due for extraction	Evaluation	Analysis: Date analysed	Due for analysis	Evaluation
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F) QW1A	13-Aug-2018	---	---	---	21-Aug-2018	09-Feb-2019	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F) QW1A	13-Aug-2018	---	---	---	21-Aug-2018	10-Sep-2018	✓
EP075(SIM)A: Phenolic Compounds							
Amber Glass Bottle - Unpreserved (EP075(SIM)) QW1A	13-Aug-2018	20-Aug-2018	20-Aug-2018	✓	22-Aug-2018	29-Sep-2018	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM)) QW1A	13-Aug-2018	20-Aug-2018	20-Aug-2018	✓	22-Aug-2018	29-Sep-2018	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071) QW1A	13-Aug-2018	20-Aug-2018	20-Aug-2018	✓	22-Aug-2018	29-Sep-2018	✓
Clear glass VOC vial - HCl (EP080) QW1A	13-Aug-2018	22-Aug-2018	27-Aug-2018	✓	22-Aug-2018	27-Aug-2018	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071) QW1A	13-Aug-2018	20-Aug-2018	20-Aug-2018	✓	22-Aug-2018	29-Sep-2018	✓
Clear glass VOC vial - HCl (EP080) QW1A	13-Aug-2018	22-Aug-2018	27-Aug-2018	✓	22-Aug-2018	27-Aug-2018	✓

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Matrix: **WATER** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN							
Clear glass VOC vial - HCl (EP080)							
QW1A	**13-Aug-2018**	**22-Aug-2018**	27-Aug-2018	✓	**22-Aug-2018**	27-Aug-2018	✓

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Quality Control Parameter Frequency Compliance

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

Matrix: **WATER**

Evaluation: ✗ = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	13	0.00	10.00	✗	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	20	0.00	10.00	✗	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	13	0.00	5.00	✗	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	20	0.00	5.00	✗	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

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Work Order	: ES1824306
Client	: TRACE ENVIRONMENTAL PTY LTD
Project	: —

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510B 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 60mL DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (2013) Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.

Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES1824306**

Client	: TRACE ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: MR JACK ELLIS	Contact	: Customer Services ES
Address	: Shop 2 793-799 New Canterbury Road Dulwich Hill NSW 2203	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: jack@traceenviro.com	E-mail	: ALSEnviro.Sydney@alsglobal.com
Telephone	: ---	Telephone	: +61-2-8784 8555
Facsimile	: ---	Facsimile	: +61-2-8784 8500
Project	: ---	Page	: 1 of 2
Order number	:	Quote number	: ES2018TRAENV0003 (EN/222/17 (Sydney Batches))
C-O-C number	: ---	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ---		
Sampler	:		

Dates

Date Samples Received	: 17-Aug-2018 15:00	Issue Date	: 18-Aug-2018
Client Requested Due Date	: 24-Aug-2018	Scheduled Reporting Date	: **24-Aug-2018**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 6.5'C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 1 / 1

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.

RIGHT SOLUTIONS | RIGHT PARTNER

Issue Date	: 18-Aug-2018
Page	: 2 of 2
Work Order	: ES1824306 Amendment 0
Client	: TRACE ENVIRONMENTAL PTY LTD

Sample Container(s)/Preservation Non-Compliances

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

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - W-27 TRH/BTEX/NAPAH/Phenols/8 Metals
ES1824306-001	13-Aug-2018 00:00	QW1A	✓

Proactive Holding Time Report

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

Requested Deliverables

ACCOUNTS		
- A4 - AU Tax Invoice (INV)	Email	accounts@traceenviro.com
ANDREW KITA		
- A4 - AU Tax Invoice (INV)	Email	andrew@traceenviro.com
JACK ELLIS		
- *AU Certificate of Analysis - NATA (COA)	Email	jack@traceenviro.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	jack@traceenviro.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	jack@traceenviro.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	jack@traceenviro.com
- A4 - AU Tax Invoice (INV)	Email	jack@traceenviro.com
- Chain of Custody (CoC) (COC)	Email	jack@traceenviro.com
- EDI Format - XTab (XTAB)	Email	jack@traceenviro.com
KEN HENDERSON		
- *AU Certificate of Analysis - NATA (COA)	Email	ken@traceenviro.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	ken@traceenviro.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	ken@traceenviro.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	ken@traceenviro.com
- A4 - AU Tax Invoice (INV)	Email	ken@traceenviro.com
- Chain of Custody (CoC) (COC)	Email	ken@traceenviro.com
- EDI Format - XTab (XTAB)	Email	ken@traceenviro.com

eurofins | mgt

Sydney
Unit F3 - 6 Building F, 16 Mars Road, Lane Cove
Phone: +612 9900 8400
Email: EnviroSampleNSW@eurofins.com.au

