



Charter Keck Cramer

Environmental Site Assessment

81 – 95 Burnley Street,
Richmond, Victoria

30 May 2016

51573 Rev 01 (Final)

JBS&G

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Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was commissioned by Charter Keck Cramer (Charter) to undertake an Environmental Site Assessment (ESA) which included both a Preliminary Site Investigation (PSI) site history review and Detailed Site Investigation (DSI) consisting of a soil assessment for the property located at 81 – 95 Burnley Street, Richmond, Victoria herein referred to as ‘the site’.

It is understood that the site is intended to be developed into primarily apartments with potential for ground floor retail and podium commercial office and associated mixed uses.

PSI

The site is located in a region of Richmond where a combination of residential and commercial / industrial land use historically occurred and still occurs. A review of land Titles indicated that the site has been owned by the Aluminium and Plate Company Pty Ltd, Russell Manufacturing Company Pty Ltd and Repco Engine Parts Pty Ltd. A search conducted by Royal Historical Society of Victoria (RHSV) identified that rubber goods manufacturing company (Leggett Products), a sulphurous oil maker (Victorian Chemical Company), a foundry (Crusader Plate Company), a spark plug manufacturer (Aviator Manufacturing Company) have been located on Doonside or Appleton Street. An electrical substation was present on Appleton Street in the 1970s. Leaks or spills from this substation could be the source of the PCB identified during building construction in 2004. It is noted that a substation is no longer present at the site in this location.

The site has been owned by Astrodome Hire Pty Ltd since 1992 and is currently used by Harry the Hirer as a showroom, office and for the storage and distribution of rental equipment.

Environmental audits have been conducted at four locations within approximately 150 m of the site. All four sites have subsequently been issued a Statement or Certificate of Environmental Audit.

The PSI findings identified the key potential risks to be importation of fill, metal and petroleum hydrocarbon contamination associated with previous site activities and the previously identified PCB contamination possibly associated with the electrical substation.

DSI

On 21 and 22 March 2016, 24 soil bores (SB01 to SB24) were advanced across the site to assess the areas of concern identified during the PSI and to assess general site conditions. On 12 April 19, additional soil bores were progressed at 2, 5 and or 12 m offsets to delineate soil contamination identified at two locations (SB11 and SB23).

The concentrations of all analytes were below the adopted assessment criteria with the exception of:

- Arsenic exceeded the site derived Ecological Investigation Level (EIL) guideline in one sample. The exceedance was noted to be in shallow fill material. Statistical analysis using ProUCL software indicated that the 95% upper confidence limit of the mean (95%UCL) for arsenic in the fill material / disturbed natural material was 63 mg/kg, which was below the adopted EIL assessment criterion and on that basis the slightly elevated and isolated arsenic concentration is not considered to be significant;
- Copper exceeded the site derived EIL guideline in two samples. Both exceedances were noted to be in fill material at a depth no greater than 0.5 m below surface. The 95%UCL for copper in the fill material / disturbed natural material was 659 mg/kg, which exceeds the adopted EIL assessment criterion. The concentrations were below the adopted human health assessment criteria;

- Zinc exceeded the site derived EIL guideline in one sample. The exceedance was noted to be in shallow fill material. The 95%UCL for zinc in the fill material / disturbed natural material was 524 mg/kg, which was below the adopted EIL assessment criterion and on that basis the slightly elevated and isolated zinc concentrations are not considered to be significant;
- The C₁₀-C₁₆ and C₁₆-C₃₄ Total Recoverable Hydrocarbon (TRH) fractions exceeded adopted ecological and human health assessment criteria for direct contact and vapour intrusion in 11 and 9 samples, respectively. The impacts were reported at a depth of up to 1.2 m below surface. Analysis of natural clay material at a depth of 2.4 m in an impacted area (SB04) reported hydrocarbon concentrations above the laboratory limit of reporting (LOR) but below the adopted assessment criteria. Impacted fill material is predominantly located in the northern central portion of the site and has been laterally delineated.
- Naphthalene exceeded the adopted human health vapour intrusion assessment criterion for a residential setting but not a commercial / industrial setting in one sample of shallow fill material. This sample was collected from within the identified TRH plume.
- PCB (total) exceeded the adopted human health assessment criteria for a commercial / industrial setting in two locations and a high density residential setting in three locations. The lateral and vertical extent of the PCB impacts have been delineated.

