





Detailed Site Investigation

Infrastructure NSW
Powerhouse Parramatta,
Phillip Street
Parramatta NSW

3 April 2020

58352/128673 (Rev 0)
JBS&G Australia Pty Ltd

Detailed Site Investigation

Infrastructure NSW
Powerhouse Parramatta,
Phillip Street
Parramatta NSW

3 April 2020

58352/128673 (Rev 0)

JBS&G Australia Pty Ltd

Table of Contents

Abbreviations.....	vii
Executive Summary.....	viii
1. Introduction.....	1
1.1 Background.....	1
1.2 Purpose.....	2
1.3 Objectives.....	2
1.4 Scope of Works.....	2
1.5 Overview of Proposed Development	4
2. Site Condition and Surrounding Environment.....	6
2.1 Assessment Area Identification.....	6
2.2 Site Description	6
2.3 Surrounding Land Use	7
2.4 Topography.....	7
2.5 Geology and Soils	7
2.6 Hydrology	7
2.7 Hydrogeology	8
2.8 Acid Sulfate Soils.....	8
2.9 Meteorology.....	9
3. Site History.....	10
3.1 Aerial Photographs	10
3.2 Historical Land Title Records	11
3.2.1 30 B Phillip Street (historical Lot B D.P. 393866, Lot 102 D.P. 1031459 & Lot A D.P. 384927, current Lot 1-3 DP 1247122)	11
3.2.2 34 Phillip Street (historical Lot 1 DP 569139, current Lot 2 DP 1247122)	12
3.2.3 44 Phillip Street (historical Lot 1 DP 742271, current Lot 2 DP 1247122)	12
3.2.4 47 Smith Street (historical Lot C DP 384927, current Lot 2 DP 1247122)	12
3.3 Council Records	13
3.3.1 44 Phillip Street.....	13
3.3.2 30 B Phillip Street.....	13
3.3.3 34 Phillip Street.....	14
3.4 EPA Records.....	14
3.5 EPA Per- and Poly- Fluoroalkyl Substances (PFAS) Register	14
3.6 Australian and NSW Heritage Register	14
3.7 Previous Investigations.....	15

3.7.1	Preliminary ESA (EIS 2013).....	15
3.7.2	JBS&G PSI & DSI for Substation at 42 Phillip St (2016a)	16
3.7.3	JBS&G PSI (2016b).....	16
3.8	Integrity Assessment	17
4.	Conceptual Site Model	18
4.1	Areas of Environmental Concern	18
4.2	Potentially Contaminated Media	18
4.3	Potential for Migration, Exposure Pathways and Receptors	18
4.4	Potential Exposure Pathways	19
4.4.1	Potential Receptors.....	19
5.	Sampling and Analysis Plan.....	20
5.1	Data Quality Objectives.....	20
5.1.1	State the Problem	20
5.1.2	Identify the Decision	20
5.1.3	Identify Inputs to the Decision.....	21
5.1.4	Define the Study Boundaries	21
5.1.5	Develop a Decision Rule.....	22
5.1.6	Specific Limits on Decision Errors	22
5.2	Optimise the Design of Obtaining Data.....	24
5.2.1	Soil and Groundwater Investigation Program	24
5.3	Soil and Groundwater Investigation Methodology	24
5.3.1	Soil Sampling Methodology	24
5.4	Groundwater Monitoring Well Installation.....	25
5.4.1	Groundwater Sampling Methodology	25
5.4.2	Decontamination	26
5.4.3	Duplicate and Triplicate Sample Preparation	26
5.4.4	Laboratory Analysis.....	26
6.	Assessment Criteria	27
6.1	Regulatory Guidelines	27
6.2	Soil Assessment Criteria Selection.....	27
6.3	Groundwater Assessment Criteria Selection.....	28
7.	Quality Assurance/Quality Control.....	29
8.	Results.....	30
8.1	Soil Observations.....	30
8.2	Soil Analytical Results.....	30
8.2.1	Heavy Metals	30
8.2.2	TRH/BTEX	31

8.2.3	PAHs	31
8.2.4	PCBs.....	31
8.2.5	OCPs	31
8.2.6	VOCs.....	31
8.2.7	Asbestos	31
8.3	Groundwater Field Observations	32
8.4	Groundwater Analytical Results	32
8.4.1	Metals	32
8.4.2	TRH/BTEX	32
8.4.3	PAHs	32
8.4.4	VOCs	33
9.	Site Characterisation.....	34
9.1	Are there any unacceptable risks to onsite future receptors from soil?	34
9.1.1	Soil Contamination.....	34
9.1.2	Groundwater.....	35
9.2	Are there any issues relating to the local area background soil concentrations that exceed appropriate soil criteria?	35
9.3	Are there any chemical mixtures?.....	35
9.4	Are there any aesthetic issues?.....	35
9.5	Is there any evidence of, or potential for, migration of contaminants from the site?	36
9.6	Is a site management strategy required?.....	36
10.	Conclusions and Recommendations.....	37
11.	Limitations	38

List of Tables

Table 2.1: Summary of Assessment Area Details.....	6
Table 2.2: Registered Groundwater Bore Search Summary	8
Table 3.1 Summary of Historical Aerial Imagery Review	10
Table 4.1 Areas of Environmental Concern and Associated Contaminants of Potential Concern.....	18
Table 5.1 Summary of Decision Rules	22
Table 5.2 Data Quality Indicators.....	23
Table 5.3 Analytical Schedule	26
Table 6.1 Average Background Concentrations.....	28
Table 8.1 Depth to Groundwater (6 March 2020)	32

List of Figures

Figure 1	Site Location
Figure 2	Site Layout and Sample Locations
Figure 3	Soil Exceedances
Figure 4	Groundwater Exceedances

Appendices

Appendix A	Summary Tables
Appendix B	Photographic Log
Appendix C	Groundwater Bore Search
Appendix D	Historical Aerials
Appendix E	Land Title Records
Appendix F	Council Certificates
Appendix G	EPA Records
Appendix H	Heritage Records
Appendix I	Field Bore Logs
Appendix J	Laboratory Certificates and Chain of Custody Documentation
Appendix K	Calibration Certificates
Appendix L	Detailed QA/QC Assessment

Abbreviations

Term	Definition
ACM	Asbestos Containing Material
AEC	Area of Environmental Concern
AHD	Australian Height Datum
bgs	Below Ground Surface
BTEX	Benzene, toluene, ethylbenzene and xylenes
B(a)P	Benzo(a)pyrene
COC	Chain of Custody
COPC	Contaminants of Potential Concern
CSM	Conceptual Site Model
DPIE	Department of Planning, Industry and Environment
DQI	Data Quality Indicator
DQOs	Data Quality Objectives
ESA	Environmental Site Assessment
EPA	Environmental Protection Authority
ha	Hectare
HIL	Health based Investigation level
HSL	Health Screening Level
JBS&G	JBS&G Australia Pty Ltd
LOR	Limit of Reporting
MAAS	Museum of Applied Arts and Sciences
NATA	National Association of Testing Authority
OCP	Organochlorine Pesticides
OEH	Office of Environment and Heritage
PAHs	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl
PID	Photo – Ionisation Detector
QA/QC	Quality Assurance/Quality Control
RPD	Relative Percentage Difference
SAQP	Sampling, Analysis and Quality Plan
SEARs	Secretary's Environmental Assessment Requirements
TCLP	Toxicity Characteristic Leaching Procedure
TE	Telstra Exchange
TEQ	Toxicity Equivalent Quotient
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbon
UCL	Upper Confidence Limit
VOC	Volatile Organic Compound

Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by Infrastructure NSW (the client) to conduct a Detailed Site Investigation (DSI) of potential contamination at the proposed future location of the Museum of Applied Arts and Sciences (also referred to as the future Powerhouse Parramatta) at Philip Street, Parramatta NSW (the site). The total site is legally identified as Lot 1 and Lot 2 in DP1247122 and Lot 1 in DP128476 and occupies an area of approximately 2.5 hectares (ha). The site location and layout are shown on **Figures 1 and 2**, respectively.

Previous intrusive investigations identified potential sources of contamination at the site including imported fill materials of unknown origin and a substation present on a small portion of the site. Limited soil analyses undertaken across the site indicated elevated levels of lead, polycyclic aromatic hydrocarbons (PAHs) and asbestos in soils. It was recommended that additional investigations should be undertaken across the site.

The scope of works for this investigation comprised a review of available site history and publicly available information to identify potential areas of environmental concern (AECs) and associated contaminants of potential concern (COPC), groundwater monitoring well installation, soil and groundwater sampling, analysis of selected samples for identified COPC, comparison of collected data against relevant EPA endorsed criteria and preparation of a DSI report in general accordance with relevant EPA endorsed guidelines. The objective was to determine, from a site contamination perspective, whether the site was suitable for the proposed recreational open space land use for Parramatta Powerhouse. Recreational open space land use criteria was considered to be the most appropriate as the proposed development includes multiple recreational areas openly accessible to the public, inclusive of adults and children.

Based on the scope of work and subject to the limitations in **Section 11**, the following conclusions have been made:

- The review of historical site use information and inspection of site conditions identified potential areas of environmental concern and associated contaminants of concern which were associated with potential importation of fill materials from unknown origins and the historical operation of an electrical substation;
- Fill material comprised brown/dark brown/grey heterogeneous sandy clayey silt with inclusions of bitumen, mulch, brick, concrete, gravels and tiles. Depth of fill material ranged between 0 to 1.1 m bgs across the main portion of the site, with greater fill depths within the Parramatta River foreshore (up to 4.0 m bgs);
- Anthropogenic inclusions of plastic, concrete, brick, sandstone gravels, and slag were observed in fill materials. The relative quantity of these inclusions in fill are such that they are not considered to pose an unacceptable aesthetic issue for the proposed land use, presuming that the site surface across the proposed redevelopment will be finished with imported landscaping materials including soil and grass/shrubs/trees etc, new hardstand areas and new buildings;
- Intrusive soil investigations completed here and historically identified the following:
 - Elevated levels of heavy metals, TRHs and PAHs exceeding the adopted ecological criteria;
 - Elevated isolated hotspots with concentrations of lead, PAHs, polychlorinated biphenyls (PCBs) and asbestos exceeding the adopted human health criteria for the proposed recreational open space land use. These impacts are considered to be associated with constituents present in fill materials on the site, and were generally restricted to shallow

depths, as consistent with the vertical extent and historical placement of imported fill materials on the site and pose a potential risk to future on-site receptors if not remediated/managed;

- Elevated levels of heavy metals exceeding ecological criteria, apart from the highest levels of lead, are not considered likely to present a potential ecological risk on the site, noting the historical urbanised location of the site; and
- An assessment of groundwater was undertaken by a comparison of levels of environmental constituents present in hydrogeologically upgradient and downgradient monitoring wells. Levels of environmental constituents were found to be consistent with anticipated levels within an historically urbanised area, and further there was no indication of a site-specific source of groundwater impact.

Based on the results of the investigation and subject to the limitations in **Section 11**, the following recommendations have been made:

- It is recommended that a RAP is prepared detailing the required remediation and/or ongoing management works to address the highest levels of lead, PAHs, PCBs and asbestos impacted soils on the site, as well as an ASSMP outlining the relevant management requirements if acid sulfate soils are encountered. The RAP (JBS&G 2020a¹) and ASSMP (JBS&G 2020b²) have been prepared and submitted in conjunction with this report.

¹ Remedial Action Plan, Powerhouse Parramatta, Phillip Street, Parramatta NSW, 3 April 2020, JBS&G Australia Pty Ltd, ref: 58352/128675 (Rev 0).

² Acid Sulfate Soil Management Plan, Powerhouse Parramatta, Phillip Street, Parramatta NSW, 3 April 2020, JBS&G Australia Pty Ltd, ref: 58352/128686 (Rev 0).

1. Introduction

JBS&G Australia Pty Ltd (JBS&G) was engaged by Infrastructure NSW (the client) to conduct a Detailed Site Investigation (DSI) of potential contamination at the proposed future location of the Museum of Applied Arts and Sciences (also referred to as the future Powerhouse Parramatta) at Philip Street, Parramatta NSW (the site). The total site is legally identified as Lot 1 and Lot 2 in DP1247122 and Lot 1 in DP128476 and occupies an area of approximately 2.5 hectares (ha). The site location and layout are shown on **Figures 1** and **2**, respectively.

This report supports a State Significant Development (SSD) Development Application (DA) for the development of the Powerhouse Parramatta at 34-54 & 30B Phillip Street and 338 Church Street, Parramatta. The Powerhouse Parramatta is a museum (information and education facility) that has a capital investment value in excess of \$30 million and as such the DA is submitted to the Minister for Planning pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act). Infrastructure NSW is the proponent of the DA.

The Department of Planning, Industry and Environment (DPIE) have issued Secretary's Environmental Assessment Requirements (SEARs) to the applicant for the preparation of an Environmental Impact Statement (EIS) for the proposed development. This report has been prepared having regard to the SEARs as issued for the management of site contamination issues. This detailed site investigation report has been prepared to determine the extent of contamination affecting the site and has been prepared in accordance with relevant guidelines made or approved by the NSW EPA.

1.1 Background

The Powerhouse is Australia's contemporary museum for excellence and innovation in applied arts and sciences. The museum was established in 1879 in the Garden Palace which emerged from a history of 19th Century grand exhibition halls, including the Grand Palais. It currently encompasses the Powerhouse in Ultimo, Sydney Observatory in The Rocks and the Museums Discovery Centre in Castle Hill. The Powerhouse has occupied the Ultimo site since 1988.

Parramatta, in the heart of Western Sydney, is entering a period of rapid growth. It was identified in 2014's A Plan for Growing Sydney as the metropolis' emerging second Central Business District, with the provision of supporting social and cultural infrastructure regarded as integral to its success. The strategic importance of Parramatta as an economic and social capital for Sydney has been subsequently reinforced and further emphasised through its designation as the metropolitan centre of the Central City under the Greater Sydney Region Plan.

Powerhouse Parramatta will be the first State cultural institution to be located in Western Sydney – the geographical heart of Sydney. In December 2019, the Government announced the winning design, by Moreau Kusunoki and Genton, for the Powerhouse Parramatta from an international design competition. Powerhouse Parramatta will establish a new paradigm for museums through the creation of an institution that is innately flexible. It will become a national and international destination renowned for its distinctive programs driven by original research and inspired by its expansive collections. It will be a place of collaboration, a mirror of its communities forever embedded in the contemporary identity of Greater Sydney and NSW.

Previous environmental assessments identified that the site was subject to historical filling which was potentially affected by a range of contaminants. Elevated levels of lead, semi and non-volatile petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs) and asbestos were identified in soils. Acid sulfate soils were also identified as likely to be present in deep soils and likely to be encountered by future piling works, or otherwise deep excavations.

1.2 Purpose

The DPIE have issued SEARs to the applicant for the preparation of an EIS for the proposed development. This report has been prepared having regard to the SEARs below:

SEAR	Where addressed
<p>15. Contamination and Remediation</p> <p>The EIS shall:</p> <ul style="list-style-type: none"> - Demonstrate compliance with the requirements of SEPP 55 and if remediation works are required include a Remedial Action Plan - Identify geotechnical issues (including Acid Sulfate Soils) associated with the construction of the development. A Preliminary Site Investigation Study if needed, and/or further information as required by SEPP55 including an Acid Sulfate Soils Management Plan 	<p>Throughout this report, including the RAP (JBS&G 2020a) and ASSMP (JBS&G 2020b)</p>

The investigation has been completed in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards in order to satisfy the above key issues identified in DPIE SEARs.

1.3 Objectives

The objectives of the investigation are to identify the potential for contamination based on current and historical site activities and to draw conclusions of the contamination status of the site as well as to assess potential soil, groundwater and vapour issues which may affect the site's proposed future land use for a open space / recreational purpose. Recreational open space land use criteria was considered to be the most appropriate as the proposed development includes multiple recreational areas openly accessible to the public, inclusive of adults and children.

1.4 Scope of Works

To achieve the objectives of the investigation, the scope of works comprised:

- A review of available site (including assessment area) history and background information to identify potential areas of environmental concern and associated contaminants of concern including:
 - A review of relevant information detailed in the Preliminary Site Investigation (PSI) completed by JBS&G (2016a³);
 - Update records of publicly available information held by NSW EPA, where readily available; and
 - Update licensed groundwater bores data present within a 1 km radius of the assessment area available on the online National Groundwater Information System, Bureau of Meteorology (2019/05) and WaterNSW (2019);
- Review of the environmental setting including topography, geology and hydrogeology of the site and surrounding areas;
- Development and documentation of a conceptual site model (CSM) and sampling and laboratory program (SAQP) based on the available information;
- A detailed site inspection to identify potential areas of environmental concern and confirm desktop findings;
- Soil sampling and analysis at 23 locations across the assessment area;

³ Preliminary Site Investigation, Proposed Museum of Applied Arts & Sciences, Parramatta NSW, JBS&G Australia Pty Ltd, 1 September 2016, ref: 51861/104899 Rev A, JBS&G 2016a.

- Installation of three additional groundwater wells;
- Groundwater sampling of three new and two existing groundwater wells; and
- Preparation of a DSI report, in general accordance with relevant EPA made or endorsed guidelines.

1.5 Overview of Proposed Development

The Powerhouse was established in 1879, and Powerhouse Parramatta will radically return to its origins through the creation of seven presentation spaces of extraordinary scale that will enable the delivery of an ambitious, constantly changing program that provides new levels of access to Powerhouse Collection. The Powerhouse will set a new international benchmark in experiential learning through the creation of an immensely scaled 360-degree digital space, unique to Australia.

Powerhouse Parramatta will reflect the communities and cultures of one of Australia's fastest growing regions. It will hold First Nations culture at its core and set a new national benchmark in culturally diverse programming. The Powerhouse will be highly connected through multiple transport links, and integrate into the fine grain of the city.

Powerhouse Parramatta will be an active working precinct and include the Powerlab, which will enable researchers, scientists, artists and students from across regional NSW, Australia and around the world to collaborate and participate in Powerhouse programs. The Powerlab will feature digital studios to support music and screen industries alongside co-working spaces, life-long learning and community spaces. Integrated into the Powerlab will be a research kitchen and library that will support a NSW industry development program including archives and oral histories.

This application will deliver an iconic cultural institution for Parramatta in the heart of Sydney's Central City. The SSD DA seeks consent for the delivery of the Powerhouse Parramatta as a single stage, comprising:

- Site preparation works, including the termination or relocation of site services and infrastructure, tree removal and the erection of site protection hoardings and fencing;
- Demolition of existing buildings including the existing Riverbank Car Park, 'Willow Grove', 'St George's Terrace' and all other existing structures located on the site;
- Construction of the Powerhouse Parramatta, including:
 - Seven major public presentation spaces for the exhibition of Powerhouse Collection;
 - Front and back-of-house spaces;
 - Studio, co-working and collaboration spaces comprising the 'Powerlab', supported by 40 residences (serviced apartments) for scientists, researchers, students and artists, students, researchers and scientists, and 60 dormitory beds for school students;
 - Education and community spaces for staff, researchers and the Powerlab residents, the community, and education and commercial hirers;
 - Commercial kitchen comprising the 'Powerlab Kitchen' used for cultural food programs, research, education and events;
 - Film, photography, and postproduction studios that will connect communities with industry and content that will interpret the Powerhouse Collection;
 - Public facing research library and archive for community, industry, students and researchers to access materials; and
 - A mix of retail spaces including food and drink tenancies with outdoor dining.
- Operation and use of the Powerhouse Parramatta including use of the public domain provided on the site to support programs and functions;
- Maintenance of the existing vehicular access easement via Dirrabarri Lane, the removal of Oyster Lane and termination of George Khattar Lane, and the provision of a new vehicular access point to Wilde Avenue for loading;

- Public domain within the site including new public open space areas, landscaping and tree planting across the site; and
- Building identification signage.

The project does not seek consent for the carrying out of works outside of the site boundary, and in particular does not involve any alterations to the existing edge of the formed concrete edge of the Parramatta River or to the waterway itself.

2. Site Condition and Surrounding Environment

2.1 Assessment Area Identification

The site location and the assessment area are shown in **Figures 1** and **Figure 2**, respectively. The site is located at the northern edge of the Parramatta CBD on the southern bank of the Parramatta River. It occupies an area of approximately 2.5 hectares and has extensive frontages to Phillip Street, Wilde Avenue and the Parramatta River. A small portion of the site extends along the foreshore of the Parramatta River to the west, close to the Lennox Street Bridge on Church Street. The site excludes the GE Office Building at 32 Phillip Street.

Assessment area details are summarised in **Table 2.1** and described in detail in the following sections.

Table 2.1: Summary of Assessment Area Details

Lot/DP	Lot 1 and Lot 2 DP1247122, Lot 1 DP128476
Address	Philip Street, Parramatta
Local Government Authority	City of Parramatta Council
Approximate Area size	2.5 ha
Current Zoning	B4 Mixed Use, RE1 Public Recreation
Current Land Use	Carpark, commercial properties including restaurants and open space
Previous Land Use	Carpark since 1960s
Proposed Land Use	Open space / recreational – Powerhouse Parramatta plus open space areas for public access

2.2 Site Description

A detailed inspection of the assessment area was conducted on 28 February 2020 by one of JBS&G's trained and experienced environmental scientists. Observations of the current site configuration and potential areas of concern are discussed below. A photographic log is presented as **Appendix B**.

The site is currently occupied by a number of buildings and structures, including:

- Riverbank Car Park – a four-level public car park;
- Willow Grove – a two-storey villa of Victorian Italianate style constructed in the 1870s;
- St George's Terrace – a two-storey terrace of seven houses fronting Phillip Street constructed in the 1880s;
- 36 Phillip Street – a two-storey building comprising retail and business premises;
- 40 Phillip Street – a two-storey building comprising retail and business premises; and
- 42 Philip Street – a substation building set back from the street.

The immediate context of the site comprises a range of land uses including office premises, retail premises, hotel, serviced apartments and residential apartments. To the north is the Parramatta River and open space corridor, beyond which are predominately residential uses. The Riverside Theatre is located to the north-west across the Parramatta River.

Two ground-level asphalt carparks situated to the south of the Riverbank Car Park and were divided by an open-space, private parkland and Willow Grove and St George's Terrace. Small landscaped areas consisting of vegetation and patchy grass/exposed soils were also situated at various locations throughout both carparks. A number of private carparks were also situated at the rear of the commercial properties along Phillip Street, with surface compositions comprising patchy asphalt and gravelled exposed soils.

Directly to the north of the commercial properties, Oyster Lane and George Khattar Lane merge and slope downwards in a northerly direction towards Parramatta River and to the east of the Riverbank

Car Park. A landscaped area comprising large trees and grass also exists between George Khattar Lane and Riverbank Car Park.

2.3 Surrounding Land Use

The land uses surrounding the proposed Powerhouse Parramatta have been identified as follows:

- North – Parramatta River, River Foreshore Reserve, high density residential apartments, Riverside Theatres and low-density residential housing;
- East – Wilde Avenue, commercial properties including restaurants and open parkland;
- South– Multistorey GE office building, Phillip Street, commercial estates including restaurants followed by George Street; and
- West – High density residential apartments, commercial estates such as Bondi Pizza Parramatta.

2.4 Topography

A review of topographic information obtained from proposed plan packages⁴ indicated that the southern portion of the site lies at an elevation of approximately 7.5 m Australian Height Datum (AHD) and falls towards the north/Parramatta River with a final elevation of approximately 2.1 m AHD. The elevation is relatively consistent at approximately 7.5 m AHD from west to east.

2.5 Geology and Soils

Review of the 1:100 000 scale Sydney Geological Sheet Series 9130 (NSW DMR 1983⁵) indicates that the site is located on the Wianamatta Group Shale, consisting mostly of shale, carbonaceous claystone, laminate, fine to medium grade lithic sandstone. Previous investigations (see **Section 3.7**) reported fill over natural soils as silty sand/silty clay overlying sandstone.

Review of the NSW Department of Environment and Heritage online resource eSPADE⁶, indicated the site overlies the Birrong Soil Group which comprises deep (>250 cm) *Yellow Podzolic Soils* on older alluvial terraces, deep (>250 cm) Solodic Soils and Yellow Solonetz on the current floodplain. The soil landscape is prone to localised flooding and presents a high soil erosion hazard. Furthermore, the Birrong Soil Group can be characterised as saline subsoil with very low soil fertility and seasonal waterlogging.

2.6 Hydrology

The majority of surface area at the site is sealed concrete or asphalt. It is assumed that precipitation will migrate through municipal stormwater infrastructure and subsequently discharge to Parramatta River or north, downgradient towards Parramatta River.

⁴ 200402 SSDA Package, Moreau Kusunoki and Genton Architects, Powerhouse Parramatta, Rev 3.

⁵ *Sydney 1:100,000 Geological Sheet 1930, 1st Edition*. NSW Department of Mineral Resources 1983 (NSW DMR 1983)

⁶ eSPADE <https://www.environment.nsw.gov.au/eSpade2WebApp#> NSW Department of Environment and Heritage. Accessed 5 March 2020

2.7 Hydrogeology

Registered bore information obtained from the Water NSW online database (WNSW⁷) is included as **Attachment C**. The search identified four groundwater bores located within a 1 km radius of the site and are summarised following.

Table 2.2: Registered Groundwater Bore Search Summary

Bore Number	Approximate distance from site (km) and Eastings/Northings	Approximate distance from site (km)	Intended Use	Drilled depth (m bgs)	Standing Water Level (m bgs)	Geological Material
GW108611	0.46 E: 315129 N: 6257213	0.46	Water Supply	60.50	6.2	Fill to 1.00 m bgs, clay to 3.00 m bgs, shale to 5.50 m bgs, sandstone to 60.50 m bgs.
GW110912	0.66 E: 315997 N: 6257285	0.66	Exploration	10.00	7.0	Concrete to 0.10 m bgs, silty clay fill to 0.20 m bgs, natural sandy grey clay to 3.50 m bgs, clay with shale to 4.30 m bgs, shale to 6.80 m bgs, sandstone to 10.00 m bgs.
GW110913	0.66 E: 315992 N: 6257267	0.66	Exploration	10.00	7.0	Concrete to 0.10 m bgs, silty clay fill with gravel to 0.50 m bgs, natural red-brown sandy clay to 4.50 m bgs, clay with shale to 4.90 m bgs, sandstone to 4.90 m bgs, sandy clay with shale to 6.00 m bgs, sandstone to 10.00 m bgs.
GW110914	0.66 E: 315973 N: 6257260	0.66	Exploration	6.0	5.0	Silty sand fill to 0.20 m bgs, sandy clay fill to 1.10 m bgs, natural sandy clay to 2.50 m bgs, red clay to 5.00 m bgs, siltstone and shale to 5.50 m bgs, sandy clay to 5.50 m bgs, sandstone to 6.00 m bgs.

Based on the information obtained from groundwater bores and the mapped geology of the site, it is anticipated that shallow groundwater is encountered at the interface of residual soils and bedrock at greater than 5 m depth apart from the area immediately adjoining the Parramatta River. Based on the location of the site and local topography, the inferred groundwater flow direction is north towards Parramatta River.

2.8 Acid Sulfate Soils

Review of the Acid Sulfate Soil Risk Map (NSW DLWC)⁸ indicates that the site is located within an area of Disturbed Terrain which includes areas historically impacted by reclamation of low-lying wetlands, dredging, mining or urban development. The nearby Parramatta River comprises an area of high probability of acid sulfate soil occurrence in bottom sediments.

⁷ Water New South Wales, <http://realtime.data.watarnsw.com.au>, accessed 26 March 2020.

⁸ 'Acid Sulphate Soil Risk Map – Prospect-Parramatta, 1997 1:25 000 (NSW DLWC)

2.9 Meteorology

A review of average climatic data for the nearest Bureau of Meteorology monitoring location (Bankstown Airport) indicates that the site is located within the following metrological setting:

- Average minimum temperatures vary from 4.5°C in July to 16.7°C in January;
- Average maximum temperatures vary from 17.5°C in June to 28.1°C in January;
- The average annual rainfall is approximately 914 mm; and
- Monthly rainfall varies from 51.4 mm in September to 99.1 mm in March with the wettest periods occurring on average in February, March and April.

3. Site History

3.1 Aerial Photographs

Aerial Photographs from 1930, 1943, 1956, 1961, 1970, 1982, 1994, 2005, 2016, and 2020 were obtained from the Department of Land and Property Information, summarised in **Table 3.1** and copies included in **Attachment D**.

Table 3.1 Summary of Historical Aerial Imagery Review

Year	Observations
1930	The aerial is unclear, however parkland comprising trees and grassland dominated the central and northern portions of the site. Small and medium sized buildings were evident in the southern portion and appeared to be potentially utilised for commercial/residential purposes. There was a structure where Willow Grove house currently stands. A large warehouse was also situated directly to the southwest of the site and to the north of Phillip Street. The surrounding areas appeared to comprise small to medium sized commercial properties, parkland and low-density residential housing.
1943	The site remained predominantly the same with open parkland dominating the central and northern portions with small to medium sized commercial/residential structures situated in the southern portion. Two structures have been raised near the central western boundary, and one or more structures appeared in the location of the current carpark access road from Phillip Street. An additional structure was now visible immediately west of the structure present in the current location of Willow Grove. A factory building with sawtooth roof has been developed in the area currently occupied by the GE building, and some additional residential structures were built in the surrounding areas.
1956	The majority of vegetation and grassland that were apparent in the central and northern portion appeared to have been cleared with some exposed soils now visible. Additional structures have also been built in the south western corner of the site, with the two structures previously visible at the western boundary no longer present. The surrounding area remains mostly unchanged with a number of additional residential and commercial structures built.
1961	The large multi-storey carpark identified during the site investigation is in the process of being constructed. Temporary and/or permanent ground level carparks were also situated to the south and east of the new development, where existing asphalt car parking exists. A concrete footpath also traversed the northern portion of the site from east to west. The structure west of the Willow Grove house was removed. In addition, a number of smaller structures that were previously identified in the south eastern corner have been demolished and replaced with a carpark. The remaining surrounding areas remained mostly unchanged with a number of additional residential and commercial structures built. A number of small to medium sized structures that were previously located directly west of the site have been amalgamated into a large multi-storey structure.
1970	The large carpark structure in the centre of the site has been completed and the surrounding ground level carparks were paved with asphalt. Structures that were previously situated in the south western corner have been demolished and also replaced with a carpark and access way. The sawtooth-roofed building southwest of the site was removed and replaced with ground level carpark. The sawtooth roof of the building in the current GE building location was replaced with a newer roof. South of Phillip Street, a number of structures have also been demolished and replaced with a ground level carpark. The remaining surrounding areas remained mostly unchanged with a number of additional residential and commercial structures built.
1982	No major developments have occurred since the previous photograph with the exception of the yards located at the rear of the south eastern structures replaced with concrete hardstand, and the construction of Wilde Avenue and associated bridge directly to the east of the site. The ground level car park south of Phillip Street has been developed into a multi-storey carpark and commercial building.
1994	No major developments occurred since the previous photo with exception to a small structure having been demolished in the central portion of the site (adjoining the northeast of Willow Grove) and the development of the GE office building directly south of the site. Additional apartments and office buildings have also been built in the surrounding areas, including one immediately west of the Phillip Street accessway.

Year	Observations
2005	No major developments occurred since the previous photo with exception to a removal of a large tree in the western-most carpark, and the construction of additional structures located in the central portion directly south of the large carpark building, adjoining Willow Grove.
2016	The site remained largely unchanged from the previous aerial. Redevelopment of the large apartments/commercial property to the west of the site, fronting the river, was in progress.
2020	The large apartment/commercial property to the west was completed. Besides that, the site remained largely unchanged from the previous aerial photograph.

3.2 Historical Land Title Records

A search of historical land title records has been conducted for a limited number of properties contained within the site and are summarised below with full records provided in **Appendix E**. The registered proprietors for the combined lots are detailed below.

The information obtained does not indicate any ownership or occupancy of the site for any purposes likely to involve potentially high-risk contaminating activities, consistent with the aerial photographic review herein.

3.2.1 30 B Phillip Street (historical Lot B D.P. 393866, Lot 102 D.P. 1031459 & Lot A D.P. 384927, current Lot 1-3 DP 1247122)

Lot B DP 393866

- 1898 to 1934 - Fanny Eliza Houison (Widow).
- 1934 to 1954 - Martha Florence Houison (Spinster) and Maude Mary Houison (Spinster).
- 1954 to 1955 - James Keith Solling Houison (Accountant) and Gwenda Solling Houison (Spinster).
- 1955 to Date - The Council of the City of Parramatta.

Lot 102 DP 1031459

- 1917 to 1935 - Henry Edward Haddrill (Produce Merchant).
- 1935 to 1953 - David Bruce Frater (Retired Grazier).
- 1953 to Date - The Council of the City of Parramatta.

Lot A DP 384927

- 1910 to 1923 - Elizabeth Melhuish (Married Woman).
- 1923 to 1926 - Hartley John Wood (Cordial Maker) and Esther Amelia Ellen Wood (His Wife).
- 1926 to 1948 - William James Laws (Cordial Manufacturer) and Ethel Elegar May Laws (His Wife).
- 1948 to 1953 - Ethel Elegar May Laws (Widow).
- 1953 to Date - The Council of the City of Parramatta.

3.2.2 34 Phillip Street (historical Lot 1 DP 569139, current Lot 2 DP 1247122)

- 1919 to 1923 – Evangeline Estella Davidson (Married Woman).
- 1923 to 1949 - May Victoria West (Spinster).
- 1949 to 1953 - Frances Amy Thompson (Married Woman).
- 1953 to 1986 - The Commonwealth of Australia.
- 1986 to 1987 - Australian Telecommunications Commission.
- 1987 to 1994 - Agostino Bros. Pty Limited.
- 1994 to 2009 - Rex Gene Maughan.
- 2009 to 2015 - Australia Investments LLC.
- 2015 to Date – City of Parramatta Council.

3.2.3 44 Phillip Street (historical Lot 1 DP 742271, current Lot 2 DP 1247122)

- 1919 to 1935 - Albert Harding Porter (Surgeon).
- 1935 to 1935 - Rosamond Ellen Dudgeon (Widow).
- 1935 to 1949 - Frances Evelyn Webber (Spinster) & her deceased estate.
- 1949 to 1969 - Salvatore Messina (Market Gardener).
- 1969 to 2001 - Waldor Development Pty Limited.
- 2001 to 2008 - John Francis Surian, Christine Teresa Sharp, Andrew Brooks, David Ronald Lewarne, Redlee Imports Pty Ltd.
- 2008 to 2014 - John Francis Surian, Christine Teresa Sharp, Andrew Brooks, Redlee Imports Pty Ltd.
- 2014 to 2015 - John Francis Surian, Christine Teresa Sharp, Andrew Brooks, Redlee Imports Pty Ltd.
- 2015 to Date - City of Parramatta Council.

3.2.4 47 Smith Street (historical Lot C DP 384927, current Lot 2 DP 1247122)

- 1910 to 1923 - Elizabeth Melhuish (Married Woman)
- 1923 to 1926 - Hartley John Wood (Cordial Maker) and Esther Amelia Ellen Wood (His Wife)
- 1926 to 1948 - Esther Amelia Ellen Wood (His Wife) and Ethel Elegar May Laws (His Wife)
- 1948 to 1954 - Ethel Elegar May Laws (His Wife)
- 1954 to 1959 - Percy Whitton Leabeater (Merchant)
- 1959 to 1962 - Scott's (Newcastle) Investments Limited
- 1962 to Date - The Council of the City of Parramatta

3.3 Council Records

A representative number of Section 10.7 (2) and (5) planning certificates were acquired for three properties within the site including 44 Phillip Street, 30B Phillip Street and 34 Phillip Street. Complete copies of these planning certificate are provided in **Appendix F** and a summary of the information with respect to contamination is as follows for each selected property:

3.3.1 44 Phillip Street

- The site is zoned B4 Mixed Use.
- The land is identified as containing a Heritage Item in Parramatta Local Environmental Plan 2011. The land is not located in a heritage conservation area.
- The land is not affected by road widening or road realignment.
- The land is subject to Section 5.4 Preservation of Trees or Vegetation in Parramatta Development Control Plan 2011.
- The land is not affected by any of the matters contained in Clause 59(2) as amended in the Contaminated Land Management Act 1997.
- The land is identified as Class 4 on the Acid Sulfate Soils maps of the Parramatta Local Environmental Plan 2011. This details that development consent is required to carry out works more than 2 metres below the natural ground surface.

3.3.2 30 B Phillip Street

- The site is zoned B4 Mixed Use and RE1 Public Recreation.
- An item of environmental heritage is not situated on the land and the land is not located in a heritage conservation area.
- The land is not affected by road widening or road realignment.
- The land is subject to Section 5.4 Preservation of Trees or Vegetation in Parramatta Development Control Plan 2011.
- The land is not affected by any of the matters contained in Clause 59(2) as amended in the Contaminated Land Management Act 1997.
- The land is identified as Class 4 on the Acid Sulfate Soils maps of the Parramatta Local Environmental Plan 2011. This details that development consent is required to carry out works more than 2 metres below the natural ground surface.

3.3.3 34 Phillip Street

- The site is zoned B4 Mixed Use.
- The land is identified as containing a Heritage Item in Parramatta Local Environmental Plan 2011. The land is not located in a heritage conservation area.
- The land is not affected by road widening or road realignment.
- The land is subject to Section 5.4 Preservation of Trees or Vegetation in Parramatta Development Control Plan 2011.
- The land is not affected by any of the matters contained in Clause 59(2) as amended in the Contaminated Land Management Act 1997.
- The land is identified as Class 4 on the Acid Sulfate Soils maps of the Parramatta Local Environmental Plan 2011. This details that development consent is required to carry out works more than 2 metres below the natural ground surface.

3.4 EPA Records

A search of the NSW EPA's public register maintained under the Protection of the Environment Operations Act 1997 (POEO Act) was undertaken for the subject site and surrounding properties. The results of the search are presented in **Appendix G**. The search identified that there were no current or former prevention, clean-up or prohibition notices for the site.

A search was also undertaken through the EPA's public contaminated land register (**Appendix G**). The search identified that there have been no notices issued under the Contaminated Land Management Act 1997 (CLM Act) for the site and immediate surrounds.

In addition, a review of the EPA's list of NSW Contaminated Sites Notified to OEH identified that the site or nearby sites have not been notified to EPA under Section 60 of the CLM Act. The review identified there were no records relating to the immediate vicinity of the site.

3.5 EPA Per- and Poly- Fluoroalkyl Substances (PFAS) Register

A search was also undertaken through the EPA's PFAS register of contaminated sites and is included in **Appendix G**. The search identified that there are no sites near Parramatta that are notified to the EPA with regards to PFAS contamination.

3.6 Australian and NSW Heritage Register

A search of the Australian Heritage Trust database and the NSW Heritage Inventory was undertaken with records included in **Appendix H**. The search indicates that the site contains Phillip Street and two properties which have been identified as culturally significant in the NSW Heritage Database and are identified as Phillip Street (Archaeological Management Unit – 3155, 3173, 3174 and 3176), 44 Phillip Street (St George's Terrace and Potential Archaeological Site) and 34 Phillip Street (Willow Grove and Potential Archaeological Site). In addition, these properties are documented in *The Future of Parramatta's Past: An Archaeological Zoning Plan 1788 to 1844* (DoP, 2010⁹). Multiple additional properties in close proximity to the site were also identified on the NSW Heritage Register and are detailed in **Appendix H**.

A search of the Australian Heritage Database also identified Willow Grove at 34 Phillip Street as an item listed by the Register of the National Estate (non-statutory archive). No other properties on site or in proximity to the site were identified as culturally significant.

⁹ The Future of Parramatta's Past: An Archaeological Zoning Plan 1788 to 1844. Volume 1: Text and Volume 2: Inventory. The Department of Planning, The University of New South Wales 1989. (Reprinted 2010) (DoP, 2010)

3.7 Previous Investigations

3.7.1 Preliminary ESA (EIS 2013¹⁰)

A Phase 1 Environmental Site Assessment was completed on a portion of the site by Environmental Investigation Services on 28 October 2013 (EIS 2013) for City of Parramatta Council. This assessment was conducted in order to determine the suitability of a portion of the current proposed site for a proposed mixed-use development. The portion assessed included the foreshore area, multi-storey and ground level parking areas and the Phillip Street and Wilde Avenue access ways. The findings of the assessment are summarised below:

- Fill materials in the foreshore area were observed to include some anthropogenic materials in the fill profile, including ash at location (BH2). Fill was underlain by silty sand and silty clay overlying sandstone. Sandstone was encountered between 3 m and 9.5 m depth. Seepage water was noted between 4 and 6 m within boreholes south of the car park, and between 1.5 and 2 m in the foreshore area;
- PAHs reported as benzo(a)pyrene B(a)P toxicity equivalent quotient (TEQ) were reported at one location (BH2) exceeding the adopted human health criteria concentration of 3 mg/kg, as located in the foreshore area in the northwest of the site. These concentrations were equivalent to or above the adopted NEPC (2013) health-based investigation level (HIL) of 3 mg/kg and further exceeded the adopted ecological screening level (ESL);
- Toxicity characteristic leaching procedure (TCLP) results for B(a)P in samples from BH2 indicated that B(a)P was not leaching. This is consistent with the presence of ash materials identified by EIS in fill at BH2, whereby PAHs are bound into the ash material and 'naturally' immobilised;
- Elevated concentrations of nickel (37mg/kg) and zinc (320mg/kg) were encountered above the adopted ecological investigation levels (EILs) at two locations within the foreshore area. It is noted the consultant did not derive site-specific EILs for these metals, and so the assessment is likely conservative;
- Results indicated that deep penetration of the soils (greater than 5 m bgs) may result in the generation of potential ASS. Shallower soils at locations BH2 and BH4 (foreshore) were also found to be acidic following oxidation, although results were below the adopted ASS action criteria; and
- The results of the groundwater assessment on two samples were reported by EIS as being less than the adopted criteria, including hardness modified trigger values. A trace concentration of light fraction total petroleum hydrocarbon (TPH C6-C9) was encountered in the MW1 sample. EIS consider that this is likely to be the result of small surficial spills in the car park area.

¹⁰ Preliminary Environmental Site Assessment for Proposed Mixed Use Development at Riverbank Square, 30B Phillip Street, Parramatta. Environmental Investigation Services Pty Ltd, 28 October 2013 (EIS 2013)

3.7.2 JBS&G PSI & DSI for Substation at 42 Phillip St (2016a¹¹)

JBS&G was engaged by Endeavour Energy to provide a Preliminary and Detailed Site Investigation (PSI-DSI) for a cottage substation located at 42 Phillip Street, Parramatta. The objectives of the PSI/DSI were to assess potential contamination associated with use of the site as a substation and to determine the suitability of the site for land uses permitted under the zoning B4 Mixed Use. Based on the results of the investigation, the following conclusions were made:

- There were potentially unacceptable risks from B(a)P, lead and asbestos contaminated soils with respect to the proposed commercial/industrial land use;
- Asbestos impacts in soils were restricted to the upper 0.5 m of fill material;
- B(a)P and lead impacted material at the site was not subject to leaching under neutral conditions and migration of lead and B(a)P contamination to groundwater was therefore considered unlikely; and
- It was considered that the site could be made suitable subject to further investigation and/or management.

3.7.3 JBS&G PSI (2016b¹²) for the Proposed Museum of Applied Arts and Sciences Development

JBS&G were engaged by Pells Sullivan Meynink to provide a PSI of the area for the proposed Museum of Applied Arts and Sciences (MAAS) development in Parramatta, NSW (the site).

The investigation reported the following:

- Historical uses and activities on the site have the potential to have resulted in contamination, particularly from filling to raise site levels, predominantly along the foreshore area and where former structures have been demolished;
- Intrusive investigations identified the presence of elevated PAHs (and minor TRH) in fill material at levels exceeding open space land use criteria. The PAHs/TRH were considered to be associated with materials in the fill including ash and charcoal and asphaltic materials in shallow fill below car park areas;
- PAHs did not appear to be contaminated to unacceptable levels as a result of activities or conditions at the site;
- There was reported to a low likelihood of contaminants in fill migrating from the site via groundwater;
- No asbestos containing materials were observed or reported during the investigation. However, soil investigations were completed using boreholes to minimise disturbance of site surfaces and it was acknowledged that during bulk excavations, other materials in fill not observed during the investigation could be encountered;
- PASS conditions did not appear to be present in fill or shallow soils. However, it was noted that deeper soils (>7 m) may require ASS management if disturbed; and
- It was reported that not all areas were accessible during the investigation and remained subject to future environmental assessment.

It was recommended that a detailed site investigation be completed to better define the character and extent of contaminated fill and identify management requirements to enable the site to be made suitable for the intended land uses.

¹¹ Preliminary and Detailed Site Investigation, 42 Phillip Street, Parramatta, NSW, JBS&G Australia Pty Ltd, 4 May 2016, (JBS&G 2016a)

¹² Preliminary Site Investigation, Proposed Museum of Applied Arts & Sciences, Parramatta, NSW, JBS&G Australia Pty Ltd, 1 September 2016 (JBS&G 2016b)

3.8 Integrity Assessment

The information obtained from formal published sources noted above has been found to be in general agreement regarding the history of the site.

Based on the range of sources and general consistency of the historical information, it is considered that the historical assessment has an acceptable level of accuracy with respect to the potentially contaminating activities historically occurring at the site.

It is noted that no historical dangerous goods records were sought for the site. Based on the information obtained from other sources and the inspection of the site, it is considered unlikely that storage of dangerous goods in any significant/recordable quantities would have occurred at the site. A search of dangerous goods records was completed in JBS&G (2016a).

4. Conceptual Site Model

4.1 Areas of Environmental Concern

Based on previous site investigations, the site history and observations of site conditions during the detailed site inspection, areas of environmental concern and potential contaminants of concern have been identified for the assessment and are presented in **Table 4.1**.

Table 4.1 Areas of Environmental Concern and Associated Contaminants of Potential Concern

Area of Environmental Concern (AEC)	Contaminants of Potential Concern (COPC)
Fill material from unknown sources across areas of the site not previously investigated, and at identified 'hotspots' (EIS 2013, JBS&G 2016a and 2016b)	Heavy metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn), PAHs, TRHs, volatile organic compounds (VOCs), organochlorine pesticides (OCP), polychlorinated biphenyls (PCBs), and asbestos
Substation	PCBs and TRH (dielectric fluids / coolants)
Groundwater underlying the site that may discharge to Parramatta River	Heavy metals, PAHs, TRH/VOCs
Natural soils and weathered parent rock underlying the site	Potential acid sulfate soils (PASS) and potential impacts from leachable COPCs in overlying fill materials

4.2 Potentially Contaminated Media

Potentially contaminated media at the site include:

- Fill material;
- Natural soils; and
- Groundwater.

Fill material is considered to be a potentially impacted medium based upon the age of the site (i.e., occupation since mid-1800's), likely filling of the site and previous demolition and construction works. Based on the potential leachability of some COPCs and the anticipated disturbed/filled nature of the site, natural soils are also considered to be potentially impacted media. As with the natural soils, the potential for groundwater impact will depend on the actual nature, occurrence and characteristic of impact within the overlying fill materials and, potentially, the natural soils.

4.3 Potential for Migration, Exposure Pathways and Receptors

Contaminants generally migrate from a site via a combination of windblown dusts, rainwater infiltration, groundwater migration and surface water runoff. The potential for contaminants to migrate is a combination of:

- The nature of the contaminants (solid/liquid and mobility characteristics);
- The extent of the contaminants (isolated or widespread);
- The location of the contaminants (surface soils or at depth); and
- The site topography, geology, hydrology and hydrogeology.

The potential contaminants of concern identified as part of the site history review and site inspection are in solid (e.g. asbestos, metals) liquid form (e.g. TRH/BTEX, OCPs, PCBs) or vapour form (VOCs).

The potential for migration of contaminated soil via wind and fugitive dust emissions is considered to be low, given that the majority of the site is generally sealed by building footprints, concrete, pavers or asphalt, and landscaped areas contain only minor areas of exposed soil.

The potential for contaminants to migrate vertically through the soil profile, impact groundwater and migrate offsite is considered to be low based on the generally sealed nature of the site and the low permeability and low hydraulic conductivities of the underlying natural clays (where saturated

horizons were anticipated). However, contact between shallow groundwater and fill could result in some impact to shallow groundwater.

The potential for contaminants to migrate via surface water runoff is considered to be low given the generally sealed nature of the site. There may be interactions between shallow groundwater and surface water along the immediate foreshore areas with the adjacent Parramatta River, however, based on dilution factors and previous investigation results, this is unlikely to result in any unacceptable contamination migration to the river.

4.4 Potential Exposure Pathways

Based on the COPCs identified in soil, groundwater and soil vapour, the potential exposure pathways for the site include:

- Oral and dermal pathways from impacted soils and groundwater (either through beneficial groundwater re-use [unlikely] or made accessible via excavation);
- Inhalation of airborne contaminants (including airborne asbestos fibres);
- Inhalation of vapour migrating from impacted soils and groundwater, although given the lack of volatile contaminants previously reported, this is unlikely; and
- Contaminant uptake via vegetation (flora) or bioaccumulation within fauna.

4.4.1 Potential Receptors

Potential receptors of environmental impact within the site which will need to be addressed with respect to the suitability of the site for the proposed use include:

- Current users of the site who may be potentially be exposed to COPC through direct contact with or ingestion of impacted soils and/or groundwater and/or inhalation of dusts/fibres/vapours associated with impacted media, although currently sealed surfaces mitigate potential exposure to current users;
- Excavation/construction/maintenance workers conducting activities at the site, who may potentially be exposed to COPCs through direct contact with impacted soils and/or groundwater present within excavations and/or inhalation of impacts associated with impacted media;
- Future workers and recreational users (i.e. users / visitors to the museum) who may potentially be exposed to COPC through direct contact with or ingestion of impacted soils and/or groundwater, and/or inhalation of dusts/fibres associated with impacted media;
- Flora and fauna on the site within future landscaped areas; and
- The fresh and marine water ecosystem of Parramatta River located hydro-geologically downgradient of the site.

5. Sampling and Analysis Plan

5.1 Data Quality Objectives

Data quality objectives (DQOs) were developed for the investigation, as discussed in the following sections.

5.1.1 State the Problem

It is understood that the client proposes to undertake a single-stage development of the new Powerhouse Parramatta museum, comprising:

- Site preparation works, including the termination or relocation of site services and infrastructure, tree removal and erection of site protection hoardings and fencing;
- Demolition of existing buildings including the existing Riverbank Car Park, 'Willow Grove', 'St George's Terrace' and all other existing structures located on the site;
- Construction of the new Powerhouse Parramatta museum;
- Operation and use of the new Powerhouse Parramatta museum including use of the public domain provided on the site to support programs and functions;
- Maintenance of the existing vehicular access easement via Dirrabarri Lane, the removal of Oyster Lane and termination of George Khattar Lane, and the provision of a new vehicular access point to Wilde Avenue for loading;
- Public domain within the site including new public open space areas, landscaping and tree planting across the site; and
- Building identification signage.

The objective of this investigation was to characterise potential contamination within the development footprint of the new Powerhouse Parramatta museum and to draw conclusions regarding site suitability for the proposed use.

5.1.2 Identify the Decision

Based on the decision making process for assessing urban redevelopment sites detailed in EPA (2017¹³), the following decisions must be made:

- Are there any unacceptable risks to likely future on-site receptors?
- Are there any impacts of chemical mixtures?
- Are there any aesthetic issues at the site?
- Is there any evidence of, or potential for, migration of contaminants from the site?
- Is a site management strategy required?

¹³ 'Contaminated Sites: Guidelines for the NSW Site Auditor Scheme, 3rd Edition', NSW Environmental Protection Authority, October 2017 (EPA 2017)

5.1.3 Identify Inputs to the Decision

Inputs identified to provide sufficient data to make the decisions nominated above include:

- A review of historical site information and inspection of the site to identify potential AECs and COPCs at the site;
- Detailed site inspection/walkover;
- Physical observations and interpretation of environmental data through collection and analysis of soil and groundwater samples;
- Development of appropriate assessment criteria for evaluation of soil and groundwater impacts;
- Laboratory analyses of soil and groundwater samples for potentially contaminated media regarding COPCs; and
- Confirmation that data generated by sample analyses are of sufficient quality to allow reliable comparison to assessment criteria as undertaken by assessment of quality assurance/quality control (QA/QC).

Specifically, sufficient data needs to be collected from each of the identified potentially impacted media in the identified AECs for the associated COPCs (**Table 4.1**).

5.1.4 Define the Study Boundaries

The site location is identified as established in **Section 2.1** and defined in **Figure 1** and **Figure 2**. The investigation area accounts for an approximate area of 2.5 ha.

With consideration to the objectives of the investigation, the intrusive investigation via boreholes extended to a maximum vertical depth of 6.0 m bgs or 0.5 m into natural materials (or prior to refusal), whichever was shallower. Groundwater wells were installed at a maximum depth of 6 m, 2 m below the encountered groundwater depth, or where solid flight auger refusal was reported on underlying sandstone, whichever was shallower.

The lateral study boundaries are limited to the assessment area of the site as shown on **Figure 2**.

Seasonality was not assessed as part of this investigation. Data is therefore representative of the timing and duration of the current investigation in which site inspection and sampling occurred during February/March 2020. Seasonality is not considered potentially significant to the potential occurrence of contaminants.

5.1.5 Develop a Decision Rule

Analytical data for potentially contaminated media was assessed against NSW EPA endorsed criteria as identified in **Section 6**.

Statistical analysis of the soil data set was not undertaken for this investigation due to the nature of contamination identified. The decision rules adopted to answer the decisions identified in **Section 5.1.2** are summarised in **Table 5.1**.

Table 5.1 Summary of Decision Rules

Decision Required to be Made	Decision Rule
1. Are there any unacceptable risks to on site future receptors from soils in the investigation areas?	Soil analytical data was compared against EPA endorsed criteria including NEPC (2013). If concentrations of contaminants were reported above the adopted EPA endorsed criteria, the answer is Yes . If concentrations of contaminants were reported below the adopted EPA endorsed criteria, the answer is No . Use of statistical methods: Statistical analysis was not undertaken for this investigation as the presence of contamination hotspots are considered to be isolated in nature and cannot be statistically compared to fill across the site
2. Are there any issues relating to local area background soil concentrations that exceed the appropriate soil criteria?	Analytical data in natural soil samples were compared to the background levels for urban areas of NSW as described in NEPC 2013. Where concentrations were less than the background levels, the answer to the decision was No . Otherwise the answer to the decision was Yes .
3. Are there any chemical mixtures?	Were there more than one group of contaminants present which increase the risk of harm? If there was, the answer to the decision was Yes . Otherwise, the answer to the decision was No .
4. Are there any aesthetic issues associated with potentially impacted media within the investigation areas?	If there were any unacceptable odours, soil discolouration or other aesthetic aspect, the answer to the decision was Yes . Otherwise, the answer to the decision was No .
5. Is there any potential for contaminant migration from the investigation areas?	A qualitative assessment of contaminant sources, migration pathways and receptors were completed during assessment of investigation data collected. If the assessment identifies unacceptable risks to off-site receptors, the answer to the decision was Yes . Otherwise the answer to the decision was No .
6. Is a site management strategy required?	Is the answer to any of the above decisions Yes ? If yes, a site management strategy is required. Otherwise, a site management strategy is not required.

5.1.6 Specific Limits on Decision Errors

This step seeks to establish the decision maker's tolerable limits on decision errors, which were used to establish performance goals for limiting inherent uncertainty in the data. Data generated during this project needs to be robust and reliable to facilitate decisions to be made with confidence.

Specific limits for this project were adopted in accordance with the appropriate guidance from the NSW EPA endorsed and NEPC's (2013) appropriate indicators of DQIs used to assess QA/QC and standard JBS&G procedures for field sampling and handling.