Brisbane
Unit 1-21 Smallwood Place, Murarrie
Phone: +617 3902 4600
Email: EnviroSampleQLD@eurofins.com.au

Melbourne
2 Kingston Town Close, Oakleigh, VIC 3166
Phone: +613 8564 5000 Fax: +613 8564 5090
Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

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CLIENT DETAILS

Company Name: TRACE Environmental

Office Address: 793-799 New Canterbury Road, Dulwich Hill, NSW, 2203

Contact Name: Jack Ellis

Project Manager: Ken Henderson

Email for results: ken@traceenviro.com

Purchase Order:

PROJECT Number: L16

PROJECT Name: Mascot

COC Number: 1 of 1

Eurofins | mgt quote ID: 180802TRAC

Data output format:

Special Directions & Comments:

Please email invoice(s) to accounts@traceenviro.com & Proj Manager

Eurofins | mgt DI water batch number:

Analyses: Suite B7a; Suite B15; VOC; 28 PFAS; TRH & BTEX; Snd to ACS; HOLD

#	Sample ID	Date	Matrix
1	MW1	15/8/18	Water
2	MW2	↓	↓
3	MW3		
4	MW4		
5	QW1		
6	QW1A		
7	Trip blank		
8	Trip spike		
9			
10			
11			
12			
13			
14			
15			
16			

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	30 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX	2 hours
Ferrous Iron	7 days	ASLP, TCLP	7 days

Containers: 1LP | 250P | 125P | 1LA | 40mL vial | 125mL A | Jar | Bag

Sample comments: contact sample; contact sample

Relinquished: Jack Ellis
Date & Time: 15/8/18
Signature: J Ellis

Laboratory Staff
Received By: Ash W
Date & Time: 15/08/18 5.41PM
Signature: [signature]

Turnaround time: 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 DAY ☒ 10 DAY ☐ Other

Method Of Shipment: ☒ Courier ☐ Hand Delivered ☐ Postal
Courier Consignment #

Temperature on arrival:

QS3000_R1 Issue Date: 22 August 2013 Page 1 of 1

TESS G
17/6/18 11.45AM
ice - 6.5 C

Rec: Sayf
17/6/18 6.5C
1500

Environmental Division
Sydney
Work Order Reference
ES1824306

Telephone: +61-2-8784 8555

Appendix I

QA/QC Summary & Calibration Certificates

Appendix I – Quality Assurance/Quality Control Program

1.1 Field QA Procedures

To ensure that the data obtained meets the DQIs of precision, accuracy, representativeness, completeness and comparability, the following field procedures and QA measures were implemented as part of the investigation fieldwork:

- Field staff undertaking the fieldwork were appropriately qualified and experience;
- Locations of sampling points were appropriately determined prior to conducting fieldworks to ensure adequate site characterisation, and based on a review of site history;
- Field documentation included the completion of standard field forms including Daily Field Reports documenting the field activities undertaken throughout each day in the field, gauging sheets and purging logs and the use of Chain of Custody (COC) documentation for all field samples;
- Field instruments were maintained in good order and appropriately calibrated and/or challenged in accordance with the manufacturer's instructions prior to conducting fieldworks;
- Soil samples were collected in laboratory supplied washed / certified clean glass 250 mL glass jars with Teflon lined lids. Waterproof labels were affixed to the body of the jars, and included the job number, unique sample identification, and date of sample collection
- Groundwater samples were collected in laboratory washed / certified bottles appropriate for the analytes tested. Waterproof labels were affixed to the body of the jars, and included the job number, unique sample identification, and date of sample collection;
- Sampling was done in a manner to ensure that any volatile organic compound (VOC) losses were minimal. Immediately after each sample was collected, the vial was sealed with zero headspace to prevent any VOC losses;
- In accordance with AS 4482.1 (2005), soil and groundwater samples were stored in a cool esky containing ice immediately after collection;
- Samples were submitted to the laboratory immediately following fieldwork to ensure that sample holding times could be met. Primary and QA/QC samples were analysed by NATA accredited laboratories by the appropriate analytical methods and LORs; and
- Reusable sampling equipment was decontaminated between sampling locations and new gloves were worn for the collection of each sample to prevent cross contamination.