The vertical extent of adopted high density residential human health or ecological assessment criteria exceedances was limited to a maximum depth of 1.5 m below surface. No significant impacts were identified in field screening or laboratory testing in natural material at a depth of 2.4 m below surface. This suggests that groundwater contamination arising from site derived hydrocarbon or inorganic soil contamination is unlikely.

It is anticipated that the identified C₁₀-C₁₆, C₁₆-C₃₄, naphthalene and PCB impacts would be removed as part of any commercial or residential development. There may be an option to suitably cap these materials if the fill material is to be retained.

The current analytical results have been compared to the offsite disposal soil assessment criteria (IWRG 621). Initial results (based solely on the total concentrations obtained to date) suggest the majority of soil excavated as part of a proposed development would be classified as Fill Material or Category C Contaminated Soil.

Two main areas of concern for offsite disposal were identified during the DSI. These consist of TRH concentrations exceeding the Category C Contaminated Soil guideline and PCB impacted material at concentrations greater than 2 mg/kg. Delineation works were undertaken to estimate the volumes of impacted material. The estimated volume of the Category B Contaminated Soil due to TRH was 135 m³ and the estimated volume of PCB contaminated material exceeding 2 mg/kg was 5.5 m³. The PCB impacted soils can be disposed of as Category C Contaminated Soil to an appropriate landfill.

The conclusions of this report should be read in conjunction with and with regard to the limitations included in Section 6.

1. Introduction

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) was commissioned by Charter Keck Cramer (Charter) to undertake an Environmental Site Assessment (ESA) which included both a Preliminary Site Investigation (PSI) site history review and Detailed Site Investigation (DSI) consisting of a soil assessment for the property located at 81 – 95 Burnley Street, Richmond, Victoria herein referred to as ‘the site’. The location and boundaries of the site are illustrated in Figure 1.

The ESA was conducted to review site history information to assess if any site contamination issues associated with past or present site usage may impact on future development of the site.

It is understood that the site is intended to be developed into apartments with ground floor retail and podium commercial office uses.

1.2 Objectives

The work was completed to achieve the following objectives:

- The PSI was conducted to review site history information to assess if any site contamination issues associated with past or present site usage may impact on future development of the site; and
- The DSI soil assessment was conducted to investigate potential subsurface impacts associated with past, existing site and surrounding land uses in order to identify any contamination which may impact on future development of the site.

1.3 Scope

The scope of the assessment included:

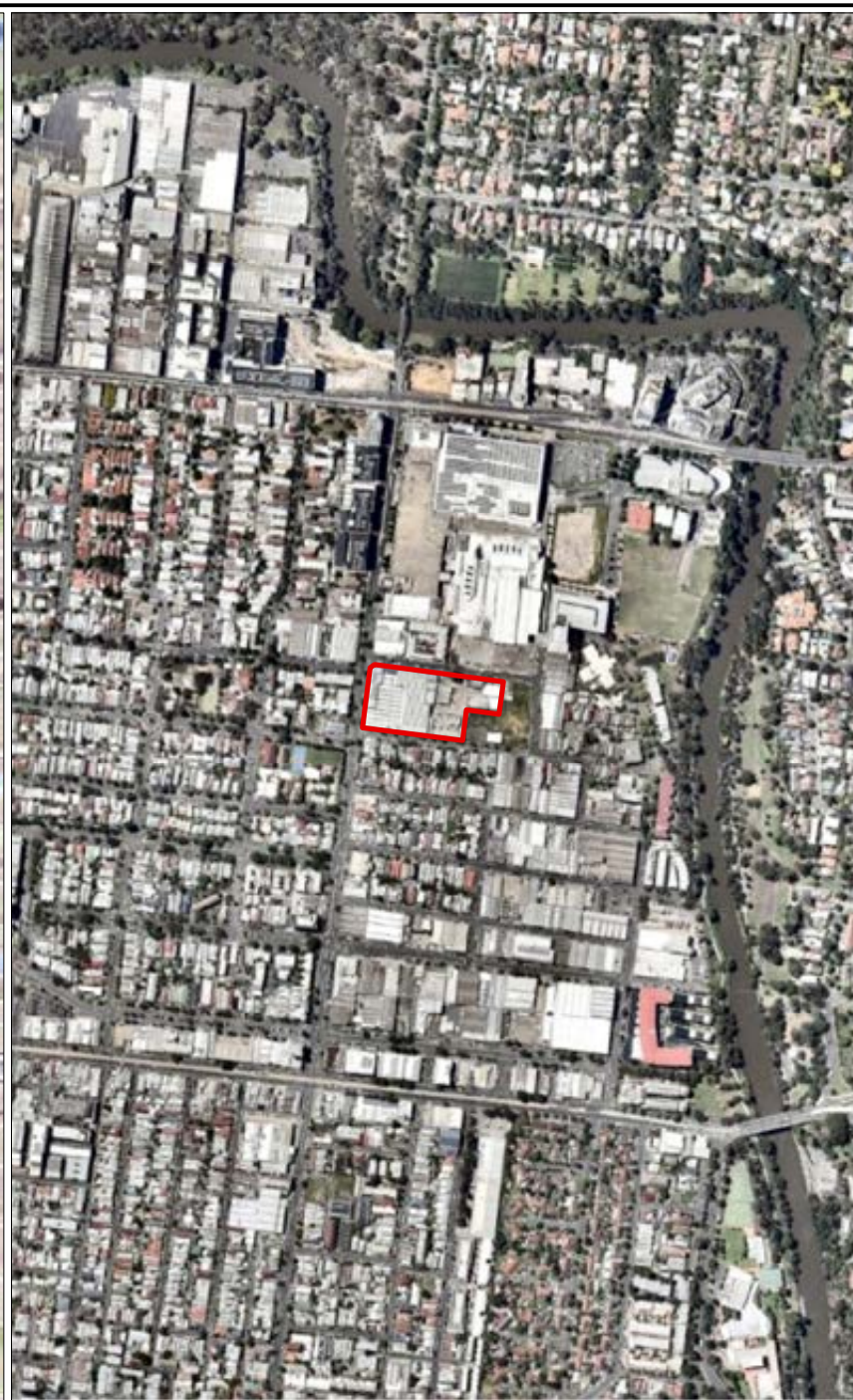
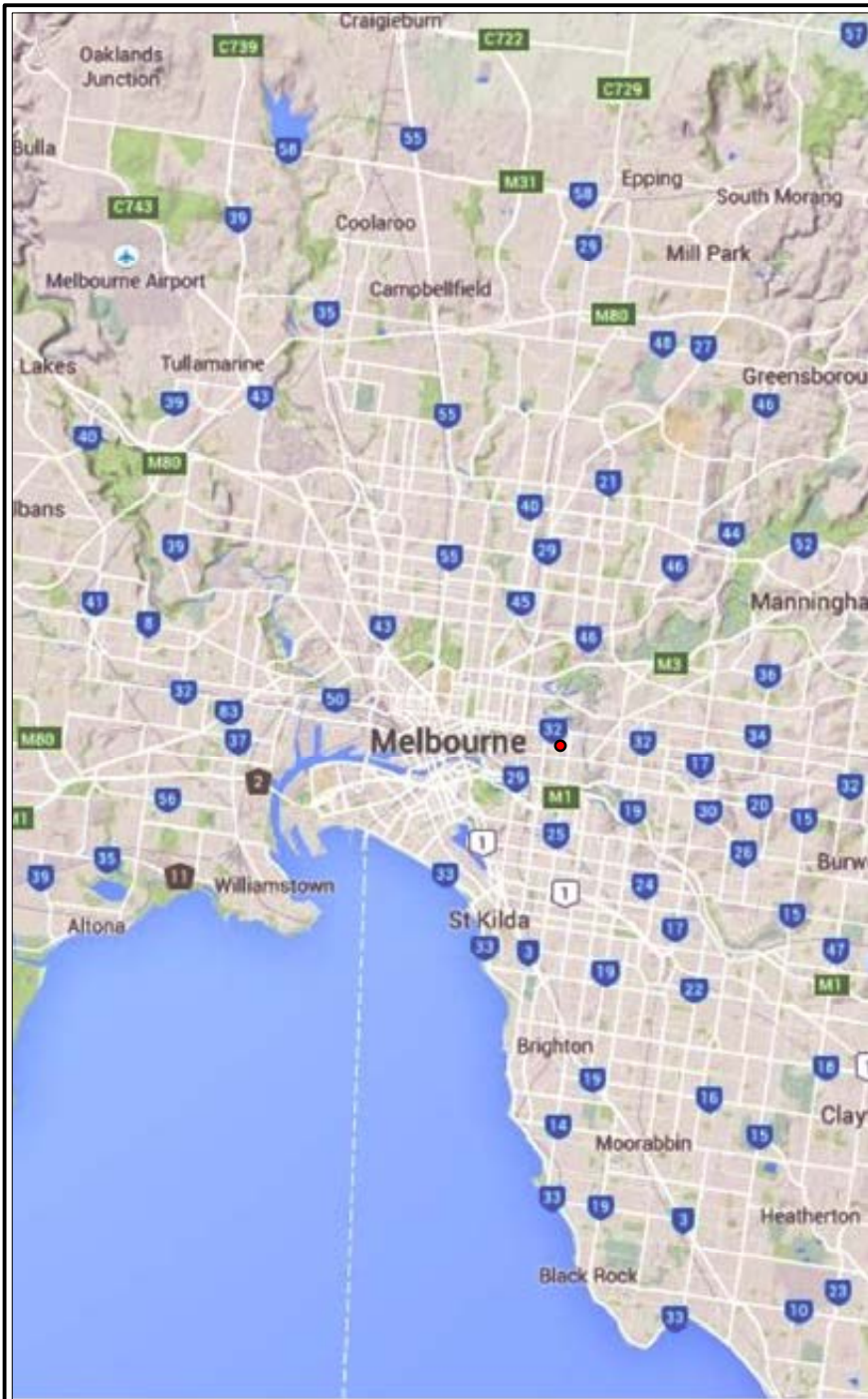
- Identification of potential contamination issues based upon a desktop study and site inspection;
- Completion of soil sampling and analysis;
- Preparation of this report.