To assess the usability of the data prior to making decisions, the data was assessed against pre-determined DQIs to assess precision, accuracy, representativeness, comparability, completeness and sensitivity (PARCCS parameters). The acceptable limit on decision error was 95% compliance with DQIs.

The pre-determined DQIs established for the project are discussed below in relation to the PARCCS parameters and are shown in **Table 5.2**.

- **Precision** – measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD) of duplicate samples.
- **Accuracy** – measures the bias in a measurement system. The accuracy of the laboratory data that are generated during this study is a measure of the closeness of the analytical results obtained by a method to the ‘true’ value. Accuracy is assessed by reference to the analytical results of laboratory control samples, laboratory spikes and analyses against reference standards.
- **Representativeness** – expresses the degree to which sample data accurately and precisely represent a characteristic of a population or an environmental condition. Representativeness is achieved by collecting samples on a representative basis across the site, and by using an adequate number of sample locations to characterise the site to the required accuracy.
- **Comparability** – expresses the confidence with which one data set can be compared with another. This is achieved through maintaining a level of consistency in techniques used to collect samples; and ensuring analysing laboratories use consistent analysis techniques; and reporting methods.
- **Completeness** – is defined as the percentage of measurements made which are judged to be valid measurements. The completeness goal is set at there being sufficient valid data generated during the study.
- **Sensitivity** – expresses the appropriateness of the chosen laboratory methods, including the limits of reporting, in producing reliable data in relation to the adopted site assessment criteria.

Table 5.2 Data Quality Indicators

Data Quality Indicators	Frequency	Data Quality Criteria
Precision		
Split duplicates (intra laboratory)	1 / 20 samples	<50% RPD ¹
Blind duplicates (inter laboratory)	1 / 20 samples	<50% RPD ¹
Laboratory Duplicates	1 / 20 samples	<50% RPD ¹
Accuracy		
Surrogate spikes	All organic samples	70-130%
Laboratory control samples	1 per lab batch	70-130%
Matrix spikes	1 per lab batch	70-130%
Representativeness		
Sampling appropriate for media and analytes	All samples	- ²
Samples extracted and analysed within holding times.	-	Soil: organics (14 days), inorganics (6 months), asbestos (nil)
Laboratory Blanks	1 per lab batch	<LOR
Trip spike	1 per lab batch	70-130% recovery
Storage blank	1 per lab batch	<LOR
Rinsate sample (reusable sampling equipment)	1 per sampling event/media	<LOR
Comparability		
Standard operating procedures for sample collection & handling	All Samples	All Samples
Standard analytical methods used for all analyses	All Samples	National Association of Testing Authority (NATA) accreditation
Consistent field conditions, sampling staff and laboratory analysis	All Samples	All samples ²
Limits of reporting appropriate and consistent	All Samples	All samples ²
Completeness		
Sample description and COCs completed and appropriate	All Samples	All samples ²
Appropriate documentation	All Samples	All samples ²

Data Quality Indicators	Frequency	Data Quality Criteria
Satisfactory frequency and result for QC samples		95% compliance
Data from critical samples is considered valid	-	Critical samples valid
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted Site assessment criteria	All samples	LOR<= Site assessment criteria

¹ If the RPD between duplicates were greater than the pre-determined data quality indicator, a judgment will be made as to whether the exceedance was critical in relation to the validation of the data set or unacceptable sampling error occurred in the field.

² A qualitative assessment of compliance with standard procedures and appropriate sample collection methods will be completed during the DQI compliance assessment.

5.2 Optimise the Design of Obtaining Data

Various strategies for developing a statistically based sampling plan are identified in *Contaminated Sites: Sampling Design Guidelines* (EPA 1995), including judgemental, random, systematic and stratified sampling patterns. The adopted sampling methodology is discussed in the following sections.

5.2.1 Soil and Groundwater Investigation Program

Given the current understanding of the site, limitations associated with existing structures and activities on site, and the previous investigations (EIS 2013; JBS&G 2016a; JBS&G 2016b), JBS&G collected samples in locations that generally provided coverage the site area, whilst also allowing for targeted sampling of the impacted fill material that was previously identified. Groundwater wells were installed at three locations across the site to assess the potential for contaminant migration to groundwater. Two existing monitoring well locations (BH1 and BH4) were present and utilised in the investigation.

5.3 Soil and Groundwater Investigation Methodology

5.3.1 Soil Sampling Methodology

Soil samples were collected at 23 locations (SB1-SB20, MW1-MW3) in accessible areas distributed across the extent of the site, with three locations converted into monitoring wells (MW1-MW3). Chosen locations were based on a combination of systematic and targeted sampling to areas of environmental concern. Sample locations were undertaken using a drill rig with solid flight augers and extended through fill material beneath asphalt/concrete hardstands to natural soils. The purpose of the works is to ensure a broad characterisation of the fill materials potentially present across the extent of the site.

Soil samples were collected from material at ground surface or directly underlying the paved ground-surface (0.1 m), at 0.5 m, and at each subsequent 0.5 m intervals to a maximum depth of 6.0m below ground surface (m bgs) or 0.5 m into natural materials (or prior refusal), whichever was shallower. Where physical evidence of gross contamination was identified, sample locations were extended vertically to delineate contamination. During the collection of soil samples, features such as seepage, discolouration, staining, odours and other indicators of contamination were noted on investigation logs presented in **Appendix I**.

All samples were collected using a new pair of powder free nitrile gloves at each sample location. Soil samples were screened on site during works using a photo-ionisation detector (PID) containing a standard ionisation lamp with standard electron voltage (eV) range associated with the ionisation potentials of typical volatile organic compounds (VOCs) including petroleum hydrocarbons. During the collection of soil samples, features such as seepage, discolouration, staining, odours, PASS indicators and other signs of contamination were noted (e.g. asbestos containing material, ACM).

Collected samples were immediately transferred to laboratory supplied sample jars. Sample jars were then transferred to a chilled ice box for sample preservation prior to and during shipment to the testing laboratory. A chain-of-custody form was completed and forwarded with the samples to

the testing laboratory. Based upon field observations, samples were analysed in accordance with the laboratory schedule provided in **Table 5.3**.

Not all samples collected were analysed. All samples remained at the primary laboratory for a period of two months for possible future analysis (subject to holding times) if required following the receipt of samples results.

On completion, each location was reinstated by returning material approximately in the order removed, and materials compacted.

5.4 Groundwater Monitoring Well Installation

Three soil sampling boreholes were converted into groundwater monitoring wells. Two monitoring wells were installed within the Parramatta River foreshore in the northern portion of the site (MW2 and MW3), with one in the south-eastern portion of the site (MW1, upgradient from the site).

MW1 was installed to a depth of 6 m bgs, with MW2 and MW3 installed to depths of 4 m bgs. The wells were constructed from 50 mm unplasticised polyvinyl chloride (uPVC) screen and casing, combined with a lockable cap and steel gatic cover. The screen was installed such that the encountered water level was within the screened interval, allowing for the detection of Light Non-Aqueous Phase Liquids (LNAPLs), if present. Surrounding the uPVC screen a graded (2mm) sand was utilised to construct a 'gravel pack' which limited clogging of the screen with excess soils. Additionally, above the screened interval, a bentonite seal was installed to reduce the potential for surface water, perched water and/or liquid phase contaminants to enter the well from outside the screened interval. The steel gatic cover was installed in concrete consistent with the surrounds.

After installation, the monitoring wells were developed to remove excess silt and sediment resultant from the installation process. The wells were then allowed to settle for six days prior to sampling.

5.4.1 Groundwater Sampling Methodology

Groundwater monitoring wells utilised for the assessment of groundwater at the site are shown in **Figure 3** comprising existing (BH1 and BH4) and newly installed monitoring wells (MW1 to MW3). Prior to sampling, standing water at the top of the monitoring wells was collected utilising a clear bailer to assess the potential presence of Light Non-Aqueous Phase Liquid (LNAPL). Following this, the monitoring wells were purged using a low-flow peristaltic pump and flow cell. Standing water within the monitoring wells was pumped out at the highest possible flow-rate whilst ensuring that minimal fluctuations in depth to water occurred. A flow cell was used to facilitate the continuous monitoring of water quality parameters using a water quality meter, that included: electrical conductivity (EC); redox potential (Eh); pH; dissolved oxygen (DO); and temperature. As per sampling guidance provided by the Victorian EPA (April 2000) - *Groundwater Sampling Guidelines*, groundwater samples were collected when:

- Consecutive EC readings are within 3%;
- Consecutive Eh readings are within 10mV;
- Consecutive DO readings are within 10%;
- Consecutive pH readings are within 0.05; and
- Consecutive temperature readings are within 0.2°C.

Sampling notes were completed for each monitoring well detailing parameter stabilisation and sampling observations. Collected groundwater samples were immediately filtered (as necessary) and transferred to laboratory supplied sample bottles specific to each analyte. Sample containers were then transferred to a chilled iced box for sample preservation prior to and during shipment to the testing laboratory. A chain-of-custody form was completed and forwarded with each sample batch to the laboratory. Groundwater samples were analysed in accordance with **Table 5.3**.

5.4.2 Decontamination

Prior to the commencement of soil sampling activities, non-disposable sampling equipment, including augers were cleaned with a high pressure water/detergent spray, rinsed with water and then air dried. The equipment was inspected to ensure that no soil, debris or other contaminants were apparent on the equipment prior to the commencement of works. Sampling equipment were subsequently decontaminated using the above process between each sampling location.

A rinsate sample was obtained from non-disposable sampling equipment following completion of field sampling activities to determine the effectiveness of the decontamination procedures implemented on re-usable sampling equipment.

5.4.3 Duplicate and Triplicate Sample Preparation

At selected sample locations, sufficient soil and groundwater was collected to provide a primary, blind (intra-laboratory) duplicate and split (inter-laboratory) duplicate (triplicate) samples using the sampling methodology outlined above.

The collected soil samples were divided laterally into three samples with minimal disturbance to reduce the potential for loss of volatiles and placed in three clean glass jars and sample bags as appropriate. Soil samples were not homogenised in order to minimise the loss of volatiles. Similarly, to soil, groundwater was divided laterally into three sample bottles with minimal disturbance to volatile contaminants.

Each sample was labelled with primary, duplicate or triplicate sample identification before being placed in the same chilled esky for transport to the laboratory.

5.4.4 Laboratory Analysis

JBS&G contracted Eurofins MGT (Eurofins) as the primary laboratory for the required chemical analyses. The secondary laboratory was Envirolab Services Pty Ltd (Envirolab). Both laboratories were NATA accredited for the required analyses. In addition, the laboratories were required to meet JBS&G's internal quality assurance/quality control (QA/QC) requirements. The completed analysis schedule is summarised in **Table 5.3**.

Table 5.3 Analytical Schedule

Sample Type	No. of Sampling Locations	Analyses (exc. QA/QC)
Soil	23	Heavy metals – 32 samples PAH – 32 samples TRH/VOCs – 15 samples OCP/PBBs – 6 samples Asbestos (500 mL) – 22 samples
Groundwater	5	Heavy metals – 5 samples PAH (low level) – 5 samples TRH/VOCs – 5 samples

In addition to the above primary analyses, to address the DQIs, field duplicate and triplicate soil samples were analysed at a rate of one per 20 primary samples. A rinsate sample was also obtained from non-disposable sampling equipment at the completion of sampling activities. Trip spike and trip blank samples were also analysed for BTEX to accompany the sampling event.

6. Assessment Criteria

6.1 Regulatory Guidelines

The following guidelines are applicable to this investigation:

- *National Environment Protection (Assessment of Site Contamination) Measure 1999*, National Environment Protection Council, 2013 (NEPC 2013);
- *Contaminated Sites: Sampling Design Guidelines*, NSW EPA, 1995 (EPA 1995);
- *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites*, NSW OEH, 2011 (OEH 2011);
- *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme*, 3rd Edition, NSW EPA, October 2017 (EPA 2017);
- *Contaminated Sites: Guidelines for the Assessment and Management of Groundwater Contamination*, NSW Department of Environment and Conservation, March 2007 (DEC 2007);
- *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, Australian and New Zealand and Australian State and Territory Governments (ANZG, August 2018); and
- *Guidelines for the Assessment Remediation and Management of Asbestos-Contaminated Sites in Western Australia*, May 2009. Western Australia Department of Health (DOH), (DOH 2009).

6.2 Soil Assessment Criteria Selection

With consideration to the recreational and open-space land use of the site, the concentrations of contaminants in the soil have been compared against NEPC (2013) health based investigation and screening levels (HILs and HSLs), and ecological investigation and screening levels (EILs and ESLs), as outlined below:

- HILs for recreational/open space land use – NEPC 2013 HIL-C;
- HSLs for petroleum hydrocarbons considering potential for vapour intrusion, coarse and fine grained soil for commercial/industrial land use as a conservative measure, at levels from 0-4.0 m bgs – NEPC 2013 HSL-D;
- HSLs for asbestos levels in soil for recreational/open space land use – NEPC 2013 HSL-C;
- Aesthetic considerations – NEPC 2013;
- EILs/ESLs for recreational/open space land use, coarse and fine grained soils (NEPC 2013); and (if required)
- Management Limits for TRH, coarse and fine grained soils for recreational/open space land use – NEPC 2013.

Where there were no NSW EPA endorsed thresholds the laboratory LOR was adopted as an initial screening value for the purposes of this assessment.

Site-specific EILs were not derived for the site as the identification of multiple types of fill material during the investigation prohibited the derivation of reliable site specific EILs. The EILs used for this assessment are the most conservative values for the intended land use.

These background concentrations were consistent with the background heavy metal concentrations within natural soils from the site (from sample MW2-4.0), outlined in **Section 8** below.

Table 6.1 Average Background Concentrations

Contaminant	ABC*
Arsenic	5
Chromium (III)	8
Copper	18
DDT	Not Applicable
Lead	104
Naphthalene	Not Applicable
Nickel	5
Zinc	77

* ABCs based on Henry Olszowy *Et Al.* 1995; NSW, old suburbs, low traffic, 25 percentiles

6.3 Groundwater Assessment Criteria Selection

Groundwater analytical data for this assessment has been compared against the following groundwater criteria:

- ANZAST (2018) 95% Trigger Values for Marine and Fresh Water Aquatic Ecosystems (which ever was the lower value as a conservative measure); and
- HSLs for vapour intrusion for low-high density residential land uses for coarse grained soils (sand).

Guideline values for the protection of marine water ecosystems have been adopted noting the proximity of the site to Parramatta River. Australian Drinking Water Guidelines were not considered to be applicable to groundwater as there is no known beneficial use within the highly urbanised area.

7. Quality Assurance/Quality Control

The results of the quality assurance and quality control (QA/QC) assessment are provided in **Appendix L**.

In summary, based on the results of the QA/QC assessment the field sampling and handling procedures across the site produced QA/QC results which indicate that the soil data collected as part of the intrusive investigation is of an acceptable quality.

The NATA certified laboratory reports indicate that the project laboratories were achieving levels of performance within its recommended control limits during the period when the samples from this program were analysed.

Based on the results of the field and laboratory QA/QC program, the soil and groundwater data is of an acceptable quality upon which to draw conclusions regarding the environmental condition of the site.

8. Results

8.1 Soil Observations

Soil sampling was conducted at the assessment area on 28 February 2020. Sample locations are shown on **Figure 3**, with investigation logs summarising observations presented in **Appendix I**.

All sample locations encountered ground surface conditions comprising either bitumen, concrete, mulch, or grass. Fill material was comprising brown/dark brown/grey heterogeneous, sandy clayey silt with inclusions of bitumen (2-5 mm), mulch, brick, concrete, gravels and tiles. Depth of fill material ranged between 0 to 1.1 m bgs across the main portion of the site, with greater fill depths within the Parramatta River foreshore (up to 4.0 m bgs). No visible ACM was noted at any of the sample locations. Slight odours were recorded at SB5 (0.2 m), MW1 (0.2 m and 0.5 m), MW3 (2.0 m). Grey stained soils were observed at MW3 (2.0 m). It was unable to be reliably determined as to whether odours and/or staining were consequent of naturally occurring sources.

Fill materials were generally underlain by fine-grained to medium-grained homogeneous silty clayey sand/clay/sandstone. No elevated PID readings were measured, indicating low potential for typical volatile organic contaminants. Field calibration sheets are provided in **Appendix K**.

8.2 Soil Analytical Results

Soil sampling locations are shown on **Figure 3**. Detailed laboratory reports and chain of custody documentation are provided in **Appendix J**. Summarised soil laboratory results including results from EIS (2013), JBS&G (2016a) and JBS&G (2016b) locations are presented in **Table A**. Soil results are discussed in the following sections.

8.2.1 Heavy Metals

A range of heavy metal concentrations exceeded the lowest of the adopted ecological criteria that may be derived. These included elevated levels of copper, nickel, lead and zinc with concentration ranges of:

- 68-240 mg/kg for copper;
- 36-130 mg/kg for nickel;
- 610-1400 mg/kg for lead; and
- 75-820 mg/kg for zinc.

Lead concentrations also exceeded the adopted human health criterion (HIL C 600 mg/kg) at the following locations:

- MW1_0.2 with a concentration of 610 mg/kg (JBS&G 2020);
- SB13_0.2 with a concentration of 810 mg/kg (JBS&G 2020);
- HA01_0.15-0.25 with a concentration of 1,400 mg/kg (JBS&G 2016a); and
- HA04_0.5-0.6 with a concentration of 840 mg/kg (JBS&G 2016a).

Statistical analysis was not undertaken on the lead data set due to the variation and heterogeneity of fill material. In addition, lead concentrations at HA01_0.15-0.25 exceeds 250 % of the adopted criterion, which precludes use of a 95% UCL calculation to determine compliance with assessment criteria.

8.2.2 TRH/BTEX

Concentrations of TRH in soil samples were generally reported to be below the laboratory LOR or less than the adopted health based and ecological criteria for analysed soil samples with the exception of TRH F2 Fraction exceeding the adopted ecological criteria at MW1_0.5 (400 mg/kg concentration exceeding the ESL criterion of 120 mg/kg).

No BTEX compounds were reported at concentrations above laboratory LOR in analysed soil samples.

8.2.3 PAHs

Naphthalene was not reported above laboratory LOR within analysed soil samples.

PAHs were generally reported below the adopted soil criteria with the exception of B(a)P and carcinogenic PAHs (as B(a)P TEQs). BaP exceeded the adopted ecological criterion (ESL 0.7 mg/kg) at multiple locations across the site with concentrations ranging from 0.8-9.2 mg/kg. Carcinogenic PAHs (as B(a)P TEQ) was reported as exceeding the adopted human health criterion (HIL C 3 mg/kg) at the following locations:

- SB12_0.2 with a concentration of 10.62 mg/kg (JBS&G 2020);
- BH3 0.15-0.25 and BH3 0.4-0.5 with concentrations of 14 mg/kg and 6.4 mg/kg respectively (JBS&G 2016b);
- BH6 1.2-1.3 with a concentration of 3.8 mg/kg (JBS&G 2016b);
- HA01_0.15-0.25 with a concentration of 6.5 mg/kg (JBS&G 2016a);
- HA02_0.18-0.28 with a concentration of 6.3 mg/kg (JBS&G 2016a); and
- BH2_1.5-1.95 with a concentration of 4 mg/kg (EIS 2013).

Statistical analysis was not conducted as multiple concentrations of carcinogenic PAHs as B(a)P TEQ exceeded 250 % of the adopted criterion, which precludes use of a 95% UCL calculation to determine compliance with assessment criteria.

8.2.4 PCBs

PCBs were generally reported below the laboratory LOR, with the exception of SB12_0.2 with a concentration of 1.2 mg/kg, exceeding the adopted human health criterion of 1 mg/kg.

8.2.5 OCPs

OCPs were not reported above laboratory LOR in any of the analysed soil samples.

8.2.6 VOCs

VOCs were not reported above laboratory LOR in any of the analysed soil samples.

8.2.7 Asbestos

During previous investigations within the cottage substation located at 42 Phillip Street, Parramatta (JBS&G 2016a), one fragment of ACM was identified at HA05. Friable asbestos was also detected in sample HA01 (0.15-0.25) during the 2016 substation investigation, with a concentration of 0.0014 % w/w, exceeding the adopted human health criterion of 0.001 % w/w. Asbestos was not identified by the laboratory within the underlying sample HA01 (0.5-0.6).

A total of 22 soil samples were analysed for asbestos as part of this investigation. No asbestos (AF/FA) or ACM was identified during intrusive investigations of by the laboratories in the analysed samples.

8.3 Groundwater Field Observations

A groundwater monitoring event (GME) including sampling of the three installed monitoring wells and two existing wells on 6 March 2020 by an appropriately trained and experienced environmental consultant. Stabilised groundwater parameters as measured in the field prior to the collection of groundwater samples in this investigation are presented in **Table B** and summarised as follow:

- Recovered groundwater was observed to be grey-brown, slightly turbid to clear with no odours or sheen observed at any location;
- pH ranged from 6.28 (BH4) to 7.34 (MW1) indicating neutral conditions;
- Electrical Conductivity (EC) ranged from 817 $\mu\text{S}/\text{cm}$ (MW1) to 1710 $\mu\text{S}/\text{cm}$ (BH4), indicating a brackish water environment;
- Field redox (Eh) ranged from -39.3 mV (BH4) to 661.4 mV (MW1);
- Dissolved Oxygen (DO) ranged from 0.15 ppm (BH1) to 1.64 ppm (MW1), indicating slightly aerobic conditions; and
- Temperature ranged from 23.5°C (BH4) to 25.4°C (BH1).

Depths to groundwater are summarised in **Table 8.1** below.

Table 8.1 Depth to Groundwater (6 March 2020)

Well Reference	Depth to Groundwater (m bgs)
MW1	3.682
MW2	1.334
MW3	1.981
BH1	4.950
BH4	1.390

Based on the site topography and the well depth to groundwater, groundwater is inferred to flow in a northerly direction towards Parramatta River.

8.4 Groundwater Analytical Results

Detailed laboratory reports and chain of custody documentation are provided in **Appendix J**. Summarised groundwater analytical data for COPCs are presented in **Table C**. The results are discussed in **Section 8.4.1** to **Section 8.4.4**.

8.4.1 Metals

Heavy metal concentrations within the analysed samples were all reported to be below the adopted site assessment criteria with the exception of the following:

- Copper was detected at concentrations exceeding the adopted ecological criterion (0.0013 mg/L) in MW1 and MW3, with concentrations of 0.002 mg/L; and
- Zinc was detected at concentrations exceeding the adopted ecological criterion (0.008 mg/L) in MW1, MW2 and MW3, with concentrations ranging from 0.01 mg/L to 0.078 mg/L.

8.4.2 TRH/BTEX

TRH/BTEX were reported to be at concentrations below the laboratory LORs within the analysed samples.

8.4.3 PAHs

PAHs were reported to be at concentrations below the laboratory LORs within the analysed samples.

8.4.4 VOCs

VOCs were reported to be at concentrations below the laboratory LORs within the analysed samples.

9. Site Characterisation

Based on the decision-making process for assessing urban redevelopment sites detailed in EPA (2017) and discussed in **Section 5.1.5**, the decisions required to be made are discussed below.

9.1 Are there any unacceptable risks to onsite future receptors from soil?

In reference to the decision rules developed in **Section 5.1.5**, the following sections discuss potential risks posed to future onsite receptors from impacted media present at the site.

9.1.1 Soil Contamination

The results of the sampling and laboratory analysis program has resulted in the identification of several areas of contamination concern with regard to site soils as presented in **Figure 3** and outlined below.

Heavy Metals

Individual nickel, copper and zinc concentrations were reported to be at concentrations exceeding the adopted nickel EIL criterion in multiple samples selected for analysis across the site, including from previous environmental assessments as detailed in **Section 3.7**. Lead concentrations were also exceeding the adopted human health criterion at multiple locations across the site.

Apart from lead, levels of nickel, copper and zinc are considered to be consistent with anticipated levels in a historically urbanised area and not considered to pose a potential ecological risk with respect to the proposed development of the site. Locations where lead concentrations exceeded human health criteria for open space land use were generally restricted to shallow depths, as consistent with the vertical extent and historical placement of imported fill materials on the site. These hotspots will require remediation/management during the proposed development.

PAHs

Concentrations of B(a)P exceeded the adopted ecological criterion at multiple locations across the site. It is noted that NEPC (2013) Schedule B7 guidance¹⁴ notes that plant uptake of anthropogenic PAHs is limited. Therefore, it is considered that these B(a)P ecological exceedances do not represent an unacceptable risk to ecological receptors requiring remediation or management during the proposed development.

Carcinogenic PAHs (as B(a)P TEQ) at locations where concentrations significantly exceed the adopted human health criterion require remediation/management during the proposed development.

PCBs

Elevated PCB concentrations above the adopted human health criterion at one location (SB12) requires remediation/management during the proposed development.

¹⁴ NEPC (2013) has advised that plants grown on PAH contaminated soil have only limited ability to take up and incorporate anthropogenic PAHs through their roots and into their biomass, especially those PAHs with higher molecular weights including benzo(a)pyrene. Physical and biochemical processes within soil and the soil ecosystem in conjunction with the low solubility of benzo(a)pyrene generally result in benzo(a)pyrene bonding firmly to soil particles or the outside layers of root tissue with uptake rates being very slow and/or non-existent. As such, it was concluded that benzo(a)pyrene ecological exceedances did not represent an unacceptable risk requiring remediation or management.

Asbestos

Friable asbestos was identified to exceed the human health criteria for open space land use at location HA01 (JBS&G 2016a). This location requires remediation/management for asbestos during the proposed development.

Concentrations of asbestos (in bonded and friable form) at all other sample locations were reported below the adopted site criteria.

9.1.2 Groundwater

Elevated levels of copper and zinc were identified during the groundwater investigation. It is considered that these heavy metal concentrations are representative of minor influences of the surrounding urban environment rather than specific point sources of contamination, and further there was no indication of a site-specific source of groundwater impact. Therefore, it is considered that the elevated copper and zinc concentrations in groundwater do not pose an unacceptable risk that requires remediation or management.

9.2 Are there any issues relating to the local area background soil concentrations that exceed appropriate soil criteria?

In-situ natural site soils were analysed as part of the assessment. Reported contaminant concentrations present within natural soils were all within background levels for urban areas published in NEPC (2013). On this basis, there are considered to not be any issues associated with background soil concentrations that require further consideration.

9.3 Are there any chemical mixtures?

There were no potential chemical mixtures identified during the investigation that may pose an unacceptable contamination issue with respect to development and/or future permissible land uses.

9.4 Are there any aesthetic issues?

Inspection of the ground surface and excavated spoil was undertaken during the intrusive investigation for the presence of discolouration, fibrous cement fragments that may contain asbestos or other indications of potential land contamination. The inspection did not identify the presence of significantly odorous soils, hydrocarbon staining, ACM or other inclusions which may represent an aesthetic issue.

Trace anthropogenic inclusions such as bricks, road base gravels, asphalt, terracotta and tile were observed to be present in fill materials at some locations. However, the amount of anthropogenic inclusions was minor and the proposed development plans include sealing of the majority of ground surfaces to support overlying built form. Therefore, the anthropogenic inclusions in fill material are considered not to pose an unacceptable risk to the proposed land use or require management/remediation. Notwithstanding the more predominant occurrences occur with areas of the highest levels of soil impact, and will be addressed by remediation of these areas.

Based on the preliminary design plans provided by the client, some garden beds and open space landscaped areas are also proposed. Site fill material is considered to be of limited use within the garden beds due to anthropogenic inclusions, and suitable topsoil as approved by the landscapers or arborists should be (and is anticipated to be) used.

On this basis, there are not considered to be unacceptable aesthetic concerns at the site that will require ongoing management given the proposed land use of the site.

9.5 Is there any evidence of, or potential for, migration of contaminants from the site?

The potential for migration of contaminants from the site was considered to be low, based on the following:

- Site investigations did not identify leachable COPCs in soils that could mobilise to groundwater and migrate off-site;
- The investigation did not identify significant groundwater impacts underlying the site;
- Given that the site is largely covered with grass and hardstand pavements, dust and water erosion potential is minimised.

9.6 Is a site management strategy required?

Yes, a site management strategy is required to remediate and/or manage the identified lead, PAH, PCB and asbestos soil contamination at the site. A Remedial Action Plan (RAP, JBS&G 2020a) has been prepared and will be implemented in accordance with the relevant regulatory requirements and documents the procedures and standards to be followed in order to address the identified soil impacts at the site that will be remediated/managed during the Powerhouse Parramatta redevelopment works.

Due to identified potential ASS impacts that may be present at depth (and encountered during piling works or otherwise deep excavations), an Acid Sulfate Soil Management Plan (ASSMP) has been prepared (JBS&G 2020b). The ASSMP details the required management and treatment procedures to follow should ASS/PASS be encountered.

10. Conclusions and Recommendations

Based on the scope of work and subject to the limitations in **Section 11**, the following conclusions have been made:

- The review of historical site use information and inspection of site conditions identified potential areas of environmental concern and associated contaminants of concern which were associated with potential importation of fill materials from unknown origins and the historical operation of an electrical substation;
- Fill material comprised brown/dark brown/grey heterogeneous sandy clayey silt with inclusions of bitumen, mulch, brick, concrete, gravels and tiles. Depth of fill material ranged between 0 to 1.1 m bgs across the main portion of the site, with greater fill depths within the Parramatta River foreshore (up to 4.0 m bgs);
- Anthropogenic inclusions of plastic, concrete, brick, sandstone gravels, and slag were observed in fill materials. The relative quantity of these inclusions in fill are such that they are not considered to pose an unacceptable aesthetic issue for the proposed land use, presuming that the site surface across the proposed redevelopment will be finished with imported landscaping materials including soil and grass/shrubs/trees etc, new hardstand areas and new buildings;
- Intrusive soil investigations completed here and historically identified the following:
 - Elevated levels of heavy metals, TRHs and PAHs exceeding the adopted ecological criteria;
 - Elevated isolated hotspots with concentrations of lead, PAHs, polychlorinated bihenyls (PCBs) and asbestos exceeding the adopted human health criteria for the proposed recreational open space land use. These impacts are considered to be associated with constituents present in fill materials on the site, and were generally restricted to shallow depths, as consistent with the vertical extent and historical placement of imported fill materials on the site and pose a potential risk to future on-site receptors if not remediated/managed;
 - Elevated levels of heavy metals exceeding ecological criteria, apart from the highest levels of lead, are not considered likely to potential ecological risk on the site, noting the historical urbanised location of the site; and
- An assessment of groundwater was undertaken by a comparison of levels of environmental constituents present in hydrogeologically upgradient and downgradient monitoring wells. Levels of environmental constituents were found to be consistent with anticipated levels within an historically urbanised area, and further there was no indication of a site-specific source of groundwater impact.

Based on the results of the investigation and subject to the limitations in **Section 11**, the following recommendations have been made:

- It is recommended that a RAP is prepared detailing the required remediation and/or ongoing management works to address the highest levels of lead, PAHs, PCBs and asbestos impacted soils on the site, as well as an ASSMP outlining the relevant management requirements if acid sulfate soils are encountered. The RAP (JBS&G 2020a) and ASSMP (JBS&G 2020b) have been prepared and submitted in conjunction with this report.

11. Limitations

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

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

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

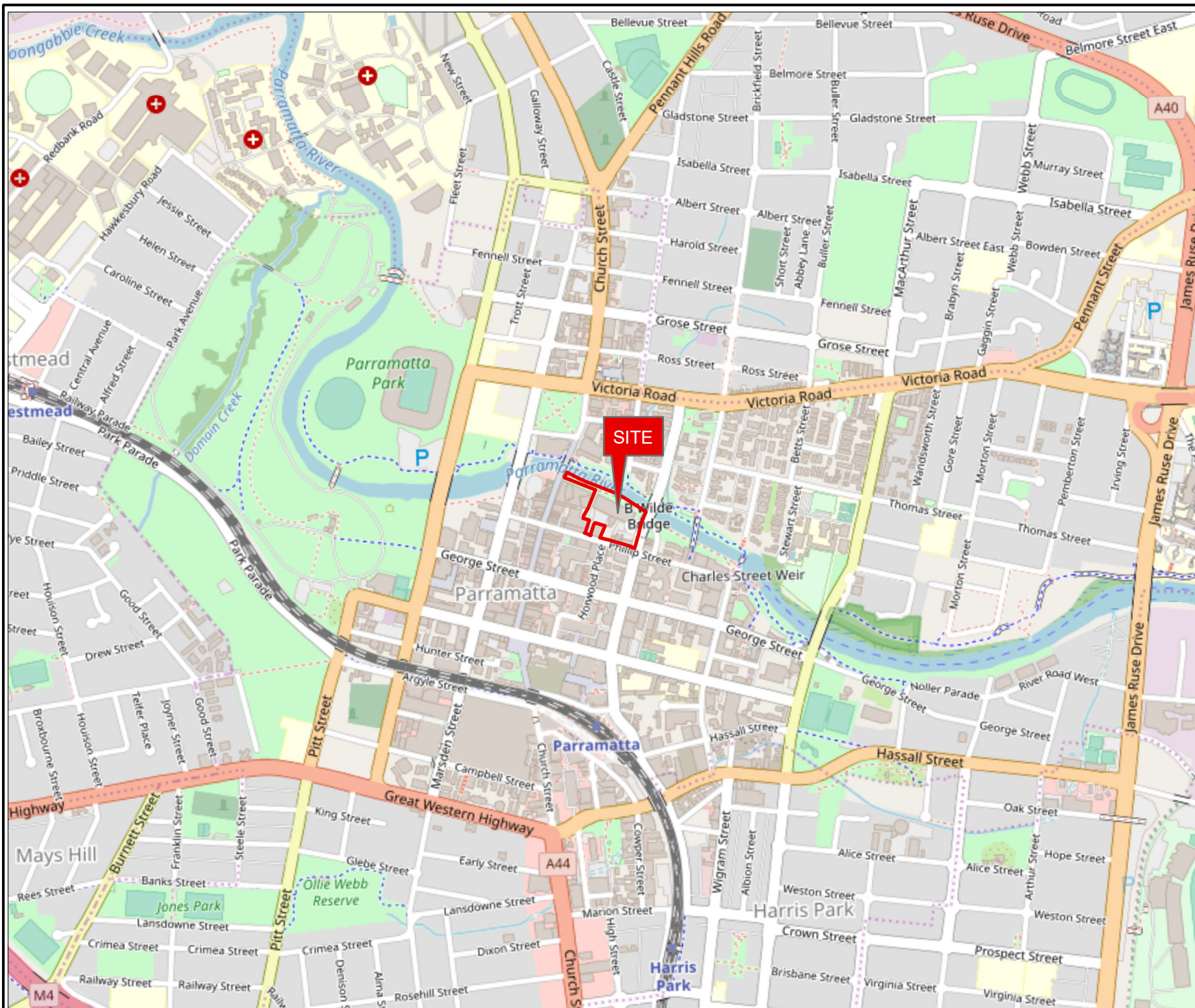
Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the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

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

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

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

Figures



Legend:

Approximate Site Boundary



Job No: 58352

Client: Infrastructure NSW

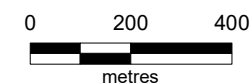
Version: R01 Rev 0

Date 2/03/2020

Drawn By: AS

Checked By: JN

Scale 1:15,000



Coord. Sys. GDA 1994 MGA Zone 56

**Phillip Street,
Parramatta, NSW**

SITE LOCATION

FIGURE 1



Legend:

- Approximate Site Boundary
- Cadastre (NSW DCS, 2020)

Sample Locations

- Sample Locations (EIS 2013)
- Sample Locations (JBS&G 2016a)
- Sample Locations (JBS&G 2016b)
- ⊕ Groundwater Monitoring Well Locations (JBS&G 2020)
- Soil Bore Sample Locations (JBS&G 2020)



Job No: 58352

Client: Infrastructure NSW

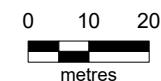
Version: R01 Rev 0

Date 11/03/2020

Drawn By: AS

Checked By: JN

Scale 1:1,250

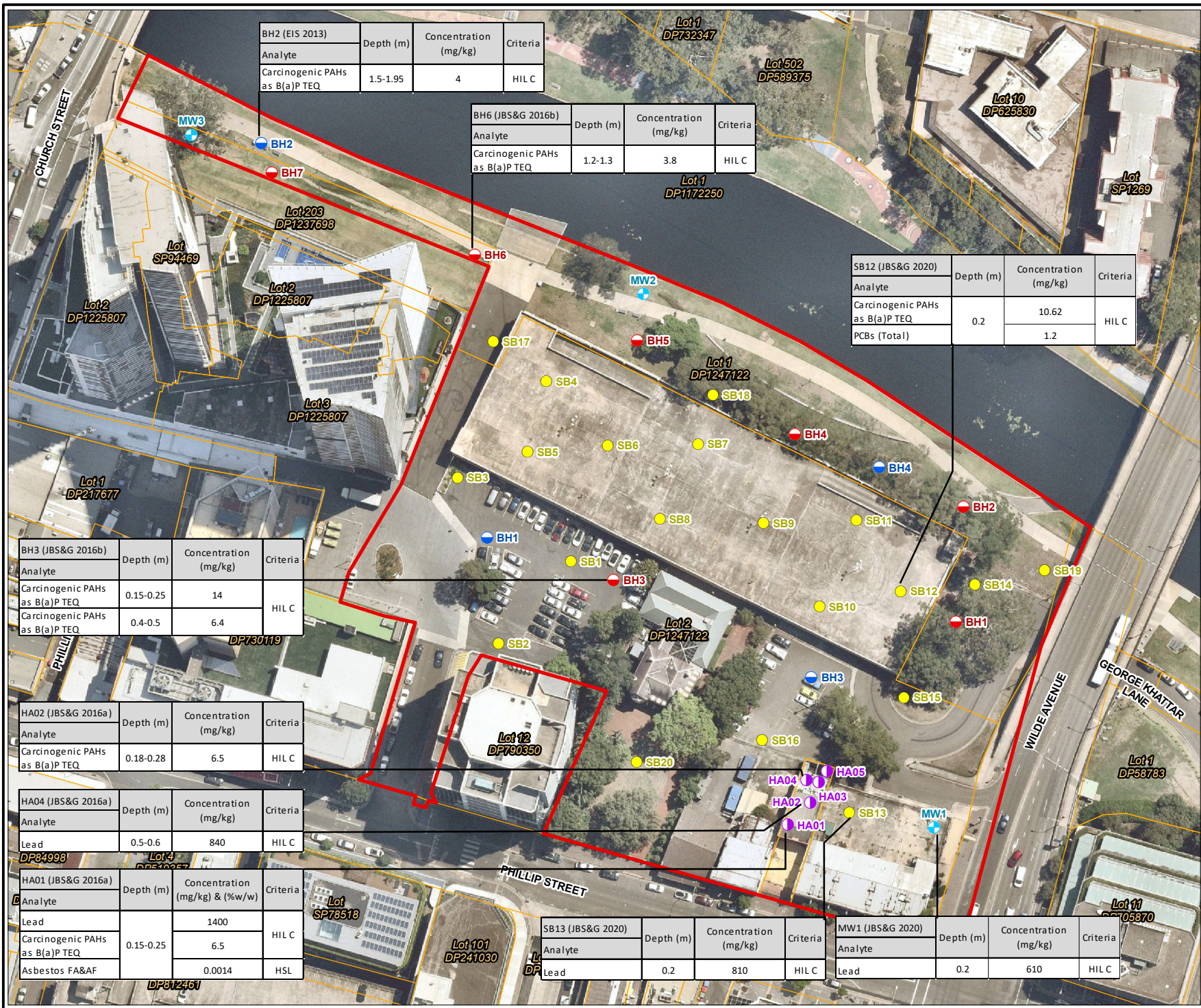


Coord. Sys. GDA 1994 MGA Zone 56

Phillip Street,
Parramatta, NSW

**SITE LAYOUT AND
SAMPLE LOCATIONS**

FIGURE 2



Legend:

- Approximate Site Boundary
- Cadastre (NSW DCS, 2020)
- Sample Locations**
- Sample Locations (EIS 2013)
- Sample Locations (JBS&G 2016a)
- Sample Locations (JBS&G 2016b)
- Groundwater Monitoring Well Locations (JBS&G 2020)
- Soil Bore Sample Locations (JBS&G 2020)

JBS&G

Job No: 58352

Client: Infrastructure NSW

Version: R01 Rev 0 Date 27/03/2020

Drawn By: RH/RF Checked By: MP

Scale 1:1,255

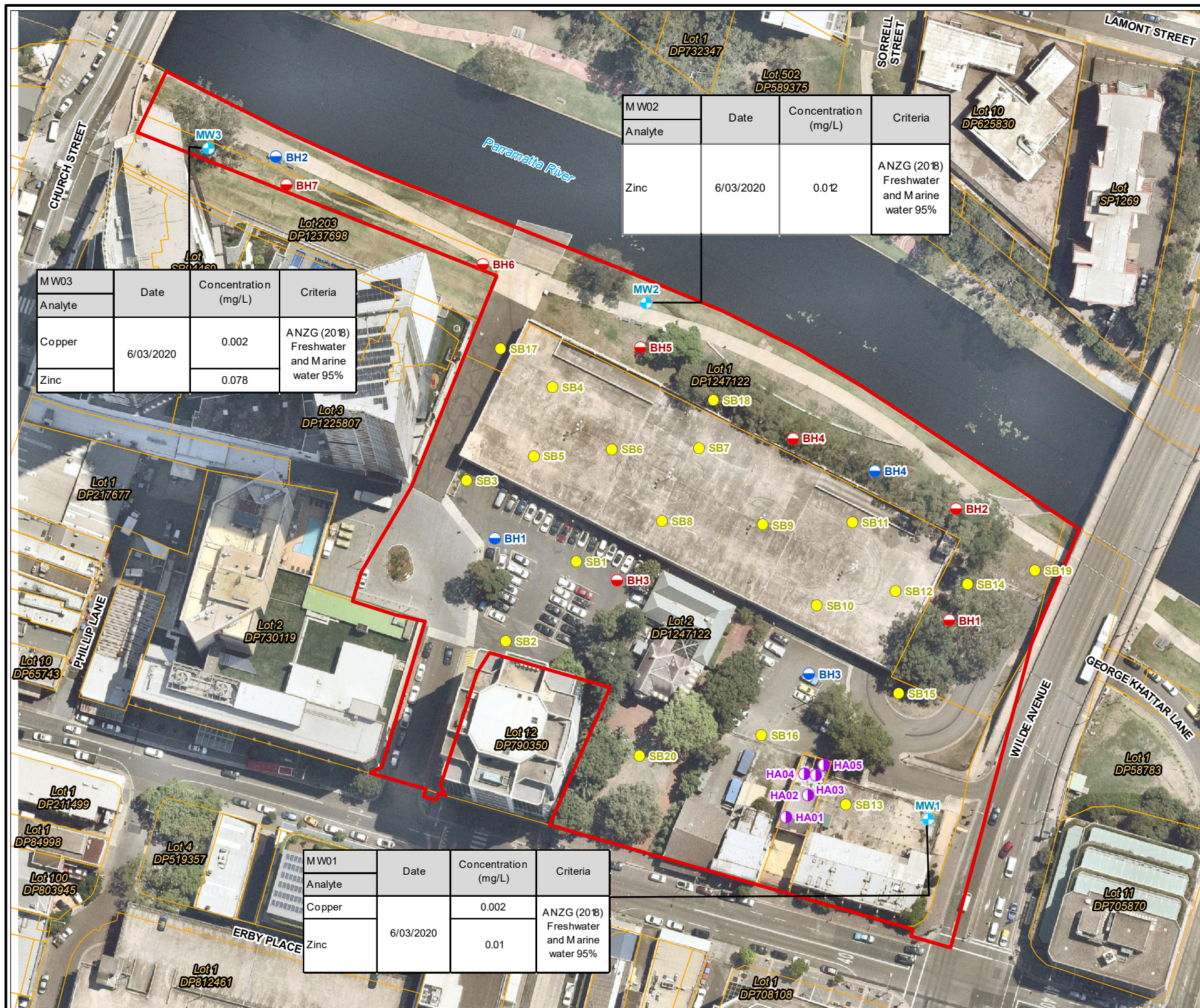
0 10 20 metres

Coord. Sys. GDA 1994 MGA Zone 56

Phillip Street, Parramatta, NSW

SOIL EXCEEDANCES (HIL C AND HSL)

FIGURE 3



Legend:

- Approximate Site Boundary
- Cadastre (NSW DCS, 2020)

Sample Locations

- Sample Locations (EIS 2013)
- Sample Locations (JBS&G 2016a)
- Sample Locations (JBS&G 2016b)
- Groundwater Monitoring Well Locations (JBS&G 2020)
- Soil Bore Sample Locations (JBS&G 2020)



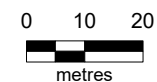
Job No: 58352

Client: Infrastructure NSW

Version: R01 Rev 0 Date 26/03/2020

Drawn By: AS Checked By: JN

Scale 1:1,300



Coord. Sys. GDA 1994 MGA Zone 56

Phillip Street,
Parramatta, NSW

GROUNDWATER EXCEEDANCES

FIGURE 4

Appendix A Summary Tables

[illegible]

JBS&C

	Chlorinated Alkanes										Solvents		Polychlorinated Biphenyls				Monocyclic Aromatic Hydrocarbons				Miscellaneous Hydrocarbons				Chlorinated Benzenes				Trihalomethanes				Other				
	Carbon tetrachloride	Chloroethane	Dichloromethane	Trichloromethane	1,1-dichloroethane	1,2-dichloroethane	1,3-dichloropropane	1,4-dichloropropane	1,5-dichloropropane	1,6-dichloropropane	1,7-dichloropropane	1,8-dichloropropane	1,9-dichloropropane	1,10-dichloropropane	1,11-dichloropropane	1,12-dichloropropane	1,13-dichloropropane	1,14-dichloropropane	1,15-dichloropropane	1,16-dichloropropane	1,17-dichloropropane	1,18-dichloropropane	1,19-dichloropropane	1,20-dichloropropane	1,21-dichloropropane	1,22-dichloropropane	1,23-dichloropropane	1,24-dichloropropane	1,25-dichloropropane	1,26-dichloropropane	1,27-dichloropropane	1,28-dichloropropane	1,29-dichloropropane	1,30-dichloropropane			
File #	Date	Site Type	Depth	Location	Lab Report	1,1-dichloroethane	1,2-dichloroethane	1,3-dichloropropane	1,4-dichloropropane	1,5-dichloropropane	1,6-dichloropropane	1,7-dichloropropane	1,8-dichloropropane	1,9-dichloropropane	1,10-dichloropropane	1,11-dichloropropane	1,12-dichloropropane	1,13-dichloropropane	1,14-dichloropropane	1,15-dichloropropane	1,16-dichloropropane	1,17-dichloropropane	1,18-dichloropropane	1,19-dichloropropane	1,20-dichloropropane	1,21-dichloropropane	1,22-dichloropropane	1,23-dichloropropane	1,24-dichloropropane	1,25-dichloropropane	1,26-dichloropropane	1,27-dichloropropane	1,28-dichloropropane	1,29-dichloropropane	1,30-dichloropropane		
B2 (HMO 2020)																																					
NW15 0.2	28/02/2020	Clay	0.2	Private Commercial Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
NW15 0.5	28/02/2020	Clay	0.5	Private Commercial Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
NW2 4.0	28/02/2020	Sand	4.0	Grassland Fenshore	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
NW3 0.0	28/02/2020	Sand	0.0	Grassland Fenshore	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
NW3 1.0	28/02/2020	Silt	1.0	Grassland Fenshore	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
NW3 1.2	28/02/2020	Silt	1.2	On-grade open asphalt carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
NW3 1.5	28/02/2020	Silt	1.5	On-grade open asphalt carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
NW3 2.0	28/02/2020	Silt	2.0	On-grade open asphalt carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
Q001 (duplicate pair 183, 1.5)	28/02/2020	Clay	1.5	On-grade open asphalt carpark	705373	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Q001A (triplicate pair 183, 1.5)	28/02/2020	Clay	1.5	On-grade open asphalt carpark	705373	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
184 0.2	28/02/2020	Silt	0.2	Multi-Storey Carpark	705373	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
184 0.5	28/02/2020	Silt	0.5	Multi-Storey Carpark	705373	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
184 0.2	28/02/2020	Silt	0.2	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
184 1.0	28/02/2020	Clay	1.0	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
184 1.5	28/02/2020	Clay	1.5	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
184 2.0	28/02/2020	Clay	2.0	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
184 2.5	28/02/2020	Clay	2.5	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
184 3.0	28/02/2020	Clay	3.0	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
184 3.5	28/02/2020	Clay	3.5	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
184 4.0	28/02/2020	Clay	4.0	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
Q002 (duplicate pair 187, 1.0)	28/02/2020	Silt	1.0	Multi-Storey Carpark	705373	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Q002A (triplicate pair 187, 1.0)	28/02/2020	Silt	1.0	Multi-Storey Carpark	705373	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
187 0.2	28/02/2020	Silt	0.2	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
187 0.5	28/02/2020	Silt	0.5	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
187 1.0	28/02/2020	Silt	1.0	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
187 1.5	28/02/2020	Silt	1.5	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
187 2.0	28/02/2020	Silt	2.0	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
187 2.5	28/02/2020	Silt	2.5	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
187 3.0	28/02/2020	Silt	3.0	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
187 3.5	28/02/2020	Silt	3.5	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
187 4.0	28/02/2020	Silt	4.0	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
187 4.5	28/02/2020	Silt	4.5	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
187 5.0	28/02/2020	Silt	5.0	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
187 5.5	28/02/2020	Silt	5.5	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
187 6.0	28/02/2020	Silt	6.0	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD		
187 6.5	28/02/2020	Silt	6.5	Multi-Storey Carpark	705373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD																		

Table B: Groundwater Field Parameters
Parramatta Powerhouse

Well ID	Sample Date	Total Well Depth	Depth to Water	Depth to LNAPL	Vapour Well Head	Electrical Conductivity	pH	Dissolved Oxygen	Temperature	Redox
		m TOC	m TOC	m	ppm	µs/cm	-	mg/L	°C	mV
MW1	6/03/2020	6.020	3.682	-	5.4	817	7.34	1.64	24.9	661.4
MW2	6/03/2020	4.100	1.334	-	5.7	922	7.10	0.10	24	-120.6
MW3	6/03/2020	4.030	1.981	-	1.0	1188	7.19	0.16	24.1	-124.3
BH1	6/03/2020	6.03	4.950	-	0.0	1121	6.75	0.15	25.4	-96.7
BH4	6/03/2020	4.5	1.390	-	0.0	1710	6.28	0.25	23.5	-39.3

Table B: Groundwater Field Parameters
Parramatta Powerhouse

Comments
Clear, very low turbidity, no sheen, no odour
Brown/grey, moderate turbidity, no sheen, no odour
Grey, moderate turbidity, no sheen, no odour
Dark grey, high turbidity, no sheen, no odour
Clear, very low turbidity, no sheen, no odour



	Heavy Metals								TPHs (NEPC 1999)				TRHs (NEPC 2013)						BTEXN								
	Arsenic (Total)	Cadmium	Chromium (Total) (Filtered)	Copper (Filtered)	Lead (Filtered)	Mercury (Inorganic) (Filtered)	Nickel (Filtered)	Zinc (Filtered)	G6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	G6-C10 Fraction	G6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene
mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.001	0.0001	0.001	0.001	0.001	0.00005	0.001	0.001	0.01	0.05	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.05	0.01	0.01	0.001	0.001	0.001	0.001	0.002	0.003	0.00001
ANZG (2018) Freshwater and Marine water 95% toxicant DGVs		0.0002		0.0013	0.0034	0.0004	0.011	0.008													0.7	0.08	0.18	0.35	0.07		0.016
NEPM 2013 Groundwater HSL C for Vapour Intrusion - Sand 2 to <4m																		NL		NL	NL	NL	NL			NL	NL
NEPM 2013 Groundwater HSL C for Vapour Intrusion - Sand 4 to <8m																		NL		NL	NL	NL	NL			NL	NL

Field ID	Sample Date	Report Number																											
DSI (JBS&G 2020)																													
BH1	6/03/2020	706429	0.005	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.003	<0.005	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.00001
BH4	6/03/2020	706429	0.002	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.001	<0.005	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.00001
MW1	6/03/2020	706429	<0.001	<0.0002	0.002	0.001	<0.001	<0.0001	<0.001	0.001	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.00001
QC01 (duplicate pair MW1)	6/03/2020	706429	<0.001	<0.0002	0.002	0.002	<0.001	<0.0001	<0.001	0.011	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.00001
QC01A (triplicate pair MW1)	6/03/2020	238372	0.001	<0.0001	0.004	<0.001	<0.001	<0.00005	0.001	0.01	<0.01	<0.05	<0.1	<0.1	-	<0.05	<0.1	<0.1	-	<0.05	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.002	-	<0.002
MW2	6/03/2020	706429	0.002	<0.0002	<0.001	0.001	<0.001	<0.0001	0.002	0.012	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.00001
MW3	6/03/2020	706429	0.002	<0.0002	<0.001	0.002	<0.001	<0.0001	<0.001	0.078	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.00001
Phase 1 ESA (EIS 2013)																													
MW1	30/09/2013	MW1	<0.001	<0.002	0.001	<0.002	<0.001	<0.00005	0.009	0.013	0.082	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.0002	
MW4	30/09/2013	MW4	0.001	<0.002	<0.001	<0.002	<0.001	<0.00005	0.002	0.017	<0.01	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.0002	

Table C: 2013-2020 Groundwater Analytical Results
Project Number: 58352
Project Name: Parramatta Powerhouse

[illegible][illegible]