1.2 Field QA/QC Data Evaluation

1.2.1 Replicate Samples

A QC blind duplicate sample is a sub-sample of the parent sample taken in the field and submitted to the primary laboratory for analysis to enable measurement of the overall precision of the sampling procedure (how representative the result is of the true field conditions) and the precision of the laboratory analytical methods. A QC blind triplicate sample is also a sub-sample of the parent sample taken in the field, but this sample is submitted to a secondary laboratory for analysis to enable assessment of the accuracy of the analytical results between different laboratories.

The primary laboratory for soil and groundwater analyses was Eurofins-mgt in Lane Cove, NSW. The intra-laboratory duplicates were also analysed by Eurofins-mgt. The inter-laboratory duplicates were analysed by ALS Environmental in Smithfield, NSW.

1.2.2 Soil and Groundwater Replicate Data

The soil and groundwater duplicate and triplicate samples collected during the site validation works, and submitted for laboratory testing, are shown in **Table I-1**, below.

Table I-1: Soil and Groundwater Duplicate/Triplicate Summary

Parent Sample	Date	Blind Duplicate	Blind Triplicate	Analysis
SB11-0.75	10 August 2018	QS1	QS1A	TPH/TRH, BTEX, PAH, metals
SB19-2.5	8 August 2018	QS2	QS2A	TPH/TRH, BTEX, PAH, metals
SB22-6.0	13 August 2018	QS3	QS3A	TPH/TRH, BTEX, PAH, metals
SB13-0.2	13 August 2018	QA1	QA1A	Asbestos
SB6-0.2	14 August 2018	QA2	QA2A	Asbestos
MW-2	15 August 2018	QW1	QW1A	TPH/TRH, BTEX, PAH, metals, phenols

In total, 87 primary soil samples were analysed for the COPCs at the site, equating to a frequency of one soil duplicate/triplicate per 19 samples.

In total, four primary groundwater samples were collected during the GME, equating to a frequency of one duplicate/triplicate groundwater sample per four primary samples.

In order to evaluate the data obtained for the replicate samples, the RPD between replicate and parent samples is calculated using the following equation.

$$\text{Relative Percentage Difference} = \frac{X^1 - X^2}{\left(\frac{X^1 + X^2}{2}\right)} \times 100$$

Standards AS 4482.1-1997, AS 4482.2-1999, AS/NZ 5667.1-1998, AS/NZ 5667.11-1998 and NEPM (2013) state that replicate and original sample RPDs should generally be within 30%. However, this variation can be expected to be higher for organic compounds than for inorganics. In addition, greater variation is observed where low concentrations of analytes are present. Therefore, the following RPD acceptance criteria were adopted during this DSI:

- Inorganics – 30% RPD;
- Organics – 50% RPD; and
- If primary and/or duplicate concentration <10 × LOR – No Limit.

If replicate RPDs are determined to be outside this range, the reasons and potential impact on site data validity are discussed.

As shown on **Tables 11 and 13,** the RPD between the primary and duplicate/triplicate soil and groundwater samples were within the acceptable ranges.

1.2.3 Trip Blank/Trip Spike

Trip blank and trip spike samples were prepared and transported with primary samples to ensure cross contamination of samples has not occurred during transportation of the samples for the soil and groundwater sampling events.

The trip spike/trip blank analytical results are summarised in **Table 12**. No COPCs were detected at concentrations above the laboratory LORs in any of the trip blanks analysed during the works. The trip spike recoveries were found to be in acceptable ranges for all samples.

1.2.4 Rinsate

The use of rinsate blank samples enables the assessment of potential cross-contamination of the samples during the field handling and are collected during field decontamination procedures by rinsing decontaminated equipment with clean deionised water. Detection of contaminants in a rinsate sample may indicate cross-contamination between sampling locations

One rinsate water sample was submitted for each day of soil sampling, with the exception of soil sampling completed 9 and 10 August 2018 (see below for further details), with analysis of rinsate water associated with the decontaminated hand auger. The rinsate analytical results are summarised in **Table 12**. COPCs were not detected at concentrations exceeding the laboratory LORs in any of the rinsate blanks, indicating the potential for cross contamination of samples from decontaminated equipment was low and decontamination between sampling locations was adequate for the remaining COPCs.