1.4 Site Details

The site details are included in Table 1.1.

Table 1.1: Site Details

Category	Details
Street Address	81 – 95 Burnley Street, Richmond, Victoria, 3121
Allotment Details	Lots 1, 2 and 6 of LP221640 and Lot 1 PS317466
Area of Site	Approximately 12,800 m ²
Municipality	City of Yarra
Zoning	Industrial Zone 3 (IN3Z)
Planning Overlays	Design and Development Overlay (DDO) (Lots 1, 2 and 6 of LP221640 only) Design and Development Overlay – Schedule 2 (DDO2) (Lots 1, 2 and 6 of LP221640 only) Heritage Overlay (HO) Heritage Overlay Schedule (HO252) Heritage Overlay Schedule (HO375) (Lots 1, 2 and 6 of LP221640 only)



Legend:

- Site Location
- Site Boundary



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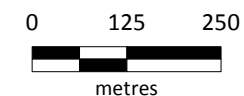
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Coor. Sys. GDA 1994 MGA Zone 55

81 – 95 Burnley Street, Richmond, Victoria

SITE LOCATION

FIGURE 1

2. Preliminary Site Investigation

2.1 Methodology

The PSI was undertaken in accordance with the procedures presented in the *National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013* (NEPM), published by the National Environment Protection Council (NEPC, 2013), with particular reference to Schedule B(2) *Site Characterisation*.