Appendix B Photographic Log

PHOTO 1: EASTERN END OF CARPARK BUILDING, FACING WEST



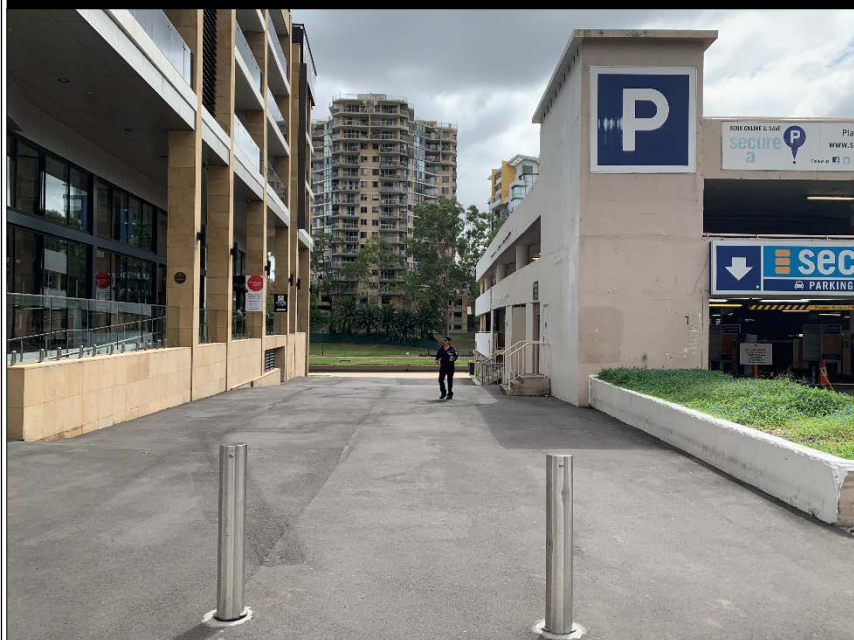
PHOTO 2: PROPERTY IN THE SOUTH-EASTERN CORNER OF THE SITE, FACING SOUTH



PHOTO 3: THREE STOREY CARPARK, FACING NORTH



PHOTO 4: CARPARK ENTRANCE AT CENTRAL/WESTERN PART OF SITE, FACING NORTH



Job No: 58352

Client: Infrastructure NSW

Version: R01 Rev A

Date: 5/03/2020

Drawn By: JN

Checked By: JN

Not to Scale

Coord. Sys n/a

Detailed Site Investigation

Phillip Street, Parramatta NSW

APPENDIX B: PHOTO LOG

PHOTO 5: FORMER COTTAGE SUBSTATION, FACING WEST



PHOTO 6: BOTTOM LEVEL OF CARPARK, FACING WEST



PHOTO 7: MINI PROBE DRILL RIG, DRILLING IN THE BOTTOM LEVEL OF THE CARPARK, FACING WEST

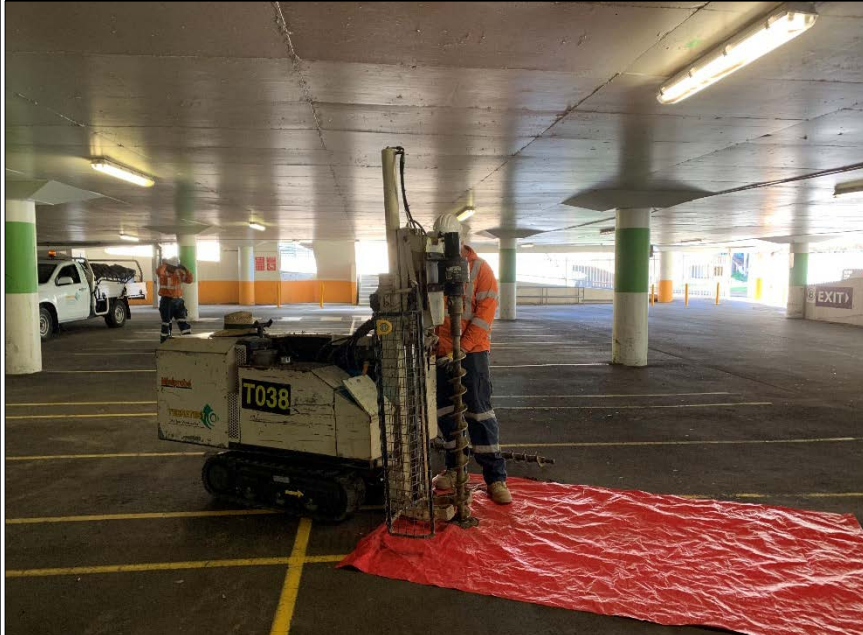


PHOTO 8: OPEN-SPACE PARKLAND ALONG PARRAMATTA RIVER, FACING EAST



Job No: 58352

Client: Infrastructure NSW

Version: R01 Rev A

Date: 5/03/2020

Drawn By: JN

Checked By: JN

Not to Scale

Coord. Sys n/a

Phillip Street, Parramatta NSW

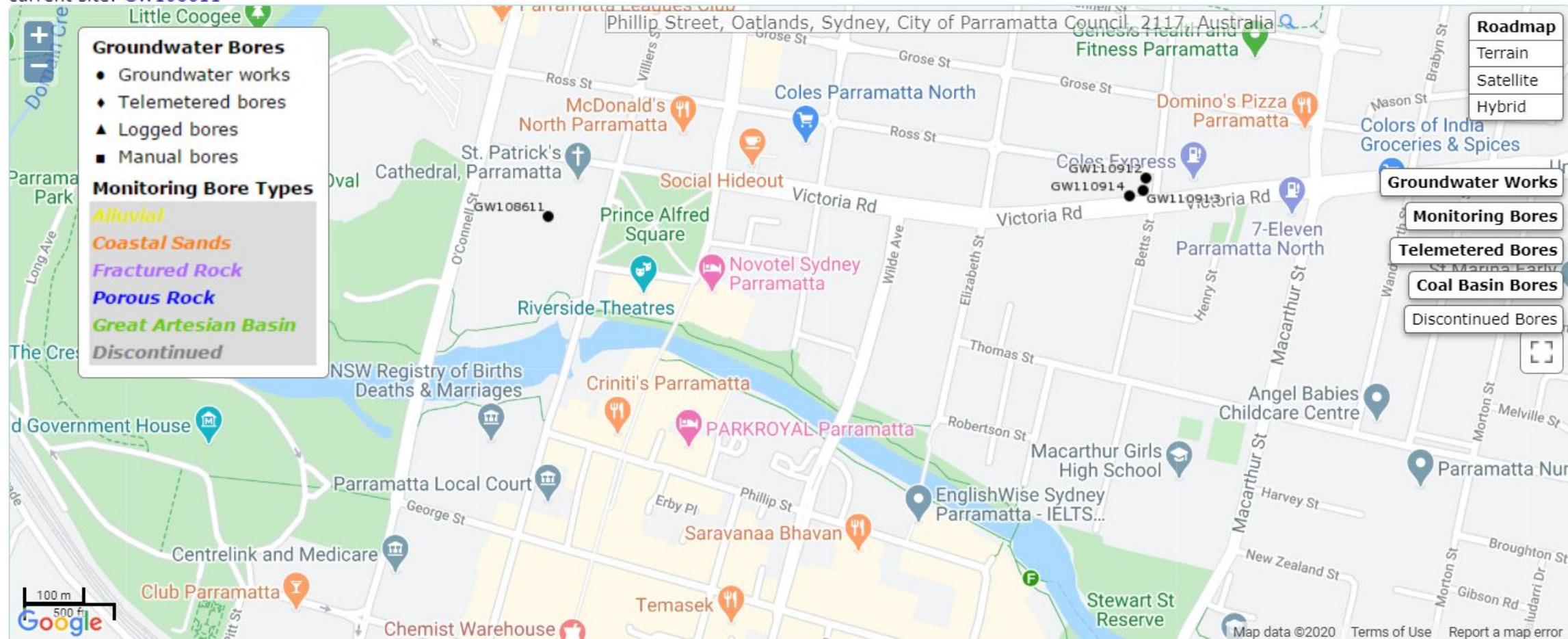
APPENDIX: B

Appendix C Groundwater Bore Search

All data times are Eastern Standard Time

Map Info

current site: **GW108611**



WaterNSW

Work Summary

GW108611

Licence: 10WA108668	Licence Status: CURRENT
Authorised Purpose(s): DOMESTIC Intended Purpose(s): DOMESTIC	
Work Type: Bore	
Work Status: Supply Obtained	
Construct.Method: Down Hole Hamm	
Owner Type: Private	
Commenced Date:	Final Depth: 60.50 m
Completion Date: 20/04/2005	Drilled Depth: 60.50 m
Contractor Name: INTERTEC DRILLING SERVICES	
Driller: William Crump	
Assistant Driller:	
Property: ROMAN CATHOLIC CHURCH 1 Marist PI PARRAMATTA 2150 NSW	Standing Water Level 6.200 (m):
GWMA: -	Salinity Description:
GW Zone: -	Yield (L/s): 5.500

Site Details

Site Chosen By:	County	Parish	Cadastre
	Form A: CUMBERLAND	FIELD OF	1//1034092
	Licensed: CUMBERLAND	FIELD OF MARS	Whole Lot 1//1034092
Region: 10 - Sydney South Coast	CMA Map: 9130-3N		
River Basin: 212 - HAWKESBURY RIVER	Grid Zone:	Scale:	
Area/District:			
Elevation: 0.00 m (A.H.D.)	Northing: 6257213.000	Latitude: 33°48'32.9"S	
Elevation Source: Unknown	Easting: 315129.000	Longitude: 151°00'09.8"E	
GS Map: -	MGA Zone: 56	Coordinate Source: GIS - Geogra	

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	11.50	206			Down Hole Hammer
1		Hole	Hole	11.50	60.50	165			Down Hole Hammer
1		Annulus	Concrete	-0.10	11.50	206			
1	1	Casing	Pvc Class 9	-0.50	29.50	140			Suspended in Clamps, Screwed and Glued
1	1	Casing	Steel	-0.50	11.50	168	158		Driven into Hole, Welded

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
46.10	46.30	0.20	Unknown			5.00		00:25:00	4650.00
56.50	56.60	0.10	Unknown	6.20		0.20		00:25:00	5300.00

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	1.00	1.00	Fill	Fill	
1.00	3.00	2.00	Clay, brown	Clay	

3.00	5.50	2.50	Shale	Shale	
5.50	7.00	1.50	Sandstone, with Shale bedding	Sandstone	
7.00	22.00	15.00	Sandstone, grey	Sandstone	
22.00	23.30	1.30	Sandstone, soft	Sandstone	
23.30	46.10	22.80	Sandstone, grey	Sandstone	
46.10	46.30	0.20	Sandstone, fractured	Sandstone	
46.30	47.50	1.20	Sandstone, grey	Sandstone	
47.50	47.70	0.20	Sandstone, fractured	Sandstone	
47.70	56.50	8.80	Sandstone, grey	Sandstone	
56.50	56.60	0.10	Sandstone, fractured	Sandstone	
56.60	60.50	3.90	Sandstone, grey	Sandstone	

Remarks

20/04/2005: Form A Remarks:
Airlift tests at 60m = 5.5 Lps, 42m = 4.0 Lps. Water has a strange odour & is discoloured.
04/03/2010: Updated from original form A.

*** End of GW108611 ***

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW

Work Summary

GW110912

Licence:

Licence Status:

Authorised Purpose(s):

Intended Purpose(s): MONITORING BORE

Work Type: Well

Work Status:

Construct.Method: Auger - Solid

Owner Type: Private

Commenced Date:

Completion Date: 20/01/2010

Final Depth: 10.00 m

Drilled Depth: 10.00 m

Contractor Name: Terratest Pty Ltd

Driller: Wisam Abouchrouche

Assistant Driller:

Property:

Standing Water Level 7.000 (m):

GWMA:

Salinity Description:

GW Zone:

Yield (L/s):

Site Details

Site Chosen By:

County

Parish

Cadastre

Form A: CUMBERLAND

FIELD OF

1/509643

Licensed:

Region: 10 - Sydney South Coast

CMA Map:

River Basin: - Unknown

Grid Zone:

Scale:

Area/District:

Elevation: 0.00 m (A.H.D.)

Northing: 6257285.000

Latitude: 33°48'31.1"S

Elevation Source: Unknown

Easting: 315997.000

Longitude: 151°00'43.6"E

GS Map: -

MGA Zone: 56

Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	10.00	125			Auger - Solid Flight
1		Annulus	Waterworn/Rounded	0.00	0.00				Graded
1	1	Opening	Screen	3.00	10.00	50		0	PVC Class 18, Screwed, A: 1.00mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
7.00	10.00	3.00	Unknown	7.00					

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.10	0.10	CONCRETE	Conglomerate	
0.10	0.50	0.40	FILL,SILTY CLAY, GRAVEL	Fill	
0.50	1.80	1.30	CLAY SANDY GREY RED	Clay Loam	
1.80	2.50	0.70	CLAY SANDY GREY BROWN	Clay Loam	
2.50	3.00	0.50	CLAY SANDY GREY	Clay Loam	

3.00	3.50	0.50	CLAY SANDY SOME SHALE FRAGMENTS	Clay Loam	
3.50	4.30	0.80	SHALE CLAY BROWN	Shale	
4.30	5.00	0.70	SHALE LOW STRENGTH,IRONSTONE,SANDSTONE	Shale	
5.00	5.20	0.20	SHALE LOW STRENGTH DARK GREY	Shale	
5.20	6.50	1.30	SHALE LOW STRENGTH BROWN SANDSTONE BANDS	Shale	
6.50	6.80	0.30	SANDSTONE LOW STRENGTH WHITE	Sandstone	
6.80	10.00	3.20	SANDSTONE MEDIUM STRENGTH WHITE	Sandstone	

*** End of GW110912 ***

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW

Work Summary

GW110913

Licence:	Licence Status:
Authorised Purpose(s): Intended Purpose(s): MONITORING BORE	
Work Type: Well	
Work Status:	
Construct.Method: Auger - Solid	
Owner Type: Private	
Commenced Date:	Final Depth: 10.00 m
Completion Date: 20/01/2010	Drilled Depth:
Contractor Name: Terratest Pty Ltd	
Driller: Wisam Abouchrouche	
Assistant Driller:	
Property:	Standing Water Level 7.000 (m):
GWMA:	Salinity Description:
GW Zone:	Yield (L/s):

Site Details

Site Chosen By:				
Form A: CUMBERLAND		County	Parish	Cadastre
Licensed:		FIELD OF		1//509643
Region: 10 - Sydney South Coast		CMA Map:		
River Basin: - Unknown		Grid Zone:		
Area/District:		Scale:		
Elevation: 0.00 m (A.H.D.)		Northing: 6257267.000		Latitude: 33°48'31.7"S
Elevation Source: Unknown		Easting: 315992.000		Longitude: 151°00'43.3"E
GS Map: -		MGA Zone: 56		Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	10.00	125			Auger - Solid Flight
1		Annulus	Waterworn/Rounded	0.00	0.00				
1	1	Opening	Screen	6.00	10.00	50		0	PVC Class 18, Screwed, A: 1.00mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
7.00	10.00	3.00	Unknown	7.00					

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.10	0.10	CONCRETE	Unknown	
0.10	0.20	0.10	CLAY SILTY RED BROWN	Unknown	
0.20	1.20	1.00	CLAY SANDY RED BROWN	Unknown	
1.20	2.00	0.80	CLAY SANDY RED	Unknown	
2.00	3.50	1.50	CLAY SANDY BROWN	Unknown	

3.50	4.50	1.00	CLAY SANDY BROWN/SHALE	Unknown	
4.50	4.90	0.40	SANDSTONE BROWN LOW STRENGTH	Unknown	
4.90	6.00	1.10	CLAY SANDY BROWN SHALE FRAGMENTS	Unknown	
6.00	6.20	0.20	SANDSTONE WEATHERED GREY WHITE	Unknown	
6.20	10.00	3.80	SANDSTONE WHITE	Unknown	

*** End of GW110913 ***

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW

Work Summary

GW110914

Licence:	Licence Status:
Authorised Purpose(s): Intended Purpose(s): MONITORING BORE	
Work Type: Well	
Work Status:	
Construct.Method: Auger - Solid	
Owner Type: Private	
Commenced Date:	Final Depth: 6.00 m
Completion Date: 20/01/2010	Drilled Depth: 6.00 m
Contractor Name: Terratest Pty Ltd	
Driller: Wisam Abouchrouche	
Assistant Driller:	
Property:	Standing Water Level 5.000 (m):
GWMA:	Salinity Description:
GW Zone:	Yield (L/s):

Site Details

Site Chosen By:			
County		Parish	Cadastre
Form A:	CUMBERLAND	FIELD OF	1//509643
Licensed:			
Region: 10 - Sydney South Coast		CMA Map:	
River Basin: - Unknown	Grid Zone:	Scale:	
Area/District:			
Elevation: 0.00 m (A.H.D.)	Northing: 6257260.000	Latitude: 33°48'31.9"S	
Elevation Source: Unknown	Easting: 315973.000	Longitude: 151°00'42.6"E	
GS Map: -	MGA Zone: 56	Coordinate Source: Unknown	

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	6.00	125			Auger - Solid Flight
1		Annulus	Waterworn/Rounded	0.00	0.00				Graded
1	1	Opening	Screen	2.50	6.00	50		0	PVC Class 18, Screwed, A: 1.00mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
5.00	6.00	1.00	Unknown	5.00					

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.20	0.20	FILL, SILTY SAND BROWN	Fill	
0.20	0.40	0.20	FILL,SANDY CLAY RED GREY	Fill	
0.40	1.10	0.70	FILL SANDY CLAY RED	Fill	
1.10	2.50	1.40	CLAY SANDY RED	Clay Loam	
2.50	3.20	0.70	CLAY RED	Clay Loam	


3.20	5.00	1.80	SILTSTONE, SHALE FRAGMENTS	Siltstone	
5.00	5.50	0.50	CLAY SANDY BROWN	Clay Loam	
5.50	6.00	0.50	SANDSTONE BROWN LOW STRENGTH	Sandstone	

*** End of GW110914 ***

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

Appendix D Historical Aerials

**Legend:**

 Approximate Site Boundary



Job No: 58352

Client: Infrastructure NSW

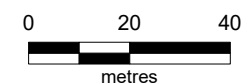
Version: Aerials

Date 26/03/2020

Drawn By: RH

Checked By: JS

Scale 1:1,500



Coord. Sys. GDA 1994 MGA Zone 56

**Phillip Street,
Parramatta, NSW**

HISTORIC AERIAL IMAGE 1930

FIGURE 1930



Legend:

Approximate Site Boundary



Job No: 58352

Client: Infrastructure NSW

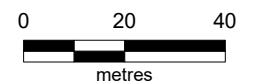
Version: Aerials

Date 26/03/2020

Drawn By: RH

Checked By: JS

Scale 1:1,500



Coord. Sys. GDA 1994 MGA Zone 56


**Phillip Street,
Parramatta, NSW**

HISTORIC AERIAL IMAGE 1943

FIGURE 1943



Legend:

 Approximate Site Boundary



Job No: 58352

Client: Infrastructure NSW

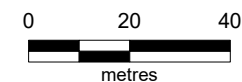
Version: Aerials

Date 26/03/2020

Drawn By: RH

Checked By: JS

Scale 1:1,500



Coord. Sys. GDA 1994 MGA Zone 56


**Phillip Street,
Parramatta, NSW**

HISTORIC AERIAL IMAGE 1956

FIGURE 1956



Legend:

 Approximate Site Boundary



Job No: 58352

Client: Infrastructure NSW

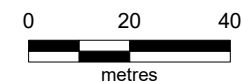
Version: Aerials

Date 26/03/2020

Drawn By: RH

Checked By: JS

Scale 1:1,500

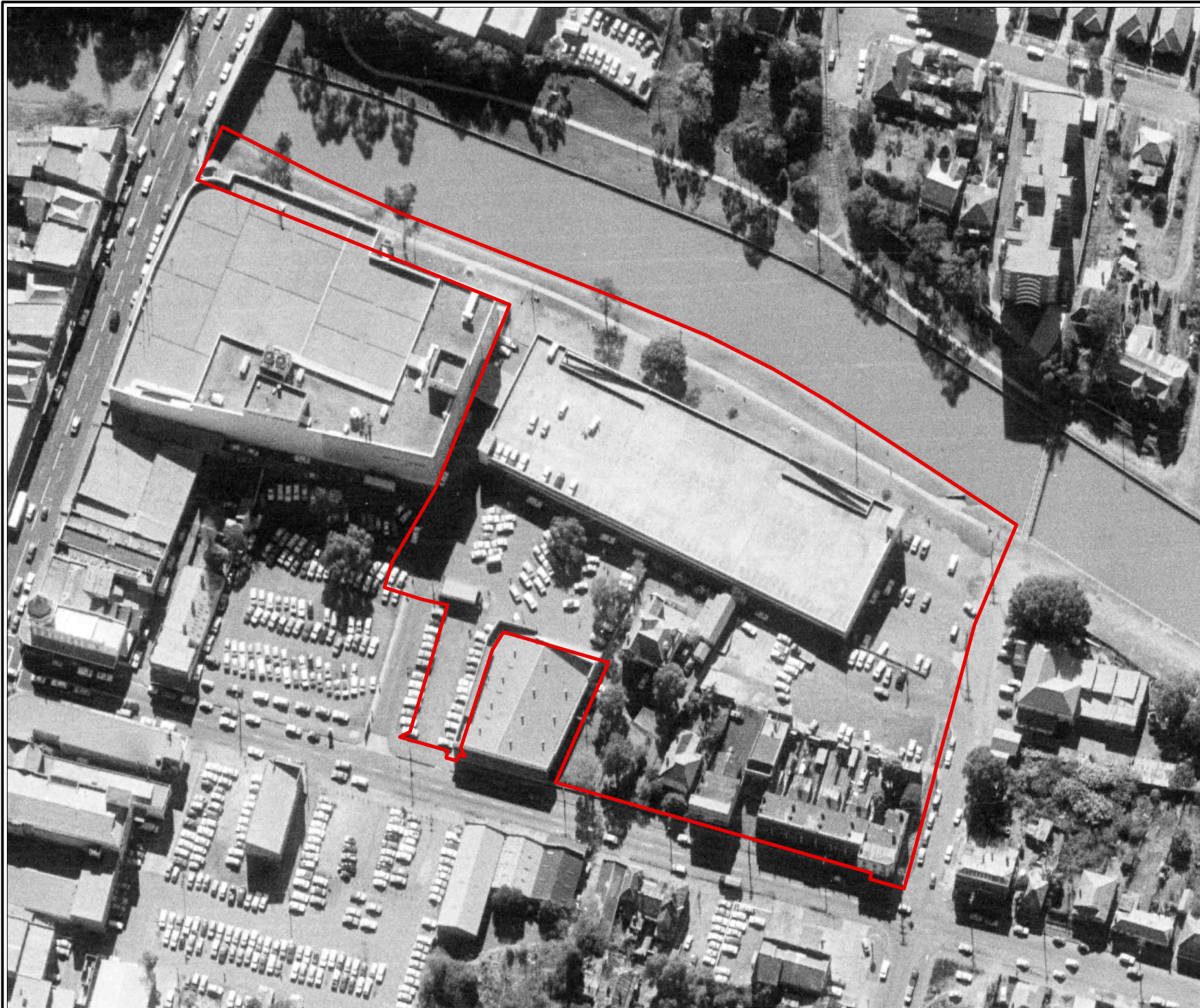


Coord. Sys. GDA 1994 MGA Zone 56


**Phillip Street,
Parramatta, NSW**

HISTORIC AERIAL IMAGE 1961

FIGURE 1961



Legend:

 Approximate Site Boundary



Job No: 58352

Client: Infrastructure NSW

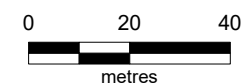
Version: Aerials

Date 26/03/2020

Drawn By: RH

Checked By: JS

Scale 1:1,500




Coord. Sys. GDA 1994 MGA Zone 56

**Phillip Street,
Parramatta, NSW**

HISTORIC AERIAL IMAGE 1970

FIGURE 1970

**Legend:**

 Approximate Site Boundary



Job No: 58352

Client: Infrastructure NSW

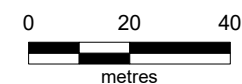
Version: Aerials

Date 26/03/2020

Drawn By: RH

Checked By: JS

Scale 1:1,500



Coord. Sys. GDA 1994 MGA Zone 56


**Phillip Street,
Parramatta, NSW**

HISTORIC AERIAL IMAGE 1982

FIGURE 1982



Legend:

 Approximate Site Boundary



Job No: 58352

Client: Infrastructure NSW

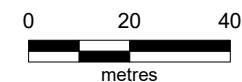
Version: Aerials

Date 26/03/2020

Drawn By: RH

Checked By: JS

Scale 1:1,500

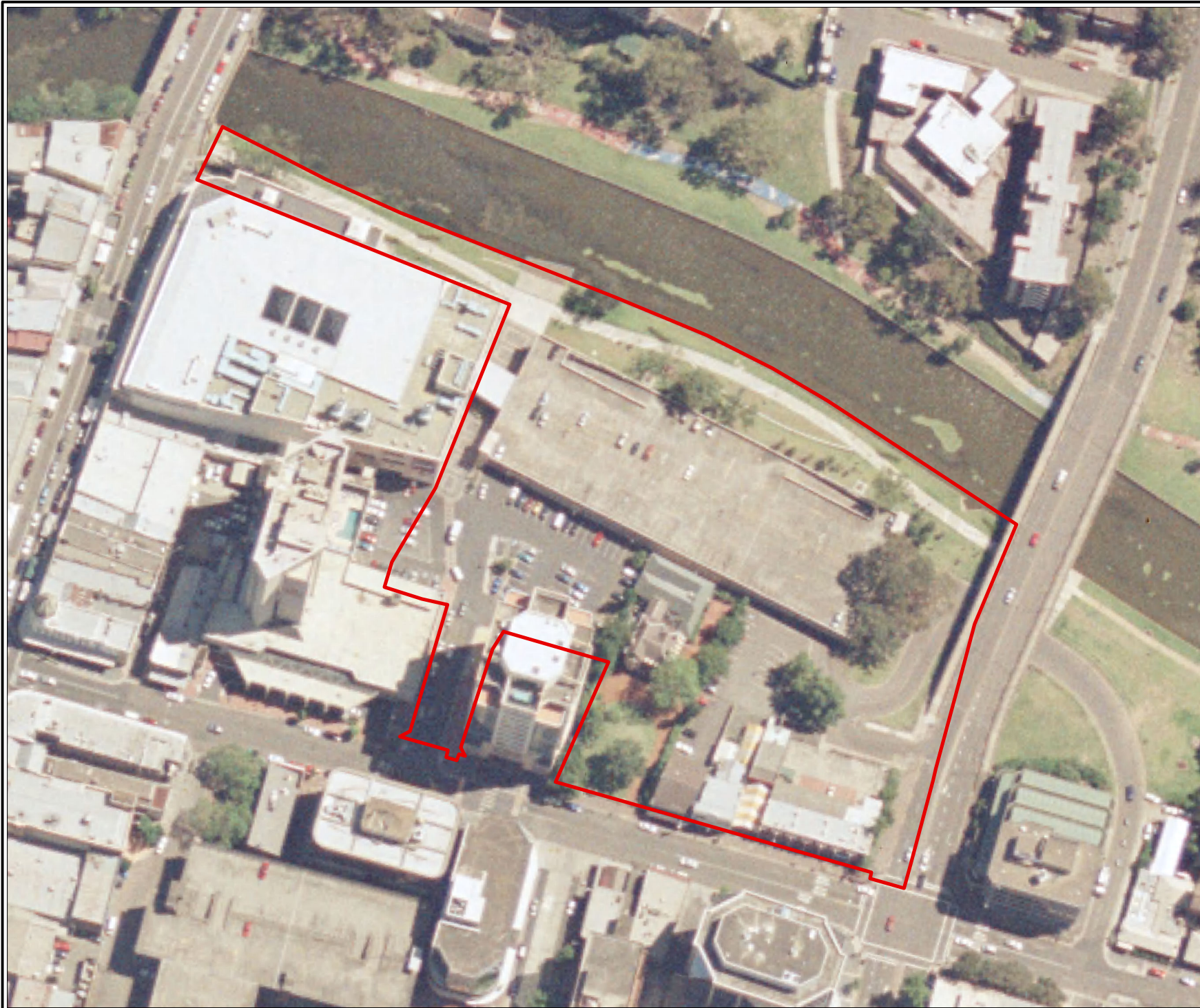



Coord. Sys. GDA 1994 MGA Zone 56

**Phillip Street,
Parramatta, NSW**

HISTORIC AERIAL IMAGE 1994

FIGURE 1994

**Legend:**

 Approximate Site Boundary



Job No: 58352

Client: Infrastructure NSW

Version: Aerials

Date 26/03/2020

Drawn By: RH

Checked By: JS

Scale 1:1,500



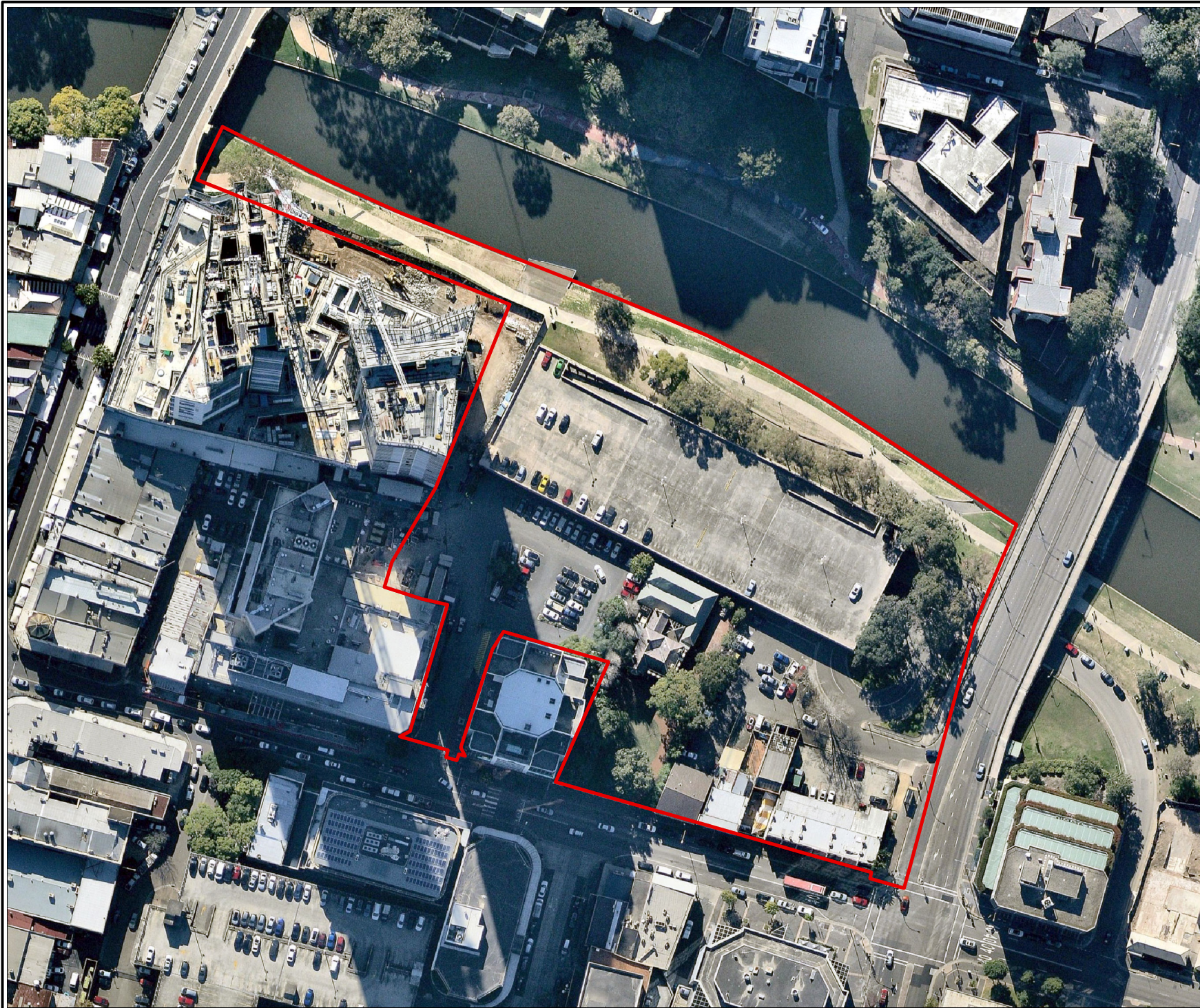
0 20 40
metres


Coord. Sys. GDA 1994 MGA Zone 56

**Phillip Street,
Parramatta, NSW**

HISTORIC AERIAL IMAGE 2005

FIGURE 2005

**Legend:**

 Approximate Site Boundary



Job No: 58352

Client: Infrastructure NSW

Version: Aerials

Date 26/03/2020

Drawn By: RH

Checked By: JS

Scale 1:1,500



0 20 40
metres

Coord. Sys. GDA 1994 MGA Zone 56

**Phillip Street,
Parramatta, NSW**

HISTORIC AERIAL IMAGE 2016

FIGURE 2016

**Legend:**

 Approximate Site Boundary



Job No: 58352

Client: Infrastructure NSW

Version: Aerials

Date 26/03/2020

Drawn By: RH

Checked By: JS

Scale 1:1,500



0 20 40
metres

Coord. Sys. GDA 1994 MGA Zone 56

**Phillip Street,
Parramatta, NSW**

HISTORIC AERIAL IMAGE 2020

FIGURE 2020

Appendix E Land Title Records

Cadastral Records Enquiry Report

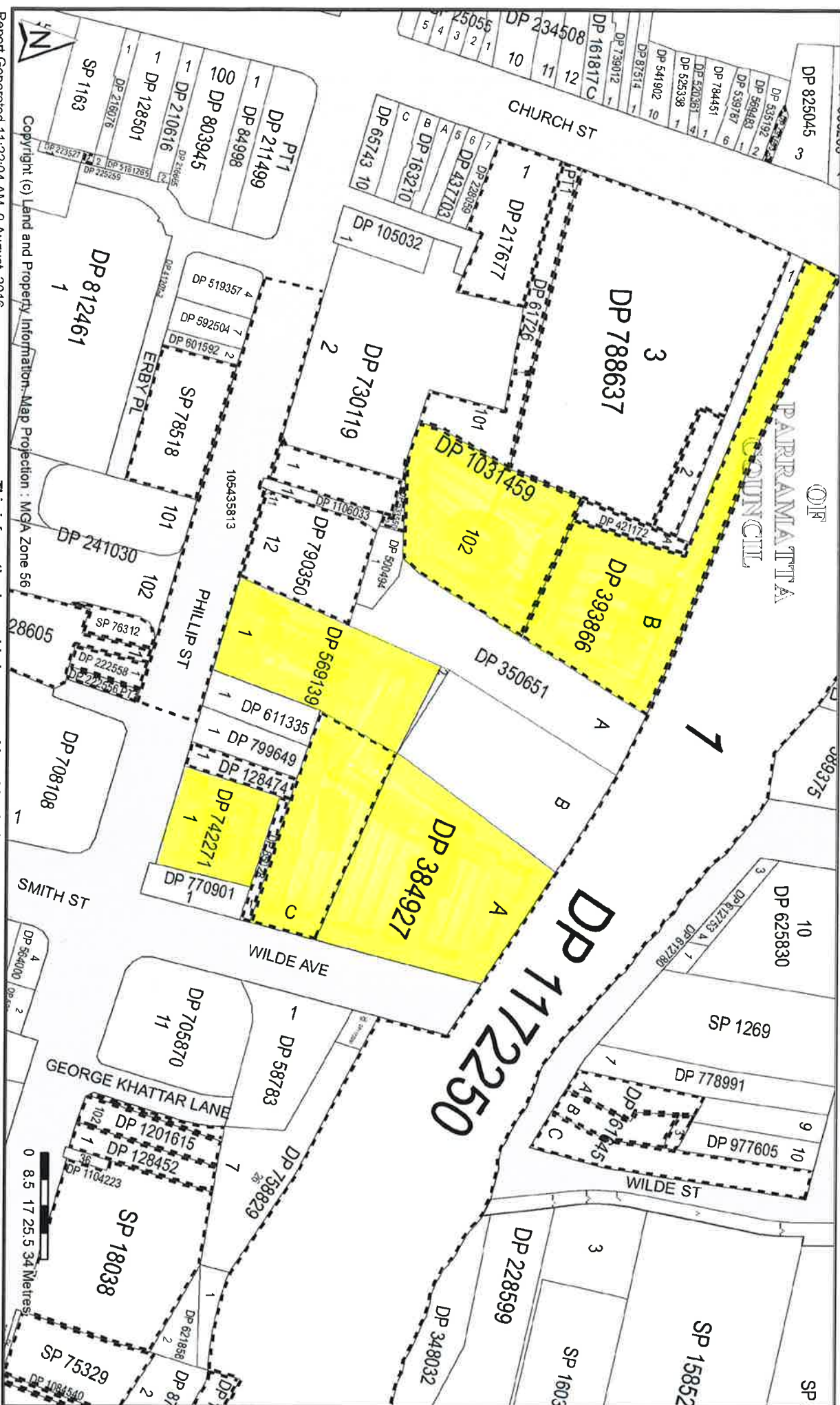
Requested Parcel: Lot 2 DP 569139


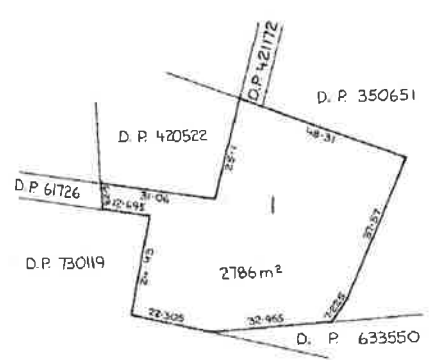

LG A: PARRAMATTA

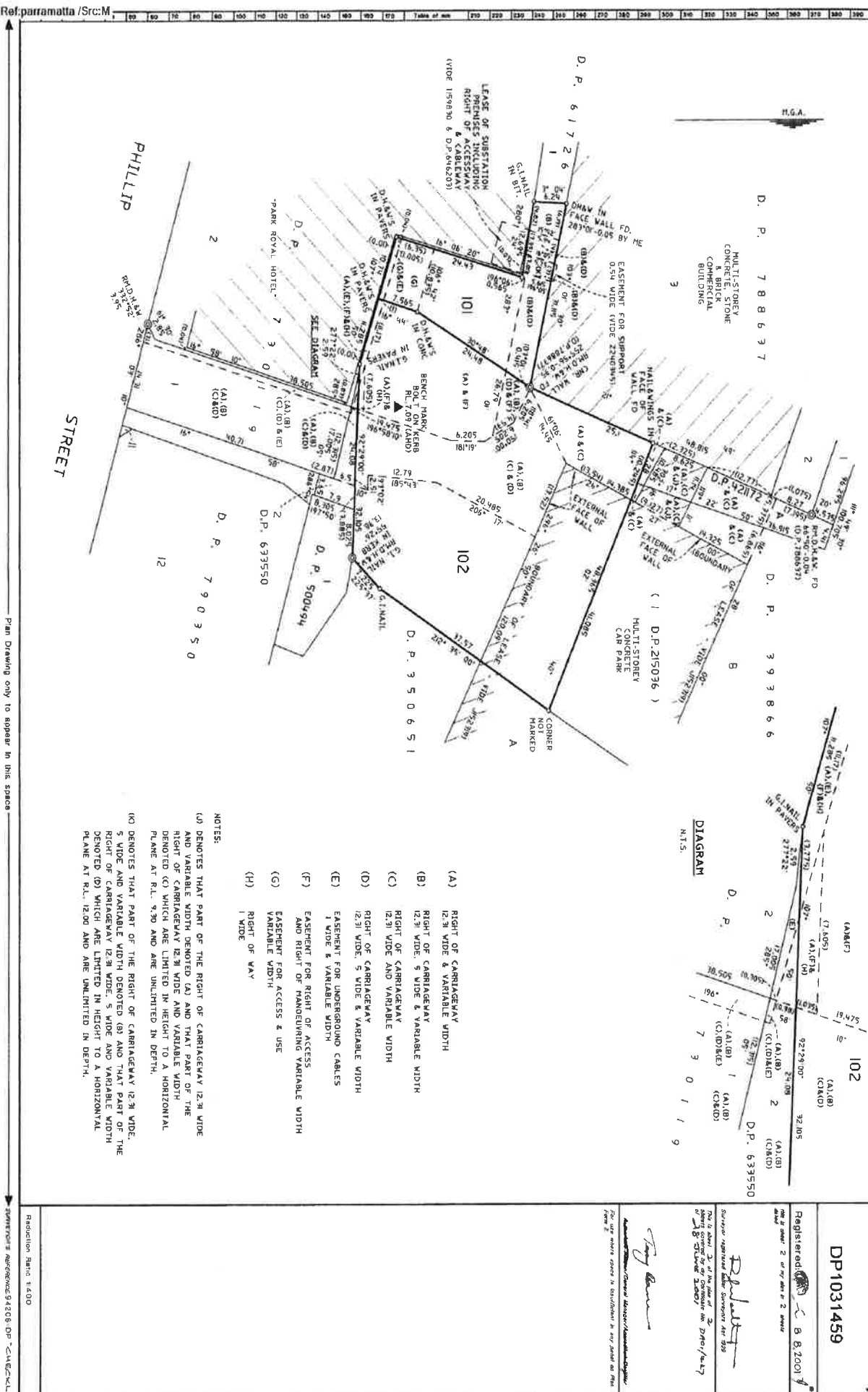
Parish : ST JOHN

Identified Parcel : Lot 2 DP 569139

County : CUMBERLAND



LT2/16		D. P. 724764	
PLAN OF THE PART OF LOT 1 IN D.P. 953734 BEING THE RESIDUE AFTER D.P. 420522 AND D.P. 421367 AS COMPRISED IN CERTIFICATE OF TITLE VOL. 2749 FOL. 187		Registered:  10-6-1987	
Municipality: <u>PARRAMATTA</u>		C.A.: _____	
Town or Locality: <u>PARRAMATTA</u>		Title System: <u>TORRENS</u>	
Parish: <u>ST. JOHN</u>		Purpose: <u>DEPARTMENTAL</u>	
County: <u>CUMBERLAND</u>		Ref. Map: <u>U0052-411</u>	
Reduction Ratio 1: 800		Last Plan: <u>D. P. 953734</u>	
Lengths are in metres			
			
<p>This negative is a photograph made as a permanent record of a document in the custody of the Registrar General this day.</p> <p> 15th June, 1987</p>			
Prepared in Land Title Office 4/6 87			





PROPERTY ACT, 1900



15127108

First Title : Old System

Prior Title : Vol.8414 Fol.152



15127 108
Vol. Fol.

EDITION 4 10 1983
ISSUED

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,



LENGTHS ARE IN METRES

CANCELLED

SEE AUTO FOLIO



X LOT A IN D.P. 421172
 F LOT F IN D.P. 421172

AREA: 3307 m²

LAND REFERRED TO

Lot A in Deposited Plan 421172 and Lot B in Deposited Plan 393866 at Parramatta in the City of Parramatta Parish of St. John and County of Cumberland.

FIRST SCHEDULE

THE COUNCIL OF THE CITY OF PARRAMATTA.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant.
2. J152319^P Lease to David Jones Limited of that part of Lot 1 in Deposited Plan/215036 which lies above 2 horizontal planes at levels of 6.72 and 9.615 metres respectively. Expires 20-11-2061.

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

FIRST SCHEDULE (continued)
REGISTERED PROPRIETOR

Registrar General

SECOND SCHEDULE (continued)

PARTICULARS

Registrar General CANCELLATION

CANCELLED

SEE AUTO FOLIO

NOTATIONS AND UNREGISTERED DEALINGS

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

3/8/2016 7:45PM

FOLIO: AUTO CONSOL 15127-108

Recorded	Number	Type of Instrument	C.T. Issue
19/2/1992		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 15127-108	

PARCELS IN CONSOL ARE:
B/393866, A/421172.

14/10/1996	2531470	DEPARTMENTAL DEALING
17/10/1996	2482330	TRANSFER OF LEASE
19/11/1996	2612687	MORTGAGE OF LEASE
29/3/1999	5709941	DISCHARGE OF MORTGAGE
29/3/1999	5709942	TRANSFER OF LEASE
29/3/1999	5709943	MORTGAGE OF LEASE

8/8/2001 DP1031459 DEPOSITED PLAN

EDITION 1

12/3/2002	8383390	CHANGE OF NAME
12/3/2002	8383393	MORTGAGE OF LEASE
12/3/2002	8383394	MORTGAGE OF LEASE

26/6/2003	9655517	DISCHARGE OF MORTGAGE
26/6/2003	9655518	DISCHARGE OF MORTGAGE
26/6/2003	9655519	DISCHARGE OF MORTGAGE
26/6/2003	9233090	SURRENDER OF LEASE

26/6/2003 9233091 LEASE

26/6/2003 9655520 MORTGAGE OF LEASE

EDITION 2

21/7/2004 AA796278 CAVEAT

15/10/2007 AD413619 TRANSFER OF LEASE

7/11/2007 AD544262 MORTGAGE OF LEASE

14/8/2008 AE150031 DISCHARGE OF MORTGAGE

15/10/2008 AE259990 DEPARTMENTAL DEALING

6/6/2011 AG229150 DISCHARGE OF MORTGAGE

6/6/2011 AG229151 TRANSFER OF LEASE

END OF PAGE 1 - CONTINUED OVER

SEARCH DATE

3/8/2016 7:45PM

FOLIO: AUTO CONSOL 15127-108

PAGE 2

<u>Recorded</u>	<u>Number</u>	<u>Type of Instrument</u>	<u>C.T. Issue</u>
18/12/2015	AK77891	SURRENDER OF LEASE	EDITION 3

*** END OF SEARCH ***

parramatta

PRINTED ON 3/8/2016

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 15127-108

SEARCH DATE	TIME	EDITION NO	DATE
3/8/2016	7:51 PM	3	18/12/2015

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
AT PARRAMATTA
LOCAL GOVERNMENT AREA CITY OF PARRAMATTA
PARISH OF ST JOHN COUNTY OF CUMBERLAND
TITLE DIAGRAM SEE SCHEDULE OF PARCELS

FIRST SCHEDULE

THE COUNCIL OF THE CITY OF PARRAMATTA

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 DP1031459 RIGHT OF CARRIAGEWAY 12.31 WIDE AND VARIABLE WIDTH
AFFECTING THE PART(S) SHOWN SO BURDENED AND DESIGNATED
(A) IN DP1031459
- 3 DP1031459 RIGHT OF CARRIAGEWAY 12.31 WIDE AND VARIABLE WIDTH
AFFECTING THE PART(S) SHOWN SO BURDENED AND DESIGNATED
(C) IN DP1031459

NOTATIONS

UNREGISTERED DEALINGS: PE DP1203630.

SCHEDULE OF PARCELS

LOT B IN DP393866
LOT A IN DP421172

TITLE DIAGRAM

DP393866
DP421172.

*** END OF SEARCH ***

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

3/8/2016 7:44PM

FOLIO: 1/724764

First Title(s): OLD SYSTEM

Prior Title(s): VOL 2749 FOL 187

Recorded	Number	Type of Instrument	C.T. Issue
-----	-----	-----	-----
16/6/1987	DP724764	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
29/2/1988	X299786	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	FOLIO CREATED EDITION 1
14/10/1996	2531470	DEPARTMENTAL DEALING	
17/10/1996	2482330	TRANSFER OF LEASE	
19/11/1996	2612687	MORTGAGE OF LEASE	
29/3/1999	5709941	DISCHARGE OF MORTGAGE	
29/3/1999	5709942	TRANSFER OF LEASE	
29/3/1999	5709943	MORTGAGE OF LEASE	
8/8/2001	DP1031459	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

3/8/2016 7:44PM

FOLIO: 102/1031459

First Title(s): OLD SYSTEM

Prior Title(s): 1/724764

Recorded	Number	Type of Instrument	C.T. Issue
8/8/2001	DP1031459	DEPOSITED PLAN	FOLIO CREATED EDITION 1
12/3/2002	8383390	CHANGE OF NAME	
12/3/2002	8383393	MORTGAGE OF LEASE	
12/3/2002	8383394	MORTGAGE OF LEASE	
15/7/2002	8678283	REQUEST	
26/6/2003	9655517	DISCHARGE OF MORTGAGE	
26/6/2003	9655518	DISCHARGE OF MORTGAGE	
26/6/2003	9655519	DISCHARGE OF MORTGAGE	
26/6/2003	9233090	SURRENDER OF LEASE	
26/6/2003	9233091	LEASE	
26/6/2003	9655520	MORTGAGE OF LEASE	EDITION 2
21/7/2004	AA796278	CAVEAT	
15/10/2007	AD413619	TRANSFER OF LEASE	
7/11/2007	AD544262	MORTGAGE OF LEASE	
14/8/2008	AE150031	DISCHARGE OF MORTGAGE	
2/10/2008	AE248075	TRANSFER OF LEASE	
6/6/2011	AG229150	DISCHARGE OF MORTGAGE	
6/6/2011	AG229151	TRANSFER OF LEASE	
18/12/2015	AK77891	SURRENDER OF LEASE	EDITION 3
29/6/2016	AK558617	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 102/1031459

SEARCH DATE	TIME	EDITION NO	DATE
9/8/2016	1:12 PM	3	18/12/2015

LAND

LOT 102 IN DEPOSITED PLAN 1031459
AT PARRAMATTA
LOCAL GOVERNMENT AREA CITY OF PARRAMATTA
PARISH OF ST JOHN COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1031459

FIRST SCHEDULE

THE COUNCIL OF THE CITY OF PARRAMATTA

SECOND SCHEDULE (7 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 DP1031459 RIGHT OF CARRIAGEWAY 12.31 WIDE AND VARIABLE WIDTH
AFFECTING THE PART(S) SHOWN SO BURDENED AND DESIGNATED
(A) IN THE TITLE DIAGRAM
- 3 DP1031459 RIGHT OF CARRIAGEWAY 12.31 WIDE, 5 WIDE AND VARIABLE
WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED AND
DESIGNATED (B) IN THE TITLE DIAGRAM
- 4 DP1031459 RIGHT OF CARRIAGEWAY 12.31 WIDE AND VARIABLE WIDTH
AFFECTING THE PART(S) SHOWN SO BURDENED AND DESIGNATED
(C) IN THE TITLE DIAGRAM
- 5 DP1031459 RIGHT OF CARRIAGEWAY 12.31 WIDE, 5 WIDE AND VARIABLE
WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED AND
DESIGNATED (D) IN THE TITLE DIAGRAM
- 6 DP1031459 EASEMENT FOR UNDERGROUND CABLES 1 WIDE AND VARIABLE
WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED IN THE
TITLE DIAGRAM
- 7 DP1031459 EASEMENT FOR RIGHT OF ACCESS AND RIGHT OF MANOEUVRING
VARIABLE WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED
IN THE TITLE DIAGRAM

NOTATIONS

UNREGISTERED DEALINGS: PE DP1203630.

*** END OF SEARCH ***

parramatta

PRINTED ON 9/8/2016

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

3/8/2016 7:44PM

FOLIO: AUTO CONSOL 6792-237

Recorded	Number	Type of Instrument	C.T. Issue
15/2/1993		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 6792-237	

PARCELS IN CONSOL ARE:
A-B/384927.

14/10/1996	2531470	DEPARTMENTAL DEALING
17/10/1996	2482330	TRANSFER OF LEASE
19/11/1996	2612687	MORTGAGE OF LEASE
29/3/1999	5709941	DISCHARGE OF MORTGAGE
29/3/1999	5709942	TRANSFER OF LEASE
29/3/1999	5709943	MORTGAGE OF LEASE
21/2/2000	6504297	CAVEAT
21/2/2000	6504298	CAVEAT
29/6/2000	6889731	REQUEST
29/6/2000	6889732	REQUEST
27/7/2001	7810392	DEPARTMENTAL DEALING
12/3/2002	8383390	CHANGE OF NAME
12/3/2002	8383393	MORTGAGE OF LEASE
12/3/2002	8383394	MORTGAGE OF LEASE
19/9/2002	8891233	CAVEAT
19/9/2002	8891234	CAVEAT
26/6/2003	9655517	DISCHARGE OF MORTGAGE
26/6/2003	9655518	DISCHARGE OF MORTGAGE
26/6/2003	9655519	DISCHARGE OF MORTGAGE
26/6/2003	9233090	SURRENDER OF LEASE
26/6/2003	9233091	LEASE
26/6/2003	9655520	MORTGAGE OF LEASE
21/7/2004	AA796278	CAVEAT
25/9/2007	AD439976	DEPARTMENTAL DEALING

EDITION 1

END OF PAGE 1 - CONTINUED OVER

SEARCH DATE

3/8/2016 7:44PM

FOLIO: AUTO CONSOL 6792-237

PAGE 2

<u>Recorded</u>	<u>Number</u>	<u>Type of Instrument</u>	<u>C.T. Issue</u>
15/10/2007	AD413619	TRANSFER OF LEASE	
7/11/2007	AD544262	MORTGAGE OF LEASE	
14/8/2008	AE150031	DISCHARGE OF MORTGAGE	
2/10/2008	AE248075	TRANSFER OF LEASE	
6/6/2011	AG229150	DISCHARGE OF MORTGAGE	
6/6/2011	AG229151	TRANSFER OF LEASE	
18/12/2015	AK77891	SURRENDER OF LEASE	EDITION 2

*** END OF SEARCH ***

parramatta

PRINTED ON 3/8/2016

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 6792-237

SEARCH DATE	TIME	EDITION NO	DATE
9/8/2016	2:15 PM	2	18/12/2015

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
LOCAL GOVERNMENT AREA CITY OF PARRAMATTA
PARISH OF ST JOHN COUNTY OF CUMBERLAND
TITLE DIAGRAM DP384927

FIRST SCHEDULE

THE COUNCIL OF THE CITY OF PARRAMATTA

SECOND SCHEDULE (5 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- * 2 6504297 CAVEAT BY PARRAMATTA REALTY PTY LIMITED AFFECTING
PART BEING LOT A IN DP3849237
- * 6889731 ORDER OF COURT
- * 9233091 CAVEATOR CONSENTED
- * 3 6504298 CAVEAT BY PARRAMATTA REALTY PTY LIMITED & BODY
CORPORATE MANAGEMENT SERVICES PTY LIMITED AFFECTING
PART BEING LOT A IN DP384927
- * 6889732 ORDER OF COURT
- * 9233091 CAVEATOR CONSENTED
- * 4 8891233 CAVEAT BY PARRAMATTA REALTY PTY LIMITED OF PART
BEING LOT A DP384927
- * 9233091 CAVEATOR CONSENTED
- * 5 8891234 CAVEAT BY PARRAMATTA REALTY PTY LIMITED & BODY
CORPORATE MANAGEMENT SERVICES PTY LTD OF PART BEING
LOT A DP 384927
- * 9233091 CAVEATOR CONSENTED

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOT A IN DP384927
LOT B IN DP384927.

*** END OF SEARCH ***

parramatta

PRINTED ON 9/8/2016



12517090

NEW SOUTH WALES

CERTIFICATE OF TITLE

LAND PROPERTY ACT, 1900

Appln No.8321

Vol. **12517** Fol. **90**

Prior Title Vol.6725 Fol.146

Edition issued 19-8-1974.

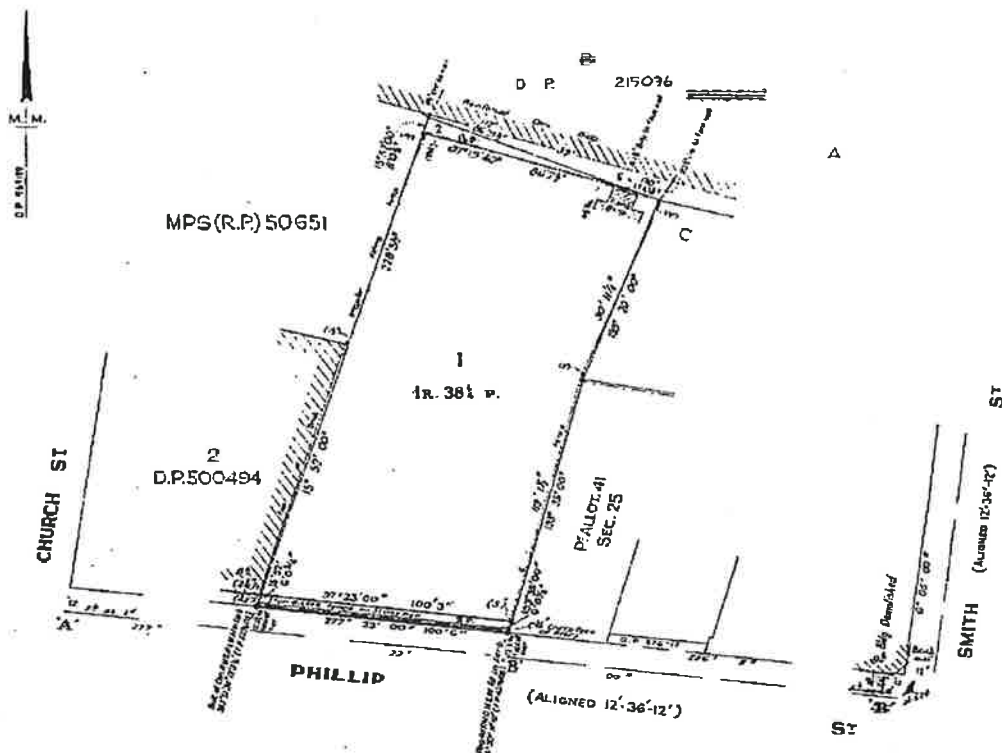


I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

CANCELLED
Registrar General.