Additionally, given the nature of material encountered in soil bores advanced at the site (i.e. fill), the observed anthropogenic material (i.e. bricks and concrete) and the absence of COPC concentrations reported above laboratory LORs in natural soil samples collected on 9 and 10 August 2018, the reported COPC concentrations in soil samples collected on 9 and 10 August are likely to be representative of soil conditions at the site. Therefore, the absence of rinsate blanks during field works completed on 9 and 10 August 2018 is considered unlikely to affect the interpretation of results and the outcomes of this DSI.

No reusable sampling equipment was used during the groundwater sampling as samples were collected using disposable, single use sampling equipment. Therefore, no rinsate samples were collected during the GME.

1.2.5 Sample Holding Times

Holding times are the length of time a sample can be stored after collection and prior to analysis without significantly affecting the analytical results. Holding times vary with the analyte, sample matrix, and analytical methodology used to quantify the analytes concentration. A review of the laboratory analytical reports indicates that all soil and groundwater samples were extracted and/or analysed within the appropriate holding times.

1.2.6 Sample Integrity

The COCs and sample receipt documentation received with each sample batch is included with the laboratory reports (**Appendix H**). A review of this documentation indicates that samples were received at the primary and secondary laboratories at appropriate temperatures. Samples for VOC analysis were received in airtight sample containers and with no headspace remaining.

1.2.7 Sample Containers

A review of the laboratory reports (**Appendix H**) indicates all soil and groundwater samples were submitted to the laboratory in the appropriate containers.

2 Laboratory QA/QC Data Evaluation

The chosen analytical laboratories undertake internal QA/QC procedures that include the analysis of method blanks, internal duplicate samples, laboratory control samples, matrix spikes and surrogate recovery. Additionally, laboratory QA/QC procedures include sample receipt, logging, storage, preservation and analysis within the method specified holding time, and samples were received and stored appropriately, and all samples were analysed within the specified holding time. A review of the laboratory QA/QC procedures indicated that laboratory QA/QC samples percent recoveries were within specified ranges for all samples, with the exception of those discussed below. A review of the identified laboratory QA/QC exceedance indicated that these are not considered to affect the interpretation of results or the outcome of the DSI and are justified below.

Soil Investigation

- Report 612025-S:
  - One matrix spike recovery was outside of the recommended acceptance criteria for lead. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

3 Data Useability

The data validation procedure employed in the assessment of the field and laboratory QA/QC data indicated that the reported analytical results are representative of the conditions at the sample locations and that the analytical data can be relied upon for the purpose of the site assessment. It is concluded that overall the quality of the analytical data produced is reliable for the purpose of this DSI.

Gas Calibration Certificate

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Instrument MX6
Serial No. 12091J1-019
Sensors O2, PID, LEL

Item	Test	Pass	Comments			
			Low	High	TWA	STEL
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	N/A				
	Filter	N/A				
	Flow	N/A				
	Valves, Diaphragm	N/A				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	O2	✓	19.5%	23.5%	N/A	N/A
	PID	✓	50ppm	100ppm	10ppm	25ppm
	LEL	✓	5%	10.00%	N/A	N/A
Alarms	Beeper	✓				
	Settings	✓				
Software	Version					
Datalogger	Operation	✓				
Download	Operation	✓				
Other tests:						

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Diffusion mode Aspirated mode

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
O2		20.90%		Fresh Air	20.8%
PID		98ppm	NATA	SY137	96.3ppm
LEL		50% LEL Methane	NATA	SY174	48%

Calibrated by: Sarah Lian

Calibration date: 07-Aug-18

Next calibration due: 03-Feb-19

6/8/18

Multi Parameter Water Meter

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Instrument YSI Quatro Pro Plus
Serial No. 10H100317

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 10.00		pH 10.00		320322	pH 9.35
1. pH 7.00		pH 7.00		307928	pH 6.89
2. pH 4.00		pH 4.00		307927	pH 4.32
3. mV		234mV		311901/311902	234mV
4. EC		2.76mS		306341	2.77mS
5. D.O		0.00ppm		5656	0.04ppm
6. Temp		20.7°C		MultiTherm	20.2°C

Calibrated by: Sarah Lian

Calibration date: 6/08/2018

Next calibration due: 5/09/2018