The PSI includes the components outlined in Table 2.1.

Table 2.1: PSI Sources of Information

Source / Section Heading	Report Section Number
Site inspection	Section 2.2
Surrounding land use	Section 2.3
Regional geology and hydrogeology	Section 2.4
Historical ownership	Section 2.5
Aerial photographs	Section 2.6
Previous environmental investigations	Section 2.7
EPA records	Section 2.8
Historical Society records	Section 2.9
Dangerous goods search	Section 2.10
Anecdotal information	Section 2.11
Cathodic protection records	Section 2.12
Council records	Section 2.13
Summary of site history	Section 2.14

2.2 Site Inspection

On 10 March 2016, an experienced JBS&G environmental scientist undertook a site inspection. Observations from the site inspection are presented within Table 2.2. Photographs from the site inspection are included in Appendix A.

Table 2.2: Site Inspection Summary

Item	Detail
Shape of site	Irregular
Topography	Western building is raised by approximately 0.4 m relative to street level. The site is predominantly flat with a slope down to street level on the northern boundary.
Nearest surface water body	Yarra River is located approximately 300 m to the east of the site.
Current layout	The western portion of the site is covered by a building of sawtooth construction. This building consists of a showroom, office area, cleaning area and warehouse storage. A modern warehouse (constructed in 2004) with a rooftop carpark is present in the south eastern portion of the site. Two buildings and two semipermanent marquees are present in the north eastern portion of the site.
Surface condition	The majority of the site is covered in concrete. Minimal surface staining was observed around the aboveground storage tank (AST) refuelling area. The remaining concrete was observed to be in good condition. However, new floor covering as part of a recent refurbishment of the western portion of the main sawtooth building prevented investigation of the underlying concrete slab.
Site observations	No visible signs of underground storage tanks (USTs) or storage / disposal of large quantities of chemicals (beyond that discussed in Section 2.10) was observed during the site inspection. Two substation structures are present on the site based on current Dial Before You Dig (DBYD) plans and council endorsed development from 1994. One fronts

Item	Detail
	Doonside Street in the central northern portion of the site and the other fronts Appleton Street in the south western portion of the site. Electrical warning signs were observed in both these locations during our site works, although JBS&G was not able to access these areas during site works, hence it has not been confirmed if the substations are live. The DBYD plans suggest that they may be active. The location of neither of these current substations is consistent with the historic substation discussed in Section 2.9.

The current site layout is shown in Figure 2.

2.3 Surrounding Land Use

The surrounding land use at the time of the site inspection is summarised in Table 2.3.

Table 2.3: Surrounding Land Use

Location	Detail
North	Doonside Street then subsequently commercial / industrial properties.
East	The Former Victoria Chemical Company which at the time of inspection was predominantly vacant land. This neighbouring site was issued with a 53X Statement in August 2008 (CARMS No. 63190-1). Then subsequently David Street and then a former forge (now occupied by Kennards Hire)
South	Appleton Street then subsequently low / medium density residential properties.
West	Burnley Street then subsequently predominantly low / medium density residential properties and a primary school to the south west and commercial / industrial properties to the north west

2.4 Regional Geology & Hydrogeology

Details of the regional geology and hydrogeology are presented in Table 2.4.