PLAN SHOWING LOCATION OF LAND

SEE AUTO FOLIO



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 1 in Deposited Plan 569139 at Parramatta in the City of Parramatta Parish of St. John and County of Cumberland being part of Allotment 43 of Section 25 granted to Benjamin Lee on 5-2-1843, part of Allotment 41 of Section 25 granted to Benjamin Lee on 13-10-1852 and part of Allotment 20 of Section 25 granted to William Peasley on 10-8-1854.

FIRST SCHEDULE

THE COMMONWEALTH OF AUSTRALIA.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.

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

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

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

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR

Agostino Bros. Pty. Limited by Transfer M803217 Registered 26-3-1987
Agostino Bros. Pty. Limited by Transfer M803217 Registered 26-3-1987

NATURE INSTRUMENT NUMBER DATE ENTERED Signature of Registrar General

CANCELLED

SEE AUTO FOLIO

SECOND SCHEDULE (continued)

NATURE INSTRUMENT NUMBER DATE

PARTICULARS

ENTERED

Signature of Registrar General

CANCELLATION

M803218 Mortgage to Hunter BNZ Finance Limited. Registered 26-3-1987



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

W5085425-2

M803217

X6231670m

MP 776173
(EASEMENT)

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

3/8/2016 7:44PM

FOLIO: 1/569139

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 12517 FOL 90

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
8/8/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
16/8/1988	X623467	DISCHARGE OF MORTGAGE	EDITION 1
25/8/1988	DP776173	DEPOSITED PLAN	
22/12/1988	Y81060	DEPARTMENTAL DEALING	EDITION 2
15/3/1989	Y238540	MORTGAGE	EDITION 3
1/6/1989	Y295334	MORTGAGE	EDITION 4
15/8/1990	Z167932	DISCHARGE OF MORTGAGE	EDITION 5
15/8/1994	U530531	DISCHARGE OF MORTGAGE	
15/8/1994	U530532	TRANSFER	EDITION 6
8/2/1996	O898268	REQUEST	EDITION 7
25/8/2009	AE832752	TRANSFER	EDITION 8
26/5/2015	AJ519382	CAVEAT	
22/6/2015	AJ588489	TRANSFER	EDITION 9
29/6/2016	AK558617	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

Ref:parramatta /Src:M
97-011**TRANSFER**
Real Property Act, 1900U
530532 F

12

Office of State Revenue use only

00-20

110894 3021 04 200835087/03

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

Folio Identifier 1/569139

(B) LODGED BY

L.T.O. Box

74S

Name, Address or DX and Telephone

ALLEN ALLEN & HEMSLEY
Solicitors & Notaries
The Chifley Tower, 2 Chifley Square, Sydney
Telephone: 230 4000
LTO 74S
Fax: 233 7022

Reference (max. 15 characters): DAC 1047722 CXL

(C) TRANSFEROR

AGOSTINO BROS PTY LIMITED

(ACN 001 236 997)

(D) acknowledges receipt of the consideration of \$875,000

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

REX GENE MAUGHAN

(G)

TENANCY:

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

DATE 11 August 1994

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

The COMMON SEAL of AGOSTINO BROS PTY LIMITED was affixed in the presence of:

Signature of Witness

Director Name of Witness (BLOCK LETTERS)

Address of Witness

Director/Secretary

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

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness



Signature of Transferor Director

Signature of Transferor Secretary

Signature of Transferee's Solicitor
DAVID COHEN

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

CHECKED BY (office use only)

910

Ref:parramatta /Src:M

Form: 01T
Release: 3.5
www.lands.nsw.gov.au

TRANSFER

New South Wales
Real Property Act 1900

**AE832752G**

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the use of this form for the establishment and maintenance of the Real Property Register. 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

NEW SOUTH WALES DUTY

24-06-2009

0005388084-001

TRANSFER- TRANSFER

DUTIABLE AMOUNT \$ *****3,000,000.00

DUTY

\$ *****150,490.00

(A) TORRENS TITLE

1/569139

(B) LODGED BYDocument
Collection
Box

745

Name, Address or DX, Telephone, and LLPN if any

Allens Arthur Robinson LLPN 123024W
DX 105 Sydney Tel: 9230 4000

Reference: VKHS:206007894:PATS*6057

CODEST JT
TJ TW**(C) TRANSFEROR**

REX GENE MAUGHAN

(D) CONSIDERATION

The transferor acknowledges receipt of the consideration of \$ 10.00

and as regards

(E) ESTATE

the above land transfers to the transferee an estate in fee simple

(F) SHARE**TRANSFERRED****(G)**

Encumbrances (if applicable):

(H) TRANSFEEAUSTRALIA INVESTMENTS, LLC a company registered in the Arizona
Corporation Commission, USA**(I)****TENANCY:**

DATE 29 June 2009

(J)I certify that the person(s) signing opposite, with whom
I am personally acquainted or as to whose identity I am
otherwise satisfied, signed this instrument 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: FOR EXECUTION SEE

Address of witness: ANNEXURE 'A'

I certify that the person(s) signing opposite, with whom
I am personally acquainted or as to whose identity I am
otherwise satisfied, signed this instrument 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: FOR EXECUTION SEE

Address of witness: ANNEXURE 'A'

RELODGEDALL HANDWRITING MUST BE IN BLOCK CAPITALS.
0902

14 AUG 2009

TIME: 3:47

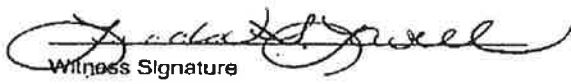
Page 1 of 23


DEPARTMENT OF LANDS
LAND AND PROPERTY INFORMATION DIVISION

THIS IS ANNEXURE A TO TRANSFER FROM REX GENE MAUGHAN TO AUSTRALIA
INVESTMENTS, LLC DATED 29 June 2009

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


I certify that the person signing opposite, with
whom I am personally acquainted or as to
whose identity I am otherwise satisfied,
signed this instrument in my presence

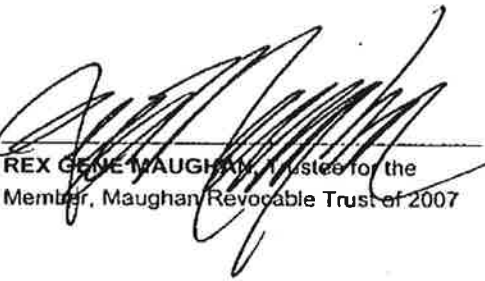

Witness Signature
Linda S. Lovell
Print Name
4501 E McCormick Pkwy
Address
Scottsdale, AZ 85086 USA



Signature

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

Executed by AUSTRALIA INVESTMENTS,
LLC, a company registered in the Arizona
Corporation Commission, USA, in
accordance with its Articles of Organisation
in the presence of:


Witness Signature
Linda S. Lovell
Print Name
4501 E McCormick Pkwy
Address
Scottsdale, AZ 85086 USA


Signature
REX GENE MAUGHAN, Trustee for the
Member, Maughan Revocable Trust of 2007


Victoria Hoffhouse
Solicitor for
the Transferee

FILM WITH

DECLARATION

I, REX GENE MAUGHAN of 7501 East McCormick Parkway, Scottsdale, Arizona 85258 USA, am a Trustee of the Maughan Revocable Trust of 2007, which is the sole member of Australia Investments, L.L.C. ("the Company") and do hereby swear, affirm and state under the penalty of perjury under the laws of the United States of America, as follows:

1. I am an adult person, competent to make this declaration on behalf of the Company and have personal knowledge of the matters set forth herein.
2. The Company is a foreign company.
3. The Company is not a registered foreign company.
4. The Company does not have an Australia Registered Body Number.
5. The Company does not carry on business in Australia within the meaning of s21(3) of the Corporations Act 1989.
6. All of the foregoing information is true and correct to the best of my knowledge, information and belief. If called upon to testify in court, I would testify as I have set forth above.

Dated this 24 July, 2009


REX GENE MAUGHAN

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/569139

SEARCH DATE	TIME	EDITION NO	DATE
3/8/2016	7:51 PM	9	22/6/2015

LAND

LOT 1 IN DEPOSITED PLAN 569139
AT PARRAMATTA
LOCAL GOVERNMENT AREA CITY OF PARRAMATTA
PARISH OF ST JOHN COUNTY OF CUMBERLAND
TITLE DIAGRAM DP569139

FIRST SCHEDULE

PARRAMATTA CITY COUNCIL

(T AJ588489)

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 DP776173 RESTRICTION(S) ON THE USE OF LAND
- 3 O898268 POSITIVE COVENANT

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

3/8/2016 7:44PM

FOLIO: 1/742271

First Title(s): OLD SYSTEM

Prior Title(s): CA17906

Recorded	Number	Type of Instrument	C.T. Issue
23/3/1987	CA17906	CONVERSION ACTION	FOLIO CREATED EDITION 1
18/5/1989	Y373361	VARIATION OF MORTGAGE	EDITION 2
22/3/1991	Z551537	VARIATION OF MORTGAGE	EDITION 3
22/4/1991	Z604589	LEASE	EDITION 4
9/2/1993	I105619	VARIATION OF MORTGAGE	EDITION 5
1/2/1995	U982687	DISCHARGE OF MORTGAGE	
1/2/1995	U982688	LEASE	
1/2/1995	U982689	VARIATION OF LEASE	EDITION 6
21/9/1995	O548854	LEASE	
21/9/1995	O548855	LEASE	
21/9/1995	O548856	LEASE	EDITION 7
29/9/1995	O574410	LEASE	EDITION 8
5/6/1998	5036788	VARIATION OF LEASE	EDITION 9
11/8/1999	6083251	CAVEAT	
22/10/1999	6288013	SURRENDER OF LEASE	EDITION 10
4/6/2001	7436431	APPLICATION FOR PREPARATION OF LAPSING NOTICE	
4/9/2001	7912663	REQUEST	
4/9/2001	7912664	TRANSFER	
4/9/2001	7912665	MORTGAGE	EDITION 11
31/3/2004	AA534350	LEASE	EDITION 12
16/8/2007	AD320581	LEASE	EDITION 13
29/7/2008	AE116754	TRANSFER	EDITION 14

END OF PAGE 1 - CONTINUED OVER

SEARCH DATE

3/8/2016 7:44PM

FOLIO: 1/742271

PAGE 2

Recorded	Number	Type of Instrument	C.T. Issue
12/10/2009	AE784457	LEASE	EDITION 15
2/3/2012	AG818337	DISCHARGE OF MORTGAGE	
2/3/2012	AG818338	MORTGAGE	EDITION 16
7/12/2013	AI221604	DISCHARGE OF MORTGAGE	EDITION 17
22/1/2014	AI318294	TRANSFER	EDITION 18
20/5/2014	AI590551	TRANSFER	EDITION 19
17/4/2015	AJ412502	CAVEAT	
13/8/2015	AJ728014	WITHDRAWAL OF CAVEAT	
13/8/2015	AJ728015	TRANSFER	EDITION 20
29/6/2016	AK558617	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

parramatta

PRINTED ON 3/8/2016

Ref:parramatta /Src:M

Form: 01T
Release: 1
www.lpi.nsw.gov.au

TRANSFER

New South Wales
Real Property Act 1900



7912664J

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

STAMP DUTY

Office of State Revenue use	CLIENT No. 1387067	STAMP No. 789
	STAMP DUTY.....\$2.00	SIGNATURE <i>[Signature]</i>
	TRANSACTION No. 012604	DATE 29/6/2001
ASSESSMENT DETAILS:		

(A) TORRENS TITLE

1/742271

(B) LODGED BY

Delivery Box	Name, Address or DX and Telephone	CODES
24J	CTB	T
	Reference: 479213	TW
		(Sheriff)

(C) TRANSFEROR

WALDOR DEVELOPMENT PTY. LIMITED A.C.N. 000 308 510

(D) CONSIDERATION The transferor acknowledges receipt of the consideration of \$ 2,500,000.00 and as regards

(E) ESTATE the land specified above transfers to the transferee an estate in fee simple

(F) SHARE TRANSFERRED

(G) Encumbrances (if applicable):

(H) TRANSFEEE

JOHN FRANCIS SURIAN, CHRISTINE TERESE SHARP, ANDREW BROOKS,
DAVID RONALD LEWARNE and REDLEE IMPORTS PTY LTD A.C.N. 072 007 366

TENANCY: Tenants in Common in Equal Shares

(J) DATE

29/06/01

Certified correct for the purposes of the Real Property Act 1900
by the corporation named below the common seal of which
was affixed pursuant to the authority specified and in the presence
of the authorised person(s) whose signature(s) appear(s) below.
Corporation:
Authority:

Signature of authorised person:
[Signature]
Name of authorised person:
Office held: SECRETARY

Signature of authorised person:
[Signature]
Name of authorised person:
Office held: DIRECTOR



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

Signature:

[Signature]
WARREN JOHN DE MONTENAS
W. de MONTENAS.

Signatory's name:

Signatory's capacity: transferees' solicitor

Ref:parramatta /Src:M

Form: 01T
Licence: 01-05-025
Licensee: LEAP Legal Software Pty Limited
Firm name: Jennifer E Darin

TRANSFER

New South Wales
Real Property Act 1900



AE116754W

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

NEW SOUTH WALES DUTY
10-07-2008 0005062376-001
TRANSFER- TRANSFER
DUTIABLE AMOUNT \$ *****500,000.00
DUTY \$ *****17,990.00

(A) TORRENS TITLE

If appropriate, specify the part transferred
FOLIO IDENTIFIER 1/742271

(B) LODGED BY

Delivery Box
Name, Address or DX and Telephone

245

LLPN:123836E
CTB

Reference (optional): 479212-teo1

CODES
T
TW
(Sheriff)

(C) TRANSFEROR

DAVID RONALD LEWARNE

(D) CONSIDERATION

The transferor acknowledges receipt of the consideration of \$500,000.00 and as regards the land specified above transfers to the transferee an estate in fee simple.

(E) ESTATE

(F) SHARE TRANSFERRED

(G) Encumbrances (if applicable): Mortgage registered No. 7912665

(H) TRANSFEE

ANDREW BROOKS and JOHN FRANCIS SURIAN

(I) **TENANCY:** Tenants in Common in Equal Shares

DATE 10/07/2008

(J) I certify that the person(s) signing opposite, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this instrument in my presence.

Signature of witness:

Name of witness:

Address of witness:

Therese Yanes.
54 Derrett St.
Nth. Parramatta

I certify that the person(s) signing opposite, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this instrument in my presence.

Signature of witness:

Name of witness:

Address of witness:

Lisa Ewing
LISA EWING
206 CORUNNA ROAD
PETERSHAM 2049

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

Signature of transferor:

10.7.08

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

Signature of transferee:

[Signature]

Ref:parramatta /Src:M

Licence: 05-11-636
Licensee: Sdtdocs
Matthews Folbig Pty Limited

TRANSFER

New South Wales
Real Property Act 1900



AI318294E

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

STAMP DUTY

Office of State Revenue use only

Office of State Revenue	
Client No: 2312806	
Duty: \$10 -	Trans No: 7447115
Asst details:	

(A) TORRENS TITLE

1/742271

(B) LODGED BY

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODES
307V	Matthews Folbigg Tel: 9635 7966 Fax: 9689 3494 PO Box 248 Parramatta 2124 DX 8233 Parramatta Reference (optional): 307V	T TW

(C) TRANSFEROR

REDLEE IMPORTS PTY LTD (ACN 072 007 366)

(D) CONSIDERATION

The transferor acknowledges receipt of the consideration of \$ 590,000.00 and as regards the land

(E) ESTATE

specified above transfers to the transferee an estate in fee simple.

(F) SHARE TRANSFERRED

--

(G)

Encumbrances (if applicable):

(H) TRANSFEE

REDLEE IMPORTS PTY LTD (ACN 072 007 366)
TENANCY:

DATE

20/12/13

(J) Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the company named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.
Company: REDLEE IMPORTS PTY LTD (ACN 072 007 366)
Authority: Section 127(1) of the Corporations Act 2001

Signature of authorised person:

Name of authorised person:

Office held:

Robert Henry Walsman
Robert Henry Walsman
Director

Signature of authorised person:

Name of authorised person:

Office held:

Robert Henry Walsman
Robert Henry Walsman
Director

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

Signature:

Phillip Brophy

Signatory's name: Phillip Brophy

Capacity: Solicitor for the transferee

(K) The transferee's solicitor 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

Ref:parramatta /Src:M

Form: 01T
Licence: 05-11-638
Licensee: Softdocs
Matthews Folbigg Pty Limited

TRANSFER
New South Wales
Real Property Act 1900



AI590551M

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the use of 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

Office of State Revenue
NSW Treasury
Client No: 2312805 1867
Duty: \$10.00 Trans No: 7605446
Asst details:

(A) TORRENS TITLE

1/742271

(B) LODGED BY

Document
Collection
Box

307V

Name, Address or DX, Telephone, and Customer Account Number if any

Acc. No. 123198L Matthews Folbigg Pty Limited
DX 8233 PARRAMATTA
Tel: 9635 7966

Reference (optional): PRB140453

CODES

**T
TW**

(C) TRANSFEROR

JOHN FRANCIS SURIAN

(D) CONSIDERATION The transferor acknowledges receipt of the consideration of \$ 885,000

and as regards the land

(E) ESTATE specified above transfers to the transferee an estate in fee simple.

**(F) SHARE
TRANSFERRED**

(G) Encumbrances (if applicable):

(H) TRANSFEE

JOHN F SURIAN PTY LTD ACN 001 906 118

(I) **TENANCY:**

DATE

5 / 5 / 14

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

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

Signature of witness:

[Signature]

Signature of transferor:

[Signature]

Name of witness:

SUSAN LEWIS

Address of witness:

21 CADDIES BOULEVARD
ROUSE HILL

Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the company named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.

Company: JOHN F SURIAN PTY LTD ACN 001 906 118

Authority: Section 127(1) of the Corporations Act 2001

Signature of authorised person:

Name of authorised person:

Office held:

[Signature]
Nancy Surian
Director

Signature of authorised person:

Name of authorised person:

Office held: x

[Signature]
John Surian
Director

(K) The transferee's solicitor 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.

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/742271

SEARCH DATE	TIME	EDITION NO	DATE
9/8/2016	2:32 PM	20	13/8/2015

LAND

LOT 1 IN DEPOSITED PLAN 742271
AT PARRAMATTA
LOCAL GOVERNMENT AREA CITY OF PARRAMATTA
PARISH OF ST JOHN COUNTY OF CUMBERLAND
TITLE DIAGRAM DP742271

FIRST SCHEDULE

PARRAMATTA CITY COUNCIL

(T AJ728015)

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 LIMITED TITLE. LIMITATION PURSUANT TO SECTION 28T(4) OF THE REAL PROPERTY ACT, 1900. THE BOUNDARIES OF THE LAND COMPRISED HEREIN HAVE NOT BEEN INVESTIGATED BY THE REGISTRAR GENERAL.

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

parramatta

PRINTED ON 9/8/2016

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

9/8/2016 11:23AM

FOLIO: C/384927

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 15127 FOL 109

Recorded	Number	Type of Instrument	C.T. Issue
29/7/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
26/9/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
12/8/1999	6084941	CAVEAT	
21/2/2000	6504297	CAVEAT	
21/2/2000	6504298	CAVEAT	
29/6/2000	6889731	REQUEST	
29/6/2000	6889732	REQUEST	
27/7/2001	7810392	DEPARTMENTAL DEALING	
7/2/2002	DP1014803	REJECTED - DEPOSITED PLAN	
24/5/2002	6796013	WITHDRAWN - REQUEST	
24/5/2002	6796014	WITHDRAWN - REQUEST	
19/9/2002	8891233	CAVEAT	
19/9/2002	8891234	CAVEAT	
25/9/2007	AD439976	DEPARTMENTAL DEALING	
29/6/2016	AK558617	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

NEW SOUTH WALES

First Title : Old System

Prior Title : Vol.8414 Fol.152

CERTIFICATE OF TITLE

REAL PROPERTY ACT, 1900



Vol. 15127 Fol. 109

EDITION
ISSUED 4 10 1983

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.

[Signature]
Registrar General.



PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



LAND REFERRED TO

Lot C in Deposited Plan 384927 at Parramatta in the City of Parramatta Parish of St. John and County of Cumberland.

FIRST SCHEDULE

THE COUNCIL OF THE CITY OF PARRAMATTA.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON
(Page 1) Vol. 15127 Fol. 109

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

FIRST SCHEDULE (continued)
REGISTERED PROPRIETOR

Registrar General

SECOND SCHEDULE (continued)

PARTICULARS

Registrar General

CANCELLATION

NOTATIONS AND UNREGISTERED DEALINGS

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: C/384927

SEARCH DATE	TIME	EDITION NO	DATE
9/8/2016	2:27 PM	-	-

VOL 15127 FOL 109 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LOT C IN DEPOSITED PLAN 384927
AT PARRAMATTA
LOCAL GOVERNMENT AREA CITY OF PARRAMATTA
PARISH OF ST JOHN COUNTY OF CUMBERLAND
TITLE DIAGRAM DP384927

FIRST SCHEDULE

THE COUNCIL OF THE CITY OF PARRAMATTA

SECOND SCHEDULE (6 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- * 2 6084941 CAVEAT BY RIVERQUAY DEVELOPMENTS PTY LIMITED
- * 3 6504297 CAVEAT BY PARRAMATTA REALTY PTY LIMITED
- * 6889731 ORDER OF COURT
- * 4 6504298 CAVEAT BY PARRAMATTA REALTY PTY LIMITED & BODY
CORPORATE MANAGEMENT SERVICES PTY LIMITED
- * 6889732 ORDER OF COURT
- * 5 8891233 CAVEAT BY PARRAMATTA REALTY PTY LIMITED
- * 6 8891234 CAVEAT BY PARRAMATTA REALTY PTY LIMITED & BODY
CORPORATE MANAGEMENT SERVICES PTY LTD

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

parramatta

PRINTED ON 9/8/2016

Appendix F Council Certificates



PLANNING CERTIFICATE

CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979 as amended

Certificate No: 2016/3868
Fee: \$133.00
Issue Date: 3 August 2016
Receipt No: 4706939
Applicant Ref: PSM PARRAMATTA:49215

DESCRIPTION OF LAND

Address: St Georges Terrace
44 Phillip Street
PARRAMATTA NSW 2150
Lot Details: Lot 1 DP 742271

SECTION A

The following Environmental Planning Instrument to which this certificate relates applies to the land:

Parramatta Local Environmental Plan 2011

For the purpose of **Section 149(2)** it is advised that as the date of this certificate the abovementioned land is affected by the matters referred to as follows:



The land is zoned: B4 Mixed Use PLEP2011

Issued pursuant to Section 149 of the Environmental Planning and Assessment Act, 1979.

NOTE: This table is an excerpt from Parramatta Local Environmental Plan 2011 and must be read in conjunction with and subject to the other provisions of that instrument, and in force at that date.

1 Objectives of zone

- To provide a mixture of compatible land uses.
- To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.
- To encourage development that contributes to an active, vibrant and sustainable neighbourhood.
- To create opportunities to improve the public domain and pedestrian links.
- To support the higher order Zone B3 Commercial Core while providing for the daily commercial needs of the locality.
- To protect and enhance the unique qualities and character of special areas within the Parramatta City Centre.

2 Permitted without consent

Home occupations

3 Permitted with consent

Boarding houses; Building identification signs; Business identification signs; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Hotel or motel accommodation; Information and education facilities; Light industries; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Seniors housing; Shop top housing; Water recycling facilities; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Crematoria; Depots; Dual occupancies; Dwelling houses; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home industries; 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); Research stations; Rural industries; Rural workers' dwellings; Secondary dwellings; Semi-detached dwellings; Sewerage systems; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water supply systems; Wharf or boating facilities; Wholesale supplies



SECTION B**State Policies and Regional Environmental Plans**

The land is affected by State Environmental Planning Policies and Regional Environmental Plans as detailed in Annexure "B1".

Draft Local Environmental Plan

The land is not affected by a Draft Local Environmental Plan which has been placed on Public Exhibition and has not yet been published.

Development Control Plan

The land is affected by Parramatta Development Control Plan 2011.

The Minister for Planning has issued directions that provisions of an EPI do not apply to certain Part 4 development where a concept plan has been approved under Part 3A.

Development Contribution Plan

The Parramatta Civic Improvement Plan (Amendment No. 4) applies to this land.

Heritage Item/Heritage Conservation Area

The land is identified as containing a Heritage Item in Parramatta Local Environmental Plan 2011

The land is not located in a heritage conservation area.

Road Widening

The land is not affected by road widening or road realignment under:

- (a) Division 2 of Part 3 of the Roads Act 1993.
- (b) Any Environmental Planning Instrument.
- (c) Any Resolution of Council.

Land Reservation Acquisition

The land is not affected by Land Reservation Acquisition in Parramatta Local Environmental Plan 2011.

Site Compatibility Certificate (Seniors Housing, Infrastructure and Affordable Rental Housing)

At the date of issue of this certificate Council is not aware of any

- a. Site compatibility certificate (affordable rental housing),
- b. Site compatibility certificate (infrastructure),
- c. Site compatibility certificate (seniors housing)

in respect to the land issued pursuant to the Environmental Planning & Assessment Amendment (Site Compatibility Certificates) Regulation 2009 (NSW).

Contamination

The land is not affected by any of the matters contained in Clause 59(2) as amended in the Contaminated Land Management Act 1997 – as listed

- a. that the land to which the certificate relates is significantly contaminated land
- b. that the land to which the certificate relates is subject to a management order



- c. that the land to which the certificate relates is the subject of an approved voluntary management proposal
- d. that the land to which the certificate relates is subject to an ongoing maintenance order
- e. that the land to which the certificate relates is the subject of a site audit statement

Tree Preservation

The land is subject to Section 5.4 Preservation of Trees or Vegetation in Parramatta Development Control Plan 2011.

Council has not been notified of an order under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land.

Coastal Protection

The land is not affected by Section 38 or 39 of the Coastal Protection Act 1979.

Has an order been made under Part 4D of the Coastal Protection Act 1979 in relation to temporary coastal protection works (within the meaning of the Act) on the land (or on public land adjacent to that land)?

NO

Has Council been notified under section 55x of the Coastal Protection Act 1979 that temporary coastal protection works (within the meaning of the Act) have been placed on the land (or on public land adjacent to that land)?

NO

Has the owner (or any previous owner) of the land been consented in writing to the land being subject to annual charges under section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act)?

NO

Council Policy

Council has not adopted a policy to restrict the development of the land by reason of the likelihood of projected sea level rise (coastal protection), tidal inundation, subsidence or any other risk on land subject to the Parramatta Local Environmental Plan 2011.

Council has adopted a policy covering areas subject to the Parramatta Local Environmental Plan 2011 to restrict development of any land by reason of the likelihood of flooding.

Council has adopted by resolution a policy on contaminated land that applies to areas subject to the Parramatta Local Environmental Plan 2011. The Policy will restrict the development of the land if the circumstances set out in the policy prevail. A copy of the policy is available on Councils website at www.parracity.nsw.gov.au or from the Customer Service Centre.

**Mine Subsidence**

The land is not affected by Section 15 of the Mine Subsidence Compensation Act 1961 proclaiming land to be a Mine Subsidence District.

Bushfire Land

The land is not bushfire prone land.

Threatened Species

The Director General with responsibility for the Threatened Species Conservation Act 1995 has not advised Council that the land includes or comprises a critical habitat.

**State Environmental Planning Policy
(Exempt and Complying Development Codes) 2008**

**This does not constitute a Complying Development Certificate under section
85 of the EP&A Act**

This information only addresses matters raised in **Clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1)(c3) and 1.19** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

General Housing Code

Complying Development pursuant to the General Housing Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

Rural Housing Code

Complying Development pursuant to the Rural Housing Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

Housing Alterations Code



Complying Development pursuant to the Housing Alterations Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

General Development Code

Complying Development pursuant to the General Development Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

Demolition Code

Complying Development pursuant to the Demolition Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

Commercial and Industrial (New Buildings and Additions) Code

Complying Development pursuant to Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

General Commercial and Industrial (Alterations) Code

Complying Development pursuant to the General Commercial and Industrial (Alterations) Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:



- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

Subdivision Code

Complying Development pursuant to the Subdivision Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

Fire Safety Code

Complying Development pursuant to the Fire Safety Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),



SPECIAL NOTES

The land is identified as Class 4 on the Acid Sulfate Soils map. Refer to Clause 6.1 of Parramatta Local Environmental Plan 2011.

Applicants for Sections 149 Certificates are advised that Council does not hold sufficient information to fully detail the effect of any encumbrances on the title of the subject land. The information available to Council is provided on the basis that neither Council nor its servants hold out advice or warrant to you in any way its accuracy, nor shall Council or its servants, be liable for any negligence in the preparation of that information. Further information should be sought from relevant Statutory Departments.



SECTION C**The following additional information is issued under Section 149(5)**

Pursuant to S149(5) the Council supplies information as set out below on the basis that the Council takes no responsibility for the accuracy of the information. The information if material should be independently checked by the applicant.

This land is identified on the Additional Local Provisions Map of the Parramatta Local Environmental Plan 2011. Part 7 Additional local provisions – Parramatta City Centre of the Parramatta Local Environmental Plan 2011 applies to the land.

This land is identified as a “Key site” on the Key Sites Map of the Parramatta Local Environmental Plan 2011.

Aboriginal Heritage – High Sensitivity – potential to contain items of Aboriginal heritage. Contact Council’s Customer Service/Duty Planner (02) 9806 5050 for more information.

The land is considered by Council TO BE ABOVE the 1 in 100 year mainstream flood level.

This information is based on data available to the Council. It is provided on the basis that neither Council nor its servants hold out advice or warrant to you in any way its accuracy, nor shall the Council or its servants, be liable for any negligence in the preparation of that information.

Note: Advisory Information regarding Loose-Fill asbestos Insulation

Research undertaken by the Loose-Fill Asbestos Insulation Taskforce has determined that there is a potential for loose-fill asbestos insulation to be found in residential dwellings constructed prior to 1980 in 28 local government areas including the City of Parramatta.

Some residential homes located in the City of Parramatta may contain loose-fill asbestos insulation, for example in the roof space. NSW Fair Trading maintains a Register of homes that are affected by loose-fill asbestos insulation.

You should make your own enquiries as to the age of the buildings on the land to which this certificate relates and, if it contains a building constructed prior to 1980, the council strongly recommends that any potential purchaser obtain advice from a licensed asbestos assessor to determine whether loose fill asbestos is present in any building on the land and, if so, the health risks (if any) this may pose for the building’s occupants.

Please Contact NSW Fair Trading for further information.

This information has been provided pursuant to section 149(5) of the Environmental Planning and Assessment Act, 1979 as amended.

**ANNEXURE "B1"**

Issued pursuant to Section 149 of the Environmental Planning and Assessment Act 1979. Note: The following information is supplied in respect of Section 149 and embodies the requirements of Department of Planning Circular No. A2 dated 17 March 1989 and the Ministerial Notification dated 15 December 1986.

STATE ENVIRONMENTAL PLANNING POLICY NO.1 - Development Standards

STATE ENVIRONMENTAL PLANNING POLICY NO.19 - Bushland in Urban Areas

STATE ENVIRONMENTAL PLANNING POLICY NO.21 – Caravan Parks

STATE ENVIRONMENTAL PLANNING POLICY NO.32 - Urban Consolidation (Redevelopment of Urban Land)

STATE ENVIRONMENTAL PLANNING POLICY NO.33 - Hazardous and Offensive Development

STATE ENVIRONMENTAL PLANNING POLICY NO.55 - Remediation of Land

STATE ENVIRONMENTAL PLANNING POLICY NO.64 - Advertising and Signage

STATE ENVIRONMENTAL PLANNING POLICY NO.65 – Design Quality of Residential Flat Development.

STATE ENVIRONMENTAL PLANNING POLICY NO.70 – Affordable Housing (Revised Schemes)

STATE ENVIRONMENTAL PLANNING POLICY – (Housing for Seniors or People with a Disability) 2004

STATE ENVIRONMENTAL PLANNING POLICY – (Building Sustainability Index: BASIX) 2004

STATE ENVIRONMENTAL PLANNING POLICY – (Major Development) 2005

STATE ENVIRONMENTAL PLANNING POLICY – (Mining, Petroleum Production and Extractive Industries) 2007

STATE ENVIRONMENTAL PLANNING POLICY – (Temporary Structures) 2007

STATE ENVIRONMENTAL PLANNING POLICY (Infrastructure) 2007

STATE ENVIRONMENTAL PLANNING POLICY (Exempt and Complying Development Codes) 2008

STATE ENVIRONMENTAL PLANNING POLICY (Affordable Rental Housing) 2009

SYDNEY REGIONAL ENVIRONMENTAL PLAN NO.9 (No.2) - Extractive Industries

SYDNEY REGIONAL ENVIRONMENTAL PLAN NO.24 - Homebush Bay Area

SYDNEY REGIONAL ENVIRONMENTAL PLAN – (Sydney Harbour Catchment) 2005

N.B. All enquiries as to the application of Draft, State and Regional Environmental Planning Policies should be directed to The Department of Planning and Infrastructure – 23-33 Bridge Street Sydney NSW 2000.



Greg Dyer
Interim General Manager

per

A handwritten signature in black ink, appearing to read "M. Dyer", written over a horizontal line.

dated 3 August 2016



PLANNING CERTIFICATE

CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979 as amended

Certificate No: 2016/3872
Fee: \$133.00
Issue Date: 4 August 2016
Receipt No: 4706939
Applicant Ref: PSM PARRAMATTA:49215

DESCRIPTION OF LAND

Address: CBD Foreshore Reserve (Pk 439)
30B Phillip Street
PARRAMATTA NSW 2150

Lot Details: Lot 1 DP 730119 Lot 1 DP 500494 Lot 2 DP 633550 Lot 102 DP 1031459 Lot A DP 421172 Lot B DP 393866 Lot A DP 350651 Lot B DP 384927 Lot 2 DP 569139 Lot A DP 384927 Lot 1 DP 1106033

SECTION A

The following Environmental Planning Instrument to which this certificate relates applies to the land:

Parramatta Local Environmental Plan 2011

For the purpose of **Section 149(2)** it is advised that as the date of this certificate the abovementioned land is affected by the matters referred to as follows:



The land is zoned: B4 Mixed Use PLEP2011

Issued pursuant to Section 149 of the Environmental Planning and Assessment Act, 1979.

NOTE: This table is an excerpt from Parramatta Local Environmental Plan 2011 and must be read in conjunction with and subject to the other provisions of that instrument, and in force at that date.

1 Objectives of zone

- To provide a mixture of compatible land uses.
- To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.
- To encourage development that contributes to an active, vibrant and sustainable neighbourhood.
- To create opportunities to improve the public domain and pedestrian links.
- To support the higher order Zone B3 Commercial Core while providing for the daily commercial needs of the locality.
- To protect and enhance the unique qualities and character of special areas within the Parramatta City Centre.

2 Permitted without consent

Home occupations

3 Permitted with consent

Boarding houses; Building identification signs; Business identification signs; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Hotel or motel accommodation; Information and education facilities; Light industries; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Seniors housing; Shop top housing; Water recycling facilities; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Crematoria; Depots; Dual occupancies; Dwelling houses; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home industries; 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); Research stations; Rural industries; Rural workers' dwellings; Secondary dwellings; Semi-detached dwellings; Sewerage systems; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water supply systems; Wharf or boating facilities; Wholesale supplies

The land is zoned: RE1 Public Recreation PLEP2011



Issued pursuant to Section 149 of the Environmental Planning and Assessment Act, 1979.

NOTE: This table is an excerpt from Parramatta Local Environmental Plan 2011 and must be read in conjunction with and subject to the other provisions of that instrument, and in force at that date.

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.
- To conserve, enhance and promote the natural assets and cultural heritage significance of Parramatta Park.
- To create a riverfront recreational opportunity that enables a high quality relationship between the built and natural environment.

2 Permitted without consent

Environmental protection works; Flood mitigation works

3 Permitted with consent

Boat launching ramps; Boat sheds; Charter and tourism boating facilities; Community facilities; Environmental facilities; Information and education facilities; Jetties; Kiosks; Markets; Recreation areas, Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Restaurants or cafes; Roads; Take away food and drink premises; Water recreation structures; Water recycling facilities

4 Prohibited

Any development not specified in item 2 or 3

SECTION B

State Policies and Regional Environmental Plans

The land is affected by State Environmental Planning Policies and Regional Environmental Plans as detailed in Annexure "B1".

Draft Local Environmental Plan

The land is not affected by a Draft Local Environmental Plan which has been placed on Public Exhibition and has not yet been published.

Development Control Plan

The land is affected by Parramatta Development Control Plan 2011.

The Minister for Planning has issued directions that provisions of an EPI do not apply to certain Part 4 development where a concept plan has been approved under Part 3A.

Development Contribution Plan

The Parramatta Civic Improvement Plan (Amendment No. 4) applies to this land.

Heritage Item/Heritage Conservation Area

An item of environmental heritage is not situated on the land.



The land is not located in a heritage conservation area.

Road Widening

The land is not affected by road widening or road realignment under:

- (a) Division 2 of Part 3 of the Roads Act 1993.
- (b) Any Environmental Planning Instrument.
- (c) Any Resolution of Council.

Land Reservation Acquisition

The land is not affected by Land Reservation Acquisition in Parramatta Local Environmental Plan 2011.

Site Compatibility Certificate (Seniors Housing, Infrastructure and Affordable Rental Housing)

At the date of issue of this certificate Council is not aware of any

- a. Site compatibility certificate (affordable rental housing),
- b. Site compatibility certificate (infrastructure),
- c. Site compatibility certificate (seniors housing)

in respect to the land issued pursuant to the Environmental Planning & Assessment Amendment (Site Compatibility Certificates) Regulation 2009 (NSW).

Contamination

The land is not affected by any of the matters contained in Clause 59(2) as amended in the Contaminated Land Management Act 1997 – as listed

- a. that the land to which the certificate relates is significantly contaminated land
- b. that the land to which the certificate relates is subject to a management order
- c. that the land to which the certificate relates is the subject of an approved voluntary management proposal
- d. that the land to which the certificate relates is subject to an ongoing maintenance order
- e. that the land to which the certificate relates is the subject of a site audit statement

Tree Preservation

The land is subject to Section 5.4 Preservation of Trees or Vegetation in Parramatta Development Control Plan 2011.

Council has not been notified of an order under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land.

Coastal Protection

The land is not affected by Section 38 or 39 of the Coastal Protection Act 1979.

Has an order been made under Part 4D of the Coastal Protection Act 1979 in relation to temporary coastal protection works (within the meaning of the Act) on the land (or on public land adjacent to that land)?

NO



Has Council been notified under section 55x of the Coastal Protection Act 1979 that temporary coastal protection works (within the meaning of the Act) have been placed on the land (or on public land adjacent to that land)?

NO

Has the owner (or any previous owner) of the land been consented in writing to the land being subject to annual charges under section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act)?

NO

Council Policy

Council has not adopted a policy to restrict the development of the land by reason of the likelihood of projected sea level rise (coastal protection), tidal inundation, subsidence or any other risk on land subject to the Parramatta Local Environmental Plan 2011.

Council has adopted a policy covering areas subject to the Parramatta Local Environmental Plan 2011 to restrict development of any land by reason of the likelihood of flooding.

Council has adopted by resolution a policy on contaminated land that applies to areas subject to the Parramatta Local Environmental Plan 2011. The Policy will restrict the development of the land if the circumstances set out in the policy prevail. A copy of the policy is available on Councils website at www.parracity.nsw.gov.au or from the Customer Service Centre.

Mine Subsidence

The land is not affected by Section 15 of the Mine Subsidence Compensation Act 1961 proclaiming land to be a Mine Subsidence District.

Bushfire Land

The land is not bushfire prone land.

Threatened Species

The Director General with responsibility for the Threatened Species Conservation Act 1995 has not advised Council that the land includes or comprises a critical habitat.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

This does not constitute a Complying Development Certificate under section 85 of the EP&A Act

This information only addresses matters raised in **Clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1)(c3) and 1.19** of State Environmental Planning Policy (Exempt and Complying Development codes) 2008.



It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

General Housing Code

Complying Development pursuant to the General Housing Code **may** be carried out on the land under **Clause 1.17A (1) (c) to (e), (2), (3) and (4) and Clause 1.18 (1)(c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Complying Development pursuant to the General Housing Code **may** be carried out on the land under **Clause 1.19** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Rural Housing Code

Complying Development pursuant to the Rural Housing Code **may** be carried out on the land under **Clause 1.17A (1) (c) to (e), (2), (3) and (4) and Clause 1.18 (1)(c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Complying Development pursuant to the Rural Housing Code **may** be carried out on the land under **Clause 1.19** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Housing Alterations Code

Complying Development pursuant to the Housing Alterations Code **may** be carried out on the land under **Clause 1.17A (1) (c) to (e), (2), (3) and (4) and Clause 1.18 (1)(c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Complying Development pursuant to the Housing Alterations Code **may** be carried out on the land under **Clause 1.19** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

General Development Code

Complying Development pursuant to the General Development Code **may** be carried out on the land under **Clause 1.17A (1) (c) to (e), (2), (3) and (4) and Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Complying Development pursuant to the General Development Code **may** be carried out on the land under **Clause 1.19** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.



Demolition Code

Complying Development pursuant to the Demolition Code **may** be carried out on the land under **Clause 1.17A (1) (c) to (e), (2), (3) and (4) and Clause 1.18 (1)(c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Complying Development pursuant to the Demolition Code **may** be carried out on the land under **Clause 1.19** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Commercial and Industrial (New Buildings and Additions) Code

Complying Development pursuant to the Commercial and Industrial (New Buildings and Additions) Code **may** be carried out on the land under **Clause 1.17A (1) (c) to (e), (2), (3) and (4) and Clause 1.18 (1)(c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Complying Development pursuant to the Commercial and Industrial (New Buildings and Additions) Code **may** be carried out on the land under **Clause 1.19** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

General Commercial and Industrial (Alterations) Code

Complying Development pursuant to the General Commercial and Industrial (Alterations) Code **may** be carried out on the land under **Clause 1.17A (1) (c) to (e), (2), (3) and (4) and Clause 1.18 (1)(c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Complying Development pursuant to the General Commercial and Industrial (Alterations) Code **may** be carried out on the land under **Clause 1.19** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Subdivision Code

Complying Development pursuant to the Subdivision Code **may** be carried out on the land under **Clause 1.17A (1) (c) to (e), (2), (3) and (4) and Clause 1.18 (1)(c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Complying Development pursuant to the Subdivision Code **may** be carried out on the land under **Clause 1.19** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Fire Safety Code

Complying Development pursuant to the Fire Safety Code **may** be carried out on the land under **Clause 1.17A (1) (c) to (e), (2), (3) and (4) and Clause 1.18 (1)(c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Complying Development pursuant to the Fire Safety Code **may** be carried out on the land under **Clause 1.19** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

**SPECIAL NOTES**

The land is identified as Class 4 on the Acid Sulfate Soils map. Refer to Clause 6.1 of Parramatta Local Environmental Plan 2011.

Applicants for Sections 149 Certificates are advised that Council does not hold sufficient information to fully detail the effect of any encumbrances on the title of the subject land. The information available to Council is provided on the basis that neither Council nor its servants hold out advice or warrant to you in any way its accuracy, nor shall Council or its servants, be liable for any negligence in the preparation of that information. Further information should be sought from relevant Statutory Departments.



SECTION C

The following additional information is issued under Section 149(5)

Pursuant to S149(5) the Council supplies information as set out below on the basis that the Council takes no responsibility for the accuracy of the information. The information if material should be independently checked by the applicant.

This land is identified on the Additional Local Provisions Map of the Parramatta Local Environmental Plan 2011. Part 7 Additional local provisions – Parramatta City Centre of the Parramatta Local Environmental Plan 2011 applies to the land.

This land is identified as a “Key site” on the Key Sites Map of the Parramatta Local Environmental Plan 2011.

Aboriginal Heritage – High Sensitivity – potential to contain items of Aboriginal heritage. Contact Council’s Customer Service/Duty Planner (02) 9806 5050 for more information.

The land is affected by a 100 year Average Recurrence Interval flood as indicated by Council’s current flooding information. As such Council is required to take that into account when determining any development application made in respect of the land.

Further information is available at the Catchment Management Section within Council’s City Assets and Environment Unit.

Additional advice should be also sought from an appropriately qualified person as to the extents and potential hazards associated with the likely flooding of the land. The names of qualified persons maybe obtained from the Institution of Engineers Australia.

Note: Advisory Information regarding Loose-Fill asbestos Insulation

Research undertaken by the Loose-Fill Asbestos Insulation Taskforce has determined that there is a potential for loose-fill asbestos insulation to be found in residential dwellings constructed prior to 1980 in 28 local government areas including the City of Parramatta.

Some residential homes located in the City of Parramatta may contain loose-fill asbestos insulation, for example in the roof space. NSW Fair Trading maintains a Register of homes that are affected by loose-fill asbestos insulation.

You should make your own enquiries as to the age of the buildings on the land to which this certificate relates and, if it contains a building constructed prior to 1980, the council strongly recommends that any potential purchaser obtain advice from a licensed asbestos assessor to determine whether loose fill asbestos is present in any building on the land and, if so, the health risks (if any) this may pose for the building’s occupants.

Please Contact NSW Fair Trading for further information.

This information has been provided pursuant to section 149(5) of the Environmental Planning and Assessment Act, 1979 as amended.

**ANNEXURE "B1"**

Issued pursuant to Section 149 of the Environmental Planning and Assessment Act 1979. Note: The following information is supplied in respect of Section 149 and embodies the requirements of Department of Planning Circular No. A2 dated 17 March 1989 and the Ministerial Notification dated 15 December 1986.

STATE ENVIRONMENTAL PLANNING POLICY NO.1 - Development Standards

STATE ENVIRONMENTAL PLANNING POLICY NO.19 - Bushland in Urban Areas

STATE ENVIRONMENTAL PLANNING POLICY NO.21 – Caravan Parks

STATE ENVIRONMENTAL PLANNING POLICY NO.32 - Urban Consolidation (Redevelopment of Urban Land)

STATE ENVIRONMENTAL PLANNING POLICY NO.33 - Hazardous and Offensive Development

STATE ENVIRONMENTAL PLANNING POLICY NO.55 - Remediation of Land

STATE ENVIRONMENTAL PLANNING POLICY NO.64 - Advertising and Signage

STATE ENVIRONMENTAL PLANNING POLICY NO.65 – Design Quality of Residential Flat Development.

STATE ENVIRONMENTAL PLANNING POLICY NO.70 – Affordable Housing (Revised Schemes)

STATE ENVIRONMENTAL PLANNING POLICY – (Housing for Seniors or People with a Disability) 2004

STATE ENVIRONMENTAL PLANNING POLICY – (Building Sustainability Index: BASIX) 2004

STATE ENVIRONMENTAL PLANNING POLICY – (Major Development) 2005

STATE ENVIRONMENTAL PLANNING POLICY – (Mining, Petroleum Production and Extractive Industries) 2007

STATE ENVIRONMENTAL PLANNING POLICY – (Temporary Structures) 2007

STATE ENVIRONMENTAL PLANNING POLICY (Infrastructure) 2007

STATE ENVIRONMENTAL PLANNING POLICY (Exempt and Complying Development Codes) 2008

STATE ENVIRONMENTAL PLANNING POLICY (Affordable Rental Housing) 2009

SYDNEY REGIONAL ENVIRONMENTAL PLAN NO.9 (No.2) - Extractive Industries

SYDNEY REGIONAL ENVIRONMENTAL PLAN NO.24 - Homebush Bay Area

SYDNEY REGIONAL ENVIRONMENTAL PLAN – (Sydney Harbour Catchment) 2005

N.B. All enquiries as to the application of Draft, State and Regional Environmental Planning Policies should be directed to The Department of Planning and Infrastructure – 23-33 Bridge Street Sydney NSW 2000.



Greg Dyer
Interim General Manager

per

A handwritten signature in black ink, appearing to read "M. Dyer", written over a horizontal line.

dated 4 August 2016



PLANNING CERTIFICATE

CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979 as amended

Certificate No: 2016/3873
Fee: \$133.00
Issue Date: 4 August 2016
Receipt No: 4706939
Applicant Ref: PSM PARRAMATTA:49215

DESCRIPTION OF LAND

Address: Willow Grove
34 Phillip Street
PARRAMATTA NSW 2150

Lot Details: Lot 1 DP 569139

SECTION A

The following Environmental Planning Instrument to which this certificate relates applies to the land:

Parramatta Local Environmental Plan 2011

For the purpose of **Section 149(2)** it is advised that as the date of this certificate the abovementioned land is affected by the matters referred to as follows:



The land is zoned: B4 Mixed Use PLEP2011

Issued pursuant to Section 149 of the Environmental Planning and Assessment Act, 1979.

NOTE: This table is an excerpt from Parramatta Local Environmental Plan 2011 and must be read in conjunction with and subject to the other provisions of that instrument, and in force at that date.

1 Objectives of zone

- To provide a mixture of compatible land uses.
- To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.
- To encourage development that contributes to an active, vibrant and sustainable neighbourhood.
- To create opportunities to improve the public domain and pedestrian links.
- To support the higher order Zone B3 Commercial Core while providing for the daily commercial needs of the locality.
- To protect and enhance the unique qualities and character of special areas within the Parramatta City Centre.

2 Permitted without consent

Home occupations

3 Permitted with consent

Boarding houses; Building identification signs; Business identification signs; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Hotel or motel accommodation; Information and education facilities; Light industries; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Seniors housing; Shop top housing; Water recycling facilities; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Crematoria; Depots; Dual occupancies; Dwelling houses; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home industries; 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); Research stations; Rural industries; Rural workers' dwellings; Secondary dwellings; Semi-detached dwellings; Sewerage systems; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water supply systems; Wharf or boating facilities; Wholesale supplies



SECTION B**State Policies and Regional Environmental Plans**

The land is affected by State Environmental Planning Policies and Regional Environmental Plans as detailed in Annexure "B1".

Draft Local Environmental Plan

The land is not affected by a Draft Local Environmental Plan which has been placed on Public Exhibition and has not yet been published.

Development Control Plan

The land is affected by Parramatta Development Control Plan 2011.

The Minister for Planning has issued directions that provisions of an EPI do not apply to certain Part 4 development where a concept plan has been approved under Part 3A.

Development Contribution Plan

The Parramatta Civic Improvement Plan (Amendment No. 4) applies to this land.

Heritage Item/Heritage Conservation Area

The land is identified as containing a Heritage Item in Parramatta Local Environmental Plan 2011

The land is not located in a heritage conservation area.

Road Widening

The land is not affected by road widening or road realignment under:

- (a) Division 2 of Part 3 of the Roads Act 1993.
- (b) Any Environmental Planning Instrument.
- (c) Any Resolution of Council.

Land Reservation Acquisition

The land is not affected by Land Reservation Acquisition in Parramatta Local Environmental Plan 2011.

Site Compatibility Certificate (Seniors Housing, Infrastructure and Affordable Rental Housing)

At the date of issue of this certificate Council is not aware of any

- a. Site compatibility certificate (affordable rental housing),
- b. Site compatibility certificate (infrastructure),
- c. Site compatibility certificate (seniors housing)

in respect to the land issued pursuant to the Environmental Planning & Assessment Amendment (Site Compatibility Certificates) Regulation 2009 (NSW).

Contamination

The land is not affected by any of the matters contained in Clause 59(2) as amended in the Contaminated Land Management Act 1997 – as listed

- a. that the land to which the certificate relates is significantly contaminated land
- b. that the land to which the certificate relates is subject to a management order



- c. that the land to which the certificate relates is the subject of an approved voluntary management proposal
- d. that the land to which the certificate relates is subject to an ongoing maintenance order
- e. that the land to which the certificate relates is the subject of a site audit statement

Tree Preservation

The land is subject to Section 5.4 Preservation of Trees or Vegetation in Parramatta Development Control Plan 2011.

Council has not been notified of an order under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land.

Coastal Protection

The land is not affected by Section 38 or 39 of the Coastal Protection Act 1979.

Has an order been made under Part 4D of the Coastal Protection Act 1979 in relation to temporary coastal protection works (within the meaning of the Act) on the land (or on public land adjacent to that land)?

NO

Has Council been notified under section 55x of the Coastal Protection Act 1979 that temporary coastal protection works (within the meaning of the Act) have been placed on the land (or on public land adjacent to that land)?

NO

Has the owner (or any previous owner) of the land been consented in writing to the land being subject to annual charges under section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act)?

NO

Council Policy

Council has not adopted a policy to restrict the development of the land by reason of the likelihood of projected sea level rise (coastal protection), tidal inundation, subsidence or any other risk on land subject to the Parramatta Local Environmental Plan 2011.

Council has adopted a policy covering areas subject to the Parramatta Local Environmental Plan 2011 to restrict development of any land by reason of the likelihood of flooding.

Council has adopted by resolution a policy on contaminated land that applies to areas subject to the Parramatta Local Environmental Plan 2011. The Policy will restrict the development of the land if the circumstances set out in the policy prevail. A copy of the policy is available on Council's website at www.parracity.nsw.gov.au or from the Customer Service Centre.

**Mine Subsidence**

The land is not affected by Section 15 of the Mine Subsidence Compensation Act 1961 proclaiming land to be a Mine Subsidence District.

Bushfire Land

The land is not bushfire prone land.

Threatened Species

The Director General with responsibility for the Threatened Species Conservation Act 1995 has not advised Council that the land includes or comprises a critical habitat.

**State Environmental Planning Policy
(Exempt and Complying Development Codes) 2008**

**This does not constitute a Complying Development Certificate under section
85 of the EP&A Act**

This information only addresses matters raised in **Clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1)(c3) and 1.19** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

General Housing Code

Complying Development pursuant to the General Housing Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

Rural Housing Code

Complying Development pursuant to the Rural Housing Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),



Housing Alterations Code

Complying Development pursuant to the Housing Alterations Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

General Development Code

Complying Development pursuant to the General Development Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

Demolition Code

Complying Development pursuant to the Demolition Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

Commercial and Industrial (New Buildings and Additions) Code

Complying Development pursuant to Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

General Commercial and Industrial (Alterations) Code

Complying Development pursuant to the General Commercial and Industrial (Alterations) Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State



Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

Subdivision Code

Complying Development pursuant to the Subdivision Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),

Fire Safety Code

Complying Development pursuant to the Fire Safety Code **may not** be carried out on the land. The land is wholly affected by specific land exemptions under **Clause 1.17A or Clause 1.18 (1) (c3)** of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The land exemptions are:

- the land comprises, or contains an item of environmental heritage (that is listed on the State Heritage Register or that is subject to an interim heritage order under the *Heritage Act 1977* or that is identified as an item of environmental heritage in an environmental planning instrument),



SPECIAL NOTES

The land is identified as Class 4 on the Acid Sulfate Soils map. Refer to Clause 6.1 of Parramatta Local Environmental Plan 2011.

Applicants for Sections 149 Certificates are advised that Council does not hold sufficient information to fully detail the effect of any encumbrances on the title of the subject land. The information available to Council is provided on the basis that neither Council nor its servants hold out advice or warrant to you in any way its accuracy, nor shall Council or its servants, be liable for any negligence in the preparation of that information. Further information should be sought from relevant Statutory Departments.



SECTION C

The following additional information is issued under Section 149(5)

Pursuant to S149(5) the Council supplies information as set out below on the basis that the Council takes no responsibility for the accuracy of the information. The information if material should be independently checked by the applicant.

This land is identified on the Additional Local Provisions Map of the Parramatta Local Environmental Plan 2011. Part 7 Additional local provisions – Parramatta City Centre of the Parramatta Local Environmental Plan 2011 applies to the land.

This land is identified as a “Key site” on the Key Sites Map of the Parramatta Local Environmental Plan 2011.

Aboriginal Heritage – High Sensitivity – potential to contain items of Aboriginal heritage. Contact Council’s Customer Service/Duty Planner (02) 9806 5050 for more information.

The land is affected by a 100 year Average Recurrence Interval flood as indicated by Council’s current flooding information. As such Council is required to take that into account when determining any development application made in respect of the land.