Table 2.4: Regional Geology and Hydrogeology

Source	Detail
Geology	
Geological Survey of Victoria 1:63 360 Geological Map (Ringwood) (GSV 1981)	The geological map indicates that the Richmond area is underlain by Newer Volcanic basaltic rock. Soils in the vicinity of the site are expected to be clays and silty clays derived from the weathering of the basalt rock.
Site Investigation	All bores were progressed through concrete. Fill material of varying composition (silts, gravel or sand) or disturbed natural (typically clays) were encountered to a depth between 0.2 and 1.2 m below surface. A layer of cemented sand approximately 0.3 m thick was present in the northern portion of the site (SB01 – SB06) at depths between 0.25 and 1.0 m below surface. In general, the underlying natural strata comprised of brown and pale brown silty clays and weathered basalt. Refusal on basalt occurred at locations in the southern portion of the site at depths between 0.35 and 0.9 m below surface.
Hydrogeology	
Australian Bureau of Meteorology, National Groundwater Information System.	A search of the Australian Government Bureau of Meteorology Groundwater Information System (BOM, 2016) was undertaken to identify licensed groundwater wells within a 500 m radius of the site. A total of 35 licensed bores were identified. Bores ranged from 3 to 30 m in depth. Seventeen bores were listed for monitoring purposes, two bores were listed for exploration purposes and the purpose of the remaining 16 bores was listed as unknown.
Site Investigations	No groundwater investigation was undertaken onsite. However, groundwater monitoring at the Former Victoria Chemical Company immediately to the east of the site suggests that groundwater should be at approximately 9 m below surface (PJR&A, 2008).

Table 2.5 provides a summary of the key groundwater well location and purposes identified within approximately 500 m of the site.



Legend:

- Site Boundary
- Design / Development Boundary



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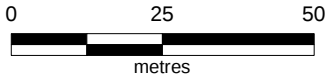
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81 – 95 Burnley Street, Richmond, Victoria

SITE LAYOUT

FIGURE 2

Table 2.5: Summary of Listed Water Supply Bores of Known Purpose within 500 m of Site

Bore ID	Bore Depth (m)	Status	Date Drilled	Bore Purpose	Distance from Site
RM005/54	3.9	Unknown	1/01/1999	Unknown	450 m north of site
RM005/55	5	Unknown	1/01/1999	Unknown	450 m north of site
RM005/56	9	Unknown	1/01/1999	Unknown	450 m north of site
RM005/58	3	Unknown	1/01/1999	Unknown	450 m north of site
RM005/59	3	Unknown	1/01/1999	Unknown	450 m north of site
RM005/73	8.8	Unknown	1/01/1999	Unknown	450 m north of site
RM005/77	10.5	Unknown	1/01/1999	Unknown	450 m north of site
RM005/78	7	Unknown	1/01/1999	Unknown	450 m north of site
RM005/79	4	Unknown	1/01/1999	Unknown	450 m north of site
WRK051524	8.5	Functional	10/03/2010	Monitoring	450 m north west of site
WRK051525	10.5	Functional	10/03/2010	Monitoring	450 m north west of site
WRK055810	14.1	Functional	19/03/2010	Monitoring	450 m north west of site
WRK058241	15	Functional	5/05/2011	Monitoring	200 m north west of site
WRK058242	15	Functional	5/05/2011	Monitoring	200 m north west of site
WRK058243	15	Functional	5/05/2011	Monitoring	200 m north west of site
WRK058568	25	Functional	2/08/2010	Monitoring	200 m north west of site
WRK058569	25	Functional	2/08/2010	Monitoring	200 m north west of site
WRK058570	25	Functional	2/08/2010	Monitoring	200 m north west of site
WRK058907	15	Functional	5/05/2011	Monitoring	200 m north west of site
WRK058908	15	Functional	5/05/2011	Monitoring	200 m north west of site
WRK059069	15	Functional	5/05/2011	Monitoring	200 m north west of site
WRK059070	15	Functional	5/05/2011	Monitoring	200 m north west of site
WRK059071	15	Functional	5/05/2011	Monitoring	200 m north west of site
WRK059072	15	Functional	5/05/2011	Monitoring	150 m north west of site
WRK059073	15	Functional	5/05/2011	Monitoring	150 m north west of site
WRK059074	15.8	Functional	21/10/2010	Monitoring	150 m north west of site
WRK984376	25	Functional	22/02/2008	Unknown	200 m south of site
WRK984377	25	Functional	22/02/2008	Unknown	200 m south of site
WRK984378	25	Functional	22/02/2008	Unknown	200 m south of site
WRK984379	25	Functional	22/02/2008	Unknown	200 m south of site
WRK984380	25	Functional	22/02/2008	Unknown	200 m south of site
WRK984381	25	Functional	22/02/2008	Unknown	200 m south of site
WRK985847	15	Functional	23/02/2009	Exploration	150 m north west of site
WRK988600	13	Non-functional	13/11/2008	Exploration	500 m north west of site
WRK988639	30	Proposed		Unknown	500 m north west of site

2.5 Historical Ownership

The site is currently described as Lots 1, 2 and 6 of LP221640 and Lot 1 PS317466.

Copies of available historical and current Certificates of Title are attached as Appendix B. A summary of historical Title records obtained from the Historical Search Statement are provided in Table 2.6.

Table 2.6: Summary of Historical Ownership Details

Property Description	Certificate of Title	Date	Ownership Details
Lot 1 on Plan subdivision 221640. Parish of Jika Jika	Volume:10021 Folio:523	14 th August 1992	Astrodome Hire Pty Ltd
	Volume:09707 Folio:046	13 th August 1990	State Bank of Australia
		30 th June 1989	Landbase Developments Pty Ltd
		23 rd October 1988	Permanent Trustee Nominees Limited
	Volume:01992 Folio:333	14 th January 1909	Mary Anne Casey
		7 th November 1907	James Fagan (Butcher)
		20 th February 1888	The Langridge Mutual Permanent Building Society
	Volume:01780 Folio:927	8 th September 1886	Maurice Martin
		13 th December 1885	George Taylor McCall (Blacksmith)
	Volume:09088 Folio:447	3 rd December 1981	Permanent Trustee Nominees
		23 rd June 1975	Repco Engine Parts Pty Ltd
	Volume:09047 Folio:209	10 th June 1974	Repco Engine Parts Pty Ltd
	Volume:08861 Folio:340	11 th May 1970	Russell Manufacturing Company Pty Ltd
	Volume:07575 Folio:161	27 th May 1959	Russell Manufacturing Company Pty Ltd
		17 th October 1950	Frank Lloyd (Labourer) Elsie Mary Jones (Married Woman)
	Volume:06082 Folio:249	21 st November 1936	Aluminium and Plate Company Pty Ltd
	Volume:05755 Folio:841	2 January 1935	Platers Pty Ltd
		17 th November 1933	Russell Manufacturing Company Pty Ltd
		18 th July 1930	Edward Lesslie Newbigin

Certificates of Title reviewed since 1888 indicate that the site or portions of the of the site have been owned by individuals, partners or companies. The historic Titles indicate that part of the site has been owned by the Aluminium and Plate Company Pty Ltd, Russell Manufacturing Company Pty Ltd and Repco Engine Parts Pty Ltd. The site has also been owned by various Building Societies and the State Bank of Australia. The site has been owned by Astrodome Hire Pty Ltd since 1992.

2.6 Aerial Photographs

Table 2.7 presents a summary of the review of historical aerial photographs relating to the site. Copies of the aerial photographs are presented in Figures 3A and 3B, with the approximate site boundaries shown for reference.

Table 2.7: Summary of Aerial Photograph Observations

Date	Comments
1931	The quality of the photograph is poor, however, the following general statements can be made: • Various buildings, not consistent the current layout are present on the site. • The south eastern portion of the site maybe residential properties. • The surrounding area is largely occupied residential properties to the south and commercial / industrial buildings to the west. It is not possible to determine what is located to the north or east. • The roads surrounding the site are consistent with the current layout.