Further information is available at the Catchment Management Section within Council’s City Assets and Environment Unit.

Additional advice should be also sought from an appropriately qualified person as to the extents and potential hazards associated with the likely flooding of the land. The names of qualified persons maybe obtained from the Institution of Engineers Australia.

Note: Advisory Information regarding Loose-Fill asbestos Insulation

Research undertaken by the Loose-Fill Asbestos Insulation Taskforce has determined that there is a potential for loose-fill asbestos insulation to be found in residential dwellings constructed prior to 1980 in 28 local government areas including the City of Parramatta.

Some residential homes located in the City of Parramatta may contain loose-fill asbestos insulation, for example in the roof space. NSW Fair Trading maintains a Register of homes that are affected by loose-fill asbestos insulation.

You should make your own enquiries as to the age of the buildings on the land to which this certificate relates and, if it contains a building constructed prior to 1980, the council strongly recommends that any potential purchaser obtain advice from a licensed asbestos assessor to determine whether loose fill asbestos is present in any building on the land and, if so, the health risks (if any) this may pose for the building’s occupants.

Please Contact NSW Fair Trading for further information.

This information has been provided pursuant to section 149(5) of the Environmental Planning and Assessment Act, 1979 as amended.

**ANNEXURE "B1"**

Issued pursuant to Section 149 of the Environmental Planning and Assessment Act 1979. Note: The following information is supplied in respect of Section 149 and embodies the requirements of Department of Planning Circular No. A2 dated 17 March 1989 and the Ministerial Notification dated 15 December 1986.

STATE ENVIRONMENTAL PLANNING POLICY NO.1 - Development Standards

STATE ENVIRONMENTAL PLANNING POLICY NO.19 - Bushland in Urban Areas

STATE ENVIRONMENTAL PLANNING POLICY NO.21 – Caravan Parks

STATE ENVIRONMENTAL PLANNING POLICY NO.32 - Urban Consolidation (Redevelopment of Urban Land)

STATE ENVIRONMENTAL PLANNING POLICY NO.33 - Hazardous and Offensive Development

STATE ENVIRONMENTAL PLANNING POLICY NO.55 - Remediation of Land

STATE ENVIRONMENTAL PLANNING POLICY NO.64 - Advertising and Signage

STATE ENVIRONMENTAL PLANNING POLICY NO.65 – Design Quality of Residential Flat Development.

STATE ENVIRONMENTAL PLANNING POLICY NO.70 – Affordable Housing (Revised Schemes)

STATE ENVIRONMENTAL PLANNING POLICY – (Housing for Seniors or People with a Disability) 2004

STATE ENVIRONMENTAL PLANNING POLICY – (Building Sustainability Index: BASIX) 2004

STATE ENVIRONMENTAL PLANNING POLICY – (Major Development) 2005

STATE ENVIRONMENTAL PLANNING POLICY – (Mining, Petroleum Production and Extractive Industries) 2007

STATE ENVIRONMENTAL PLANNING POLICY – (Temporary Structures) 2007

STATE ENVIRONMENTAL PLANNING POLICY (Infrastructure) 2007

STATE ENVIRONMENTAL PLANNING POLICY (Exempt and Complying Development Codes) 2008

STATE ENVIRONMENTAL PLANNING POLICY (Affordable Rental Housing) 2009

SYDNEY REGIONAL ENVIRONMENTAL PLAN NO.9 (No.2) - Extractive Industries

SYDNEY REGIONAL ENVIRONMENTAL PLAN NO.24 - Homebush Bay Area

SYDNEY REGIONAL ENVIRONMENTAL PLAN – (Sydney Harbour Catchment) 2005

N.B. All enquiries as to the application of Draft, State and Regional Environmental Planning Policies should be directed to The Department of Planning and Infrastructure – 23-33 Bridge Street Sydney NSW 2000.



Greg Dyer
Interim General Manager

per

A handwritten signature in black ink, appearing to read "M. Dyer", written over a horizontal line.

dated 4 August 2016

Appendix G EPA Records

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
PADSTOW	Former Exide Battery Manufacturing & Recycling	55 Bryant STREET	Other Industry	Contamination currently regulated under CLM Act	-33.94265241	151.0378986
PADSTOW	Galvatech	49 Gow STREET	Metal Industry	Contamination currently regulated under POEO Act	-33.93808679	151.0346862
PADSTOW	Foseco Australia	7 Stuart STREET	Chemical Industry	Regulation under CLM Act not required	-33.94342957	151.0377316
PADSTOW	Sebel Furniture	Parts 64 and 92 Gow STREET	Other Industry	Regulation under CLM Act not required	-33.93606752	151.0322057
PAGEWOOD	Former Email Site	Corner of Page Street and Holloway STREET	Metal Industry	Contamination currently regulated under CLM Act	-33.94302462	151.2132036
PAMBULA	Offsite area (roadways) adjacent to United Service Station Pambula (former Shell)	Corner Quondola Street and Bullara STREET	Service Station	Regulation under CLM Act not required	-36.93104481	149.8746763
PARKES	Caltex Service Station Parkes	352-360 Clarinda STREET	Service Station	Regulation under CLM Act not required	-33.13317454	148.173643
PARKES	Former Caltex Parkes (Mugincoble) Depot - Eugowra Rd, Mugincoble	Eugowra ROAD	Service Station	Regulation under CLM Act not required	-33.19007031	148.224822
PARKES	BP Truckstop	(Newell Highway) 1 Forbes ROAD	Other Petroleum	Regulation under CLM Act not required	-33.14309226	148.1710282
PARKES	Former BP Telescope Service Station	339-341 Clarinda STREET	Service Station	Regulation under CLM Act not required	-33.13216152	148.1743239
PARKES	BP Reliance East End Service Station Parkes	46 Clarinda STREET	Service Station	Regulation under CLM Act not required	-33.14243539	148.1846227
PARKES	Former Parkes Gas Works (including Rail Corridor and offsite land)	1A East STREET	Gasworks	Regulation being finalised	-33.143041	148.182984
PARKLEA	Caltex Parklea Service Station	Old Windsor (north of Miami Street) ROAD	Service Station	Regulation under CLM Act not required	-33.72427108	150.9388531
PARRAMATTA	BP Service Station	435 Church STREET	Service Station	Regulation under CLM Act not required	-33.80498714	151.0056151
PARRAMATTA	Coleman Oval Embankment	Cnr of Pitt STREET and Maquarie STREET	Unclassified	Regulation under CLM Act not required	-33.80441625	150.9954841

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
PARRAMATTA	7-Eleven (former Mobil) Service Station	81 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.80919769	151.0142894
PARRAMATTA	Parramatta Park Toilet Block Demolition	The Cresnet Toilet Block Parramatta PARK	Unclassified	Regulation under CLM Act not required	-33.81054034	150.9961968
PAUPONG	Former Timber Treatment Plant	Off Paupong ROAD	Other Industry	Regulation under CLM Act not required	-36.57657408	148.6624998
PENDLE HILL	7-Eleven Service Station	217 Wentworth AVENUE	Service Station	Regulation under CLM Act not required	-33.8017814	150.9577994
PENNANT HILLS	Shell Coles Express Pennant Hills West	386 Pennant Hills ROAD	Service Station	Contamination currently regulated under CLM Act	-33.73928611	151.0679704
PENRITH	Mirvac Industrial Site	2101 Castlereagh ROAD	Other Industry	Regulation under CLM Act not required	-33.73497514	150.6954097
PENRITH	7-Eleven (former Mobil) Service Station	212-222 Andrews ROAD	Service Station	Regulation under CLM Act not required	-33.73059678	150.6952571
PENRITH	Lowes Petroleum (Former Mobil) Depot Penrith	174 Coreen AVENUE	Other Petroleum	Regulation under CLM Act not required	-33.74484268	150.6980504
PENRITH	Caltex Service Station	Castlereagh Rd Cnr Lugard STREET	Service Station	Regulation under CLM Act not required	-33.73426843	150.6933382
PENRITH	BP Express Service Station	Corner Coreen Avenue and Castlereagh ROAD	Service Station	Regulation under CLM Act not required	-33.74385498	150.6925743
PENRITH	Crane Enfield Metals	Castlereagh ROAD	Metal Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.73734959	150.696442
PENRITH	7-Eleven Service Station Penrith	30 Henry STREET	Service Station	Regulation under CLM Act not required	-33.75408799	150.7045594
PENRITH	Caltex Penrith Service Station	153 Coreen AVENUE	Service Station	Regulation under CLM Act not required	-33.74287244	150.6927071
PENRITH	Jet 60 Dry Cleaners	Shop 3 134-138 Henry STREET	Unclassified	Regulation under CLM Act not required	-33.75231953	150.6964541
PENRITH	St Mary's Shopping Village	Charles Hackett DRIVE	Other Industry	Regulation under CLM Act not required	-33.766814	150.770363

[Home](#) [Contaminated land](#) [Record of notices](#)

Search results

Your search for: Suburb: PARRAMATTA

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the [planning process](#).

More information about particular sites may be available from:

- The [POEO public register](#)
- The appropriate planning authority: for example, on a planning certificate issued by the local council under [section 149 of the Environmental Planning and Assessment Act](#).

See [What's in the record and What's not in the record](#).

If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.

This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the above search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear on the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act. In addition the EPA may be regulating contamination at the site through a licence under the Protection of the Environment Operations Act 1997. You may wish to search the POEO public register: [POEO public register](#)

[Search Again](#)

[Refine Search](#)

Search TIP

To search for a specific site, search by LGA (local government area) and carefully review all sites listed.

... [more search tips](#)

27 March 2020

For business and industry ☐

For local government ☐

Contact us

- ☐ 131 555 (tel:131555)
- ☐ info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)
- ☐ EPA Office Locations (<https://www.epa.nsw.gov.au/about-us/contact-us/locations>)

[Accessibility \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)

[Disclaimer \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)

[Privacy \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy)

[Copyright \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)

☐ <https://au.linkedin.com/company/environment-protection-authority-nsw>

Find us on

☐ <https://www.facebook.com/epa.nsw>

Number	Name	Location	Type	Status	Issued date
1583054		M4 - East of Reservoir Road to East of Mamre Road, PARRAMATTA, NSW 2150	s.80 Surrender of a Licence	Issued	30-Jul-19
6848	AUSTRALIAN RED CROSS SOCIETY	4 GEORGE ST, PARRAMATTA, NSW 2150	POEO licence	No longer in force	26-Jun-00
20567	CPB CONTRACTORS PTY LIMITED	Between Pitt Street, Parramatta and Homebush Bay Drive, Homebush , PARRAMATTA, NSW 2150	POEO licence	Surrendered	20-Apr-15
1537285	CPB CONTRACTORS PTY LIMITED	Between Pitt Street, Parramatta and Homebush Bay Drive, Homebush , PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	4-Feb-16
1539035	CPB CONTRACTORS PTY LIMITED	Between Pitt Street, Parramatta and Homebush Bay Drive, Homebush , PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	24-Mar-16
1540541	CPB CONTRACTORS PTY LIMITED	Between Pitt Street, Parramatta and Homebush Bay Drive, Homebush , PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	20-May-16
1542494	CPB CONTRACTORS PTY LIMITED	Between Pitt Street, Parramatta and Homebush Bay Drive, Homebush , PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	20-Jul-16
1543214	CPB CONTRACTORS PTY LIMITED	Between Pitt Street, Parramatta and Homebush Bay Drive, Homebush , PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	3-Aug-16
1543353	CPB CONTRACTORS PTY LIMITED	Between Pitt Street, Parramatta and Homebush Bay Drive, Homebush , PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	18-Aug-16
1565103	CPB CONTRACTORS PTY LIMITED	Between Pitt Street, Parramatta and Homebush Bay Drive, Homebush , PARRAMATTA, NSW 2150	s.80 Surrender of a Licence	Issued	31-May-18
21347	CPB CONTRACTORS PTY LIMITED	PACKAGE 4, PARRAMATTA, NSW 2123	POEO licence	Issued	3-Jan-20
11627	ENDEAVOUR ENERGY	3-9 BRABYN STREET, PARRAMATTA, NSW 2150	POEO licence	Surrendered	18-Feb-02
1042293	ENDEAVOUR ENERGY	3-9 BRABYN STREET, PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	26-Nov-04
1071277	ENDEAVOUR ENERGY	3-9 BRABYN STREET, PARRAMATTA, NSW 2150	s.80 Surrender of a Licence	Issued	28-Mar-07
1563521	EQ CONSTRUCTIONS PTY LTD	331A-339 Church Street, PARRAMATTA, NSW 2123	s.91 Clean Up Notice	Issued	11-Apr-18
1564235	EQ CONSTRUCTIONS PTY LTD	331A-339 Church Street, PARRAMATTA, NSW 2123	s.110 Variation of Clean Up Notice	Issued	2-May-18
20961	FULTON HOGAN CONSTRUCTION PTY LTD	M4 - East of Reservoir Road to East of Mamre Road, PARRAMATTA, NSW 2150	POEO licence	Surrendered	30-Jun-17
1559113	FULTON HOGAN CONSTRUCTION PTY LTD	M4 - East of Reservoir Road to East of Mamre Road, PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	27-Nov-17
1559611	FULTON HOGAN CONSTRUCTION PTY LTD	M4 - East of Reservoir Road to East of Mamre Road, PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	11-Dec-17
1560703	FULTON HOGAN CONSTRUCTION PTY LTD	M4 - East of Reservoir Road to East of Mamre Road, PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	16-Jan-18
1562877	FULTON HOGAN CONSTRUCTION PTY LTD	M4 - East of Reservoir Road to East of Mamre Road, PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	16-Mar-18
1564302	FULTON HOGAN CONSTRUCTION PTY LTD	M4 - East of Reservoir Road to East of Mamre Road, PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	30-Apr-18
1564657	FULTON HOGAN CONSTRUCTION PTY LTD	M4 - East of Reservoir Road to East of Mamre Road, PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	10-May-18
1565842	FULTON HOGAN CONSTRUCTION PTY LTD	M4 - East of Reservoir Road to East of Mamre Road, PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	8-Jun-18
1567329	FULTON HOGAN CONSTRUCTION PTY LTD	M4 - East of Reservoir Road to East of Mamre Road, PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	27-Jul-18
1571176	FULTON HOGAN CONSTRUCTION PTY LTD	M4 - East of Reservoir Road to East of Mamre Road, PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	26-Oct-18
1576594	FULTON HOGAN CONSTRUCTION PTY LTD	M4 - East of Reservoir Road to East of Mamre Road, PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	29-Mar-19
20560	JOHN HOLLAND PTY LTD	143 and 169 Macquarie Street, PARRAMATTA, NSW 2150	POEO licence	Surrendered	15-Apr-15
1532020	JOHN HOLLAND PTY LTD	143 and 169 Macquarie Street, PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	31-Jul-15
1536338	JOHN HOLLAND PTY LTD	143 and 169 Macquarie Street, PARRAMATTA, NSW 2150	s.80 Surrender of a Licence	Issued	15-Dec-15
13421	JOHN HOLLAND RAIL PTY LTD	PO Box 215 , PARRAMATTA, NSW 2124	POEO licence	Issued	13-Jan-12

1504575	JOHN HOLLAND RAIL PTY LTD	PO Box 215 , PARRAMATTA, NSW 2124	s.58 Licence Variation	Issued	27-Feb-12
1519800	JOHN HOLLAND RAIL PTY LTD	PO Box 215 , PARRAMATTA, NSW 2124	s.58 Licence Variation	Issued	10-Feb-14
1548217	JOHN HOLLAND RAIL PTY LTD	PO Box 215 , PARRAMATTA, NSW 2124	s.58 Licence Variation	Issued	27-Jan-17
1551483	JOHN HOLLAND RAIL PTY LTD	PO Box 215 , PARRAMATTA, NSW 2124	s.58 Licence Variation	Issued	27-Apr-17
1560821	JOHN HOLLAND RAIL PTY LTD	PO Box 215 , PARRAMATTA, NSW 2124	s.58 Licence Variation	Issued	23-Feb-18
1586295	JOHN HOLLAND RAIL PTY LTD	PO Box 215 , PARRAMATTA, NSW 2124	s.58 Licence Variation	Issued	2-Oct-19
20762	Laing O'Rourke Australia Construction Pty Ltd	within the rail corridor between Hawksbury Rd, Westmead and Marion St, Harris Park, PARRAMATTA, NSW 2150	POEO licence	Surrendered	19-Apr-16
1541211	Laing O'Rourke Australia Construction Pty Ltd	within the rail corridor between Hawksbury Rd, Westmead and Marion St, Harris Park, PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	6-Jun-16
1545025	Laing O'Rourke Australia Construction Pty Ltd	within the rail corridor between Hawksbury Rd, Westmead and Marion St, Harris Park, PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	27-Sep-16
1547937	Laing O'Rourke Australia Construction Pty Ltd	within the rail corridor between Hawksbury Rd, Westmead and Marion St, Harris Park, PARRAMATTA, NSW 2150	s.80 Surrender of a Licence	Issued	10-Jan-17
2730	NATIONWIDE NEWS PTY. LIMITED	142-154 MACQUARIE STREET, PARRAMATTA, NSW 2150	POEO licence	Surrendered	17-Jan-00
1043386	NATIONWIDE NEWS PTY. LIMITED	142-154 MACQUARIE STREET, PARRAMATTA, NSW 2150	s.80 Surrender of a Licence	Issued	23-Dec-04
4864	PARRAMATTA STADIUM TRUST	O'CONNELL STREET, PARRAMATTA, NSW 2150	POEO licence	Surrendered	26-Jun-00
1020905	PARRAMATTA STADIUM TRUST	O'CONNELL STREET, PARRAMATTA, NSW 2150	s.80 Surrender of a Licence	Issued	19-Sep-02
1513867	R.P HUANG & G.T HU	Shop 11b, Mayfield Plaza, 26 George Street, PARRAMATTA, NSW 2123	s.91 Clean Up Notice	Issued	3-May-13
20087	ROADS AND MARITIME SERVICES	27-31 Argyle Street , PARRAMATTA, NSW 2150	POEO licence	Surrendered	20-Jun-12
1509966	ROADS AND MARITIME SERVICES	27-31 Argyle Street , PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	6-Nov-12
1516820	ROADS AND MARITIME SERVICES	27-31 Argyle Street , PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	3-Sep-13
1518767	ROADS AND MARITIME SERVICES	27-31 Argyle Street , PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	18-Dec-13
1519515	ROADS AND MARITIME SERVICES	27-31 Argyle Street , PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	23-Jan-14
1523647	ROADS AND MARITIME SERVICES	27-31 Argyle Street , PARRAMATTA, NSW 2150	s.58 Licence Variation	Issued	29-Jul-14
1530871	ROADS AND MARITIME SERVICES	27-31 Argyle Street , PARRAMATTA, NSW 2150	s.80 Surrender of a Licence	Issued	15-Jun-15
6588	SYDNEY WEST AREA HEALTH SERVICE	MARSDEN ROAD, PARRAMATTA, NSW 2150	POEO licence	Surrendered	30-Mar-00
1017910	SYDNEY WEST AREA HEALTH SERVICE	MARSDEN ROAD, PARRAMATTA, NSW 2150	s.80 Surrender of a Licence	Issued	3-Jun-02
10744	THE HOSPITALS CONTRIBUTION FUND OF AUSTRALIA LTD	6/128 MARSDEN STREET, PARRAMATTA, NSW 2150	POEO licence	Surrendered	3-Apr-00
1016362	THE HOSPITALS CONTRIBUTION FUND OF AUSTRALIA LTD	6/128 MARSDEN STREET, PARRAMATTA, NSW 2150	s.80 Surrender of a Licence	Issued	30-Apr-02
1031	WYETH AUSTRALIA PTY LIMITED	GREGORY PLACE, PARRAMATTA, NSW 2150	POEO licence	Surrendered	9-May-00
1004880	WYETH AUSTRALIA PTY LIMITED	GREGORY PLACE, PARRAMATTA, NSW 2150	s.80 Surrender of a Licence	Issued	8-Mar-01

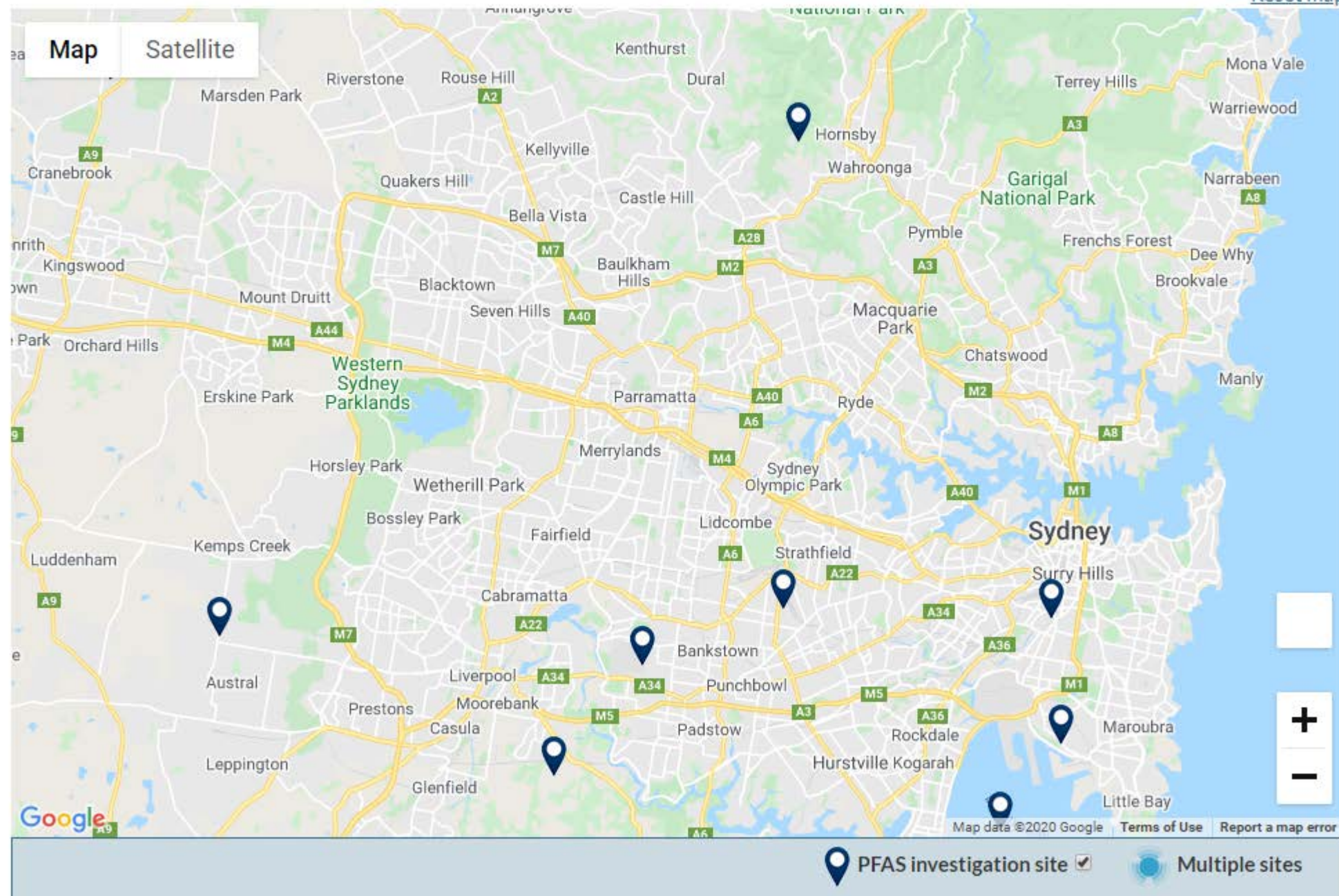
Map view

List view

Filter by: No filter set

Showing 9 of 47 sites

[Reset map](#)



Background

A strategy to systematically prioritise, assess 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.

After receiving a report, the first step is to confirm that the report does not relate to a pollution incident. The Protection of the Environment Operations Act 1997 (POEO Act) deals with pollution incidents, waste stockpiling or dumping. The EPA also has an incident management process to manage significant incidents (<https://www.epa.nsw.gov.au/reporting-and-incidents/incident-management>).

In many cases, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any significant risks for the community or environment. Such sites may still need to be cleaned up, but this can be done in conjunction with any subsequent building or redevelopment of the land. These sites do not require intervention under the CLM Act, and are dealt with through the planning and development consent process. In these cases, the EPA informs the local council or other planning authority, so that the information can be recorded and considered at the appropriate time (<https://www.epa.nsw.gov.au/your-environment/contaminated-land/managing-contaminated-land/role-of-planning-authorities>).

Where indications are that the contamination could cause actual harm to the environment or an unacceptable offsite impact (i.e. the land is 'significantly contaminated'), the EPA would apply the regulatory provisions of the CLM Act to have the responsible polluter and/or landowner investigate and remediate the site. If the reported contamination could present an immediate or long-term threat to human health NSW Health will be consulted. SafeWork NSW and Water NSW can also be consulted if there appear to be occupational health and safety risks or an impact on groundwater quality.

As such, the sites notified to the EPA and presented in the list of contaminated sites notified to the EPA are at various stages of the assessment and 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 list provides 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 person who notified the site.

The following questions and answers may assist those interested in this issue.

Frequently asked questions

Why does my land appear on the list of notified sites?

Your land may appear on the list because:

- the site owner and/or the polluter has notified the EPA under section 60 of the CLM Act
- the EPA has been notified via other means and is satisfied that the site is or was contaminated.

If a site is on the list, it does not necessarily mean the contamination is significant enough to regulate under the CLM Act.

Does the list contain all contaminated sites in NSW?

No. The list only contains contaminated sites that EPA is aware of. If a site is not on the list, it does not necessarily mean the site is not contaminated.

The EPA relies on responsible parties and the public to notify contaminated sites.

How are notified contaminated sites managed by the EPA?

There are different ways the EPA can manage notified contaminated sites. Options include:

- regulation under the CLM Act, POEO Act, or both
- notifying the relevant planning authority for management under the planning and development process
- managing the site under the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2014.

There are specific cases where contamination is managed under a tailored program operated by another agency (for example, the Resources & Geoscience's Legacy Mines Program).

What should I do if I am a potential buyer of a site that appears on the list?

You should seek advice from the seller to understand the contamination issue. You may need to seek independent contamination or legal advice.

The information provided in the list is indicative only and a starting point for your own assessment. Land contamination from past site uses is common, mainly in urban environments. If the site is properly remediated or managed, it may not affect the intended future use of the site.

Who can I contact if I need more information about a site?

You can contact the Environment Line at any time by calling 131 555 or by emailing info@environment.nsw.gov.au.

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 <i>Protection of the Environment Operations Act 1997</i> .
Under Preliminary Investigation Order	The EPA has issued a Preliminary Investigation Order under s10 of the <i>Contaminated Land Management Act 1997</i> , to obtain additional information needed to complete the assessment.
Regulation under CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the <i>Contaminated Land Management Act 1997</i> is not required.
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 <i>Contaminated Land Management Act 1997</i> . 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 <i>Contaminated Land Management Act 1997</i> (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 <i>Protection of the Environment Operations Act 1997</i> (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 <i>Environmental Planning and Assessment Act 1979</i> (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 <i>Contaminated Land Management Act 1997</i> (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 <i>Protection of the Environment Operations Act 1997</i> (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 <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the <i>Contaminated Land Management Act 1997</i> (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	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
PADSTOW	Former Exide Battery Manufacturing	55 Bryant STREET	Other Industry	Contamination currently regulated	-33.94265241	151.0378986
PADSTOW	Galvatech	49 Gow STREET	Metal Industry	Contamination currently regulated	-33.93808679	151.0346862
PADSTOW	Fosco Australia	7 Stuart STREET	Chemical Industry	Regulation under CLM Act not requ	-33.94342957	151.0377316
PADSTOW	Sebel Furniture	Parts 64 and 92 Gow STREET	Other Industry	Regulation under CLM Act not requ	-33.93606752	151.0322057
PAGEWOOD	Former Email Site	Corner of Page Street and Hollowa	Metal Industry	Contamination currently regulated	-33.94302462	151.2132036
PAMBULA	Offsite area (roadways) adjacent to	Corner Quondola Street and Bullar	Service Station	Regulation under CLM Act not requ	-36.93104481	149.8746763
PARKES	Caltex Service Station Parkes	352-360 Clarinda STREET	Service Station	Regulation under CLM Act not requ	-33.13317454	148.173643
PARKES	Former Caltex Parkes (Mugincoble	Eugowra ROAD	Service Station	Regulation under CLM Act not requ	-33.19007031	148.224822
PARKES	BP Truckstop	(Newell Highway) 1 Forbes ROAD	Other Petroleum	Regulation under CLM Act not requ	-33.14309226	148.1710282
PARKES	Former BP Telescope Service Stati	339-341 Clarinda STREET	Service Station	Regulation under CLM Act not requ	-33.13216152	148.1743239
PARKES	BP Reliance East End Service Stati	46 Clarinda STREET	Service Station	Regulation under CLM Act not requ	-33.14243539	148.1846227
PARKES	Former Parkes Gas Works (includin	1A East STREET	Gasworks	Under assessment	-33.143041	148.182984
PARKLEA	Caltex Parklea Service Station	Old Windsor (north of Miami Stree	Service Station	Regulation under CLM Act not requ	-33.72427108	150.9388531
PARRAMATTA	BP Service Station	435 Church STREET	Service Station	Regulation under CLM Act not requ	-33.80498714	151.0056151
PARRAMATTA	Coleman Oval Embankment	Cnr of Pitt STREET and Maquarie S	Unclassified	Regulation under CLM Act not requ	-33.80441625	150.9954841
PARRAMATTA	7-Eleven (former Mobil) Service Sta	81 Victoria ROAD	Service Station	Regulation under CLM Act not requ	-33.80919769	151.0142894
PARRAMATTA	Parramatta Park Toilet Block Demol	The Crescent Toilet Block Parramatt	Unclassified	Regulation under CLM Act not requ	-33.81054034	150.9961968
PAUPONG	Former Timber Treatment Plant	Off Paupong ROAD	Other Industry	Regulation under CLM Act not requ	-36.57657408	148.6624998
PENDLE HILL	7-Eleven Service Station	217 Wentworth AVENUE	Service Station	Regulation under CLM Act not requ	-33.8017814	150.9577994
PENNANT HILLS	Shell Coles Express Pennant Hills W	386 Pennant Hills ROAD	Service Station	Contamination currently regulated	-33.73928611	151.0679704
PENRITH	Mirvac Industrial Site	2101 Castlereagh ROAD	Other Industry	Regulation under CLM Act not requ	-33.73497514	150.6954097
PENRITH	7-Eleven (former Mobil) Service Sta	212-222 Andrews ROAD	Service Station	Regulation under CLM Act not requ	-33.73059678	150.6952571
PENRITH	Lowes Petroleum (Former Mobil) C	174 Coreen AVENUE	Other Petroleum	Regulation under CLM Act not requ	-33.74484268	150.6980504
PENRITH	Caltex Service Station	Castlereagh Rd Cnr Lugard STREET	Service Station	Regulation under CLM Act not requ	-33.73426843	150.6933382
PENRITH	BP Express Service Station	Corner Coreen Avenue and Castler	Service Station	Regulation under CLM Act not requ	-33.74385498	150.6925743
PENRITH	Crane Enfield Metals	Castlereagh ROAD	Metal Industry	Ongoing maintenance required to	-33.73734959	150.696442
PENRITH	7-Eleven Service Station Penrith	30 Henry STREET	Service Station	Regulation under CLM Act not requ	-33.75408799	150.7045594
PENRITH	Caltex Penrith Service Station	153 Coreen AVENUE	Service Station	Regulation under CLM Act not requ	-33.74287244	150.6927071
PENRITH	Jet 60 Dry Cleaners	Shop 3 134-138 Henry STREET	Unclassified	Regulation under CLM Act not requ	-33.75231953	150.6964541
PENRITH	St Mary's Shopping Village	Charles Hackett DRIVE	Other Industry	Regulation under CLM Act not requ	-33.766814	150.770363
PENRITH	Former Dry Cleaners	Shop 3, 134-138 Henry STREET	Other Industry	Regulation under CLM Act not requ	-33.75231953	150.6964541
PENSHURST	7-Eleven Service Station	612 Forest ROAD	Service Station	Regulation under CLM Act not requ	-33.96153533	151.0793525
PENSHURST	Caltex Service Station	641 King Georges ROAD	Service Station	Regulation under CLM Act not requ	-33.95985335	151.0891118
PERISHER VALLEY	Perisher Centre Loading Dock	Kosciuszko ROAD	Other Petroleum	Regulation under CLM Act not requ	-36.40392862	148.4111593
PERISHER VALLEY	Perisher Ski Resort	Kosciuszko ROAD	Other Petroleum	Regulation under CLM Act not requ	-36.41106374	148.4005469
PETERSHAM	Fanny Durack Aquatic Centre	Station STREET	Unclassified	Regulation under CLM Act not requ	-33.89194583	151.151824
PHEASANTS NEST	7-Eleven Service Station	(Southbound) Hume HIGHWAY	Service Station	Regulation under CLM Act not requ	-34.28291571	150.6394606

Appendix H Heritage Records

Search for NSW heritage

[Return to search page where you can refine/broaden your search.](#)

Statutory listed items

Information and items listed in the State Heritage Inventory come from a number of sources. This means that there may be several entries for the same heritage item in the database. For clarity, the search results have been divided into three sections.

- **Section 1** - contains Aboriginal Places declared by the **Minister for the Environment** under the National Parks and Wildlife Act. This information is provided by the Heritage Division.
- **Section 2** - contains heritage items listed by the **Heritage Council of NSW** under the NSW Heritage Act. This includes listing on the State Heritage Register, an Interim Heritage Order or protected under section 136 of the NSW Heritage Act. This information is provided by the Heritage Division.
- **Section 3** - contains items listed by **local councils** on Local Environmental Plans under the Environmental Planning and Assessment Act, 1979 and **State government agencies** under s.170 of the Heritage Act. This information is provided by local councils and State government agencies.

Section 1. Aboriginal Places listed under the National Parks and Wildlife Act.

Your search did not return any matching results.

Section 2. Items listed under the NSW Heritage Act.

Your search did not return any matching results.

Section 3. Items listed by Local Government and State Agencies.

Your search returned 31 records.

Item name	Address	Suburb	LGA	Information source
Barnaby's Restaurant and Potential Archaeological Site	64 and 66 Phillip Street	Parramatta	Parramatta	LGOV
Convict Drain	1, 1A and 3 Barrack Lane	Parramatta	Parramatta	LGOV
Convict Drain	174 Church Street	Parramatta	Parramatta	LGOV
Convict Drain	71, 83, 85 and 126 – 130 George Street	Parramatta	Parramatta	LGOV
Convict Drain	72, 74, 119 and 119A Macquarie Street	Parramatta	Parramatta	LGOV
Convict Drain	72B, 72C, 76 and 80A Phillip Street	Parramatta	Parramatta	LGOV
Convict Drain	18 and 25 Smith Street	Parramatta	Parramatta	LGOV

			a	
<u>Office and Potential Archaeological Site</u>	68A and 70 Phillip Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 2882</u>	42-56 Phillip Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 2894</u>	George Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 2949</u>	30 Phillip Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 2956</u>	32 Phillip Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3022</u>	10 Phillip Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3079</u>	Church Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3082</u>	George Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3083</u>	Church Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3084</u>	Church Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3086</u>	Church Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3096</u>	George Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3099</u>	70-74 Phillip Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3155</u>	Phillip Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3169</u>	Smith Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3170</u>	60a Phillip Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3171</u>	66, 68 Phillip Street	Parramatta	Parramatta	LGOV

<u>Parramatta Archaeological Management Unit 3172</u>	76-78 Phillip Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3173</u>	Phillip Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3174</u>	Phillip Street	Parramatta	Parramatta	LGOV
<u>Parramatta Archaeological Management Unit 3176</u>	Phillip Street	Parramatta	Parramatta	LGOV
<u>St Andrew's Uniting Church and Hall (Former) And Potential Arch. Site</u>	2 Phillip Street	Parramatta	Parramatta	LGOV
<u>St George's Terrace and Potential Archaeological Site</u>	44 Phillip Street	Parramatta	Parramatta	LGOV
<u>Willow Grove and Potential Archaeological Site</u>	34 Phillip Street	Parramatta	Parramatta	LGOV

There was a total of 31 records matching your search criteria.

Key:

LGA = Local Government Area

GAZ= NSW Government Gazette (statutory listings prior to 1997), HGA = Heritage Grant Application, HS = Heritage Study, LGOV = Local Government, SGOV = State Government Agency.

Note: While the Heritage Division seeks to keep the Inventory up to date, it is reliant on State agencies and local councils to provide their data. Always check with the relevant State agency or local council for the most up-to-date information.

Search Results

86 results found.

Accommodation Block Spinal Range for Wards 2 and 3 Fleet St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Administration Building Fleet St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
All Saints Anglican Church, Grounds & Trees Elizabeth St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
All Saints Parochial School Elizabeth St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Auxiliary Buildings former Kings School Marsden St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Boer War Memorial Parramatta Park	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Boundary Stone Parramatta Park	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Brislington George St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Burnside Homes Pennant Hills Rd	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Catholic Cemetery Church St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Centennial Clock Church St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Central Block former Kings School Marsden St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Colonial Hospital Well 154 Marsden St	Parramatta, NSW, Australia	(Rejected Place) Register of the National Estate (Non-statutory archive)
Cottage 12 O'Connell St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Cottage 14 O'Connell St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Cumberland Hospital Landscape Fleet St	Parramatta, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Day Room for Wards 4 and 5 (former) Fleet St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Elizabeth Farm House 70 Alice St	Rosehill, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Endrim Harold St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Experiment Farm Cottage 9 Ruse St	Harris Park, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Girls Training School Precinct 1 Fleet St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Governor Brisbanes Observatory Remnants Parramatta Park	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Governors Bath House (former) Parramatta Park	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Governors Dairy Cottage (former) Parramatta Park	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Gowan Brae Group Pennant Hills Rd	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Gowan Brae House Pennant Hills Rd	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Hambledon 47 Hassall St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Hambledon Cottage and Hambledon Reserve 47 Hassall St	Parramatta, NSW, Australia	(Nominated place) National Heritage List
Harborne including Ground and Trees 23 Boundary St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Headmasters Residence former Kings School Marsden St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Kia Ora (former) 64 Macquarie St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Kings School (former) Group Marsden St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Kings School Chapel Pennant Hills Rd	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Kitchen Block Fleet St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Lake Parramatta Dam Lackey St	North Parramatta, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Lancer Barracks Smith St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Lancer Barracks Smith St	Parramatta, NSW, Australia	(Listed place) Commonwealth Heritage List
Lancer Barracks Precinct Smith St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Lancer Barracks Precinct Smith St	Parramatta, NSW, Australia	(Listed place) Commonwealth Heritage List
Lennox Bridge Church St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Lennox House and Outbuilding 39 Campbell St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
MacArthur House 8 Melville St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Macquarie Street Gatehouse Macquarie St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Norfolk House and Contemporary Outbuilding 467 Church St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Obelisk Parramatta Park	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Old Government House Parramatta Park	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Old Government House and the Government Domain O'Connell St	Parramatta, NSW, Australia	(Listed place) National Heritage List
Parramatta Convalescent Home 43A Thomas St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Parramatta Female Factory Precinct 1 Fleet St	Parramatta, NSW, Australia	(Nomination now ineligible for PPAL) National Heritage List
Parramatta Female Factory and Institutions Precinct Fleet St	Parramatta, NSW, Australia	(Listed place) National Heritage List
Parramatta Gaol (former) 73 O'Connell St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Parramatta Park Macquarie St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Parramatta Park Gatehouse O'Connell St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Parramatta Post Office (former) 321 Church St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Parramatta Psychiatric Centre Precinct Fleet St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Parramatta Weir Marsden St	Parramatta, NSW, Australia	(Rejected Place) Register of the National Estate (Non-statutory archive)
Parramatta and Lane Cove Rivers Landscapes	Sydney, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Perth House 85 George St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Prince Alfred Park Victoria Rd	Parramatta, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Public School (former) and Convict Wall 175 Macquarie St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Remnant Garden from Old Benevolent Society Alfred St	Parramatta, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
River Terraces Fleet St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Roseneath Cottage 40-42 O'Connell St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Roxy Cinema 65 George St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Sandstone Buildings Fleet St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Sandstone Walls and Ha Ha Fleet St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Southern Gatehouse Great Western Hwy	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
St Andrews Uniting Church & Halls Marsden St	Parramatta, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
St Johns Anglican Provisional Cathedral Church St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

St Johns Cemetery and Boundary Wall O'Connell St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
St Patricks Catholic Cathedral & Presbytery Marist Pl	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Town Hall 182 Church St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Travellers Rest Inn 16 Hunter St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Travellers Rest Inn Group 16 Hunter St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Two Cannons Parramatta Park	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Ward 1 Fleet St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Ward 2 Courtyard Shelter Shed Fleet St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Ward 2 North Range Fleet St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Ward 4 North Range Fleet St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Ward 4 West Range Fleet St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Ward 5 North Range Fleet St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Ward 5 South Range (former) Fleet St	North Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Wavertree including Grounds and Trees 10 New Zealand St	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Western Gatehouse Park Av	Parramatta, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Willow Grove 34 Phillip St	Parramatta, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Wistaria Gardens Gardens Way	Parramatta, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)

Report Produced: Fri Mar 27 07:59:26 2020

Appendix I Field Bore Logs



SB1

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Bitumen		No odours, staining or asbestos observed.
	0.10			Fill	Sandy clayey silt, brown, dry, heterogeneous, non-plastic, very soft, with inclusions of bitumen (2-5 mm).	SB1_0.2m PID = 1 ppm	
	0.5					SB1_0.5m PID = 1.5 ppm	
	0.80			Fill	Silty clay, dark brown, dry, homogeneous, non-plastic very soft.		
	1.0	1.00		SM	Silty sand, brown, dry, homogeneous, loose.	SB1_1m PID = 2 ppm	
	1.5					SB1_1.5m PID = 0.6 ppm	No odours, staining or asbestos observed. End of hole at 1.5 m bgs. Program depth.
	1.50				Borehole SB1 terminated at 1.5m		



SB2

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 1.1

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Bitumen		
	0.10			Fill	Sandy clayey silt, brown, dry, heterogeneous, non-plastic, very soft, with inclusions of bitumen (0.2-3 cm).	SB2_0.2m PID = 1.7 ppm	No odours, staining or asbestos observed.
	0.5					SB2_0.5m PID = 1 ppm	No odours, staining or asbestos observed.
	0.90			Fill	Clayey silt, dark brown, dry, heterogeneous, non-plastic, soft, with inclusions of brick (<0.5 cm), gravels (0.5-2 cm) and tiles (<0.5-2 cm).	SB2_1m PID = 0.5 ppm	No odours, staining or asbestos observed.
	1.10				Borehole SB2 terminated at 1.1m		End of hole at 1.1 m bgs. Refusal on dense/rocky fill.
	1.5						



SB3

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Bitumen		No odours, staining or asbestos observed.
	0.10			Fill	Sandy clayey silt, brown, dry, heterogeneous, non-plastic, very soft, with inclusions of bitumen (2-5 mm), gravels (<0.5-4 cm) and fine bricks.	SB3 0.2m PID = 1.3 ppm	
	0.5					SB3 0.5m PID = 1.6 ppm	
	0.80			CL	Clay, brown/red, dry, homogeneous, medium plasticity, soft.	SB3 1m PID = 1.2 ppm	
	1.5					SB3 1.5m PID = 1.5 ppm	
	1.50				Borehole SB3 terminated at 1.5m		No odours, staining or asbestos observed. QS01/QS01A collected. End of hole at 1.5 m bgs. Program depth.



SB4

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Bitumen		
	0.10			Fill	Sandy clayey silt, brown, dry, heterogeneous, non-plastic, very soft, with inclusions of bitumen (2-5 mm) and gravels (0.5-3 cm).	SB4_0.2m PID = 5.2 ppm	No odours, staining or asbestos observed.
	0.5					SB4_0.5m PID = 1.2 ppm	No odours, staining or asbestos observed.
	0.80			CL	Clay, brown/red, dry, homogeneous, medium plasticity, soft.		
	1.0					SB4_1m PID = 2 ppm	No odours, staining or asbestos observed.
	1.20			SM-SC	Silty clayey sand, black, dry, homogeneous, medium grain, loose.		
	1.5					SB4_1.5m PID = 1.2 ppm	No odours, staining or asbestos observed. End of hole at 1.5 m bgs. Program depth.
	1.50				Borehole SB4 terminated at 1.5m		

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA GDT 11-3-20



SB5

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Bitumen		
		0.10		Fill	Sandy clayey silt, brown, dry, heterogeneous, non-plastic, very soft, with inclusions of bitumen (0.5-3 cm), gravels (1-2 cm) and concrete.	SB5 0.2m PID = 14.3 ppm	Slight odour, no staining or asbestos observed.
		0.40		Fill	Reworked clay, dark brown, dry, heterogeneous, high plasticity, dense, with inclusions of gravels.		
	0.5					SB5 0.5m PID = 5.2 ppm	No odours, staining or asbestos observed.
		0.80		CL	Reworked clay, brown/grey, dry, heterogeneous, high plasticity, dense, with inclusions of gravels.		
	1.0					SB5 1m PID = 3.8 ppm	No odours, staining or asbestos observed.
						SB5 1.5m PID = 3.9 ppm	No odours, staining or asbestos observed. End of hole at 1.5 m bgs. Program depth.
	1.5						
		1.50			Borehole SB5 terminated at 1.5m		



SB6

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Bitumen		No odours, staining or asbestos observed.
	0.10			Fill	Sandy clayey silt, brown, dry, heterogeneous, non-plastic, very soft, with inclusions of bitumen (0.5-3 cm), gravels (1-2 cm) and concrete.	SB6 0.2m PID = 8.7 ppm	
	0.40			Fill	Reworked clay, grey/brown, dry, heterogeneous, non-plastic, soft, with inclusions of gravels (<0.5 cm).	SB6 0.5m PID = 2.3 ppm	
	0.80			CL-SC	Sandy clay, brown, dry, homogeneous, non-plastic, soft.	SB6 1m PID = 2.5 ppm	
	1.5				Borehole SB6 terminated at 1.5m	SB6 1.5m PID = 2.5 ppm	
	1.50						No odours, staining or asbestos observed. End of hole at 1.5 m bgs. Program depth.



SB7

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Bitumen		No odours, staining or asbestos observed.
	0.10			Fill	Sandy clayey silt, brown, dry, heterogeneous, non-plastic, very soft, with inclusions of bitumen (2-5 mm).	SB7 0.2m PID = 8.3 ppm	
	0.40			Fill	Reworked clay, grey/brown, dry, heterogeneous, non-plastic, soft, with inclusions of gravels (<0.5 cm).	SB7 0.5m PID = 2.6 ppm	
	0.80			ML-CL-SC	Sandy clayey silt, black/brown, dry, homogeneous, non-plastic, soft.	SB7 1m PID = 2.3 ppm	
	1.50				Borehole SB7 terminated at 1.5m	SB7 1.5m PID = 2.7 ppm	



SB8

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Concrete		No odours, staining or asbestos observed.
	0.10			Fill	Sandy clayey silt, brown, dry, heterogeneous, non-plastic, very soft, with inclusions of bitumen (2-5 mm).	SB8_0.2m PID = 18 ppm	
	0.40			Fill	Reworked clay, grey/brown, dry, heterogeneous, non-plastic, soft, with inclusions of gravels (<0.5 cm).	SB8_0.5m PID = 8.8 ppm	
	0.80			SM	Silty sand, dark yellow, dry, homogeneous, medium grained, loose.	SB8_1m PID = 3.1 ppm	
	1.20			ML-CL-SC	Sandy clayey silt, dark brown, dry, homogeneous, non-plastic, soft.	SB8_1.5m PID = 1.5 ppm	
	1.50				Borehole SB8 terminated at 1.5m		



SB9

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Bitumen		No odours, staining or asbestos observed.
	0.10			Fill	Sandy clayey silt, brown, dry, heterogeneous, non-plastic, very soft, with inclusions of bitumen (2-5 mm).	SB9_0.2m PID = 2.1 ppm	
	0.30			Fill	Reworked clay, grey/brown, dry, heterogeneous, non-plastic, soft, with inclusions of gravels (<0.5 cm).		No odours, staining or asbestos observed.
	0.5					SB9_0.5m PID = 1.3 ppm	
	0.80			CL-SC	Sandy clay, brown, dry, homogeneous, non-plastic, soft.		No odours, staining or asbestos observed.
	1.0						
	1.00			CL	Reworked clay, brown/grey, dry, heterogeneous, high plasticity, dense, with inclusions of gravels.	SB9_1m PID = 1.7 ppm	
							No odours, staining or asbestos observed. End of hole at 1.5 m bgs. Program depth.
	1.5					SB9_1.5m PID = 2.3 ppm	
	1.50				Borehole SB9 terminated at 1.5m		



SB10

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Bitumen		No odours, staining or asbestos observed.
	0.10			Fill	Sandy clayey silt, brown, dry, heterogeneous, non-plastic, very soft, with inclusions of bitumen (2-5 mm).	SB10_0.2m PID = 3.8 ppm	
	0.30			CL-ML-SM	Sandy silty clay, brown, dry, homogeneous, non-plastic, soft.		No odours, staining or asbestos observed.
	0.5					SB10_0.5m PID = 3.1 ppm	
	1.0					SB10_1m PID = 1.7 ppm	
	1.40			CL-ML-SM	Sandy silty clay, brown, dry, homogeneous, non-plastic, soft, medium grained sand, increased sand composition.	SB10_1.5m PID = 2.3 ppm	
	1.5	1.50			Borehole SB10 terminated at 1.5m		No odours, staining or asbestos observed. End of hole at 1.5 m bgs. Program depth.



SB11

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Bitumen		No odours, staining or asbestos observed.
	0.10			Fill	Sandy clayey silt, brown, dry, heterogeneous, non-plastic, very soft, with inclusions of bitumen (2-5 mm).	SB11_0.2m PID = 5.1 ppm	
	0.40			Fill	Reworked clay, grey/brown, dry, heterogeneous, non-plastic, soft, with inclusions of gravels (<0.5 cm).	SB11_0.5m PID = 2.4 ppm	
	0.80			CL-ML-SM	Sandy silty clay, black, damp, homogeneous, high plasticity, very dense.	SB11_1m PID = 2.2 ppm	
	1.50				Borehole SB11 terminated at 1.5m	SB11_1.5m PID = 2.7 ppm	



SB12

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Bitumen		No odours, staining or asbestos observed.
	0.10			Fill	Sandy clayey silt, brown, dry, heterogeneous, non-plastic, very soft, with inclusions of bitumen (2-5 mm).	SB12_0.2m PID = 4 ppm	
	0.40			Fill	Reworked clay, grey/brown, dry, heterogeneous, non-plastic, soft, with inclusions of gravels (<0.5 cm).	SB12_0.5m PID = 2.6 ppm	
	0.80			CL-ML-SM	Sandy silty clay, black, damp, homogeneous, high plasticity, very dense.	SB12_1m PID = 2.2 ppm	
	1.50				Borehole SB12 terminated at 1.5m	SB12_1.5m PID = 2.3 ppm	



SB13

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JN

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 200

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
CC				Fill	Concrete		
SFA		0.15		Fill	Gravelly sandy silt, dark brown, dry, heterogeneous, loose, with inclusions of gravels, bricks, tiles and terracotta.	SB13_0.2m PID = 16.1 ppm	No odours, staining or asbestos observed.
	0.5	0.50		CL-ML	Silty clay, gold/brown, dry, homogeneous, medium plasticity, firm.	SB13_0.5m PID = 17.4 ppm	No odours, staining or asbestos observed.
	1.0					SB13_1m PID = 12 ppm	No odours, staining or asbestos observed.
	1.5					SB13_1.5m PID = 15.9 ppm	No odours, staining or asbestos observed. End of hole at 1.5 m bgs. Program depth.
		1.50			Borehole SB13 terminated at 1.5m		



SB14

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 0.8

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Sandy silt, dark brown, dry, heterogeneous, soft, with inclusions of mulch, brick and concrete (<0.5 cm).		No odours, staining or asbestos observed.
						SB14_0.2m PID = 5.3 ppm	
		0.30		Fill	Sandy silty clay, dark brown, dry, heterogeneous, non-palstic, soft, with inclusions of bricks (<0.5 cm) and gravels (<0.5-2 cm).		No odours, staining or asbestos observed.
	0.5					SB14_0.5m PID = 4.6 ppm	
	0.80				Borehole SB14 terminated at 0.8m		End of hole at 0.8 m bgs. Refusal on dense/rocky fill.
	1.0						
	1.5						



SB15

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Sandy silt, dark brown, dry, heterogeneous, soft, with inclusions of mulch, brick and concrete (<0.5 cm).		
						SB15_0.2m PID = 1.8 ppm	No odours, staining or asbestos observed.
	0.30			Fill	Sandy silty clay, dark brown, dry, heterogeneous, non-palstic, soft, with inclusions of bricks (<0.5 cm) and gravels (<0.5-2 cm).		
	0.5					SB15_0.5m PID = 1.7 ppm	No odours, staining or asbestos observed.
	0.70			Fill	Reworked clay, grey/black, dry, heterogeneous, low plasticity, soft.		
	1.0					SB15_1m PID = 2 ppm	No odours, staining or asbestos observed.
	1.20			Fill	Reworked clay, grey/brown, dry, heterogeneous, medium plasticity, dense.		
	1.5					SB15_1.5m PID = 1.9 ppm	No odours, staining or asbestos observed. End of hole at 1.5 m bgs. Program depth.
	1.50				Borehole SB15 terminated at 1.5m		



SB16

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JD

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Bitumen		No odours, staining or asbestos observed.
		0.10		Fill	Concrete		
		0.25		Fill	Sandy clayey silt, light brown, dry, heterogeneous, non-plastic, very soft, with inclusions of bitumen (2-5 mm).		
	0.5					SB16_0.3m PID = 4.7 ppm	No odours, staining or asbestos observed.
						SB16_0.5m PID = 7.6 ppm	
		0.80		ML-SM	Sandy silt, light brown, dry, homogeneous, soft.		No odours, staining or asbestos observed.
	1.0						
						SB16_1m PID = 7.4 ppm	
							No odours, staining or asbestos observed. End of hole at 1.5 m bgs. Program depth.
						SB16_1.5m PID = 8.7 ppm	
	1.5				Borehole SB16 terminated at 1.5m		
		1.50					

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA GDT 11-3-20



SB17

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JN

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 200

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
CC				Fill	Concrete		
SFA	0.30			Fill	Sandy silt, brown, dry, heterogeneous, loose, fine grained, with inclusions of gravels and asphalt.	SB17_0.4m PID = 9.8 ppm	No odours, staining or asbestos observed.
	0.5					SB17_0.5m PID = 8.8 ppm	No odours, staining or asbestos observed.
	1.0					SB17_1m PID = 10.9 ppm	No odours, staining or asbestos observed.
	1.10			ML-SM	Sandy silt, brown, dry, homogeneous, dense, fine grained.		
	1.5					SB17_1.5m PID = 11.7 ppm	No odours, staining or asbestos observed. End of hole at 1.5 m bgs. Program depth.
	1.50				Borehole SB17 terminated at 1.5m		



SB18

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: MN

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Sandy silt, brown, dry, heterogeneous, loose, fine grained, with inclusions of gravels and asphalt.		
	0.5					SB18_0.1m PID = 9 ppm	No odours, staining or asbestos observed.
						SB18_0.5m PID = 8.8 ppm	No odours, staining or asbestos observed.
	0.90			ML-SM	Sandy silt, brown, dry, homogeneous, dense, fine grained.		
	1.0					SB18_1m PID = 10.6 ppm	No odours, staining or asbestos observed.
	1.5					SB18_1.5m PID = 10.1 ppm	No odours, staining or asbestos observed. QS04/QS04A collected. End of hole at 1.5 m bgs. Program depth.
	1.50				Borehole SB18 terminated at 1.5m		



SB19

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: MN

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA	0.5			Fill	Sandy silt, brown, dry, heterogeneous, loose, fine grained, with inclusions of gravels and asphalt.	SB19_0.1m PID = 39.7 ppm	No odours, staining or asbestos observed.
	1.0					SB19_0.5m PID = 35.7 ppm	No odours, staining or asbestos observed.
	1.10			ML-SM	Sandy silt, brown, dry, homogeneous, dense, fine grained.	SB19_1m PID = 41.8 ppm	No odours, staining or asbestos observed.
	1.5					SB19_1.5m PID = 16.2 ppm	No odours, staining or asbestos observed. End of hole at 1.5 m bgs. Program depth.
	1.50				Borehole SB19 terminated at 1.5m		



SB20

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: MN

Contractor: Terratest

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Sandy silt, brown, dry, heterogeneous, loose, fine grained, with inclusions of rootlets.		
						SB20_0.2m PID = 6 ppm	No odours, staining or asbestos observed.
	0.5	0.50		CL-ML	Silty clay, brown/red, damp, heterogeneous, high plasticity, soft.	SB20_0.5m PID = 5.4 ppm	No odours, staining or asbestos observed.
	1.0	1.00		CL-ML	Silty clay, brown/red, damp, heterogeneous, medium plasticity, soft.	SB20_1m PID = 3.2 ppm	No odours, staining or asbestos observed.
	1.5					SB20_1.5m PID = 3.3 ppm	No odours, staining or asbestos observed. End of hole at 1.5 m bgs. Program depth.
		1.50			Borehole SB20 terminated at 1.5m		



MW1

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JN

Contractor: Terratest

Total Hole Depth (mbgs): 6

Bore Diameter (mm): 200

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Water Level Initial (mbgs): 3.5

Surface Finish: Roadbox

Casing / Screen Type: Class 18 PVC - 50mm

Casing Bottom Depth (mbgs): 3

Screen Bottom Depth (mbgs): 6

Method	Water (mbgs)	Well Details	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
CC						Fill	Concrete		
SFA (200mm)				0.12		CL-GS	Gravelly sandy clay, dark brown, damp, heterogeneous, medium plasticity, firm, with inclusions of gravels and brick.	MW1 0.2m PID = 26.4 ppm	Slight odour, no staining or asbestos observed.
				0.50		CL-ML	Silty clay, gold/brown, dry, homogeneous, medium plasticity, firm to stiff.	MW1 0.5m PID = 59.4 ppm	Slight odour, no staining or asbestos observed.
SFA (125mm)			1					MW1 1m PID = 23.2 ppm	No odours, staining or asbestos observed.
								MW1 1.5m PID = 20.2 ppm	No odours, staining or asbestos observed.
			2					MW1 2m PID = 18.2 ppm	No odours, staining or asbestos observed.
								MW1 3m PID = 12 ppm	No odours, staining or asbestos observed.
			3						
				3.50		CL-SC	Sandy clay, brown, moist, homogeneous, high plasticity, soft to firm.	MW1 3.5m PID = 14.6 ppm	No odours, staining or asbestos observed.
			4					MW1 4m PID = 8.9 ppm	No odours, staining or asbestos observed.
								MW1 5m PID = 16.2 ppm	No odours, staining or asbestos observed.
			5						
								MW1 6m PID = 10.3 ppm	No odours, staining or asbestos observed. End of hole at 6.0 m bgs. Program depth.
			6	6.00			Borehole MW1 terminated at 6m		



MW2

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JN

Contractor: Terratest

Total Hole Depth (mbgs): 4

Bore Diameter (mm): 200

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Water Level Initial (mbgs): 1.5

Surface Finish: Roadbox

Casing / Screen Type: Class 18 PVC - 50mm

Casing Bottom Depth (mbgs): 2

Screen Bottom Depth (mbgs): 4

Method	Water (mbgs)	Well Details	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA						Fill	Silty sand, dark brown, dry, homogeneous, loose, fine grained, with inclusions of gravels.	<div>MW2 0.1m PID = 14.2 ppm</div>	No odours, staining or asbestos observed.
								<div>MW2 0.5m PID = 12.6 ppm</div>	No odours, staining or asbestos observed.
			1					<div>MW2 1m PID = 10.2 ppm</div>	No odours, staining or asbestos observed.
			1.50			Fill	Silty sand, dark brown, moist, homogeneous, loose, fine grained, with inclusions of gravels.	<div>MW2 1.5m PID = 9.4 ppm</div>	No odours, staining or asbestos observed.
			2					<div>MW2 2m PID = 12.9 ppm</div>	No odours, staining or asbestos observed.
			2.00			SANDSTONE	Sandstone, gold/brown, moist, homogeneous, hard, fine grained.		
			3					<div>MW2 3m PID = 16.4 ppm</div>	No odours, staining or asbestos observed.
			3.00			SANDSTONE	Sandstone, grey with gold mottles, saturated, homogeneous, hard, fine grained.		
			4					<div>MW2 4m PID = 25.3 ppm</div>	No odours, staining or asbestos observed. End of hole at 4.0 m bgs. Program depth.
			4.00				Borehole MW2 terminated at 4m		
			5						
			6						



MW3

Project Number: 58352

Client: Infrastructure NSW

Project Name: Parramatta Powerhouse

Site Address: Phillip Street, Parramatta

Date: 28-Feb-20

Logged By: JN

Contractor: Terratest

Total Hole Depth (mbgs): 4

Bore Diameter (mm): 200

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area/Permit#:

Reference Level: Ground Surface

Elevation (m):

Water Level Initial (mbgs): 1.5

Surface Finish: Roadbox

Casing / Screen Type: Class 18 PVC - 50mm

Casing Bottom Depth (mbgs): 2

Screen Bottom Depth (mbgs): 4

Method	Water (mbgs)	Well Details	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA (200mm)				0.20		Fill	Silty sand, brown, dry, heterogeneous, loose, fine grained, with inclusions of gravels and roots.	MW3_0.1m PID = 17.6 ppm	No odours, staining or asbestos observed.
						Fill	Sandy clayey silt, brown, damp, heterogeneous, dense, fine grained, with inclusions of bricks, terracotta, concrete and gravels.	MW3_0.5m PID = 11.8 ppm	No odours, staining or asbestos observed.
SFA (125mm)			1	1.50		Fill	Sandy clayey silt, brown, moist, heterogeneous, dense, fine grained, with inclusions of bricks, terracotta, concrete and gravels.	MW3_1m PID = 12.3 ppm	No odours, staining or asbestos observed.
								MW3_2m PID = 7.8 ppm	Very slight odour, grey staining or no asbestos observed.
			3	3.00		Fill	Sandy clayey silt, brown, saturated, heterogeneous, dense, fine grained, with inclusions of bricks, terracotta, concrete and gravels.	MW3_3m PID = 5.2 ppm	No odours, staining or asbestos observed.
			4	4.00			Borehole MW3 terminated at 4m	MW3_4m PID = 6.8 ppm	No odours, staining or asbestos observed. End of hole at 4.0 m bgs. Program depth.
			5						
			6						

Appendix J Laboratory Certificates and Chain of Custody Documentation

CHAIN OF CUSTODY

pg 1/5

20905



PROJECT NO.: <u>58352</u>					LABORATORY BATCH NO.:				
PROJECT NAME: <u>Parramatta Powerhouse</u>					SAMPLERS: <u>JN, JD, + MN</u>				
DATE NEEDED BY: <u>Standard</u>					QC LEVEL: <u>NEPM (2013)</u>				
PHONE: Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688									
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) <u>Michaelson</u>@jbsg.com.au; (3)@jbsg.com.au									
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:									

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Heavy Metals	PAH	TRH/VOCs	OCF/PCBs	Asbestos*	Hold	TYPE OF ASBESTOS ANALYSIS	NOTES
SB1-0.2	Soil	28/2/20		J+B		X	X	X	X	X		*NEPM 500ml 705373 NOTES:	
SB1-0.5				B							X		
-1.0				B							X		
-1.5				J+B		X	X	X					
SB2-0.2				J+B							X		
-0.5				B							X		
-1.0				J		X	X	X		X			
SB3-0.2				J+B							X		
-0.5				B							X		
-1.5				J		X	X						
SB4-0.2				B		X	X			X			
-0.5				J		X	X						
SB4-1.0				ASS							X		
-1.5				J							X		
SB5-0.2				B+J		X	X	X		X			
-1.0				J		X	X						
SB6-0.2				J+B		X	X	X	X	X			
-1.0				J							X		
-1.5				ASS							X		

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME: <u>Chapman</u>	DATE: <u>2/3/20</u>	CONSIGNMENT NOTE NO.		NAME: <u>Michaelson</u>	DATE: <u>2/03/20</u>	COOLER SEAL - Yes..... No Intact Broken	
OF: <u>JBS&G</u>		TRANSPORT CO.		OF: <u>JBS&G</u>	DATE: <u>4:56PM</u>	COOLER TEMP deg C <u>5.5C</u>	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No Intact Broken	
OF:		TRANSPORT CO.		OF:		COOLER TEMP deg C	

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

CHAIN OF CUSTODY

pg 2/5

20906



PROJECT NO.: 3584					LABORATORY BATCH NO.:																																																																																																																																																																																																																																																																																																																																										
PROJECT NAME: Parramatta Powerhouse					SAMPLERS: JN, JD, + MN																																																																																																																																																																																																																																																																																																																																										
DATE NEEDED BY: Standard					QC LEVEL: NEPM (2013)																																																																																																																																																																																																																																																																																																																																										
PHONE: Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688																																																																																																																																																																																																																																																																																																																																															
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) J.Nicholson@jbsg.com.au; (3) @jbsg.com.au																																																																																																																																																																																																																																																																																																																																															
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																																																																																																																																																																																																																																																																																																																																															
* NEPM 500mL																																																																																																																																																																																																																																																																																																																																															
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">SAMPLE ID</th> <th rowspan="2">MATRIX</th> <th rowspan="2">DATE</th> <th rowspan="2">TIME</th> <th rowspan="2">TYPE & PRESERVATIVE</th> <th rowspan="2">pH</th> <th rowspan="2">Heavy metals</th> <th rowspan="2">PAT</th> <th rowspan="2">CRH/NOG</th> <th rowspan="2">OCB/PCBs</th> <th rowspan="2">Asbestos *</th> <th rowspan="2">Hb/d</th> <th colspan="2">TYPE OF ASBESTOS ANALYSIS</th> <th rowspan="2">NOTES:</th> </tr> <tr> <th>IDENTIFICATION</th> <th>NEPM/WA</th> </tr> </thead> <tbody> <tr> <td>SB7 - 0.2</td> <td>Soil</td> <td>28/2/20</td> <td></td> <td>B</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- 0.5</td> <td></td> <td></td> <td></td> <td>J+B</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- 1.0</td> <td></td> <td></td> <td></td> <td>J</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SB8 - 0.2</td> <td></td> <td></td> <td></td> <td>J+B</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- 0.5</td> <td></td> <td></td> <td></td> <td>B</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- 1.0</td> <td></td> <td></td> <td></td> <td>J</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- 1.5</td> <td></td> <td></td> <td></td> <td>ASS</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SB9 - 0.2</td> <td></td> <td></td> <td></td> <td>B</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- 0.5</td> <td></td> <td></td> <td></td> <td>J+B</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- 1.5</td> <td></td> <td></td> <td></td> <td>J</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SB10 - 0.2</td> <td></td> <td></td> <td></td> <td>J+B</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- 0.5</td> <td></td> <td></td> <td></td> <td>ASS</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- 1.5</td> <td></td> <td></td> <td></td> <td>J</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SB11 - 0.2</td> <td></td> <td></td> <td></td> <td>B</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- 0.5</td> <td></td> <td></td> <td></td> <td>J+B</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- 1.5</td> <td></td> <td></td> <td></td> <td>J</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SB12 - 0.2</td> <td></td> <td></td> <td></td> <td>J+B</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- 0.5</td> <td></td> <td></td> <td></td> <td>B</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- 1.5</td> <td>✓</td> <td>✓</td> <td></td> <td>J</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>															SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Heavy metals	PAT	CRH/NOG	OCB/PCBs	Asbestos *	Hb/d	TYPE OF ASBESTOS ANALYSIS		NOTES:	IDENTIFICATION	NEPM/WA	SB7 - 0.2	Soil	28/2/20		B		X	X			X	X					- 0.5				J+B		X	X			X						- 1.0				J		X	X									SB8 - 0.2				J+B		X	X	X		X						- 0.5				B							X					- 1.0				J		X	X									- 1.5				ASS							X					SB9 - 0.2				B							X					- 0.5				J+B		X	X			X						- 1.5				J							X					SB10 - 0.2				J+B		X	X			X						- 0.5				ASS							X					- 1.5				J							X					SB11 - 0.2				B							X					- 0.5				J+B		X	X			X						- 1.5				J							X					SB12 - 0.2				J+B		X	X	X		X						- 0.5				B							X					- 1.5	✓	✓		J							X				
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Heavy metals	PAT	CRH/NOG	OCB/PCBs	Asbestos *	Hb/d	TYPE OF ASBESTOS ANALYSIS		NOTES:																																																																																																																																																																																																																																																																																																																																	
												IDENTIFICATION	NEPM/WA																																																																																																																																																																																																																																																																																																																																		
SB7 - 0.2	Soil	28/2/20		B		X	X			X	X																																																																																																																																																																																																																																																																																																																																				
- 0.5				J+B		X	X			X																																																																																																																																																																																																																																																																																																																																					
- 1.0				J		X	X																																																																																																																																																																																																																																																																																																																																								
SB8 - 0.2				J+B		X	X	X		X																																																																																																																																																																																																																																																																																																																																					
- 0.5				B							X																																																																																																																																																																																																																																																																																																																																				
- 1.0				J		X	X																																																																																																																																																																																																																																																																																																																																								
- 1.5				ASS							X																																																																																																																																																																																																																																																																																																																																				
SB9 - 0.2				B							X																																																																																																																																																																																																																																																																																																																																				
- 0.5				J+B		X	X			X																																																																																																																																																																																																																																																																																																																																					
- 1.5				J							X																																																																																																																																																																																																																																																																																																																																				
SB10 - 0.2				J+B		X	X			X																																																																																																																																																																																																																																																																																																																																					
- 0.5				ASS							X																																																																																																																																																																																																																																																																																																																																				
- 1.5				J							X																																																																																																																																																																																																																																																																																																																																				
SB11 - 0.2				B							X																																																																																																																																																																																																																																																																																																																																				
- 0.5				J+B		X	X			X																																																																																																																																																																																																																																																																																																																																					
- 1.5				J							X																																																																																																																																																																																																																																																																																																																																				
SB12 - 0.2				J+B		X	X	X		X																																																																																																																																																																																																																																																																																																																																					
- 0.5				B							X																																																																																																																																																																																																																																																																																																																																				
- 1.5	✓	✓		J							X																																																																																																																																																																																																																																																																																																																																				
RELINQUISHED BY:					METHOD OF SHIPMENT:					RECEIVED BY:					FOR RECEIVING LAB USE ONLY:																																																																																																																																																																																																																																																																																																																																
NAME: <i>S Chapman</i>					CONSIGNMENT NOTE NO.					NAME: <i>Lupan</i>					COOLER SEAL - Yes..... No Intact Broken																																																																																																																																																																																																																																																																																																																																
DATE: 2/3/20					TRANSPORT CO.					DATE: 02/03					COOLER TEMP deg C																																																																																																																																																																																																																																																																																																																																
OF: JBS&G					CONSIGNMENT NOTE NO.					NAME:					COOLER SEAL - Yes..... No Intact Broken																																																																																																																																																																																																																																																																																																																																
DATE:					TRANSPORT CO.					DATE:					COOLER TEMP deg C																																																																																																																																																																																																																																																																																																																																
OF:																																																																																																																																																																																																																																																																																																																																															

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

CHAIN OF CUSTODY

pg 3/5

20907



PROJECT NO.: 32007					LABORATORY BATCH NO.:									
PROJECT NAME: Parramatta Powerhouse					SAMPLERS: JN, JD + MN									
DATE NEEDED BY: standard					QC LEVEL: NEPM (2013)									
PHONE: Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688														
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) J.Nicholson@jbsg.com.au; (3) @jbsg.com.au														
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:														
<div style="float: right; text-align: right;"> TYPE OF ASBESTOS ANALYSIS IDENTIFICATION NEPM/WA * NEPM 500ml NOTES: </div>														
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Heavy Metals	PAH	PCB/VOC	OCF/PCBS	Asbestos*	Hold			
SB13 - 0.2	soil	28/2/20		J+B		X	X	X	X	X				
- 0.5				J		X	X	X						
- 1.0				J							X			
- 1.5				J							X			
SB14 - 0.2				J+B							X			
- 0.5				J+B		X	X			X				
SB15 - 0.2				B							X			
- 0.5				J+B							X			
- 1.0				B							X			
- 1.5				J+B		X	X			X				
SB16 - 0.3				J+B		X	X			X				
- 0.5				J+B							X			
- 1.0				J							X			
- 1.5				J							X			
SB17 - 0.4				J+B							X			
- 0.5				J+B							X			
- 1.0				J+B		X	X			X				
- 1.5				J							X			
SB18 - 0.1				J+B		X	X			X				

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No Intact Broken	
OF: JBS&G	2/3/20			OF: Ryan	02/03	COOLER TEMP deg C	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No Intact Broken	
OF:		TRANSPORT CO		OF:		COOLER TEMP deg C	

CHAIN OF CUSTODY

pg 4/5

20908



PROJECT NO.: 5187					LABORATORY BATCH NO.:				
PROJECT NAME: <u>Parramatta Powerhouse</u>					SAMPLERS: <u>JN, JD + MN</u>				
DATE NEEDED BY: <u>Standard</u>					QC LEVEL: NEPM (2013)				
PHONE: Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688									
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) <u>JN, Chelson</u>@jbsg.com.au; (3)@jbsg.com.au									
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:									

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Heavy Metals	PAH	TRH/VOCs	OCF/PCBs	Asbestos*	Hold	TYPE OF ASBESTOS ANALYSIS		NOTES:
												IDENTIFICATION	NEPM/WA	
SB18 - 0.5	soil	28/2/20	↓	J+B							X		* NEPM 500ml	
- 1.0				J						X				
- 1.5				J						X				
SB19 - 0.1				J+B						X				
- 0.5				J+B						X				
- 1.0				J+B						X				
- 1.5				J						X				
SB20 - 0.2				J+B						X				
- 0.5				J						X				
- 1.0				J						X				
- 1.5				J						X				
MW1 - 0.2				J+B+ASS						X				
- 0.5				J						X				
- 1.0				J						X				
- 1.5				J+ASS						X				
- 4.0				J+ASS						X				
- 5.0				J						X				
- 6.0				J						X				
MW2 - 0.1				J+B						X				

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME: <u>Chapman</u>	DATE: <u>2/3/20</u>	CONSIGNMENT NOTE NO.		NAME: <u>Bupari</u>	DATE: <u>02/03</u>	COOLER SEAL - Yes..... No Intact Broken	
OF: JBS&G		TRANSPORT CO.		OF:		COOLER TEMP deg C	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No Intact Broken	
OF:		TRANSPORT CO.		OF:		COOLER TEMP deg C	

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

CHAIN OF CUSTODY

pg 5/5

20909



PROJECT NO.: 51111					LABORATORY BATCH NO.:																																																																																																																																																																																																																																																																																																								
PROJECT NAME: Parramatta Powerhouse					SAMPLERS: JNJD + MN																																																																																																																																																																																																																																																																																																								
DATE NEEDED BY: Standard					QC LEVEL: NEPM (2013)																																																																																																																																																																																																																																																																																																								
PHONE: Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688																																																																																																																																																																																																																																																																																																													
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) J.Nicholson@jbsg.com.au; (3) @jbsg.com.au																																																																																																																																																																																																																																																																																																													
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																																																																																																																																																																																																																																																																																																													
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>SAMPLE ID</th> <th>MATRIX</th> <th>DATE</th> <th>TIME</th> <th>TYPE & PRESERVATIVE</th> <th>pH</th> <th>Heavy Metals</th> <th>PAH</th> <th>TRH/VOC</th> <th>OCF/PCBs</th> <th>Asbestos +</th> <th>TRH</th> <th>RTXN</th> <th>IDENTIFICATION</th> <th>NEPM/NA</th> <th>NOTES:</th> </tr> </thead> <tbody> <tr> <td>MW2 - 0.5</td> <td>soil</td> <td>28/2</td> <td>20</td> <td>J + B</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td rowspan="15">* NEPM 500ml</td> </tr> <tr> <td>-1.0</td> <td>↓</td> <td>↓</td> <td></td> <td>J + B</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>-1.5</td> <td>↓</td> <td>↓</td> <td></td> <td>J + B</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>-2.0</td> <td>↓</td> <td>↓</td> <td></td> <td>J</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>-3.0</td> <td>↓</td> <td>↓</td> <td></td> <td>J</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>-4.0</td> <td>↓</td> <td>↓</td> <td></td> <td>J + ASS</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MW3 - 0.1</td> <td>↓</td> <td>↓</td> <td></td> <td>J + B</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>-1.0</td> <td>↓</td> <td>↓</td> <td></td> <td>J + B</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>-2.0</td> <td>↓</td> <td>↓</td> <td></td> <td>J + B</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>-3.0</td> <td>↓</td> <td>↓</td> <td></td> <td>J</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>-4.0</td> <td>↓</td> <td>↓</td> <td></td> <td>J</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>QS01</td> <td>↓</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>QS02</td> <td>↓</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>QS03</td> <td>↓</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>QS04</td> <td>↓</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>rinse</td> <td>Water</td> <td>28/2/20</td> <td></td> <td>2x vials, amber, metals</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TS</td> <td>↓</td> <td>27/2/20</td> <td></td> <td>2x vials</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>TB</td> <td>↓</td> <td>↓</td> <td></td> <td>↓</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> </tbody> </table> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 20%;"> RELINQUISHED BY: NAME: <u>S Chapman</u> OF: JBS&G DATE: <u>2/3/20</u> </div> <div style="width: 20%;"> METHOD OF SHIPMENT: CONSIGNMENT NOTE NO. TRANSPORT CO. CONSIGNMENT NOTE NO. TRANSPORT CO. </div> <div style="width: 20%;"> RECEIVED BY: NAME: <u>Pupau</u> DATE: <u>02/03</u> OF: NAME: DATE: OF: </div> <div style="width: 30%;"> FOR RECEIVING LAB USE ONLY: COOLER SEAL - Yes..... No Intact Broken COOLER TEMP deg C COOLER SEAL - Yes..... No Intact Broken COOLER TEMP deg C </div> </div> </div> <div data-bbox="35 1386 2112 1433" data-label="Page-Footer"> <p>IMS0 Forms013 - Chain of Custody - Generic</p> </div>															SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Heavy Metals	PAH	TRH/VOC	OCF/PCBs	Asbestos +	TRH	RTXN	IDENTIFICATION	NEPM/NA	NOTES:	MW2 - 0.5	soil	28/2	20	J + B							X				* NEPM 500ml	-1.0	↓	↓		J + B							X				-1.5	↓	↓		J + B							X				-2.0	↓	↓		J							X				-3.0	↓	↓		J							X				-4.0	↓	↓		J + ASS		X	X	X			X				MW3 - 0.1	↓	↓		J + B		X	X	X	X						-1.0	↓	↓		J + B		X	X								-2.0	↓	↓		J + B							X				-3.0	↓	↓		J							X				-4.0	↓	↓		J							X				QS01	↓					X	X								QS02	↓					X	X								QS03	↓					X	X								QS04	↓										X				rinse	Water	28/2/20		2x vials, amber, metals		X	X	X							TS	↓	27/2/20		2x vials								X			TB	↓	↓		↓							X	X		
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Heavy Metals	PAH	TRH/VOC	OCF/PCBs	Asbestos +	TRH	RTXN	IDENTIFICATION	NEPM/NA	NOTES:																																																																																																																																																																																																																																																																																														
MW2 - 0.5	soil	28/2	20	J + B							X				* NEPM 500ml																																																																																																																																																																																																																																																																																														
-1.0	↓	↓		J + B							X																																																																																																																																																																																																																																																																																																		
-1.5	↓	↓		J + B							X																																																																																																																																																																																																																																																																																																		
-2.0	↓	↓		J							X																																																																																																																																																																																																																																																																																																		
-3.0	↓	↓		J							X																																																																																																																																																																																																																																																																																																		
-4.0	↓	↓		J + ASS		X	X	X			X																																																																																																																																																																																																																																																																																																		
MW3 - 0.1	↓	↓		J + B		X	X	X	X																																																																																																																																																																																																																																																																																																				
-1.0	↓	↓		J + B		X	X																																																																																																																																																																																																																																																																																																						
-2.0	↓	↓		J + B							X																																																																																																																																																																																																																																																																																																		
-3.0	↓	↓		J							X																																																																																																																																																																																																																																																																																																		
-4.0	↓	↓		J							X																																																																																																																																																																																																																																																																																																		
QS01	↓					X	X																																																																																																																																																																																																																																																																																																						
QS02	↓					X	X																																																																																																																																																																																																																																																																																																						
QS03	↓					X	X																																																																																																																																																																																																																																																																																																						
QS04	↓										X																																																																																																																																																																																																																																																																																																		
rinse	Water	28/2/20		2x vials, amber, metals		X	X	X																																																																																																																																																																																																																																																																																																					
TS	↓	27/2/20		2x vials								X																																																																																																																																																																																																																																																																																																	
TB	↓	↓		↓							X	X																																																																																																																																																																																																																																																																																																	

Sample Receipt Advice

Company name: **JBS & G Australia (NSW) P/L**

Contact name: **Julia Nicholson**

Project name: **PARRAMATTA POWERHOUSE**

Project ID: **58352**

COC number: **Not provided**

Turn around time: **5 Day**

Date/Time received: **Mar 2, 2020 4:56 PM**

Eurofins reference: **705373**

Sample information

- ☒ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☒ Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 5.5 degrees Celsius.
- ☒ All samples have been received as described on the above COC.
- ☒ COC has been completed correctly.
- ☒ Attempt to chill was evident.
- ☒ Appropriately preserved sample containers have been used.
- ☒ All samples were received in good condition.
- ☒ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☒ Appropriate sample containers have been used.
- ☒ Sample containers for volatile analysis received with zero headspace.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.

Notes N/A Custody Seals intact (if used).

NO BAG received for sample: SB2_1.0, hence asbestos analysis cancelled.

Contact notes

If you have any questions with respect to these samples please contact:

Ursula Long on Phone : or by e.mail: UrsulaLong@eurofins.com

Results will be delivered electronically via e.mail to Julia Nicholson - jnicholson@jbsg.com.au.

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polyyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
External Laboratory															
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID										
1	SB1_0.2	Feb 28, 2020		Soil	S20-Ma02488	X		X	X	X		X	X	X	
2	SB1_1.5	Feb 28, 2020		Soil	S20-Ma02489			X	X			X	X	X	
3	SB2_1.0	Feb 28, 2020		Soil	S20-Ma02490			X	X			X	X	X	
4	SB3_0.2	Feb 28, 2020		Soil	S20-Ma02491	X									
5	SB3_1.5	Feb 28, 2020		Soil	S20-Ma02492			X	X				X		
6	SB4_0.2	Feb 28, 2020		Soil	S20-Ma02493	X									
7	SB4_0.5	Feb 28, 2020		Soil	S20-Ma02494			X	X				X		
8	SB5_0.2	Feb 28, 2020		Soil	S20-Ma02495	X		X	X			X	X	X	
9	SB5_1.0	Feb 28, 2020		Soil	S20-Ma02496			X	X				X		
10	SB6_0.2	Feb 28, 2020		Soil	S20-Ma02497	X		X	X	X		X	X	X	

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
11	SB7_0.5	Feb 28, 2020		Soil	S20-Ma02498	X		X	X				X		
12	SB7_1.0	Feb 28, 2020		Soil	S20-Ma02499			X	X				X		
13	SB8_0.2	Feb 28, 2020		Soil	S20-Ma02500	X		X	X			X	X	X	
14	SB8_1.0	Feb 28, 2020		Soil	S20-Ma02501			X	X				X		
15	SB9_0.5	Feb 28, 2020		Soil	S20-Ma02502	X		X	X				X		
16	SB10_0.2	Feb 28, 2020		Soil	S20-Ma02503	X		X	X				X		
17	SB11_0.5	Feb 28, 2020		Soil	S20-Ma02504	X		X	X				X		
18	SB12_0.2	Feb 28, 2020		Soil	S20-Ma02505	X		X	X	X			X		
19	SB13_0.2	Feb 28, 2020		Soil	S20-Ma02506	X		X	X	X		X	X	X	
20	SB13_0.5	Feb 28, 2020		Soil	S20-Ma02507			X	X			X	X	X	
21	SB14_0.5	Feb 28, 2020		Soil	S20-Ma02508	X		X	X				X		
22	SB15_1.5	Feb 28, 2020		Soil	S20-Ma02509	X		X	X				X		
23	SB16_0.3	Feb 28, 2020		Soil	S20-Ma02510	X		X	X				X		

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
24	SB17_1.0	Feb 28, 2020		Soil	S20-Ma02511	X		X	X				X		
25	SB18_0.1	Feb 28, 2020		Soil	S20-Ma02512	X		X	X				X		
26	SB18_1.5	Feb 28, 2020		Soil	S20-Ma02513			X	X				X		
27	SB19_1.0	Feb 28, 2020		Soil	S20-Ma02514	X		X	X			X	X	X	
28	SB19_1.5	Feb 28, 2020		Soil	S20-Ma02515							X	X	X	
29	SB20_0.2	Feb 28, 2020		Soil	S20-Ma02516	X		X	X				X		
30	MW1_0.2	Feb 28, 2020		Soil	S20-Ma02517	X		X	X	X		X	X	X	
31	MW1_0.5	Feb 28, 2020		Soil	S20-Ma02518			X	X			X	X	X	
32	MW2_0.1	Feb 28, 2020		Soil	S20-Ma02519	X		X	X			X	X	X	
33	MW2_4.0	Feb 28, 2020		Soil	S20-Ma02520			X	X			X	X	X	
34	MW3_0.1	Feb 28, 2020		Soil	S20-Ma02521	X		X	X	X		X	X	X	
35	MW3_1.0	Feb 28, 2020		Soil	S20-Ma02522			X	X				X		
36	QS01	Feb 28, 2020		Soil	S20-Ma02523			X	X				X		

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
37	QS02	Feb 28, 2020		Soil	S20-Ma02524			X	X				X		
38	QS03	Feb 28, 2020		Soil	S20-Ma02525			X	X				X		
39	RINSATE	Feb 28, 2020		Water	S20-Ma02526			X	X	X		X		X	
40	TS	Feb 27, 2020		Water	S20-Ma02527						X				
41	TB	Feb 27, 2020		Water	S20-Ma02528										X
42	SB1_0.5	Feb 28, 2020		Soil	S20-Ma02529		X								
43	SB1_1.0	Feb 28, 2020		Soil	S20-Ma02530		X								
44	SB2_0.2	Feb 28, 2020		Soil	S20-Ma02531		X								
45	SB2_0.5	Feb 28, 2020		Soil	S20-Ma02532		X								
46	SB3_0.5	Feb 28, 2020		Soil	S20-Ma02533		X								
47	SB4_1.0	Feb 28, 2020		Soil	S20-Ma02534		X								
48	SB4_1.5	Feb 28, 2020		Soil	S20-Ma02535		X								
49	SB6_1.0	Feb 28, 2020		Soil	S20-Ma02536		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
50	SB6_1.5	Feb 28, 2020		Soil	S20-Ma02537		X								
51	SB7_0.2	Feb 28, 2020		Soil	S20-Ma02538		X								
52	SB8_0.5	Feb 28, 2020		Soil	S20-Ma02539		X								
53	SB8_1.5	Feb 28, 2020		Soil	S20-Ma02540		X								
54	SB9_0.2	Feb 28, 2020		Soil	S20-Ma02541		X								
55	SB9_1.0	Feb 28, 2020		Soil	S20-Ma02542		X								
56	SB10_0.5	Feb 28, 2020		Soil	S20-Ma02543		X								
57	SB10_1.5	Feb 28, 2020		Soil	S20-Ma02544		X								
58	SB11_0.2	Feb 28, 2020		Soil	S20-Ma02545		X								
59	SB11_1.5	Feb 28, 2020		Soil	S20-Ma02546		X								
60	SB12_0.5	Feb 28, 2020		Soil	S20-Ma02547		X								
61	SB12_1.5	Feb 28, 2020		Soil	S20-Ma02548		X								
62	SB13_1.0	Feb 28, 2020		Soil	S20-Ma02549		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
63	SB13_1.5	Feb 28, 2020		Soil	S20-Ma02550		X								
64	SB14_0.2	Feb 28, 2020		Soil	S20-Ma02551		X								
65	SB15_0.2	Feb 28, 2020		Soil	S20-Ma02552		X								
66	SB15_0.5	Feb 28, 2020		Soil	S20-Ma02553		X								
67	SB15_1.0	Feb 28, 2020		Soil	S20-Ma02554		X								
68	SB16_0.5	Feb 28, 2020		Soil	S20-Ma02555		X								
69	SB16_1.0	Feb 28, 2020		Soil	S20-Ma02556		X								
70	SB16_1.5	Feb 28, 2020		Soil	S20-Ma02557		X								
71	SB17_0.4	Feb 28, 2020		Soil	S20-Ma02558		X								
72	SB17_0.5	Feb 28, 2020		Soil	S20-Ma02559		X								
73	SB17_1.5	Feb 28, 2020		Soil	S20-Ma02560		X								
74	SB18_0.5	Feb 28, 2020		Soil	S20-Ma02561		X								
75	SB18_1.0	Feb 28, 2020		Soil	S20-Ma02562		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
76	SB19_0.1	Feb 28, 2020		Soil	S20-Ma02563		X								
77	SB19_0.5	Feb 28, 2020		Soil	S20-Ma02564		X								
78	SB20_0.5	Feb 28, 2020		Soil	S20-Ma02565		X								
79	SB20_1.0	Feb 28, 2020		Soil	S20-Ma02566		X								
80	SB20_1.5	Feb 28, 2020		Soil	S20-Ma02567		X								
81	MW1_1.0	Feb 28, 2020		Soil	S20-Ma02568		X								
82	MW1_1.5	Feb 28, 2020		Soil	S20-Ma02569		X								
83	MW1_4.0	Feb 28, 2020		Soil	S20-Ma02570		X								
84	MW1_5.0	Feb 28, 2020		Soil	S20-Ma02571		X								
85	MW1_6.0	Feb 28, 2020		Soil	S20-Ma02572		X								
86	MW2_0.5	Feb 28, 2020		Soil	S20-Ma02573		X								
87	MW2_1.0	Feb 28, 2020		Soil	S20-Ma02574		X								
88	MW2_1.5	Feb 28, 2020		Soil	S20-Ma02575		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
89	MW2_2.0	Feb 28, 2020		Soil	S20-Ma02576		X								
90	MW2_3.0	Feb 28, 2020		Soil	S20-Ma02577		X								
91	MW3_2.0	Feb 28, 2020		Soil	S20-Ma02578		X								
92	MW3_3.0	Feb 28, 2020		Soil	S20-Ma02579		X								
93	MW3_4.0	Feb 28, 2020		Soil	S20-Ma02580		X								
94	QS04	Feb 28, 2020		Soil	S20-Ma02581		X								
Test Counts						22	53	36	36	7	1	16	36	16	1

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

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.

Attention: Julia Nicholson
Report 705373-V2-AID
Project Name **PARRAMATTA POWERHOUSE**
Project ID **58352**
Received Date Mar 02, 2020
Date Reported Mar 10, 2020

Methodology:

Asbestos Fibre
 Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.

NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.

Unknown Mineral
 Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil
 Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestos-
 containing material
 (ACM)

The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.

NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

Limit of Reporting

The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).

The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).

NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.

Project Name PARRAMATTA POWERHOUSE
Project ID 58352
Date Sampled Feb 28, 2020
Report 705373-V2-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
SB1_0.2	20-Ma02488	Feb 28, 2020	Approximate Sample 1070g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB3_0.2	20-Ma02491	Feb 28, 2020	Approximate Sample 866g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB4_0.2	20-Ma02493	Feb 28, 2020	Approximate Sample 898g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB5_0.2	20-Ma02495	Feb 28, 2020	Approximate Sample 588g 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 trace asbestos detected.
SB6_0.2	20-Ma02497	Feb 28, 2020	Approximate Sample 756g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB7_0.5	20-Ma02498	Feb 28, 2020	Approximate Sample 623g Sample consisted of: Brown coarse-grained sandy soil, brick, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB8_0.2	20-Ma02500	Feb 28, 2020	Approximate Sample 835g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB9_0.5	20-Ma02502	Feb 28, 2020	Approximate Sample 648g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
SB10_0.2	20-Ma02503	Feb 28, 2020	Approximate Sample 891g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB11_0.5	20-Ma02504	Feb 28, 2020	Approximate Sample 664g 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 trace asbestos detected.
SB12_0.2	20-Ma02505	Feb 28, 2020	Approximate Sample 711g Sample consisted of: Brown fine-grained sandy soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB13_0.2	20-Ma02506	Feb 28, 2020	Approximate Sample 643g Sample consisted of: Brown coarse-grained soil, cement, brick, fragments of cement, bitumen, coal and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB14_0.5	20-Ma02508	Feb 28, 2020	Approximate Sample 670g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB15_1.5	20-Ma02509	Feb 28, 2020	Approximate Sample 584g Sample consisted of: Brown coarse-grained soil, bitumen, brick, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB16_0.3	20-Ma02510	Feb 28, 2020	Approximate Sample 787g Sample consisted of: Brown coarse-grained soil, bitumen, brick, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB17_1.0	20-Ma02511	Feb 28, 2020	Approximate Sample 692g Sample consisted of: Brown coarse-grained soil, brick and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB18_0.1	20-Ma02512	Feb 28, 2020	Approximate Sample 664g Sample consisted of: Brown fine-grained sandy soil, glass and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB19_1.0	20-Ma02514	Feb 28, 2020	Approximate Sample 701g Sample consisted of: Brown fine-grained sandy soil, bitumen, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB20_0.2	20-Ma02516	Feb 28, 2020	Approximate Sample 510g Sample consisted of: Brown fine-grained sandy soil, glass and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
MW1_0.2	20-Ma02517	Feb 28, 2020	Approximate Sample 743g Sample consisted of: Brown coarse-grained soil, brick and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
MW2_0.1	20-Ma02519	Feb 28, 2020	Approximate Sample 723g 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 trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
MW3_0.1	20-Ma02521	Feb 28, 2020	Approximate Sample 786g Sample consisted of: Brown coarse-grained soil, brick, cement, glass and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS 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.

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

Asbestos - LTM-ASB-8020

Testing Site

Sydney

Extracted

Mar 03, 2020

Holding Time

Indefinite

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
External Laboratory															
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID										
1	SB1_0.2	Feb 28, 2020		Soil	S20-Ma02488	X		X	X	X		X	X	X	
2	SB1_1.5	Feb 28, 2020		Soil	S20-Ma02489			X	X			X	X	X	
3	SB2_1.0	Feb 28, 2020		Soil	S20-Ma02490			X	X			X	X	X	
4	SB3_0.2	Feb 28, 2020		Soil	S20-Ma02491	X									
5	SB3_1.5	Feb 28, 2020		Soil	S20-Ma02492			X	X				X		
6	SB4_0.2	Feb 28, 2020		Soil	S20-Ma02493	X									
7	SB4_0.5	Feb 28, 2020		Soil	S20-Ma02494			X	X				X		
8	SB5_0.2	Feb 28, 2020		Soil	S20-Ma02495	X		X	X			X	X	X	
9	SB5_1.0	Feb 28, 2020		Soil	S20-Ma02496			X	X				X		
10	SB6_0.2	Feb 28, 2020		Soil	S20-Ma02497	X		X	X	X		X	X	X	

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
11	SB7_0.5	Feb 28, 2020		Soil	S20-Ma02498	X		X	X				X		
12	SB7_1.0	Feb 28, 2020		Soil	S20-Ma02499			X	X				X		
13	SB8_0.2	Feb 28, 2020		Soil	S20-Ma02500	X		X	X			X	X	X	
14	SB8_1.0	Feb 28, 2020		Soil	S20-Ma02501			X	X				X		
15	SB9_0.5	Feb 28, 2020		Soil	S20-Ma02502	X		X	X				X		
16	SB10_0.2	Feb 28, 2020		Soil	S20-Ma02503	X		X	X				X		
17	SB11_0.5	Feb 28, 2020		Soil	S20-Ma02504	X		X	X				X		
18	SB12_0.2	Feb 28, 2020		Soil	S20-Ma02505	X		X	X	X			X		
19	SB13_0.2	Feb 28, 2020		Soil	S20-Ma02506	X		X	X	X		X	X	X	
20	SB13_0.5	Feb 28, 2020		Soil	S20-Ma02507			X	X			X	X	X	
21	SB14_0.5	Feb 28, 2020		Soil	S20-Ma02508	X		X	X				X		
22	SB15_1.5	Feb 28, 2020		Soil	S20-Ma02509	X		X	X				X		
23	SB16_0.3	Feb 28, 2020		Soil	S20-Ma02510	X		X	X				X		

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
24	SB17_1.0	Feb 28, 2020		Soil	S20-Ma02511	X		X	X				X		
25	SB18_0.1	Feb 28, 2020		Soil	S20-Ma02512	X		X	X				X		
26	SB18_1.5	Feb 28, 2020		Soil	S20-Ma02513			X	X				X		
27	SB19_1.0	Feb 28, 2020		Soil	S20-Ma02514	X		X	X			X	X	X	
28	SB19_1.5	Feb 28, 2020		Soil	S20-Ma02515							X	X	X	
29	SB20_0.2	Feb 28, 2020		Soil	S20-Ma02516	X		X	X				X		
30	MW1_0.2	Feb 28, 2020		Soil	S20-Ma02517	X		X	X	X		X	X	X	
31	MW1_0.5	Feb 28, 2020		Soil	S20-Ma02518			X	X			X	X	X	
32	MW2_0.1	Feb 28, 2020		Soil	S20-Ma02519	X		X	X			X	X	X	
33	MW2_4.0	Feb 28, 2020		Soil	S20-Ma02520			X	X			X	X	X	
34	MW3_0.1	Feb 28, 2020		Soil	S20-Ma02521	X		X	X	X		X	X	X	
35	MW3_1.0	Feb 28, 2020		Soil	S20-Ma02522			X	X				X		
36	QS01	Feb 28, 2020		Soil	S20-Ma02523			X	X				X		

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
37	QS02	Feb 28, 2020		Soil	S20-Ma02524			X	X				X		
38	QS03	Feb 28, 2020		Soil	S20-Ma02525			X	X				X		
39	RINSATE	Feb 28, 2020		Water	S20-Ma02526			X	X	X		X		X	
40	TS	Feb 27, 2020		Water	S20-Ma02527						X				
41	TB	Feb 27, 2020		Water	S20-Ma02528										X
42	SB1_0.5	Feb 28, 2020		Soil	S20-Ma02529		X								
43	SB1_1.0	Feb 28, 2020		Soil	S20-Ma02530		X								
44	SB2_0.2	Feb 28, 2020		Soil	S20-Ma02531		X								
45	SB2_0.5	Feb 28, 2020		Soil	S20-Ma02532		X								
46	SB3_0.5	Feb 28, 2020		Soil	S20-Ma02533		X								
47	SB4_1.0	Feb 28, 2020		Soil	S20-Ma02534		X								
48	SB4_1.5	Feb 28, 2020		Soil	S20-Ma02535		X								
49	SB6_1.0	Feb 28, 2020		Soil	S20-Ma02536		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
50	SB6_1.5	Feb 28, 2020		Soil	S20-Ma02537		X								
51	SB7_0.2	Feb 28, 2020		Soil	S20-Ma02538		X								
52	SB8_0.5	Feb 28, 2020		Soil	S20-Ma02539		X								
53	SB8_1.5	Feb 28, 2020		Soil	S20-Ma02540		X								
54	SB9_0.2	Feb 28, 2020		Soil	S20-Ma02541		X								
55	SB9_1.0	Feb 28, 2020		Soil	S20-Ma02542		X								
56	SB10_0.5	Feb 28, 2020		Soil	S20-Ma02543		X								
57	SB10_1.5	Feb 28, 2020		Soil	S20-Ma02544		X								
58	SB11_0.2	Feb 28, 2020		Soil	S20-Ma02545		X								
59	SB11_1.5	Feb 28, 2020		Soil	S20-Ma02546		X								
60	SB12_0.5	Feb 28, 2020		Soil	S20-Ma02547		X								
61	SB12_1.5	Feb 28, 2020		Soil	S20-Ma02548		X								
62	SB13_1.0	Feb 28, 2020		Soil	S20-Ma02549		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
63	SB13_1.5	Feb 28, 2020		Soil	S20-Ma02550		X								
64	SB14_0.2	Feb 28, 2020		Soil	S20-Ma02551		X								
65	SB15_0.2	Feb 28, 2020		Soil	S20-Ma02552		X								
66	SB15_0.5	Feb 28, 2020		Soil	S20-Ma02553		X								
67	SB15_1.0	Feb 28, 2020		Soil	S20-Ma02554		X								
68	SB16_0.5	Feb 28, 2020		Soil	S20-Ma02555		X								
69	SB16_1.0	Feb 28, 2020		Soil	S20-Ma02556		X								
70	SB16_1.5	Feb 28, 2020		Soil	S20-Ma02557		X								
71	SB17_0.4	Feb 28, 2020		Soil	S20-Ma02558		X								
72	SB17_0.5	Feb 28, 2020		Soil	S20-Ma02559		X								
73	SB17_1.5	Feb 28, 2020		Soil	S20-Ma02560		X								
74	SB18_0.5	Feb 28, 2020		Soil	S20-Ma02561		X								
75	SB18_1.0	Feb 28, 2020		Soil	S20-Ma02562		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
76	SB19_0.1	Feb 28, 2020		Soil	S20-Ma02563		X								
77	SB19_0.5	Feb 28, 2020		Soil	S20-Ma02564		X								
78	SB20_0.5	Feb 28, 2020		Soil	S20-Ma02565		X								
79	SB20_1.0	Feb 28, 2020		Soil	S20-Ma02566		X								
80	SB20_1.5	Feb 28, 2020		Soil	S20-Ma02567		X								
81	MW1_1.0	Feb 28, 2020		Soil	S20-Ma02568		X								
82	MW1_1.5	Feb 28, 2020		Soil	S20-Ma02569		X								
83	MW1_4.0	Feb 28, 2020		Soil	S20-Ma02570		X								
84	MW1_5.0	Feb 28, 2020		Soil	S20-Ma02571		X								
85	MW1_6.0	Feb 28, 2020		Soil	S20-Ma02572		X								
86	MW2_0.5	Feb 28, 2020		Soil	S20-Ma02573		X								
87	MW2_1.0	Feb 28, 2020		Soil	S20-Ma02574		X								
88	MW2_1.5	Feb 28, 2020		Soil	S20-Ma02575		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
89	MW2_2.0	Feb 28, 2020		Soil	S20-Ma02576		X								
90	MW2_3.0	Feb 28, 2020		Soil	S20-Ma02577		X								
91	MW3_2.0	Feb 28, 2020		Soil	S20-Ma02578		X								
92	MW3_3.0	Feb 28, 2020		Soil	S20-Ma02579		X								
93	MW3_4.0	Feb 28, 2020		Soil	S20-Ma02580		X								
94	QS04	Feb 28, 2020		Soil	S20-Ma02581		X								
Test Counts						22	53	36	36	7	1	16	36	16	1

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

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

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the 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	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to "non-bonded / friable".
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory's remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

This report has been revised (V2) to amend sample name for S20-Ma02492.

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
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias Senior Analyst-Asbestos (NSW)

Authorised by:

Sayed Abu Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

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.

Attention: **Julia Nicholson**

Report **705373-S-V2**
Project name **PARRAMATTA POWERHOUSE**
Project ID **58352**
Received Date **Mar 02, 2020**

Client Sample ID			SB1_0.2	SB1_1.5	SB2_1.0	SB3_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02488	S20-Ma02489	S20-Ma02490	S20-Ma02492
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	56	< 50	< 50	-
TRH C29-C36	50	mg/kg	110	80	110	-
TRH C10-C36 (Total)	50	mg/kg	166	80	110	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

Client Sample ID			SB1_0.2	SB1_1.5	SB2_1.0	SB3_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02488	S20-Ma02489	S20-Ma02490	S20-Ma02492
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Bromofluorobenzene (surr.)	1	%	83	94	79	-
Toluene-d8 (surr.)	1	%	96	102	88	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	130	< 100	110	-
TRH >C34-C40	100	mg/kg	170	160	170	-
TRH >C10-C40 (total)*	100	mg/kg	300	160	280	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	1.4	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	1.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.9	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
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	1.0	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	1.0	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	0.8	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	0.7	< 0.5

Client Sample ID			SB1_0.2	SB1_1.5	SB2_1.0	SB3_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02488	S20-Ma02489	S20-Ma02490	S20-Ma02492
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	0.9	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	0.9	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	1.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	1.1	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	0.6	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	1.6	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	10.1	< 0.5
2-Fluorobiphenyl (surr.)	1	%	98	51	89	89
p-Terphenyl-d14 (surr.)	1	%	118	52	107	89
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-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	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
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 621 OCP (Total)*	0.1	mg/kg	< 0.2	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	-	-
Dibutylchloroendate (surr.)	1	%	129	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	97	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-
Total PCB*	0.5	mg/kg	< 0.5	-	-	-

Client Sample ID			SB1_0.2	SB1_1.5	SB2_1.0	SB3_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02488	S20-Ma02489	S20-Ma02490	S20-Ma02492
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Dibutylchloroendate (surr.)	1	%	129	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	97	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	< 2	2.7	3.8	5.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	70	7.4	22	12
Copper	5	mg/kg	79	9.3	46	13
Lead	5	mg/kg	17	7.8	190	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.4	< 0.1
Nickel	5	mg/kg	80	5.2	20	5.3
Zinc	5	mg/kg	89	16	140	20
% Moisture	1	%	8.5	5.0	11	11

Client Sample ID			SB4_0.5	G01 SB5_0.2	SB5_1.0	G01 SB6_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02494	S20-Ma02495	S20-Ma02496	S20-Ma02497
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	< 20
TRH C10-C14	20	mg/kg	-	< 200	-	< 200
TRH C15-C28	50	mg/kg	-	< 500	-	< 500
TRH C29-C36	50	mg/kg	-	1100	-	1200
TRH C10-C36 (Total)	50	mg/kg	-	1100	-	1200
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.4-Dichlorobenzene	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
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	-	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	-	< 0.5
Allyl chloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzene	0.1	mg/kg	-	< 0.1	-	< 0.1

Client Sample ID			SB4_0.5	G01SB5_0.2	SB5_1.0	G01SB6_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02494	S20-Ma02495	S20-Ma02496	S20-Ma02497
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
Bromobenzene	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
Bromomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Carbon disulfide	0.5	mg/kg	-	< 0.5	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Chlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
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-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibromochloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibromomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	< 0.1
Iodomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	-	< 0.5
m&p-Xylenes	0.2	mg/kg	-	1.0	-	1.1
Methylene Chloride	0.5	mg/kg	-	< 0.5	-	< 0.5
o-Xylene	0.1	mg/kg	-	0.4	-	0.5
Styrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Tetrachloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
Toluene	0.1	mg/kg	-	< 0.1	-	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	< 0.5
Trichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Vinyl chloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Xylenes - Total	0.3	mg/kg	-	1.5	-	1.6
Total MAH*	0.5	mg/kg	-	1.4	-	1.6
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	< 0.5	-	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	< 0.5	-	< 0.5
4-Bromofluorobenzene (surr.)	1	%	-	87	-	90
Toluene-d8 (surr.)	1	%	-	103	-	97
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	-	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	-	< 20
TRH >C10-C16	50	mg/kg	-	< 500	-	< 500
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 500	-	< 500
TRH >C16-C34	100	mg/kg	-	1200	-	1200
TRH >C34-C40	100	mg/kg	-	1400	-	1500
TRH >C10-C40 (total)*	100	mg/kg	-	2600	-	2700

Client Sample ID			SB4_0.5	G01SB5_0.2	SB5_1.0	G01SB6_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02494	S20-Ma02495	S20-Ma02496	S20-Ma02497
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	1.0	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.3	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.6	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
Benz(a)anthracene	0.5	mg/kg	0.8	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	0.8	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	0.8	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	0.6	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	1.1	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	1.0	< 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
Total PAH*	0.5	mg/kg	6.1	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	64	70	85	100
p-Terphenyl-d14 (surr.)	1	%	94	86	107	93
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4,4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-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
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	-	< 0.2
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 621 OCP (Total)*	0.1	mg/kg	-	-	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	< 0.2
Dibutylchloroendate (surr.)	1	%	-	-	-	INT
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	101

Client Sample ID			SB4_0.5	G01SB5_0.2	SB5_1.0	G01SB6_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02494	S20-Ma02495	S20-Ma02496	S20-Ma02497
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	-	< 0.5
Total PCB*	0.5	mg/kg	-	-	-	< 0.5
Dibutylchloredate (surr.)	1	%	-	-	-	INT
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	101
Heavy Metals						
Arsenic	2	mg/kg	3.7	< 2	7.1	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	14	12	11
Copper	5	mg/kg	29	68	15	57
Lead	5	mg/kg	88	17	16	11
Mercury	0.1	mg/kg	0.3	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	36	46	10	67
Zinc	5	mg/kg	75	69	44	52
% Moisture	1	%	9.3	6.6	13	5.2

Client Sample ID			SB7_0.5	SB7_1.0	G01SB8_0.2	SB8_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02498	S20-Ma02499	S20-Ma02500	S20-Ma02501
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 200	-
TRH C15-C28	50	mg/kg	-	-	< 500	-
TRH C29-C36	50	mg/kg	-	-	1100	-
TRH C10-C36 (Total)	50	mg/kg	-	-	1100	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			SB7_0.5	SB7_1.0	G01 SB8_0.2	SB8_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02498	S20-Ma02499	S20-Ma02500	S20-Ma02501
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
1,3,5-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1,4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	-	-	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	-	-	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	-	-	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	< 0.5	-
Allyl chloride	0.5	mg/kg	-	-	< 0.5	-
Benzene	0.1	mg/kg	-	-	< 0.1	-
Bromobenzene	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 Tetrachloride	0.5	mg/kg	-	-	< 0.5	-
Chlorobenzene	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-1,3-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	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
Iodomethane	0.5	mg/kg	-	-	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	< 0.5	-
m&p-Xylenes	0.2	mg/kg	-	-	2.3	-
Methylene Chloride	0.5	mg/kg	-	-	< 0.5	-
o-Xylene	0.1	mg/kg	-	-	1.0	-
Styrene	0.5	mg/kg	-	-	< 0.5	-
Tetrachloroethene	0.5	mg/kg	-	-	< 0.5	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
trans-1,2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
trans-1,3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Trichloroethene	0.5	mg/kg	-	-	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	-	-	< 0.5	-
Vinyl chloride	0.5	mg/kg	-	-	< 0.5	-
Xylenes - Total	0.3	mg/kg	-	-	3.3	-
Total MAH*	0.5	mg/kg	-	-	3.3	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	-	< 0.5	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	-	< 0.5	-
4-Bromofluorobenzene (surr.)	1	%	-	-	74	-
Toluene-d8 (surr.)	1	%	-	-	80	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 500	-

Client Sample ID			SB7_0.5	SB7_1.0	G01SB8_0.2	SB8_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02498	S20-Ma02499	S20-Ma02500	S20-Ma02501
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	< 500	-
TRH >C16-C34	100	mg/kg	-	-	1300	-
TRH >C34-C40	100	mg/kg	-	-	970	-
TRH >C10-C40 (total)*	100	mg/kg	-	-	2270	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	1.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.8	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	2.0	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
Benz(a)anthracene	0.5	mg/kg	1.4	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	1.1	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	1.0	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	0.8	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	0.8	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	1.1	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	2.4	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	1.1	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	1.1	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	2.2	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	13	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	51	82	91	89
p-Terphenyl-d14 (surr.)	1	%	66	88	85	89
Heavy Metals						
Arsenic	2	mg/kg	4.0	2.6	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	6.9	14	5.3
Copper	5	mg/kg	34	8.5	74	< 5
Lead	5	mg/kg	130	33	7.5	< 5
Mercury	0.1	mg/kg	0.5	0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	< 5	66	< 5
Zinc	5	mg/kg	150	19	52	< 5
% Moisture	1	%	15	8.6	5.7	5.3

Client Sample ID			SB9_0.5	SB10_0.2	SB11_0.5	G01SB12_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02502	S20-Ma02503	S20-Ma02504	S20-Ma02505
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	1.5	< 0.5	0.8	9.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.8	0.6	1.1	11
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	2.0	1.2	1.4	12
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 2
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 2
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 2
Benz(a)anthracene	0.5	mg/kg	1.4	< 0.5	0.8	6.3
Benzo(a)pyrene	0.5	mg/kg	1.1	< 0.5	0.6	7.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	1.0	< 0.5	0.5	5.5
Benzo(g,h,i)perylene	0.5	mg/kg	0.7	< 0.5	< 0.5	5.8
Benzo(k)fluoranthene	0.5	mg/kg	0.8	< 0.5	< 0.5	< 2
Chrysene	0.5	mg/kg	1.0	< 0.5	0.5	< 2
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 2
Fluoranthene	0.5	mg/kg	2.6	< 0.5	1.1	< 2
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 2
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	0.9	< 0.5	0.6	7.7
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 2
Phenanthrene	0.5	mg/kg	1.7	< 0.5	< 0.5	< 2
Pyrene	0.5	mg/kg	2.3	< 0.5	1.1	12
Total PAH*	0.5	mg/kg	13.5	< 0.5	5.2	44.8
2-Fluorobiphenyl (surr.)	1	%	84	92	80	83
p-Terphenyl-d14 (surr.)	1	%	92	103	89	87
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4,4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-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
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	-	< 0.2
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 621 OCP (Total)*	0.1	mg/kg	-	-	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	< 0.2
Dibutylchloroendate (surr.)	1	%	-	-	-	127
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	95

Client Sample ID			SB9_0.5	SB10_0.2	SB11_0.5	G01SB12_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02502	S20-Ma02503	S20-Ma02504	S20-Ma02505
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	-	1.2
Aroclor-1254	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	-	< 0.5
Total PCB*	0.5	mg/kg	-	-	-	1.2
Dibutylchloredate (surr.)	1	%	-	-	-	127
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	95
Heavy Metals						
Arsenic	2	mg/kg	6.6	< 2	6.7	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	16	18	24
Copper	5	mg/kg	39	69	38	110
Lead	5	mg/kg	280	5.4	130	51
Mercury	0.1	mg/kg	0.6	< 0.1	0.3	< 0.1
Nickel	5	mg/kg	9.1	95	9.6	130
Zinc	5	mg/kg	110	62	120	98
% Moisture	1	%	12	4.3	12	4.2

Client Sample ID			SB13_0.2	SB13_0.5	SB14_0.5	SB15_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02506	S20-Ma02507	S20-Ma02508	S20-Ma02509
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	< 20	< 20	-	-
TRH C15-C28	50	mg/kg	56	< 50	-	-
TRH C29-C36	50	mg/kg	70	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	126	< 50	-	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-

Client Sample ID			SB13_0.2	SB13_0.5	SB14_0.5	SB15_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02506	S20-Ma02507	S20-Ma02508	S20-Ma02509
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
1,3,5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1,4-Dichlorobenzene	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	-	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	-	-
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Bromobenzene	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	-	-
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	-	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	-	-
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
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-1,3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Styrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
trans-1,2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
trans-1,3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	-	-
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	-	-
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Bromofluorobenzene (surr.)	1	%	75	78	-	-
Toluene-d8 (surr.)	1	%	86	80	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	-	-
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-

Client Sample ID			SB13_0.2	SB13_0.5	SB14_0.5	SB15_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02506	S20-Ma02507	S20-Ma02508	S20-Ma02509
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	< 100	< 100	-	-
TRH >C34-C40	100	mg/kg	130	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	130	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	1.8	< 0.5	1.2	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	2.1	0.6	1.4	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	2.3	1.2	1.7	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
Benz(a)anthracene	0.5	mg/kg	1.8	< 0.5	1.2	< 0.5
Benzo(a)pyrene	0.5	mg/kg	1.3	< 0.5	0.8	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	1.1	< 0.5	0.7	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	0.9	< 0.5	0.6	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	0.9	< 0.5	0.7	< 0.5
Chrysene	0.5	mg/kg	1.4	< 0.5	0.9	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	2.1	< 0.5	1.6	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	1.2	< 0.5	0.8	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	2.3	< 0.5	1.6	< 0.5
Total PAH*	0.5	mg/kg	13.7	< 0.5	8.9	< 0.5
2-Fluorobiphenyl (surr.)	1	%	91	83	80	80
p-Terphenyl-d14 (surr.)	1	%	107	114	102	90
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-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	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Toxaphene	1	mg/kg	< 1	-	-	-

Client Sample ID			SB13_0.2	SB13_0.5	SB14_0.5	SB15_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02506	S20-Ma02507	S20-Ma02508	S20-Ma02509
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	-	-
Dibutylchloredate (surr.)	1	%	INT	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	102	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-
Total PCB*	0.5	mg/kg	< 0.5	-	-	-
Dibutylchloredate (surr.)	1	%	INT	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	102	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	8.2	7.3	7.6	3.8
Cadmium	0.4	mg/kg	0.6	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	38	20	13	17
Copper	5	mg/kg	90	17	17	25
Lead	5	mg/kg	810	27	90	62
Mercury	0.1	mg/kg	2.5	< 0.1	0.1	0.1
Nickel	5	mg/kg	20	7.7	6.9	11
Zinc	5	mg/kg	340	26	59	46
% Moisture	1	%	16	16	9.4	11

Client Sample ID			SB16_0.3	SB17_1.0	SB18_0.1	SB18_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02510	S20-Ma02511	S20-Ma02512	S20-Ma02513
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	0.8	1.0	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.0	1.2	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.4	1.5	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	0.6	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	0.8	0.9	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	0.6	0.7	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	0.6	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	0.6	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	0.6	0.6	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB16_0.3	SB17_1.0	SB18_0.1	SB18_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02510	S20-Ma02511	S20-Ma02512	S20-Ma02513
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.5	mg/kg	1.0	1.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	0.6	0.8	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	0.7	< 0.5	< 0.5
Pyrene	0.5	mg/kg	0.9	1.4	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	4.5	8.9	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	81	95	77	91
p-Terphenyl-d14 (surr.)	1	%	90	107	102	84
Heavy Metals						
Arsenic	2	mg/kg	3.8	5.1	3.1	2.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	20	11	20	5.8
Copper	5	mg/kg	25	15	43	14
Lead	5	mg/kg	130	30	41	19
Mercury	0.1	mg/kg	0.3	< 0.1	< 0.1	0.2
Nickel	5	mg/kg	19	7.9	75	8.6
Zinc	5	mg/kg	180	35	150	26
% Moisture	1	%	7.5	11	12	9.9

Client Sample ID			SB19_1.0	SB19_1.5	SB20_0.2	MW1_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02514	S20-Ma02515	S20-Ma02516	S20-Ma02517
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	-	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	-	52
TRH C29-C36	50	mg/kg	< 50	< 50	-	69
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	121
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5

Client Sample ID			SB19_1.0	SB19_1.5	SB20_0.2	MW1_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02514	S20-Ma02515	S20-Ma02516	S20-Ma02517
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
1,4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
cis-1,2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
cis-1,3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
trans-1,2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
trans-1,3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	-	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
4-Bromofluorobenzene (surr.)	1	%	72	78	-	69
Toluene-d8 (surr.)	1	%	73	81	-	66
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	-	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	-	< 50

Client Sample ID			SB19_1.0	SB19_1.5	SB20_0.2	MW1_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02514	S20-Ma02515	S20-Ma02516	S20-Ma02517
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C16-C34	100	mg/kg	< 100	< 100	-	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	-	120
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	120
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	0.7	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	1.0	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	1.3	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
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	0.6	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	0.6	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	0.6	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	1.1	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	-	3.4	< 0.5
2-Fluorobiphenyl (surr.)	1	%	93	-	89	105
p-Terphenyl-d14 (surr.)	1	%	88	-	84	111
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4,4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-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
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	-	< 0.2
Toxaphene	1	mg/kg	-	-	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	-	< 0.05

Client Sample ID			SB19_1.0	SB19_1.5	SB20_0.2	MW1_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02514	S20-Ma02515	S20-Ma02516	S20-Ma02517
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	< 0.2
Dibutylchloroendate (surr.)	1	%	-	-	-	125
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	94
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	-	< 0.5
Total PCB*	0.5	mg/kg	-	-	-	< 0.5
Dibutylchloroendate (surr.)	1	%	-	-	-	125
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	94
Heavy Metals						
Arsenic	2	mg/kg	3.7	-	6.0	7.9
Cadmium	0.4	mg/kg	< 0.4	-	< 0.4	0.5
Chromium	5	mg/kg	8.1	-	19	17
Copper	5	mg/kg	12	-	41	43
Lead	5	mg/kg	22	-	250	610
Mercury	0.1	mg/kg	< 0.1	-	0.3	0.3
Nickel	5	mg/kg	11	-	15	11
Zinc	5	mg/kg	33	-	220	300
% Moisture	1	%	6.3	14	23	17

Client Sample ID			MW1_0.5	MW2_0.1	MW2_4.0	MW3_0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02518	S20-Ma02519	S20-Ma02520	S20-Ma02521
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	180	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	720	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	96	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	996	< 50	< 50	< 50
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			MW1_0.5	MW2_0.1	MW2_4.0	MW3_0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02518	S20-Ma02519	S20-Ma02520	S20-Ma02521
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
1,2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3,5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	79	94	84	78
Toluene-d8 (surr.)	1	%	78	99	94	89

Client Sample ID			MW1_0.5	MW2_0.1	MW2_4.0	MW3_0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02518	S20-Ma02519	S20-Ma02520	S20-Ma02521
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	400	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	400	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	590	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	990	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	0.8	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	1.1	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.4	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
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	0.7	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	0.6	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	0.6	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	0.7	1.0	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 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	0.6	0.9	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	1.8	3.8	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	96	104	101	114
p-Terphenyl-d14 (surr.)	1	%	90	93	92	114
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4,4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-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

Client Sample ID			MW1_0.5	MW2_0.1	MW2_4.0	MW3_0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02518	S20-Ma02519	S20-Ma02520	S20-Ma02521
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	-	< 0.2
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 621 OCP (Total)*	0.1	mg/kg	-	-	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	< 0.2
Dibutylchloroendate (surr.)	1	%	-	-	-	132
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	100
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	-	< 0.5
Total PCB*	0.5	mg/kg	-	-	-	< 0.5
Dibutylchloroendate (surr.)	1	%	-	-	-	132
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	100
Heavy Metals						
Arsenic	2	mg/kg	8.6	4.8	4.4	2.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	30	13	19	7.7
Copper	5	mg/kg	44	55	7.0	9.5
Lead	5	mg/kg	75	70	14	13
Mercury	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	8.0	11	6.8	5.0
Zinc	5	mg/kg	60	190	32	45
% Moisture	1	%	17	13	15	13

Client Sample ID			MW3_1.0	QS01	QS02	QS03
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02522	S20-Ma02523	S20-Ma02524	S20-Ma02525
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (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
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			MW3_1.0	QS01	QS02	QS03
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma02522	S20-Ma02523	S20-Ma02524	S20-Ma02525
Date Sampled			Feb 28, 2020	Feb 28, 2020	Feb 28, 2020	Feb 28, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(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
Dibenz(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(1,2,3-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
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	92	81	89	90
p-Terphenyl-d14 (surr.)	1	%	83	71	80	81
Heavy Metals						
Arsenic	2	mg/kg	3.8	5.4	3.5	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	8.3	11	7.8	< 5
Copper	5	mg/kg	18	19	11	< 5
Lead	5	mg/kg	21	16	66	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1
Nickel	5	mg/kg	6.9	7.5	< 5	< 5
Zinc	5	mg/kg	50	26	21	< 5
% Moisture	1	%	11	12	7.7	5.4

Sample History

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

A recent review of our LIMS 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.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Mar 05, 2020	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Mar 05, 2020	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Mar 05, 2020	
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices	Sydney	Mar 05, 2020	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Sydney	Mar 05, 2020	14 Days
Metals M8 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Sydney	Mar 05, 2020	180 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water	Sydney	Mar 05, 2020	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water	Sydney	Mar 05, 2020	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Sydney	Mar 03, 2020	14 Days

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
External Laboratory															
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID										
1	SB1_0.2	Feb 28, 2020		Soil	S20-Ma02488	X		X	X	X		X	X	X	
2	SB1_1.5	Feb 28, 2020		Soil	S20-Ma02489			X	X			X	X	X	
3	SB2_1.0	Feb 28, 2020		Soil	S20-Ma02490			X	X			X	X	X	
4	SB3_0.2	Feb 28, 2020		Soil	S20-Ma02491	X									
5	SB3_1.5	Feb 28, 2020		Soil	S20-Ma02492			X	X				X		
6	SB4_0.2	Feb 28, 2020		Soil	S20-Ma02493	X									
7	SB4_0.5	Feb 28, 2020		Soil	S20-Ma02494			X	X				X		
8	SB5_0.2	Feb 28, 2020		Soil	S20-Ma02495	X		X	X			X	X	X	
9	SB5_1.0	Feb 28, 2020		Soil	S20-Ma02496			X	X				X		
10	SB6_0.2	Feb 28, 2020		Soil	S20-Ma02497	X		X	X	X		X	X	X	

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
11	SB7_0.5	Feb 28, 2020		Soil	S20-Ma02498	X		X	X				X		
12	SB7_1.0	Feb 28, 2020		Soil	S20-Ma02499			X	X				X		
13	SB8_0.2	Feb 28, 2020		Soil	S20-Ma02500	X		X	X			X	X	X	
14	SB8_1.0	Feb 28, 2020		Soil	S20-Ma02501			X	X				X		
15	SB9_0.5	Feb 28, 2020		Soil	S20-Ma02502	X		X	X				X		
16	SB10_0.2	Feb 28, 2020		Soil	S20-Ma02503	X		X	X				X		
17	SB11_0.5	Feb 28, 2020		Soil	S20-Ma02504	X		X	X				X		
18	SB12_0.2	Feb 28, 2020		Soil	S20-Ma02505	X		X	X	X			X		
19	SB13_0.2	Feb 28, 2020		Soil	S20-Ma02506	X		X	X	X		X	X	X	
20	SB13_0.5	Feb 28, 2020		Soil	S20-Ma02507			X	X			X	X	X	
21	SB14_0.5	Feb 28, 2020		Soil	S20-Ma02508	X		X	X				X		
22	SB15_1.5	Feb 28, 2020		Soil	S20-Ma02509	X		X	X				X		
23	SB16_0.3	Feb 28, 2020		Soil	S20-Ma02510	X		X	X				X		

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
24	SB17_1.0	Feb 28, 2020		Soil	S20-Ma02511	X		X	X				X		
25	SB18_0.1	Feb 28, 2020		Soil	S20-Ma02512	X		X	X				X		
26	SB18_1.5	Feb 28, 2020		Soil	S20-Ma02513			X	X				X		
27	SB19_1.0	Feb 28, 2020		Soil	S20-Ma02514	X		X	X			X	X	X	
28	SB19_1.5	Feb 28, 2020		Soil	S20-Ma02515							X	X	X	
29	SB20_0.2	Feb 28, 2020		Soil	S20-Ma02516	X		X	X				X		
30	MW1_0.2	Feb 28, 2020		Soil	S20-Ma02517	X		X	X	X		X	X	X	
31	MW1_0.5	Feb 28, 2020		Soil	S20-Ma02518			X	X			X	X	X	
32	MW2_0.1	Feb 28, 2020		Soil	S20-Ma02519	X		X	X			X	X	X	
33	MW2_4.0	Feb 28, 2020		Soil	S20-Ma02520			X	X			X	X	X	
34	MW3_0.1	Feb 28, 2020		Soil	S20-Ma02521	X		X	X	X		X	X	X	
35	MW3_1.0	Feb 28, 2020		Soil	S20-Ma02522			X	X				X		
36	QS01	Feb 28, 2020		Soil	S20-Ma02523			X	X				X		

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
37	QS02	Feb 28, 2020		Soil	S20-Ma02524			X	X				X		
38	QS03	Feb 28, 2020		Soil	S20-Ma02525			X	X				X		
39	RINSATE	Feb 28, 2020		Water	S20-Ma02526			X	X	X		X		X	
40	TS	Feb 27, 2020		Water	S20-Ma02527						X				
41	TB	Feb 27, 2020		Water	S20-Ma02528										X
42	SB1_0.5	Feb 28, 2020		Soil	S20-Ma02529		X								
43	SB1_1.0	Feb 28, 2020		Soil	S20-Ma02530		X								
44	SB2_0.2	Feb 28, 2020		Soil	S20-Ma02531		X								
45	SB2_0.5	Feb 28, 2020		Soil	S20-Ma02532		X								
46	SB3_0.5	Feb 28, 2020		Soil	S20-Ma02533		X								
47	SB4_1.0	Feb 28, 2020		Soil	S20-Ma02534		X								
48	SB4_1.5	Feb 28, 2020		Soil	S20-Ma02535		X								
49	SB6_1.0	Feb 28, 2020		Soil	S20-Ma02536		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
50	SB6_1.5	Feb 28, 2020		Soil	S20-Ma02537		X								
51	SB7_0.2	Feb 28, 2020		Soil	S20-Ma02538		X								
52	SB8_0.5	Feb 28, 2020		Soil	S20-Ma02539		X								
53	SB8_1.5	Feb 28, 2020		Soil	S20-Ma02540		X								
54	SB9_0.2	Feb 28, 2020		Soil	S20-Ma02541		X								
55	SB9_1.0	Feb 28, 2020		Soil	S20-Ma02542		X								
56	SB10_0.5	Feb 28, 2020		Soil	S20-Ma02543		X								
57	SB10_1.5	Feb 28, 2020		Soil	S20-Ma02544		X								
58	SB11_0.2	Feb 28, 2020		Soil	S20-Ma02545		X								
59	SB11_1.5	Feb 28, 2020		Soil	S20-Ma02546		X								
60	SB12_0.5	Feb 28, 2020		Soil	S20-Ma02547		X								
61	SB12_1.5	Feb 28, 2020		Soil	S20-Ma02548		X								
62	SB13_1.0	Feb 28, 2020		Soil	S20-Ma02549		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
63	SB13_1.5	Feb 28, 2020		Soil	S20-Ma02550		X								
64	SB14_0.2	Feb 28, 2020		Soil	S20-Ma02551		X								
65	SB15_0.2	Feb 28, 2020		Soil	S20-Ma02552		X								
66	SB15_0.5	Feb 28, 2020		Soil	S20-Ma02553		X								
67	SB15_1.0	Feb 28, 2020		Soil	S20-Ma02554		X								
68	SB16_0.5	Feb 28, 2020		Soil	S20-Ma02555		X								
69	SB16_1.0	Feb 28, 2020		Soil	S20-Ma02556		X								
70	SB16_1.5	Feb 28, 2020		Soil	S20-Ma02557		X								
71	SB17_0.4	Feb 28, 2020		Soil	S20-Ma02558		X								
72	SB17_0.5	Feb 28, 2020		Soil	S20-Ma02559		X								
73	SB17_1.5	Feb 28, 2020		Soil	S20-Ma02560		X								
74	SB18_0.5	Feb 28, 2020		Soil	S20-Ma02561		X								
75	SB18_1.0	Feb 28, 2020		Soil	S20-Ma02562		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
76	SB19_0.1	Feb 28, 2020		Soil	S20-Ma02563		X								
77	SB19_0.5	Feb 28, 2020		Soil	S20-Ma02564		X								
78	SB20_0.5	Feb 28, 2020		Soil	S20-Ma02565		X								
79	SB20_1.0	Feb 28, 2020		Soil	S20-Ma02566		X								
80	SB20_1.5	Feb 28, 2020		Soil	S20-Ma02567		X								
81	MW1_1.0	Feb 28, 2020		Soil	S20-Ma02568		X								
82	MW1_1.5	Feb 28, 2020		Soil	S20-Ma02569		X								
83	MW1_4.0	Feb 28, 2020		Soil	S20-Ma02570		X								
84	MW1_5.0	Feb 28, 2020		Soil	S20-Ma02571		X								
85	MW1_6.0	Feb 28, 2020		Soil	S20-Ma02572		X								
86	MW2_0.5	Feb 28, 2020		Soil	S20-Ma02573		X								
87	MW2_1.0	Feb 28, 2020		Soil	S20-Ma02574		X								
88	MW2_1.5	Feb 28, 2020		Soil	S20-Ma02575		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
89	MW2_2.0	Feb 28, 2020		Soil	S20-Ma02576		X								
90	MW2_3.0	Feb 28, 2020		Soil	S20-Ma02577		X								
91	MW3_2.0	Feb 28, 2020		Soil	S20-Ma02578		X								
92	MW3_3.0	Feb 28, 2020		Soil	S20-Ma02579		X								
93	MW3_4.0	Feb 28, 2020		Soil	S20-Ma02580		X								
94	QS04	Feb 28, 2020		Soil	S20-Ma02581		X								
Test Counts						22	53	36	36	7	1	16	36	16	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH 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 Units

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	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NC	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 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

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

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

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 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, 6:2 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.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. 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-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. 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 1260 in Matrix Spikes and LCS.
9. 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.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	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	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Benzene	mg/kg	< 0.1			0.1	Pass	
Bromobenzene	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 Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
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-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
trans-1,2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1,3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-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	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB*	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	73			70-130	Pass	
TRH C10-C14	%	85			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	92			70-130	Pass	
1.1.1-Trichloroethane	%	99			70-130	Pass	
1.2-Dichlorobenzene	%	102			70-130	Pass	
1.2-Dichloroethane	%	95			70-130	Pass	
Benzene	%	103			70-130	Pass	
Ethylbenzene	%	95			70-130	Pass	
m&p-Xylenes	%	94			70-130	Pass	
o-Xylene	%	94			70-130	Pass	
Toluene	%	100			70-130	Pass	
Trichloroethene	%	112			70-130	Pass	
Xylenes - Total	%	94			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	121			70-130	Pass	
TRH C6-C10	%	76			70-130	Pass	
TRH >C10-C16	%	87			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	99			70-130	Pass	
Acenaphthylene	%	99			70-130	Pass	
Anthracene	%	96			70-130	Pass	
Benz(a)anthracene	%	100			70-130	Pass	
Benzo(a)pyrene	%	103			70-130	Pass	
Benzo(b&j)fluoranthene	%	115			70-130	Pass	
Benzo(g,h,i)perylene	%	109			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(k)fluoranthene			%	113			70-130	Pass	
Chrysene			%	103			70-130	Pass	
Dibenz(a,h)anthracene			%	115			70-130	Pass	
Fluoranthene			%	102			70-130	Pass	
Fluorene			%	99			70-130	Pass	
Indeno(1.2.3-cd)pyrene			%	109			70-130	Pass	
Naphthalene			%	97			70-130	Pass	
Phenanthrene			%	99			70-130	Pass	
Pyrene			%	103			70-130	Pass	
LCS - % Recovery									
Organochlorine Pesticides									
Chlordanes - Total			%	113			70-130	Pass	
4,4'-DDD			%	106			70-130	Pass	
4,4'-DDE			%	119			70-130	Pass	
4,4'-DDT			%	108			70-130	Pass	
a-BHC			%	116			70-130	Pass	
Aldrin			%	116			70-130	Pass	
b-BHC			%	113			70-130	Pass	
d-BHC			%	115			70-130	Pass	
Dieldrin			%	112			70-130	Pass	
Endosulfan I			%	96			70-130	Pass	
Endosulfan II			%	111			70-130	Pass	
Endosulfan sulphate			%	129			70-130	Pass	
Endrin			%	93			70-130	Pass	
Endrin aldehyde			%	112			70-130	Pass	
Endrin ketone			%	92			70-130	Pass	
g-BHC (Lindane)			%	111			70-130	Pass	
Heptachlor			%	120			70-130	Pass	
Heptachlor epoxide			%	116			70-130	Pass	
Hexachlorobenzene			%	110			70-130	Pass	
Methoxychlor			%	84			70-130	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic			%	95			70-130	Pass	
Cadmium			%	93			70-130	Pass	
Chromium			%	102			70-130	Pass	
Copper			%	108			70-130	Pass	
Lead			%	103			70-130	Pass	
Mercury			%	109			70-130	Pass	
Nickel			%	107			70-130	Pass	
Zinc			%	106			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S20-Ma01235	NCP	%	70			70-130	Pass	
TRH C10-C14	S20-Fe42414	NCP	%	82			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH C6-C10	S20-Ma01235	NCP	%	73			70-130	Pass	
TRH >C10-C16	S20-Fe42414	NCP	%	82			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S20-Ma10206	NCP	%	120			70-130	Pass	
4,4'-DDD	S20-Ma10206	NCP	%	111			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
4,4'-DDE	S20-Fe42083	NCP	%	97		70-130	Pass	
4,4'-DDT	S20-Ma10206	NCP	%	90		70-130	Pass	
a-BHC	S20-Ma10206	NCP	%	124		70-130	Pass	
Aldrin	S20-Ma10206	NCP	%	125		70-130	Pass	
b-BHC	S20-Ma10206	NCP	%	126		70-130	Pass	
d-BHC	S20-Ma10206	NCP	%	130		70-130	Pass	
Dieldrin	S20-Ma10206	NCP	%	124		70-130	Pass	
Endosulfan I	S20-Ma10206	NCP	%	111		70-130	Pass	
Endosulfan II	S20-Ma10206	NCP	%	123		70-130	Pass	
Endosulfan sulphate	S20-Fe42083	NCP	%	94		70-130	Pass	
Endrin	S20-Fe42083	NCP	%	93		70-130	Pass	
Endrin aldehyde	S20-Ma10206	NCP	%	94		70-130	Pass	
Endrin ketone	S20-Fe42083	NCP	%	102		70-130	Pass	
g-BHC (Lindane)	S20-Ma10206	NCP	%	121		70-130	Pass	
Heptachlor	S20-Fe42083	NCP	%	92		70-130	Pass	
Heptachlor epoxide	S20-Ma10206	NCP	%	125		70-130	Pass	
Hexachlorobenzene	S20-Ma10206	NCP	%	129		70-130	Pass	
Methoxychlor	S20-Fe27389	NCP	%	95		70-130	Pass	
Spike - % Recovery								
Polychlorinated Biphenyls				Result 1				
Aroclor-1260	S20-Ma10206	NCP	%	100		70-130	Pass	
Spike - % Recovery								
Volatile Organics				Result 1				
1,1-Dichloroethene	S20-Ma02489	CP	%	87		70-130	Pass	
1,1,1-Trichloroethane	S20-Ma02489	CP	%	94		70-130	Pass	
1,2-Dichlorobenzene	S20-Ma02489	CP	%	100		70-130	Pass	
1,2-Dichloroethane	S20-Ma02489	CP	%	96		70-130	Pass	
Benzene	S20-Ma02489	CP	%	99		70-130	Pass	
Ethylbenzene	S20-Ma02489	CP	%	88		70-130	Pass	
m&p-Xylenes	S20-Ma02489	CP	%	89		70-130	Pass	
o-Xylene	S20-Ma02489	CP	%	89		70-130	Pass	
Toluene	S20-Ma02489	CP	%	94		70-130	Pass	
Trichloroethene	S20-Ma02489	CP	%	104		70-130	Pass	
Xylenes - Total	S20-Ma02489	CP	%	89		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	S20-Ma02489	CP	%	107		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S20-Ma02489	CP	%	88		70-130	Pass	
Acenaphthylene	S20-Ma02489	CP	%	85		70-130	Pass	
Anthracene	S20-Ma02489	CP	%	80		70-130	Pass	
Benz(a)anthracene	S20-Ma02489	CP	%	85		70-130	Pass	
Benzo(a)pyrene	S20-Ma02489	CP	%	73		70-130	Pass	
Benzo(b&j)fluoranthene	S20-Ma02489	CP	%	82		70-130	Pass	
Benzo(g,h,i)perylene	S20-Ma02489	CP	%	79		70-130	Pass	
Benzo(k)fluoranthene	S20-Ma02489	CP	%	92		70-130	Pass	
Chrysene	S20-Ma02489	CP	%	83		70-130	Pass	
Dibenz(a,h)anthracene	S20-Ma02489	CP	%	73		70-130	Pass	
Fluoranthene	S20-Ma02489	CP	%	82		70-130	Pass	
Fluorene	S20-Ma02489	CP	%	82		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S20-Ma02489	CP	%	74		70-130	Pass	
Naphthalene	S20-Ma02489	CP	%	86		70-130	Pass	
Phenanthrene	S20-Ma02489	CP	%	86		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pyrene	S20-Ma02489	CP	%	85			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-Ma02489	CP	%	111			70-130	Pass	
Cadmium	S20-Ma02489	CP	%	112			70-130	Pass	
Chromium	S20-Ma02489	CP	%	111			70-130	Pass	
Copper	S20-Ma02489	CP	%	113			70-130	Pass	
Lead	S20-Ma02489	CP	%	118			70-130	Pass	
Mercury	S20-Ma02489	CP	%	117			70-130	Pass	
Nickel	S20-Ma02489	CP	%	112			70-130	Pass	
Zinc	S20-Ma02489	CP	%	99			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-Ma02511	CP	%	109			70-130	Pass	
Cadmium	S20-Ma02511	CP	%	107			70-130	Pass	
Chromium	S20-Ma02511	CP	%	111			70-130	Pass	
Copper	S20-Ma02511	CP	%	114			70-130	Pass	
Lead	S20-Ma02511	CP	%	127			70-130	Pass	
Mercury	S20-Ma02511	CP	%	121			70-130	Pass	
Nickel	S20-Ma02511	CP	%	110			70-130	Pass	
Zinc	S20-Ma02511	CP	%	111			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-Ma02488	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S20-Ma02488	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-Ma02488	CP	mg/kg	56	58	2.0	30%	Pass	
TRH C29-C36	S20-Ma02488	CP	mg/kg	110	130	9.0	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzene	S20-Ma02488	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Bromobenzene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Bromodichloromethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1,2-Dichloroethene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1,3-Dichloropropene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	S20-Ma02488	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	S20-Ma02488	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	S20-Ma02488	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	S20-Ma02488	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1,2-Dichloroethene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,3-Dichloropropene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total	S20-Ma02488	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	S20-Ma02488	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH >C10-C16	S20-Ma02488	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S20-Ma02488	CP	mg/kg	130	140	5.0	30%	Pass
TRH >C34-C40	S20-Ma02488	CP	mg/kg	170	200	13	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S20-Ma02488	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S20-Ma02488	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S20-Ma02488	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Toxaphene	S20-Fe41367	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1221	S20-Ma02488	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1242	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1248	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1254	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1260	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Total PCB*	S20-Ma02488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S20-Ma02488	CP	mg/kg	< 2	< 2	<1	30%	Pass
Cadmium	S20-Ma02488	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S20-Ma02488	CP	mg/kg	70	84	19	30%	Pass
Copper	S20-Ma02488	CP	mg/kg	79	82	4.0	30%	Pass
Lead	S20-Ma02488	CP	mg/kg	17	16	8.0	30%	Pass
Mercury	S20-Ma02488	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	S20-Ma02488	CP	mg/kg	80	92	14	30%	Pass
Zinc	S20-Ma02488	CP	mg/kg	89	90	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	S20-Ma02488	CP	%	8.5	8.7	3.0	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S20-Ma02500	CP	mg/kg	< 2	< 2	<1	30%	Pass
Cadmium	S20-Ma02500	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S20-Ma02500	CP	mg/kg	14	12	18	30%	Pass
Copper	S20-Ma02500	CP	mg/kg	74	68	8.0	30%	Pass
Lead	S20-Ma02500	CP	mg/kg	7.5	7.7	3.0	30%	Pass
Mercury	S20-Ma02500	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	S20-Ma02500	CP	mg/kg	66	52	24	30%	Pass
Zinc	S20-Ma02500	CP	mg/kg	52	46	13	30%	Pass

Duplicate								
				Result 1	Result 2	RPD		
% Moisture	S20-Ma02500	CP	%	5.7	4.7	19	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S20-Ma02510	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S20-Ma02510	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S20-Ma02510	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S20-Ma02510	CP	mg/kg	0.8	0.8	8.0	30%	Pass
Benzo(a)pyrene	S20-Ma02510	CP	mg/kg	0.6	0.6	8.0	30%	Pass
Benzo(b&j)fluoranthene	S20-Ma02510	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S20-Ma02510	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S20-Ma02510	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S20-Ma02510	CP	mg/kg	0.6	0.6	5.0	30%	Pass
Dibenz(a,h)anthracene	S20-Ma02510	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S20-Ma02510	CP	mg/kg	1.0	1.1	9.0	30%	Pass
Fluorene	S20-Ma02510	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S20-Ma02510	CP	mg/kg	0.6	0.7	14	30%	Pass
Naphthalene	S20-Ma02510	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S20-Ma02510	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S20-Ma02510	CP	mg/kg	0.9	1.0	5.0	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	S20-Ma02510	CP	%	7.5	7.6	2.0	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	S20-Ma02517	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1,1-Dichloroethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1-Dichloroethene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,1-Trichloroethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,1,2-Tetrachloroethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,2-Trichloroethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,2,2-Tetrachloroethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dibromoethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dichlorobenzene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dichloroethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dichloropropane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,3-Trichloropropane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,4-Trimethylbenzene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3-Dichlorobenzene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3-Dichloropropane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3,5-Trimethylbenzene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,4-Dichlorobenzene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzene	S20-Ma02517	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Bromobenzene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Carbon disulfide	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	S20-Ma02517	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	S20-Ma02517	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	S20-Ma02517	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	S20-Ma02517	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1.2-Dichloroethene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.3-Dichloropropene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total	S20-Ma02517	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S20-Ma02517	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	S20-Ma02517	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	S20-Ma02520	CP	%	15	14	6.0	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S20-Ma02521	CP	mg/kg	2.9	2.4	18	30%	Pass
Cadmium	S20-Ma02521	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S20-Ma02521	CP	mg/kg	7.7	7.6	2.0	30%	Pass
Copper	S20-Ma02521	CP	mg/kg	9.5	8.3	14	30%	Pass
Lead	S20-Ma02521	CP	mg/kg	13	11	15	30%	Pass
Mercury	S20-Ma02521	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	S20-Ma02521	CP	mg/kg	5.0	< 5	5.0	30%	Pass
Zinc	S20-Ma02521	CP	mg/kg	45	36	21	30%	Pass

Comments

This report has been revised (V2) to amend sample name for S20-Ma02492.

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
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Ursula Long	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

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.

Attention: **Julia Nicholson**

Report **705373-W-V2**
Project name **PARRAMATTA POWERHOUSE**
Project ID **58352**
Received Date **Mar 02, 2020**

Client Sample ID			RINSATE	R20 ^{TS}	TB
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-Ma02526	S20-Ma02527	S20-Ma02528
Date Sampled			Feb 28, 2020	Feb 27, 2020	Feb 27, 2020
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene ^{N02}	0.01	mg/L	< 0.01	120	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	-	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-	-
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	-	-
BTEX					
Benzene	0.001	mg/L	-	97	< 0.001
Toluene	0.001	mg/L	-	97	< 0.001
Ethylbenzene	0.001	mg/L	-	97	< 0.001
m&p-Xylenes	0.002	mg/L	-	98	< 0.002
o-Xylene	0.001	mg/L	-	100	< 0.001
Xylenes - Total	0.003	mg/L	-	98	< 0.003
4-Bromofluorobenzene (surr.)	1	%	-	108	103
Volatile Organics					
1.1-Dichloroethane	0.001	mg/L	< 0.001	-	-
1.1-Dichloroethene	0.001	mg/L	< 0.001	-	-
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	-	-
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	-	-
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-
1.2-Dibromoethane	0.001	mg/L	< 0.001	-	-
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
1.2-Dichloroethane	0.001	mg/L	< 0.001	-	-
1.2-Dichloropropane	0.001	mg/L	< 0.001	-	-
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	-	-
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	-	-

Client Sample ID			RINSATE	R20 ^{TS}	TB
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-Ma02526	S20-Ma02527	S20-Ma02528
Date Sampled			Feb 28, 2020	Feb 27, 2020	Feb 27, 2020
Test/Reference	LOR	Unit			
Volatile Organics					
1,3-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
1,3-Dichloropropane	0.001	mg/L	< 0.001	-	-
1,3,5-Trimethylbenzene	0.001	mg/L	< 0.001	-	-
1,4-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
2-Butanone (MEK)	0.001	mg/L	< 0.001	-	-
2-Propanone (Acetone)	0.001	mg/L	< 0.001	-	-
4-Chlorotoluene	0.001	mg/L	< 0.001	-	-
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	-	-
Allyl chloride	0.001	mg/L	< 0.001	-	-
Benzene	0.001	mg/L	< 0.001	-	-
Bromobenzene	0.001	mg/L	< 0.001	-	-
Bromochloromethane	0.001	mg/L	< 0.001	-	-
Bromodichloromethane	0.001	mg/L	< 0.001	-	-
Bromoform	0.001	mg/L	< 0.001	-	-
Bromomethane	0.001	mg/L	< 0.001	-	-
Carbon disulfide	0.001	mg/L	< 0.001	-	-
Carbon Tetrachloride	0.001	mg/L	< 0.001	-	-
Chlorobenzene	0.001	mg/L	< 0.001	-	-
Chloroethane	0.001	mg/L	< 0.001	-	-
Chloroform	0.005	mg/L	< 0.005	-	-
Chloromethane	0.001	mg/L	< 0.001	-	-
cis-1,2-Dichloroethene	0.001	mg/L	< 0.001	-	-
cis-1,3-Dichloropropene	0.001	mg/L	< 0.001	-	-
Dibromochloromethane	0.001	mg/L	< 0.001	-	-
Dibromomethane	0.001	mg/L	< 0.001	-	-
Dichlorodifluoromethane	0.001	mg/L	< 0.001	-	-
Ethylbenzene	0.001	mg/L	< 0.001	-	-
Iodomethane	0.001	mg/L	< 0.001	-	-
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	-	-
m&p-Xylenes	0.002	mg/L	< 0.002	-	-
Methylene Chloride	0.001	mg/L	< 0.001	-	-
o-Xylene	0.001	mg/L	< 0.001	-	-
Styrene	0.001	mg/L	< 0.001	-	-
Tetrachloroethene	0.001	mg/L	< 0.001	-	-
Toluene	0.001	mg/L	< 0.001	-	-
trans-1,2-Dichloroethene	0.001	mg/L	< 0.001	-	-
trans-1,3-Dichloropropene	0.001	mg/L	< 0.001	-	-
Trichloroethene	0.001	mg/L	< 0.001	-	-
Trichlorofluoromethane	0.001	mg/L	< 0.001	-	-
Vinyl chloride	0.001	mg/L	< 0.001	-	-
Xylenes - Total	0.003	mg/L	< 0.003	-	-
Total MAH*	0.003	mg/L	< 0.003	-	-
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	-	-
4-Bromofluorobenzene (surr.)	1	%	86	-	-
Toluene-d8 (surr.)	1	%	88	-	-

Client Sample ID			RINSATE	R ²⁰ TS	TB
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-Ma02526	S20-Ma02527	S20-Ma02528
Date Sampled			Feb 28, 2020	Feb 27, 2020	Feb 27, 2020
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	< 0.001	-	-
Benzo(g,h,i)perylene	0.001	mg/L	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	-	-
Dibenz(a,h)anthracene	0.001	mg/L	< 0.001	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	-	-
Indeno(1,2,3-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	%	INT	-	-
p-Terphenyl-d14 (surr.)	1	%	INT	-	-
Organochlorine Pesticides					
Chlordanes - Total	0.001	mg/L	< 0.001	-	-
4,4'-DDD	0.0001	mg/L	< 0.0001	-	-
4,4'-DDE	0.0001	mg/L	< 0.0001	-	-
4,4'-DDT	0.0001	mg/L	< 0.0001	-	-
a-BHC	0.0001	mg/L	< 0.0001	-	-
Aldrin	0.0001	mg/L	< 0.0001	-	-
b-BHC	0.0001	mg/L	< 0.0001	-	-
d-BHC	0.0001	mg/L	< 0.0001	-	-
Dieldrin	0.0001	mg/L	< 0.0001	-	-
Endosulfan I	0.0001	mg/L	< 0.0001	-	-
Endosulfan II	0.0001	mg/L	< 0.0001	-	-
Endosulfan sulphate	0.0001	mg/L	< 0.0001	-	-
Endrin	0.0001	mg/L	< 0.0001	-	-
Endrin aldehyde	0.0001	mg/L	< 0.0001	-	-
Endrin ketone	0.0001	mg/L	< 0.0001	-	-
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	-	-
Heptachlor	0.0001	mg/L	< 0.0001	-	-
Heptachlor epoxide	0.0001	mg/L	< 0.0001	-	-
Hexachlorobenzene	0.0001	mg/L	< 0.0001	-	-
Methoxychlor	0.0001	mg/L	< 0.0001	-	-
Toxaphene	0.01	mg/L	< 0.01	-	-
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.0001	-	-
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001	-	-
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001	-	-
Dibutylchloroendate (surr.)	1	%	INT	-	-
Tetrachloro-m-xylene (surr.)	1	%	INT	-	-

Client Sample ID			RINSATE	R20^{TS}	TB
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-Ma02526	S20-Ma02527	S20-Ma02528
Date Sampled			Feb 28, 2020	Feb 27, 2020	Feb 27, 2020
Test/Reference	LOR	Unit			
Polychlorinated Biphenyls					
Aroclor-1016	0.005	mg/L	< 0.005	-	-
Aroclor-1221	0.001	mg/L	< 0.001	-	-
Aroclor-1232	0.005	mg/L	< 0.005	-	-
Aroclor-1242	0.005	mg/L	< 0.005	-	-
Aroclor-1248	0.005	mg/L	< 0.005	-	-
Aroclor-1254	0.005	mg/L	< 0.005	-	-
Aroclor-1260	0.005	mg/L	< 0.005	-	-
Total PCB*	0.001	mg/L	< 0.001	-	-
Dibutylchlorodate (surr.)	1	%	INT	-	-
Tetrachloro-m-xylene (surr.)	1	%	INT	-	-
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	0.002	-	-
Zinc	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 LIMS 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.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Mar 03, 2020	7 Days
Total Recoverable Hydrocarbons - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Mar 03, 2020	7 Days
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Mar 04, 2020	7 Days
BTEX - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Mar 03, 2020	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Mar 04, 2020	
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices	Sydney	Mar 03, 2020	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Sydney	Mar 04, 2020	7 Days
Metals M8 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Sydney	Mar 03, 2020	180 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water	Sydney	Mar 04, 2020	7 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water	Sydney	Mar 04, 2020	7 Days

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
External Laboratory															
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID										
1	SB1_0.2	Feb 28, 2020		Soil	S20-Ma02488	X		X	X	X		X	X	X	
2	SB1_1.5	Feb 28, 2020		Soil	S20-Ma02489			X	X			X	X	X	
3	SB2_1.0	Feb 28, 2020		Soil	S20-Ma02490			X	X			X	X	X	
4	SB3_0.2	Feb 28, 2020		Soil	S20-Ma02491	X									
5	SB3_1.5	Feb 28, 2020		Soil	S20-Ma02492			X	X				X		
6	SB4_0.2	Feb 28, 2020		Soil	S20-Ma02493	X									
7	SB4_0.5	Feb 28, 2020		Soil	S20-Ma02494			X	X				X		
8	SB5_0.2	Feb 28, 2020		Soil	S20-Ma02495	X		X	X			X	X	X	
9	SB5_1.0	Feb 28, 2020		Soil	S20-Ma02496			X	X				X		
10	SB6_0.2	Feb 28, 2020		Soil	S20-Ma02497	X		X	X	X		X	X	X	

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
11	SB7_0.5	Feb 28, 2020		Soil	S20-Ma02498	X		X	X				X		
12	SB7_1.0	Feb 28, 2020		Soil	S20-Ma02499			X	X				X		
13	SB8_0.2	Feb 28, 2020		Soil	S20-Ma02500	X		X	X			X	X	X	
14	SB8_1.0	Feb 28, 2020		Soil	S20-Ma02501			X	X				X		
15	SB9_0.5	Feb 28, 2020		Soil	S20-Ma02502	X		X	X				X		
16	SB10_0.2	Feb 28, 2020		Soil	S20-Ma02503	X		X	X				X		
17	SB11_0.5	Feb 28, 2020		Soil	S20-Ma02504	X		X	X				X		
18	SB12_0.2	Feb 28, 2020		Soil	S20-Ma02505	X		X	X	X			X		
19	SB13_0.2	Feb 28, 2020		Soil	S20-Ma02506	X		X	X	X		X	X	X	
20	SB13_0.5	Feb 28, 2020		Soil	S20-Ma02507			X	X			X	X	X	
21	SB14_0.5	Feb 28, 2020		Soil	S20-Ma02508	X		X	X				X		
22	SB15_1.5	Feb 28, 2020		Soil	S20-Ma02509	X		X	X				X		
23	SB16_0.3	Feb 28, 2020		Soil	S20-Ma02510	X		X	X				X		

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
24	SB17_1.0	Feb 28, 2020		Soil	S20-Ma02511	X		X	X				X		
25	SB18_0.1	Feb 28, 2020		Soil	S20-Ma02512	X		X	X				X		
26	SB18_1.5	Feb 28, 2020		Soil	S20-Ma02513			X	X				X		
27	SB19_1.0	Feb 28, 2020		Soil	S20-Ma02514	X		X	X			X	X	X	
28	SB19_1.5	Feb 28, 2020		Soil	S20-Ma02515							X	X	X	
29	SB20_0.2	Feb 28, 2020		Soil	S20-Ma02516	X		X	X				X		
30	MW1_0.2	Feb 28, 2020		Soil	S20-Ma02517	X		X	X	X		X	X	X	
31	MW1_0.5	Feb 28, 2020		Soil	S20-Ma02518			X	X			X	X	X	
32	MW2_0.1	Feb 28, 2020		Soil	S20-Ma02519	X		X	X			X	X	X	
33	MW2_4.0	Feb 28, 2020		Soil	S20-Ma02520			X	X			X	X	X	
34	MW3_0.1	Feb 28, 2020		Soil	S20-Ma02521	X		X	X	X		X	X	X	
35	MW3_1.0	Feb 28, 2020		Soil	S20-Ma02522			X	X				X		
36	QS01	Feb 28, 2020		Soil	S20-Ma02523			X	X				X		

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
37	QS02	Feb 28, 2020		Soil	S20-Ma02524			X	X				X		
38	QS03	Feb 28, 2020		Soil	S20-Ma02525			X	X				X		
39	RINSATE	Feb 28, 2020		Water	S20-Ma02526			X	X	X		X		X	
40	TS	Feb 27, 2020		Water	S20-Ma02527						X				
41	TB	Feb 27, 2020		Water	S20-Ma02528										X
42	SB1_0.5	Feb 28, 2020		Soil	S20-Ma02529		X								
43	SB1_1.0	Feb 28, 2020		Soil	S20-Ma02530		X								
44	SB2_0.2	Feb 28, 2020		Soil	S20-Ma02531		X								
45	SB2_0.5	Feb 28, 2020		Soil	S20-Ma02532		X								
46	SB3_0.5	Feb 28, 2020		Soil	S20-Ma02533		X								
47	SB4_1.0	Feb 28, 2020		Soil	S20-Ma02534		X								
48	SB4_1.5	Feb 28, 2020		Soil	S20-Ma02535		X								
49	SB6_1.0	Feb 28, 2020		Soil	S20-Ma02536		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
50	SB6_1.5	Feb 28, 2020		Soil	S20-Ma02537		X								
51	SB7_0.2	Feb 28, 2020		Soil	S20-Ma02538		X								
52	SB8_0.5	Feb 28, 2020		Soil	S20-Ma02539		X								
53	SB8_1.5	Feb 28, 2020		Soil	S20-Ma02540		X								
54	SB9_0.2	Feb 28, 2020		Soil	S20-Ma02541		X								
55	SB9_1.0	Feb 28, 2020		Soil	S20-Ma02542		X								
56	SB10_0.5	Feb 28, 2020		Soil	S20-Ma02543		X								
57	SB10_1.5	Feb 28, 2020		Soil	S20-Ma02544		X								
58	SB11_0.2	Feb 28, 2020		Soil	S20-Ma02545		X								
59	SB11_1.5	Feb 28, 2020		Soil	S20-Ma02546		X								
60	SB12_0.5	Feb 28, 2020		Soil	S20-Ma02547		X								
61	SB12_1.5	Feb 28, 2020		Soil	S20-Ma02548		X								
62	SB13_1.0	Feb 28, 2020		Soil	S20-Ma02549		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
63	SB13_1.5	Feb 28, 2020		Soil	S20-Ma02550		X								
64	SB14_0.2	Feb 28, 2020		Soil	S20-Ma02551		X								
65	SB15_0.2	Feb 28, 2020		Soil	S20-Ma02552		X								
66	SB15_0.5	Feb 28, 2020		Soil	S20-Ma02553		X								
67	SB15_1.0	Feb 28, 2020		Soil	S20-Ma02554		X								
68	SB16_0.5	Feb 28, 2020		Soil	S20-Ma02555		X								
69	SB16_1.0	Feb 28, 2020		Soil	S20-Ma02556		X								
70	SB16_1.5	Feb 28, 2020		Soil	S20-Ma02557		X								
71	SB17_0.4	Feb 28, 2020		Soil	S20-Ma02558		X								
72	SB17_0.5	Feb 28, 2020		Soil	S20-Ma02559		X								
73	SB17_1.5	Feb 28, 2020		Soil	S20-Ma02560		X								
74	SB18_0.5	Feb 28, 2020		Soil	S20-Ma02561		X								
75	SB18_1.0	Feb 28, 2020		Soil	S20-Ma02562		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
76	SB19_0.1	Feb 28, 2020		Soil	S20-Ma02563		X								
77	SB19_0.5	Feb 28, 2020		Soil	S20-Ma02564		X								
78	SB20_0.5	Feb 28, 2020		Soil	S20-Ma02565		X								
79	SB20_1.0	Feb 28, 2020		Soil	S20-Ma02566		X								
80	SB20_1.5	Feb 28, 2020		Soil	S20-Ma02567		X								
81	MW1_1.0	Feb 28, 2020		Soil	S20-Ma02568		X								
82	MW1_1.5	Feb 28, 2020		Soil	S20-Ma02569		X								
83	MW1_4.0	Feb 28, 2020		Soil	S20-Ma02570		X								
84	MW1_5.0	Feb 28, 2020		Soil	S20-Ma02571		X								
85	MW1_6.0	Feb 28, 2020		Soil	S20-Ma02572		X								
86	MW2_0.5	Feb 28, 2020		Soil	S20-Ma02573		X								
87	MW2_1.0	Feb 28, 2020		Soil	S20-Ma02574		X								
88	MW2_1.5	Feb 28, 2020		Soil	S20-Ma02575		X								

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

ABN – 50 005 085 521

web : www.eurofins.com.au

e.mail : EnviroSales@eurofins.com

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 705373
Phone: 02 8245 0300
Fax:

Received: Mar 2, 2020 4:56 PM
Due: Mar 9, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Eurofins mgt Suite B13	BTEX and Naphthalene	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
89	MW2_2.0	Feb 28, 2020		Soil	S20-Ma02576		X								
90	MW2_3.0	Feb 28, 2020		Soil	S20-Ma02577		X								
91	MW3_2.0	Feb 28, 2020		Soil	S20-Ma02578		X								
92	MW3_3.0	Feb 28, 2020		Soil	S20-Ma02579		X								
93	MW3_4.0	Feb 28, 2020		Soil	S20-Ma02580		X								
94	QS04	Feb 28, 2020		Soil	S20-Ma02581		X								
Test Counts						22	53	36	36	7	1	16	36	16	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH 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 Units

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	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NC	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 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

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

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

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 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, 6:2 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.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. 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-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. 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 1260 in Matrix Spikes and LCS.
9. 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.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	110			70-130	Pass	
TRH C6-C10	%	73			70-130	Pass	
TRH >C10-C16	%	73			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	71			70-130	Pass	
TRH C10-C14	%	74			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	112			70-130	Pass	
Toluene	%	109			70-130	Pass	
Ethylbenzene	%	105			70-130	Pass	
m&p-Xylenes	%	110			70-130	Pass	
o-Xylene	%	110			70-130	Pass	
Xylenes - Total	%	110			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	115			70-130	Pass	
1.1.1-Trichloroethane	%	109			70-130	Pass	
1.2-Dichlorobenzene	%	107			70-130	Pass	
1.2-Dichloroethane	%	109			70-130	Pass	
Trichloroethene	%	120			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	%	127			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene			%	75			70-130	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic			%	100			70-130	Pass	
Cadmium			%	104			70-130	Pass	
Chromium			%	101			70-130	Pass	
Copper			%	97			70-130	Pass	
Lead			%	101			70-130	Pass	
Mercury			%	109			70-130	Pass	
Zinc			%	97			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-Ma00787	NCP	%	102			70-130	Pass	
Cadmium	S20-Ma00787	NCP	%	99			70-130	Pass	
Chromium	S20-Ma00787	NCP	%	96			70-130	Pass	
Copper	S20-Ma00787	NCP	%	91			70-130	Pass	
Lead	S20-Ma00787	NCP	%	93			70-130	Pass	
Mercury	S20-Ma00787	NCP	%	99			70-130	Pass	
Zinc	S20-Ma00787	NCP	%	91			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-Ma00728	NCP	%	122			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-Ma00728	NCP	%	90			70-130	Pass	
Toluene	S20-Ma00728	NCP	%	98			70-130	Pass	
Ethylbenzene	S20-Ma00728	NCP	%	109			70-130	Pass	
m&p-Xylenes	S20-Ma00728	NCP	%	111			70-130	Pass	
o-Xylene	S20-Ma00728	NCP	%	110			70-130	Pass	
Xylenes - Total	S20-Ma00728	NCP	%	111			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH C6-C10	S20-Ma00728	NCP	%	90			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S20-Ma00728	NCP	%	93			70-130	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			
Naphthalene	S20-Fe37035	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S20-Fe37035	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-Fe37035	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S20-Fe37035	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	S20-Fe37035	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.1-Dichloroethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1-Dichloroethene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1-Trichloroethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1.2-Tetrachloroethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2-Trichloroethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2.2-Tetrachloroethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dibromoethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichlorobenzene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloroethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloropropane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.3-Trichloropropane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.4-Trimethylbenzene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichlorobenzene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichloropropane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3.5-Trimethylbenzene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.4-Dichlorobenzene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Butanone (MEK)	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Propanone (Acetone)	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Chlorotoluene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Allyl chloride	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromobenzene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromochloromethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromodichloromethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromoform	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromomethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Carbon disulfide	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Carbon Tetrachloride	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chlorobenzene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chloroethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chloroform	S20-Fe37035	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Chloromethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
cis-1.2-Dichloroethene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
cis-1.3-Dichloropropene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromochloromethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromomethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dichlorodifluoromethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Iodomethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Isopropyl benzene (Cumene)	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Methylene Chloride	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Styrene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Tetrachloroethene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.2-Dichloroethene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.3-Dichloropropene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichloroethene	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichlorofluoromethane	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Vinyl chloride	S20-Fe37035	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S20-Ma05285	NCP	mg/L	< 0.001	0.001	28	30%	Pass
Cadmium	S20-Ma05285	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Chromium	S20-Ma05285	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Copper	S20-Ma05285	NCP	mg/L	0.004	0.003	3.0	30%	Pass
Lead	S20-Ma05285	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Mercury	S20-Ma05285	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Zinc	S20-Ma05285	NCP	mg/L	0.016	0.015	8.0	30%	Pass

Comments

This report has been revised (V2) to amend sample name for S20-Ma02492.

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
R20	This sample is a Trip Spike and therefore all results are reported as a percentage

Authorised By

Ursula Long	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

CERTIFICATE OF ANALYSIS 237935

Client Details

Client	JBS & G (NSW & WA) Pty Ltd
Attention	J Nicholson
Address	Level 1, 50 Margaret St, Sydney, NSW, 2000

Sample Details

Your Reference	<u>58352, Parramatta Powerhouse</u>
Number of Samples	4 Soil
Date samples received	02/03/2020
Date completed instructions received	02/03/2020

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	09/03/2020
Date of Issue	09/03/2020
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Josh Williams, Senior Chemist
Loren Bardwell, Senior Chemist
Steven Luong, Organics Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

PAHs in Soil				
Our Reference		237935-1	237935-2	237935-3
Your Reference	UNITS	QS01a	QS02a	QS03a
Date Sampled		28/02/2020	28/02/2020	28/02/2020
Type of sample		Soil	Soil	Soil
Date extracted	-	04/03/2020	04/03/2020	04/03/2020
Date analysed	-	05/03/2020	05/03/2020	05/03/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1
Benzo(b,j,k)fluoranthene	mg/kg	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	91	94	100

Acid Extractable metals in soil				
Our Reference		237935-1	237935-2	237935-3
Your Reference	UNITS	QS01a	QS02a	QS03a
Date Sampled		28/02/2020	28/02/2020	28/02/2020
Type of sample		Soil	Soil	Soil
Date prepared	-	06/03/2020	06/03/2020	06/03/2020
Date analysed	-	06/03/2020	06/03/2020	06/03/2020
Arsenic	mg/kg	5	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4
Chromium	mg/kg	10	5	3
Copper	mg/kg	14	9	2
Lead	mg/kg	14	35	4
Mercury	mg/kg	<0.1	<0.1	<0.1
Nickel	mg/kg	5	3	1
Zinc	mg/kg	18	18	3

Moisture				
Our Reference		237935-1	237935-2	237935-3
Your Reference	UNITS	QS01a	QS02a	QS03a
Date Sampled		28/02/2020	28/02/2020	28/02/2020
Type of sample		Soil	Soil	Soil
Date prepared	-	04/03/2020	04/03/2020	04/03/2020
Date analysed	-	05/03/2020	05/03/2020	05/03/2020
Moisture	%	9.9	8.0	4.7

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-012/017	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.</p> <p>For soil results:-</p> <ol style="list-style-type: none"> 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. <p>Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.</p>

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			04/03/2020	[NT]	[NT]	[NT]	[NT]	04/03/2020	[NT]
Date analysed	-			05/03/2020	[NT]	[NT]	[NT]	[NT]	05/03/2020	[NT]
Naphthalene	mg/kg	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Acenaphthylene	mg/kg	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Phenanthrene	mg/kg	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Anthracene	mg/kg	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Pyrene	mg/kg	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	66	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012/017	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012/017	<0.05	[NT]	[NT]	[NT]	[NT]	84	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012/017	101	[NT]	[NT]	[NT]	[NT]	98	[NT]

Client Reference: 58352, Parramatta Powerhouse

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date prepared	-			06/03/2020	[NT]	[NT]	[NT]	[NT]	06/03/2020	[NT]
Date analysed	-			06/03/2020	[NT]	[NT]	[NT]	[NT]	06/03/2020	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	113	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	106	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	123	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	116	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	125	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	109	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	117	[NT]

Result Definitions

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

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

Pg 1/1

IMSO Forms013 - Chain of Custody - Generic

SAMPLE RECEIPT ADVICE

Client Details

Client	JBS & G (NSW & WA) Pty Ltd
Attention	J Nicholson

Sample Login Details

Your reference	58352, Parramatta Powerhouse
Envirolab Reference	237935
Date Sample Received	02/03/2020
Date Instructions Received	02/03/2020
Date Results Expected to be Reported	09/03/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	4 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	8.4
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	PAHs in Soil	Acid Extractable metals in soil	On Hold
QS01a	✓	✓	
QS02a	✓	✓	
QS03a	✓	✓	
QS04a			✓

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

Additional Info

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

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

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

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

pg 1/1



IMSO Forms 013 - Chain of Custody - Generic

Melbourne

6 Monterey Road
Dandenong South Vic 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney

Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane

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

Perth

2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521

e.mail : EnviroSales@eurofins.com

web : www.eurofins.com.au

Sample Receipt Advice

Company name: **JBS & G Australia (NSW) P/L**
Contact name: Julia Nicholson
Project name: PARRAMATTA POWERHOUSE
Project ID: 58352
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Mar 6, 2020 5:20 PM
Eurofins reference: **706429**

Sample information

- ☒ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☒ Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 5.8 degrees Celsius.
- ☒ All samples have been received as described on the above COC.
- ☒ COC has been completed correctly.
- ☒ Attempt to chill was evident.
- ☒ Appropriately preserved sample containers have been used.
- ☒ All samples were received in good condition.
- ☒ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☒ Appropriate sample containers have been used.
- ☒ Sample containers for volatile analysis received with zero headspace.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.

Notes N/A Custody Seals intact (if used).

2-vials and metal container received for sample RINSATE, hence logged accordingly.

Contact notes

If you have any questions with respect to these samples please contact:

Ursula Long on Phone : or by e.mail: UrsulaLong@eurofins.com

Results will be delivered electronically via e.mail to Julia Nicholson - jnicholson@jbsg.com.au.

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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

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

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 706429
Phone: 02 8245 0300
Fax:

Received: Mar 6, 2020 5:20 PM
Due: Mar 13, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						TRH C6-C9	Metals M8	BTEX	Volatile Organics	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH	Polycyclic Aromatic Hydrocarbons (Trace level)
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID							
1	MW1	Mar 06, 2020		Water	S20-Ma09920		X		X	X		X
2	MW2	Mar 06, 2020		Water	S20-Ma09921		X		X	X		X
3	MW3	Mar 06, 2020		Water	S20-Ma09922		X		X	X		X
4	BH1	Mar 06, 2020		Water	S20-Ma09923		X		X	X		X
5	BH4	Mar 06, 2020		Water	S20-Ma09924		X		X	X		X
6	TS	Mar 06, 2020		Water	S20-Ma09925			X				
7	TB	Mar 06, 2020		Water	S20-Ma09926						X	
8	RINSATE	Mar 06, 2020		Water	S20-Ma09927	X	X		X			
9	QC01	Mar 06, 2020		Water	S20-Ma09928		X		X	X		X
Test Counts						1	7	1	7	6	1	6

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

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.

Attention: **Julia Nicholson**

Report **706429-W**
Project name **PARRAMATTA POWERHOUSE**
Project ID **58352**
Received Date **Mar 06, 2020**

Client Sample ID			MW1	MW2	MW3	BH1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S20-Ma09920	S20-Ma09921	S20-Ma09922	S20-Ma09923
Date Sampled			Mar 06, 2020	Mar 06, 2020	Mar 06, 2020	Mar 06, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001	0.001	< 0.001	< 0.001
2-Propanone (Acetone)	0.001	mg/L	0.002	0.021	0.003	0.002
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			MW1 Water S20-Ma09920 Mar 06, 2020	MW2 Water S20-Ma09921 Mar 06, 2020	MW3 Water S20-Ma09922 Mar 06, 2020	BH1 Water S20-Ma09923 Mar 06, 2020
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.001	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 Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.001	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	0.019
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	0.019
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	0.019
4-Bromofluorobenzene (surr.)	1	%	97	91	93	94
Toluene-d8 (surr.)	1	%	97	106	105	113
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(g,h,i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Dibenz(a,h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Client Sample ID			MW1	MW2	MW3	BH1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S20-Ma09920	S20-Ma09921	S20-Ma09922	S20-Ma09923
Date Sampled			Mar 06, 2020	Mar 06, 2020	Mar 06, 2020	Mar 06, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons (Trace level)						
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	67	53	81	87
p-Terphenyl-d14 (surr.)	1	%	87	80	54	90
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	0.002	0.002	0.005
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	0.002	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	0.001	0.001	0.002	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001	0.002	< 0.001	0.003
Zinc (filtered)	0.005	mg/L	0.010	0.012	0.078	< 0.005

Client Sample ID			BH4	R20 ^{TS}	TB	RINSATE
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S20-Ma09924	S20-Ma09925	S20-Ma09926	S20-Ma09927
Date Sampled			Mar 06, 2020	Mar 06, 2020	Mar 06, 2020	Mar 06, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.01	mg/L	< 0.01	-	< 0.01	-
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02	-
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	-	< 0.02	-
TRH >C10-C16	0.05	mg/L	< 0.05	-	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05	-	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-	-	-
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	-	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	-	-	-
BTEX						
Benzene	0.001	mg/L	-	84	< 0.001	-
Toluene	0.001	mg/L	-	87	< 0.001	-
Ethylbenzene	0.001	mg/L	-	82	< 0.001	-
m&p-Xylenes	0.002	mg/L	-	97	< 0.002	-
o-Xylene	0.001	mg/L	-	84	< 0.001	-
Xylenes - Total	0.003	mg/L	-	93	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	-	99	78	-

Client Sample ID			BH4 Water S20-Ma09924 Mar 06, 2020	R20 ^{TS} Water S20-Ma09925 Mar 06, 2020	TB Water S20-Ma09926 Mar 06, 2020	RINSATE Water S20-Ma09927 Mar 06, 2020
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	-	-	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	-	-	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	-	-	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	-	-	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	-	-	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	-	-	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	-	-	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	-	-	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	-	-	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	-	-	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	-	-	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	-	-	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	-	-	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	-	-	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001	-	-	< 0.001
2-Propanone (Acetone)	0.001	mg/L	< 0.001	-	-	< 0.001
4-Chlorotoluene	0.001	mg/L	< 0.001	-	-	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	-	-	< 0.001
Allyl chloride	0.001	mg/L	< 0.001	-	-	< 0.001
Benzene	0.001	mg/L	< 0.001	-	-	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	-	-	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	-	-	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	-	-	< 0.001
Bromoform	0.001	mg/L	< 0.001	-	-	< 0.001
Bromomethane	0.001	mg/L	< 0.001	-	-	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001	-	-	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	-	-	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	-	-	< 0.001
Chloroethane	0.001	mg/L	< 0.001	-	-	< 0.001
Chloroform	0.005	mg/L	< 0.005	-	-	< 0.005
Chloromethane	0.001	mg/L	< 0.001	-	-	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	-	-	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	-	-	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	-	-	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	-	-	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001	-	-	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	-	-	< 0.001
Iodomethane	0.001	mg/L	< 0.001	-	-	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	-	-	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	-	-	< 0.002
Methylene Chloride	0.001	mg/L	< 0.001	-	-	< 0.001
o-Xylene	0.001	mg/L	< 0.001	-	-	< 0.001
Styrene	0.001	mg/L	< 0.001	-	-	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	-	-	< 0.001
Toluene	0.001	mg/L	< 0.001	-	-	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	-	-	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	-	-	< 0.001

Client Sample ID			BH4	R20 ^{TS}	TB	RINSATE
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S20-Ma09924	S20-Ma09925	S20-Ma09926	S20-Ma09927
Date Sampled			Mar 06, 2020	Mar 06, 2020	Mar 06, 2020	Mar 06, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
Trichloroethene	0.001	mg/L	< 0.001	-	-	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001	-	-	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001	-	-	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	-	-	< 0.003
Total MAH*	0.003	mg/L	< 0.003	-	-	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	-	-	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	-	-	< 0.005
4-Bromofluorobenzene (surr.)	1	%	96	-	-	91
Toluene-d8 (surr.)	1	%	110	-	-	108
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	-	-	-
Acenaphthylene	0.00001	mg/L	< 0.00001	-	-	-
Anthracene	0.00001	mg/L	< 0.00001	-	-	-
Benz(a)anthracene	0.00001	mg/L	< 0.00001	-	-	-
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	-	-	-
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	-	-	-
Benzo(g,h,i)perylene	0.00001	mg/L	< 0.00001	-	-	-
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	-	-	-
Chrysene	0.00001	mg/L	< 0.00001	-	-	-
Dibenz(a,h)anthracene	0.00001	mg/L	< 0.00001	-	-	-
Fluoranthene	0.00001	mg/L	< 0.00001	-	-	-
Fluorene	0.00001	mg/L	< 0.00001	-	-	-
Indeno(1,2,3-cd)pyrene	0.00001	mg/L	< 0.00001	-	-	-
Naphthalene	0.00001	mg/L	< 0.00001	-	-	-
Phenanthrene	0.00001	mg/L	< 0.00001	-	-	-
Pyrene	0.00001	mg/L	< 0.00001	-	-	-
Total PAH*	0.00001	mg/L	< 0.00001	-	-	-
2-Fluorobiphenyl (surr.)	1	%	85	-	-	-
p-Terphenyl-d14 (surr.)	1	%	70	-	-	-
Heavy Metals						
Arsenic	0.001	mg/L	-	-	-	< 0.001
Arsenic (filtered)	0.001	mg/L	0.002	-	-	-
Cadmium	0.0002	mg/L	-	-	-	< 0.0002
Cadmium (filtered)	0.0002	mg/L	< 0.0002	-	-	-
Chromium	0.001	mg/L	-	-	-	< 0.001
Chromium (filtered)	0.001	mg/L	< 0.001	-	-	-
Copper	0.001	mg/L	-	-	-	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	-	-	-
Lead	0.001	mg/L	-	-	-	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	-	-	-
Mercury	0.0001	mg/L	-	-	-	< 0.0001
Mercury (filtered)	0.0001	mg/L	< 0.0001	-	-	-
Nickel	0.001	mg/L	-	-	-	< 0.001
Nickel (filtered)	0.001	mg/L	0.001	-	-	-
Zinc	0.005	mg/L	-	-	-	< 0.005
Zinc (filtered)	0.005	mg/L	< 0.005	-	-	-

Client Sample ID			QC01
Sample Matrix			Water
Eurofins Sample No.			S20-Ma09928
Date Sampled			Mar 06, 2020
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene ^{N02}	0.01	mg/L	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	0.02	mg/L	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1
Volatile Organics			
1.1-Dichloroethane	0.001	mg/L	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001
2-Propanone (Acetone)	0.001	mg/L	< 0.001
4-Chlorotoluene	0.001	mg/L	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001
Allyl chloride	0.001	mg/L	< 0.001
Benzene	0.001	mg/L	< 0.001
Bromobenzene	0.001	mg/L	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001
Bromoform	0.001	mg/L	< 0.001
Bromomethane	0.001	mg/L	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001
Chloroethane	0.001	mg/L	< 0.001
Chloroform	0.005	mg/L	< 0.005
Chloromethane	0.001	mg/L	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001

Client Sample ID			QC01
Sample Matrix			Water
Eurofins Sample No.			S20-Ma09928
Date Sampled			Mar 06, 2020
Test/Reference	LOR	Unit	
Volatile Organics			
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001
Dibromomethane	0.001	mg/L	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
Iodomethane	0.001	mg/L	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
Methylene Chloride	0.001	mg/L	< 0.001
o-Xylene	0.001	mg/L	< 0.001
Styrene	0.001	mg/L	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001
Trichloroethene	0.001	mg/L	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003
Total MAH*	0.003	mg/L	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005
4-Bromofluorobenzene (surr.)	1	%	88
Toluene-d8 (surr.)	1	%	101
Polycyclic Aromatic Hydrocarbons (Trace level)			
Acenaphthene	0.00001	mg/L	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001
Benzo(g,h,i)perylene	0.00001	mg/L	< 0.00001
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001
Dibenz(a,h)anthracene	0.00001	mg/L	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	98
p-Terphenyl-d14 (surr.)	1	%	60
Heavy Metals			
Arsenic (filtered)	0.001	mg/L	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002
Chromium (filtered)	0.001	mg/L	0.002
Copper (filtered)	0.001	mg/L	0.002

Client Sample ID			QC01
Sample Matrix			Water
Eurofins Sample No.			S20-Ma09928
Date Sampled			Mar 06, 2020
Test/Reference	LOR	Unit	
Heavy Metals			
Lead (filtered)	0.001	mg/L	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001
Zinc (filtered)	0.005	mg/L	0.011

Sample History

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

A recent review of our LIMS 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.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Mar 11, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Melbourne	Mar 11, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Mar 12, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Mar 11, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Mar 12, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Melbourne	Mar 11, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)			
Polycyclic Aromatic Hydrocarbons (Trace level)	Melbourne	Mar 12, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water (trace)			
Metals M8	Melbourne	Mar 11, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Metals M8 filtered	Melbourne	Mar 11, 2020	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PARRAMATTA POWERHOUSE
Project ID: 58352

Order No.:
Report #: 706429
Phone: 02 8245 0300
Fax:

Received: Mar 6, 2020 5:20 PM
Due: Mar 13, 2020
Priority: 5 Day
Contact Name: Julia Nicholson

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						TRH C6-C9	Metals M8	BTEX	Volatile Organics	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH	Polycyclic Aromatic Hydrocarbons (Trace level)
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID							
1	MW1	Mar 06, 2020		Water	S20-Ma09920		X		X	X		X
2	MW2	Mar 06, 2020		Water	S20-Ma09921		X		X	X		X
3	MW3	Mar 06, 2020		Water	S20-Ma09922		X		X	X		X
4	BH1	Mar 06, 2020		Water	S20-Ma09923		X		X	X		X
5	BH4	Mar 06, 2020		Water	S20-Ma09924		X		X	X		X
6	TS	Mar 06, 2020		Water	S20-Ma09925			X				
7	TB	Mar 06, 2020		Water	S20-Ma09926						X	
8	RINSATE	Mar 06, 2020		Water	S20-Ma09927	X	X		X			
9	QC01	Mar 06, 2020		Water	S20-Ma09928		X		X	X		X
Test Counts						1	7	1	7	6	1	6

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH 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 Units

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	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NC	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 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

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

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

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 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, 6:2 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.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. 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-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. 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 1260 in Matrix Spikes and LCS.
9. 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.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.001			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-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	92			70-130	Pass	
TRH C6-C10	%	91			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	97			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	80			70-130	Pass	
Toluene	%	96			70-130	Pass	
Ethylbenzene	%	97			70-130	Pass	
m&p-Xylenes	%	90			70-130	Pass	
Xylenes - Total	%	91			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	78			70-130	Pass	
1.1.1-Trichloroethane	%	72			70-130	Pass	
1.2-Dichlorobenzene	%	84			70-130	Pass	
1.2-Dichloroethane	%	75			70-130	Pass	
Trichloroethene	%	72			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	102			80-120	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Cadmium			%	104			80-120	Pass	
Chromium			%	103			80-120	Pass	
Copper			%	105			80-120	Pass	
Lead			%	104			80-120	Pass	
Mercury			%	110			75-125	Pass	
Nickel			%	105			80-120	Pass	
Zinc			%	106			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S20-Ma10098	NCP	%	101			70-130	Pass	
Cadmium (filtered)	S20-Ma10098	NCP	%	99			70-130	Pass	
Chromium (filtered)	S20-Ma10098	NCP	%	100			70-130	Pass	
Copper (filtered)	S20-Ma10098	NCP	%	98			70-130	Pass	
Lead (filtered)	S20-Ma10098	NCP	%	100			70-130	Pass	
Mercury (filtered)	S20-Ma10098	NCP	%	97			70-130	Pass	
Nickel (filtered)	S20-Ma10098	NCP	%	99			70-130	Pass	
Zinc (filtered)	S20-Ma10098	NCP	%	96			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1					
Acenaphthene	S20-Ma09921	CP	%	117			70-130	Pass	
Acenaphthylene	S20-Ma09921	CP	%	112			70-130	Pass	
Anthracene	S20-Ma09921	CP	%	103			70-130	Pass	
Benz(a)anthracene	S20-Ma09921	CP	%	92			70-130	Pass	
Benzo(a)pyrene	S20-Ma09921	CP	%	100			70-130	Pass	
Benzo(b&i)fluoranthene	S20-Ma09921	CP	%	124			70-130	Pass	
Benzo(g,h,i)perylene	S20-Ma09921	CP	%	89			70-130	Pass	
Benzo(k)fluoranthene	S20-Ma09921	CP	%	118			70-130	Pass	
Chrysene	S20-Ma09921	CP	%	109			70-130	Pass	
Dibenz(a,h)anthracene	S20-Ma09921	CP	%	74			70-130	Pass	
Fluoranthene	S20-Ma09921	CP	%	107			70-130	Pass	
Fluorene	S20-Ma09921	CP	%	113			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S20-Ma09921	CP	%	82			70-130	Pass	
Naphthalene	S20-Ma09921	CP	%	112			70-130	Pass	
Phenanthrene	S20-Ma09921	CP	%	98			70-130	Pass	
Pyrene	S20-Ma09921	CP	%	109			70-130	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			
TRH >C10-C16	S20-Ma09920	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S20-Ma09920	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S20-Ma09920	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S20-Ma09920	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S20-Ma09920	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S20-Ma09920	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1	Result 2	RPD			
Acenaphthene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Acenaphthylene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Anthracene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benz(a)anthracene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	

Duplicate								
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1	Result 2	RPD		
Benzo(a)pyrene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass
Benzo(b&j)fluoranthene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass
Benzo(g,h,i)perylene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass
Benzo(k)fluoranthene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass
Chrysene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass
Dibenz(a,h)anthracene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass
Fluoranthene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass
Fluorene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass
Naphthalene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass
Phenanthrene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass
Pyrene	S20-Ma09920	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic (filtered)	S20-Ma10098	NCP	mg/L	0.003	0.003	1.0	30%	Pass
Cadmium (filtered)	S20-Ma10098	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Chromium (filtered)	S20-Ma10098	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Copper (filtered)	S20-Ma10098	NCP	mg/L	0.017	0.017	<1	30%	Pass
Lead (filtered)	S20-Ma10098	NCP	mg/L	0.002	0.002	1.0	30%	Pass
Mercury (filtered)	S20-Ma10098	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Nickel (filtered)	S20-Ma10098	NCP	mg/L	0.011	0.011	2.0	30%	Pass
Zinc (filtered)	S20-Ma10098	NCP	mg/L	0.065	0.065	<1	30%	Pass
Duplicate								
BTEX				Result 1	Result 2	RPD		
Benzene	M20-Ma12303	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Toluene	M20-Ma12303	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Ethylbenzene	M20-Ma12303	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
m&p-Xylenes	M20-Ma12303	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
o-Xylene	M20-Ma12303	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Xylenes - Total	M20-Ma12303	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	M20-Ma12303	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass
TRH C6-C10	M20-Ma12303	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	M20-Ma12303	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
R20	This sample is a Trip Spike and therefore all results are reported as a percentage

Authorised By

Ursula Long	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

CERTIFICATE OF ANALYSIS 238372

Client Details

Client	JBS & G (NSW & WA) Pty Ltd
Attention	R Chapman, J Nicholson
Address	Level 1, 50 Margaret St, Sydney, NSW, 2000

Sample Details

Your Reference	<u>58352, Parramatta Powerhouse</u>
Number of Samples	1 water
Date samples received	06/03/2020
Date completed instructions received	06/03/2020

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
 Samples were analysed as received from the client. Results relate specifically to the samples as received.
 Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

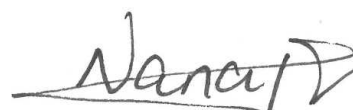
Report Details

Date results requested by	13/03/2020
Date of Issue	13/03/2020
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Jaimie Loa-Kum-Cheung, Metals Supervisor
 Josh Williams, Senior Chemist
 Steven Luong, Organics Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

VOCs in water		
Our Reference		238372-1
Your Reference	UNITS	QC01A
Date Sampled		06/03/2020
Type of sample		water
Date extracted	-	10/03/2020
Date analysed	-	10/03/2020
Dichlorodifluoromethane	µg/L	<10
Chloromethane	µg/L	<10
Vinyl Chloride	µg/L	<10
Bromomethane	µg/L	<10
Chloroethane	µg/L	<10
Trichlorofluoromethane	µg/L	<10
1,1-Dichloroethene	µg/L	<1
Trans-1,2-dichloroethene	µg/L	<1
1,1-dichloroethane	µg/L	<1
Cis-1,2-dichloroethene	µg/L	<1
Bromochloromethane	µg/L	<1
Chloroform	µg/L	<1
2,2-dichloropropane	µg/L	<1
1,2-dichloroethane	µg/L	<1
1,1,1-trichloroethane	µg/L	<1
1,1-dichloropropene	µg/L	<1
Cyclohexane	µg/L	<1
Carbon tetrachloride	µg/L	<1
Benzene	µg/L	<1
Dibromomethane	µg/L	<1
1,2-dichloropropane	µg/L	<1
Trichloroethene	µg/L	<1
Bromodichloromethane	µg/L	<1
trans-1,3-dichloropropene	µg/L	<1
cis-1,3-dichloropropene	µg/L	<1
1,1,2-trichloroethane	µg/L	<1
Toluene	µg/L	<1
1,3-dichloropropane	µg/L	<1
Dibromochloromethane	µg/L	<1
1,2-dibromoethane	µg/L	<1
Tetrachloroethene	µg/L	<1
1,1,1,2-tetrachloroethane	µg/L	<1
Chlorobenzene	µg/L	<1
Ethylbenzene	µg/L	<1

VOCs in water		
Our Reference		238372-1
Your Reference	UNITS	QC01A
Date Sampled		06/03/2020
Type of sample		water
Bromoform	µg/L	<1
m+p-xylene	µg/L	<2
Styrene	µg/L	<1
1,1,2,2-tetrachloroethane	µg/L	<1
o-xylene	µg/L	<1
1,2,3-trichloropropane	µg/L	<1
Isopropylbenzene	µg/L	<1
Bromobenzene	µg/L	<1
n-propyl benzene	µg/L	<1
2-chlorotoluene	µg/L	<1
4-chlorotoluene	µg/L	<1
1,3,5-trimethyl benzene	µg/L	<1
Tert-butyl benzene	µg/L	<1
1,2,4-trimethyl benzene	µg/L	<1
1,3-dichlorobenzene	µg/L	<1
Sec-butyl benzene	µg/L	<1
1,4-dichlorobenzene	µg/L	<1
4-isopropyl toluene	µg/L	<1
1,2-dichlorobenzene	µg/L	<1
n-butyl benzene	µg/L	<1
1,2-dibromo-3-chloropropane	µg/L	<1
1,2,4-trichlorobenzene	µg/L	<1
Hexachlorobutadiene	µg/L	<1
1,2,3-trichlorobenzene	µg/L	<1
Surrogate Dibromofluoromethane	%	122
Surrogate toluene-d8	%	101
Surrogate 4-BFB	%	111

vTRH(C6-C10)/BTEXN in Water		
Our Reference		238372-1
Your Reference	UNITS	QC01A
Date Sampled		06/03/2020
Type of sample		water
Date extracted	-	10/03/2020
Date analysed	-	10/03/2020
TRH C ₆ - C ₉	µg/L	<10
TRH C ₆ - C ₁₀	µg/L	<10
TRH C ₆ - C ₁₀ less BTEX (F1)	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Surrogate Dibromofluoromethane	%	122
Surrogate toluene-d8	%	101
Surrogate 4-BFB	%	111

svTRH (C10-C40) in Water		
Our Reference		238372-1
Your Reference	UNITS	QC01A
Date Sampled		06/03/2020
Type of sample		water
Date extracted	-	09/03/2020
Date analysed	-	10/03/2020
TRH C ₁₀ - C ₁₄	µg/L	<50
TRH C ₁₅ - C ₂₈	µg/L	<100
TRH C ₂₉ - C ₃₆	µg/L	<100
TRH >C ₁₀ - C ₁₆	µg/L	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	µg/L	<50
TRH >C ₁₆ - C ₃₄	µg/L	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100
Surrogate o-Terphenyl	%	107

PAHs in Water - Low Level		
Our Reference		238372-1
Your Reference	UNITS	QC01A
Date Sampled		06/03/2020
Type of sample		water
Date extracted	-	09/03/2020
Date analysed	-	10/03/2020
Naphthalene	µg/L	<0.2
Acenaphthylene	µg/L	<0.1
Acenaphthene	µg/L	<0.1
Fluorene	µg/L	<0.1
Phenanthrene	µg/L	<0.1
Anthracene	µg/L	<0.1
Fluoranthene	µg/L	<0.1
Pyrene	µg/L	<0.1
Benzo(a)anthracene	µg/L	<0.1
Chrysene	µg/L	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2
Benzo(a)pyrene	µg/L	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5
Total +ve PAH's	µg/L	<0.1
Surrogate <i>p</i> -Terphenyl-d14	%	70

HM in water - dissolved		
Our Reference		238372-1
Your Reference	UNITS	QC01A
Date Sampled		06/03/2020
Type of sample		water
Date prepared	-	10/03/2020
Date analysed	-	10/03/2020
Arsenic-Dissolved	µg/L	1
Cadmium-Dissolved	µg/L	<0.1
Chromium-Dissolved	µg/L	4
Copper-Dissolved	µg/L	<1
Lead-Dissolved	µg/L	<1
Mercury-Dissolved	µg/L	<0.05
Nickel-Dissolved	µg/L	1
Zinc-Dissolved	µg/L	10

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-012/017	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-013	Water samples are analysed directly by purge and trap GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

QUALITY CONTROL: VOCs in water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			10/03/2020	[NT]	[NT]	[NT]	[NT]	10/03/2020	[NT]
Date analysed	-			10/03/2020	[NT]	[NT]	[NT]	[NT]	10/03/2020	[NT]
Dichlorodifluoromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-013	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroform	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	88	[NT]
2,2-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]
1,1,1-trichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	89	[NT]
1,1-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Cyclohexane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibromomethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	81	[NT]
Bromodichloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Toluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]
1,2-dibromoethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromoform	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
m+p-xylene	µg/L	2	Org-013	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Styrene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: VOCs in water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
o-xylene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-013	120	[NT]	[NT]	[NT]	[NT]	112	[NT]
Surrogate toluene-d8	%		Org-013	102	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate 4-BFB	%		Org-013	113	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			10/03/2020	[NT]	[NT]	[NT]	[NT]	10/03/2020	[NT]
Date analysed	-			10/03/2020	[NT]	[NT]	[NT]	[NT]	10/03/2020	[NT]
TRH C ₆ - C ₉	µg/L	10	Org-016	<10	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH C ₆ - C ₁₀	µg/L	10	Org-016	<10	[NT]	[NT]	[NT]	[NT]	100	[NT]
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	106	[NT]
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Naphthalene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-016	120	[NT]	[NT]	[NT]	[NT]	112	[NT]
Surrogate toluene-d8	%		Org-016	102	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate 4-BFB	%		Org-016	113	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			09/03/2020	[NT]	[NT]	[NT]	[NT]	09/03/2020	[NT]
Date analysed	-			09/03/2020	[NT]	[NT]	[NT]	[NT]	09/03/2020	[NT]
TRH C ₁₀ - C ₁₄	µg/L	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	116	[NT]
TRH C ₁₅ - C ₂₈	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	94	[NT]
TRH C ₂₉ - C ₃₆	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	108	[NT]
TRH >C ₁₀ - C ₁₆	µg/L	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	116	[NT]
TRH >C ₁₆ - C ₃₄	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	94	[NT]
TRH >C ₃₄ - C ₄₀	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	108	[NT]
Surrogate o-Terphenyl	%		Org-003	103	[NT]	[NT]	[NT]	[NT]	116	[NT]

QUALITY CONTROL: PAHs in Water - Low Level					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			09/03/2020	[NT]	[NT]	[NT]	[NT]	09/03/2020	[NT]
Date analysed	-			10/03/2020	[NT]	[NT]	[NT]	[NT]	10/03/2020	[NT]
Naphthalene	µg/L	0.2	Org-012/017	<0.2	[NT]	[NT]	[NT]	[NT]	92	[NT]
Acenaphthylene	µg/L	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	µg/L	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Phenanthrene	µg/L	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Anthracene	µg/L	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	62	[NT]
Pyrene	µg/L	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Benzo(a)anthracene	µg/L	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/L	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-012/017	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	70	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-012/017	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012/017	80	[NT]	[NT]	[NT]	[NT]	72	[NT]

Client Reference: 58352, Parramatta Powerhouse

QUALITY CONTROL: HM in water - dissolved					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W5	[NT]
Date prepared	-			10/03/2020	[NT]	[NT]	[NT]	[NT]	10/03/2020	[NT]
Date analysed	-			10/03/2020	[NT]	[NT]	[NT]	[NT]	10/03/2020	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	113	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	[NT]	[NT]	[NT]	[NT]	99	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]

Result Definitions

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

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

pg 1/

IMSO FormsO13 – Chain of Custody – Generic

SAMPLE RECEIPT ADVICE

Client Details

Client	JBS & G (NSW & WA) Pty Ltd
Attention	R Chapman, J Nicholson

Sample Login Details

Your reference	58352, Parramatta Powerhouse
Envirolab Reference	238372
Date Sample Received	06/03/2020
Date Instructions Received	06/03/2020
Date Results Expected to be Reported	13/03/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	8.3
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	VOCs in water	VTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	HM in water - dissolved
QC01A	✓	✓	✓	✓	✓

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

Additional Info

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

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

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

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Appendix K Calibration Certificates

Multi Parameter Water Meter

Instrument YSI Quatro Pro Plus
Serial No. 18J104341



airmet
Air-Met Scientific Pty Ltd
1300 137 067

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		324189	pH 9.79
2. pH 7.00		pH 7.00		330737	pH 7.08
3. pH 4.00		pH 4.00		330734	pH 4.01
4. mV		229.6mV		338782/337308	229.6mV
5. EC		2.76mS		333787	2.76mS
6. D.O		0.00ppm		329994	0.02ppm
7. Temp		22.0°C		MultiTherm	21.7°C

Calibrated by:

Darcy Keogh

Calibration date:

5/03/2020

Next calibration due:

4/04/2020

Calibration Certificate

AirMet Scientific P/L

Level 3, 18-26 Dickson
Avenue
Artarmon
NSW 2064, Australia
Tel: 02 8425 8300
Fax: 02 8425 8399

This document certifies that the instrument detailed has been calibrated to the parameters

Certificate Print Date: 21-Oct-2019

Call ID / Order No: 239984

Calibration Date: 18-Oct-2019

Job No / Pack No: S2399840001

Next Calibration Due: 15-Apr-2020

Customer: JBS&G Australia Pty Ltd-ID 202507

Serial No: T-113497

Description: PhoCheck Tiger Li-ion Battery Battery Charger

Calibration Summary

Frequency: 180 Days

Temp: 22°C

As Found: Out of Tolerance

Result: Pass

Humidity: 45%

Certificate: S2399840001

<u>Desc</u>	<u>As Found</u>		<u>As Left (Cal Status)</u>	
	<u>Actual</u>	<u>Result</u>	<u>Actual</u>	<u>Result</u>
ISOBUTYLENE 100ppm	95.6	Pass	100.4	Pass
ISOBUTYLENE 1000ppm	851.9	Fail	998.9	Pass

Standard Used			
<u>Equip ID</u>	<u>Description</u>	<u>Valid Until</u>	<u>Cert</u>
SY281	Zero Grade Air 20.9%VOL O2, N2 Balance	05-08-2024	400285698/12 901475
SY276	ISOBUTYLENE 100PPM AIR Balance	03-07-2024	400284906
SY234	ISO-BUTYLENE 1000PPM, AIR BALANCE	08-10-2021	BU 70910- 022118

Completed By: Jason Cheng

Signed:



Field Equipment Calibration and Decontamination

PROJECT NAME: <i>Parramatta Powerhouse</i>	PROJECT NO: <i>52</i>
FIELDWORK DATES: <i>28-2-20</i>	SAMPLERS: <i>JN + JDC + MN</i>
TYPE OF INVESTIGATION: <i>Drilling</i>	PROJECT MANAGER: <i>JN</i>

CALIBRATION SUMMARY

EQUIPMENT: <i>PID, IP</i>
CALIBRATION STANDARD:

DATE	TIME	READING (ppm)	COMMENTS
<i>28/2/20</i>	<i>6:50</i>	<i>0</i>	<i>zero cal</i>
<i>↓</i>	<i>6:51</i>	<i>100</i>	<i>100ppm Isobutylene</i>
<i>↓</i>	<i>6:52</i>	<i>102.3</i>	<i>Post cal bump test</i>

DECONTAMINATION SUMMARY

EQUIPMENT: <i>Augers, IP</i>			
1	Was the equipment decontaminated appropriately prior to sampling at each location?	<i>Y</i>	N NA
2	Was excess soil removed by scraping, brushing or wiping with disposable towels?	<i>Y</i>	N NA
3	Was the equipment contaminated with grease, tar or similar material?	Y	N <i>NA</i>
	If so, was the equipment steam cleaned or rinsed with pesticide-grade acetone:hexane?	Y	N <i>NA</i>
4	Was phosphate-free detergent used to wash the equipment?	<i>Y</i>	N NA
5	Was the equipment rinsed with clean water?	<i>Y</i>	N NA
6	Was the equipment then rinsed with deionised water?	<i>Y</i>	N NA
7	Were all sample containers cleaned and acid or solvent washed prior to sample collection?	<i>Y</i>	N NA
WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS <i>New pair of nitrile gloves used for each sample.</i>			

Field Equipment Calibration and Decontamination



PROJECT NAME: Parramatta Powerhouse

PROJECT NO: 58352

FIELD DATES: 6/3/20

FIELD STAFF: RC

CALIBRATION SUMMARY

EQUIPMENT: PID

CALIBRATION STANDARD: 100ppm isobutylene

DATE	TIME	READING (ppm _v)	COMMENTS
6/3/20	7:05	0	Zero
"	7:06	100	Cal.
"	7:07	101.7	Bump

DECONTAMINATION SUMMARY

EQUIPMENT: PID

1. Was the equipment decontaminated appropriately prior to sampling at each location? ☒ Y ☐ N ☐ NA
2. Was excess soil removed by scraping, brushing or wiping with disposable towels? ☒ Y ☐ N ☐ NA
3. Was the equipment contaminated with grease, tar or similar material?
If so, was the equipment steam cleaned or rinsed with pesticide-grade acetone:hexane? ☒ Y ☒ N ☐ NA
4. Was phosphate-free detergent used to wash the equipment? ☒ Y ☐ N ☐ NA
5. Was the equipment rinsed with clean water? ☒ Y ☐ N ☐ NA
6. Was the equipment then rinsed with deionised water? ☒ Y ☐ N ☐ NA
7. Were all sample containers cleaned and acid or solvent washed prior to sample collection? ☒ Y ☐ N ☐ NA

WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS.

New gloves for each sample.

Appendix L Detailed QA/QC Assessment

QA/QC Results

The QA/QC result for soil samples collected during the JBS&G 2020 assessment are summarised in **Table L1** and discussed below. Detailed QA/QC results are included following the discussion of DQI exceedances below. QA/QC results from previous assessments are detailed in the associated previous reports.

Table L1: QA/QC Results Summary

Data Quality Indicator	Results	DQO met?
Precision		
Blind duplicates (intra laboratory)	Soil 0-67% RPD Groundwater 0-67% RPD Intra laboratory samples were analysed at a rate of 1 in 20 samples.	Partial ¹
Blind duplicates (inter laboratory)	Soil 0-82% RPD Groundwater 0-67% RPD Inter laboratory samples were analysed at a rate greater than 1 in 20 samples.	Partial ¹
Laboratory duplicates	0-24% RPD Intra laboratory samples were analysed at a rate of 1 in 20 samples.	Yes
Accuracy		
Laboratory control samples (LCS)	70-130% recovery Laboratory control samples were completed at a suitable density with respect to laboratory batch size and sample analyses.	Yes
Surrogate spikes	52-132% Surrogate spikes were completed for all organic sample analyses.	Partial ¹
Matrix spikes	70-130% recovery Matrix spikes were completed at a suitable density with respect to laboratory batch size and sample analyses.	Yes
Representativeness		
Samples extracted and analysed within holding times	All primary and duplicate samples were extracted within appropriate holding times.	Yes
Sampling appropriate for media and analytes	Samples were collected using appropriate methodology with regard to the sample media and analytes (volatile, semi-volatile and low volatility organics and inorganics).	Yes
Trip spike	70-130% One completed per sampling event and associated laboratory batches.	Yes
Trip blank	<LOR One completed per sampling event and associated laboratory batches.	Yes
Rinsate blank	<LOR One completed per sampling event and associated laboratory batch.	Yes
Standard operating procedures used for sample collection and handling	Standard operating procedures used as listed in Section 5 adopted for all sampling events and samples collected.	Yes
Comparability		

Data Quality Indicator	Results	DQO met?
Standard analytical methods used for all analyses	Standard analytical methods used as listed in Appendix J .	Yes
Consistent field conditions, field staff and laboratories	Sampling was conducted by the same field staff members in the investigation. Standard operating procedures were implemented throughout the works. Field conditions remained consistent with those anticipated in development of the SAQP throughout the works.	Yes
Limits of reporting appropriate and consistent	Limits of reporting were consistent and appropriate.	Yes
Completeness		
Soil description and COCs completed and appropriate	All field documentation and COCs were completed appropriately.	Yes
Appropriate documentation	All field documentation was appropriately completed.	Yes
Satisfactory frequency and result for QC samples	The QC results are considered adequate for the purposes of the investigation.	Yes
Data from critical samples	Samples were analysed at locations designed to address the requirements of the investigation such that a suitable data set could be established. All critical samples were analysed for appropriate COPC and the QA/QC assessment confirmed the reliability of this data.	Yes
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted site assessment criteria	Analytical methods and limits of recovery were considered appropriate for media and adopted site validation criteria for all soil analytes.	Yes

Notes: 1. See discussion below for notes

Discussion of QA/QC Results

Precision

Soil Blind Duplicates (intra laboratory)

The rate of blind duplicate sampling and analysis of soils is considered appropriate.

Soil RPDs for blind duplicate pairs were calculated according to the NEPC (2013) guidelines and were generally within the JBS&G acceptable limit (0-50%), with the exception of a nominal amount of heavy metals. These elevated RPDs are considered to be the result of heterogeneity in the soil samples collected and are not considered to influence the outcome of the investigation. In addition, reported concentrations were generally within 10 times the laboratory LOR, where any RPD is acceptable. As a conservative measure, or where concentrations exceeded 10 times the laboratory LOR, the highest concentration between the duplicate and primary sample was compared to the relevant adopted site criteria.

Soil Split Duplicates (inter laboratory)

The rate of split duplicate sampling and analysis of soils is considered appropriate.

Soil RPDs for blind interlab duplicate pairs were all within the JBS&G acceptable limit with the exception of chromium (55% RPD) and Benzo(a)pyrene TEQ (upper bound, 82% RPD). Reported concentrations are within 10x the laboratory limit of reporting, where any RPD is acceptable.

On this basis, the data has met the DQIs for inter-laboratory duplicates and the reported the elevated RPD is considered a result of field/soil characteristics and not laboratory precision errors and as such do not to affect the overall reliability or precision of the data.

Groundwater Blind Duplicates (intra laboratory)

The rate of blind duplicate sampling and analysis of groundwater is considered appropriate.

Groundwater RPDs for blind duplicate pairs were calculated according to the NEPC (2013) guidelines and were generally within the JBS&G acceptable limit (0-50%), with the exception of copper (67% RPD). Reported concentrations are within 10x the laboratory limit of reporting, where any RPD is acceptable.

Groundwater Split Duplicates (inter laboratory)

The rate of split duplicate sampling and analysis of groundwater is considered appropriate.

Groundwater RPDs for blind duplicate pairs were calculated according to the NEPC (2013) guidelines and were generally within the JBS&G acceptable limit (0-50%), with the exception of chromium (67% RPD). Reported concentrations are within 10x the laboratory limit of reporting, where any RPD is acceptable.

On this basis, the data has met the DQIs for inter-laboratory duplicates and the reported the elevated RPD is considered a result of field/groundwater characteristics and not laboratory precision errors and as such do not to affect the overall reliability or precision of the data.

Laboratory Duplicates

The rate of laboratory duplicate analysis are within the JBS&G acceptance criteria of 1 in 20 samples. RPDs were within the laboratory DQI of <30 % and the JBS&G DQI of <50 % RPD.

Accuracy

Laboratory Control Samples

All laboratory control samples (LCS) were reported as having recoveries within the JBS&G acceptable range of 70-130%.

Surrogate Spikes

Surrogate spikes were conducted in conjunction with organic contaminant analysis of all samples. Some of the surrogate spikes reported recoveries were not within the JBS&G acceptable range of 70-130%, yet the surrogate spike recoveries outside of the target range are not considered to affect the analytical data set as concentrations in validation samples were close to or below the laboratory's LOR and/or within the laboratories NATA accredited limits (50-150%).

Matrix Spikes

All matrix spikes reported recoveries were within the JBS&G acceptable range of 70 % – 130 %.

Representativeness

Sampling appropriate for media and analytes

All sampling works completed during the investigation were conducted in accordance with JBS&G standard operating procedures as outlined in the SAQP. Sample locations were undertaken for the purposes of visual inspection and/or olfactory assessment of soil/rock conditions and the collection of samples was considered appropriate for identified COPC.

All samples were collected wearing a new pair of disposable nitrile gloves. Where possible, disturbance of the sample was minimised during placement within the laboratory supplied sample container and during shipment to reduce the potential for loss of VOCs within the samples.

Holding Times

Copies of Sample Receipt Notes (SRNs) are included in relevant sections of the report (**Appendix J**) and sample extraction/analysis dates were reported in each laboratory report. All soil and groundwater analyses were undertaken within appropriate holding times for the respective analytes.

Trip Spike

Trip spikes were submitted with characterisation samples collected during the assessment. A trip spike was submitted with the lab batch, meeting the overall nominated frequency thresholds. Trip spike recoveries were within the JBS&G acceptable limit of 70-130%.

Storage Blank

A storage blank sample was carried during the characterisation sampling events and was submitted with the lab batch, meeting the overall nominated frequency thresholds. There were no reported concentrations of BTEX compounds above the laboratory LOR, achieving the nominated DQIs.

Rinsate Blank

Rinsate samples were prepared during the sampling events and subsequently submitted with the sample lab batch for analysis for key COPC. All subsequent contaminant concentrations were below the laboratory LOR.

Decontamination Comparability

All non-single use field equipment was decontaminated as per the procedure identified in **Section 5.4.2**.

Experienced JBS&G personnel undertook all sampling in accordance with standard JBS&G sampling methods as nominated in the validation SAQP.

The laboratory LORs are consistent and are considered appropriate.

Comparability

Eurofins, the primary laboratory, and Envirolab, the secondary laboratory, were NATA accredited for all analytical methods used. The laboratories used similar analytical methods and the analytical data was considered to be comparable between the laboratories as indicated by the results of inter-laboratory duplicate analyses. Where different LORs were adopted by the laboratories, the primary laboratory typically had a lower LOR than the secondary laboratory, and as such, consideration of the data set was not impacted.

Furthermore, the samples collected for assessment/validation purposes are considered comparable as all samples were collected by experienced JBS&G personnel in accordance with standard JBS&G sampling methods.

Completeness

Documentation

All laboratory documentation is complete and correct. Chain of custody documentation is provided with laboratory reports in **Appendix J**.

Frequency for QC Samples

The frequency of analysis of all QC samples was considered appropriate and valid.

Assessment of QA/QC

The field sampling and handling procedures produced QA/QC results which indicate that the collected soil analytical data are of an acceptable quality and suitable for use in site the characterisation/validation assessment.

The NATA certified laboratory results sheets indicate that the project laboratory was generally achieving levels of performance within its recommended control limits during the period when the samples for this project were analysed.

On the basis of the results of the field and laboratory QA/QC program, the soil data is of an acceptable quality in order to achieve the objectives of the current assessment.



Field Duplicates (SOIL)
Filter: SDG in('706429','705373')

SDG	705373	705373		705373	705373		705373	705373		705373	ENVIROLAB 2020-03-02T00:00:00		705373	ENVIROLAB 2020-03-02T00:00:00		705373	ENVIROLAB 2020-03-02T00:00:00	
Field ID	SB3_1.5	QS01	RPD	SB7_1.0	QS02	RPD	SB8_1.0	QS03	RPD	SB3_1.5	QS01a	RPD	SB7_1.0	QS02a	RPD	SB8_1.0	QS03a	RPD
Sampled Date/Time	28/02/2020	28/02/2020		28/02/2020	28/02/2020		28/02/2020	28/02/2020		28/02/2020	28/02/2020		28/02/2020	28/02/2020		28/02/2020	28/02/2020	

Chem_Grou	ChemName	Units	EQL																		
Metals & M	Arsenic (Total)	mg/kg	2 (Primary): 4 (Interlab)	5.2	5.4	4	2.6	3.5	30	<2.0	<2.0	0	5.2	5.0	4	2.6	<4.0	0	<2.0	<4.0	0
	Cadmium	mg/kg	0.4	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0
	Chromium (Total)	mg/kg	5 (Primary): 1 (Interlab)	12.0	11.0	9	6.9	7.8	12	5.3	<5.0	6	12.0	10.0	18	6.9	5.0	32	5.3	3.0	55
	Copper	mg/kg	5 (Primary): 1 (Interlab)	13.0	19.0	38	8.5	11.0	26	<5.0	<5.0	0	13.0	14.0	7	8.5	9.0	6	<5.0	2.0	0
	Lead	mg/kg	5 (Primary): 1 (Interlab)	16.0	16.0	0	33.0	66.0	67	<5.0	<5.0	0	16.0	14.0	13	33.0	35.0	6	<5.0	4.0	0
	Mercury (Inorganic)	mg/kg	0.1	<0.1	<0.1	0	0.1	0.2	67	<0.1	<0.1	0	<0.1	<0.1	0	0.1	<0.1	0	<0.1	<0.1	0
	Nickel	mg/kg	5 (Primary): 1 (Interlab)	5.3	7.5	34	<5.0	<5.0	0	<5.0	<5.0	0	5.3	5.0	6	<5.0	3.0	0	<5.0	1.0	0
	Zinc	mg/kg	5 (Primary): 1 (Interlab)	20.0	26.0	26	19.0	21.0	10	<5.0	<5.0	0	20.0	18.0	11	19.0	18.0	5	<5.0	3.0	0
BTEXN	Naphthalene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.1	0	<0.5	<0.1	0
Polycyclic A	Acenaphthene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.1	0	<0.5	<0.1	0
	Acenaphthylene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.1	0	<0.5	<0.1	0
	Anthracene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.1	0	<0.5	<0.1	0
	Benzo(a)anthracene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.1	0	<0.5	<0.1	0
	Benzo(a)pyrene	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
	Benzo(a)pyrene TEQ (lower bound)*	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(a)pyrene TEQ (medium bound)*	mg/kg	0.5	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	<0.5	18	0.6	<0.5	18	0.6	<0.5	18
	Benzo(a)pyrene TEQ (upper bound)*	mg/kg	0.5	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	<0.5	82	1.2	<0.5	82	1.2	<0.5	82
	Benzo(b,j)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(g,h,i)perylene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.1	0	<0.5	<0.1	0
	Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Chrysene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.1	0	<0.5	<0.1	0
	Dibenz(a,h)anthracene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.1	0	<0.5	<0.1	0
	Fluoranthene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.1	0	<0.5	<0.1	0
	Fluorene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.1	0	<0.5	<0.1	0
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.1	0	<0.5	<0.1	0
	Phenanthrene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.1	0	<0.5	<0.1	0
	PAHs (Total)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Pyrene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.1	0	<0.5	<0.1	0
Other	% Moisture 103oC	%	1	11.0	12.0	9	8.6	7.7	11	5.3	5.4	2	11.0			8.6			5.3		

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

SDG	706429	706429		706429	ENVIROLAB 2020-03-09T00:00:00	
Field ID	MW1	QC01	RPD	MW1	QC01A	RPD
Sampled Date/Time	6/03/2020	6/03/2020		6/03/2020	6/03/2020	



Field Duplicates (WATER)
Filter: SDG in('706429','705373')

SDG	706429	706429		706429	ENVIROLAB 2020-03-09T00:00:00	
Field ID	MW1	QC01	RPD	MW1	QC01A	RPD
Sampled Date/Time	6/03/2020	6/03/2020		6/03/2020	6/03/2020	

Chlorinated Alkenes	1,1-dichloroethene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	3-chloropropene	mg/l	0.001	<0.001	<0.001	0	<0.001		
	4-chlorotoluene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	cis-1,2-dichloroethene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	cis-1,3-dichloropropene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	Tetrachloroethene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	trans-1,2-dichloroethene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	trans-1,3-dichloropropene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	Trichloroethene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	Vinyl Chloride	mg/l	0.001 (Primary): 0.01 (Interlab)	<0.001	<0.001	0	<0.001	<0.01	0
Solvents	2-Propanone (Acetone)	µg/l	1	2.0	<1.0	67	2.0		
Monocyclic Aromatic Hydrocarbons	1,2,4-trimethyl benzene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	1,3,5-trimethyl benzene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	Bromobenzene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	Isopropylbenzene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	Styrene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
Miscellaneous Hydrocarbons	1,2-dibromoethane	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	2-Butanone (MEK)	mg/l	0.001	<0.001	<0.001	0	<0.001		
	4-Methyl-2-pentanone (MIBK)	mg/l	0.001	<0.001	<0.001	0	<0.001		
	Bromomethane	mg/l	0.001 (Primary): 0.01 (Interlab)	<0.001	<0.001	0	<0.001	<0.01	0
	Dibromomethane	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	Iodomethane	mg/l	0.001	<0.001	<0.001	0	<0.001		
Chlorinated Benzenes	1,2-Dichlorobenzene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	1,3-dichlorobenzene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	1,4-dichlorobenzene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	Chlorobenzene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
Trihalomethanes	Bromodichloromethane	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	Chloroform	mg/l	0.005 (Primary): 0.001 (Interlab)	<0.005	<0.005	0	<0.005	<0.001	0
	Dibromochloromethane	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	Tribromomethane	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
Organic Sulfur Compounds	Carbon disulfide	mg/l	0.001	<0.001	<0.001	0	<0.001		
EPA VIC - IWRG621	Chlorinated Hydrocarbons EPAVic	µg/l	5	<5.0	<5.0	0	<5.0		
	Other Chlorinated Hydrocarbons EPAVic	µg/l	5	<5.0	<5.0	0	<5.0		

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


© JBS&G

This document is and shall remain the property of JBS&G. The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited

Document Distribution

Rev No.	Copies	Recipient	Date
A	1 x Electronic	Tom Kennedy - Director Via email: tom@gtkconsulting.com.au	29/03/2020
0	1 x Electronic	Tom Kennedy - Director Via email: tom@gtkconsulting.com.au	03/04/2020

Document Status

Rev No.	Author	Reviewer	Approved for Issue		
		Name	Name	Signature	Date
A	Leo Rothacker / Jessica Staehli	Matthew Parkinson	Matthew Parkinson	Draft for Client Review	29/03/2020
0	Leo Rothacker / Jessica Staehli	Matthew Parkinson	Matthew Parkinson		03/04/2020