Date	Comments
1945	- What appears to be a saw-tooth building occupies the north eastern portion of the site. - A sawtooth building, consistent with the current site layout is present on the western portion of the building. - The surrounding area to the north and west are commercial / industrial buildings. Residential properties are located to the south of the site and a mixture of residential and commercial / industrial properties are located to the east of the site.
1951	The quality of the photograph is poor, however, the following general statements can be made: The site and surrounding area remain largely consistent with the 1945 photograph.
1963	Buildings to the east of the site have been redeveloped since the 1945 photo. The site and the remaining surrounding area remain largely consistent with the 1945 / 1951 photograph.
1972	The site and surrounding area appears largely unchanged from the 1963 photograph.
1982	The site and surrounding area appears largely unchanged from the 1972 photograph.
1989	The quality of the photograph is poor, however, the following general statement can be made: The site and surrounding area appears largely unchanged from the 1982 photograph.
2016	- A warehouse with rooftop car parking has been developed in the south eastern portion of the site - Residential properties to the south are largely consistent with the 1982 photograph; - Commercial / industrial buildings to the east of the site have been demolished and the area is now largely vacant land. - Commercial / industrial buildings to the north of the site have been redeveloped since the 1989 photograph

2.7 Previous Environmental Investigations

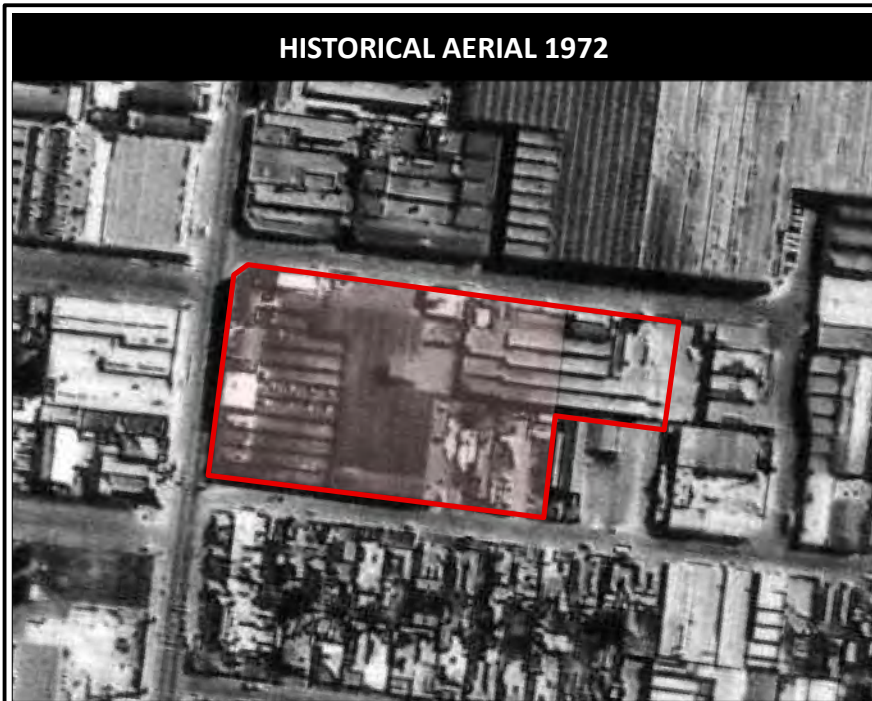
The following report and associated company internal documentation has been provided to JBS&G:

Environmental Improvement Plan for Disposal of PCB Contaminated Soil, August 2004, OTEK Australia Pty Ltd (OTEK, 2004).

This report details the assessment and required removal protocols for identified polychlorinated biphenyl (PCB) contaminated soil. The material was identified by odour during the excavation of material for footings during a partial redevelopment of the site (between Russell Manufacturing and 17 Appleton Street) circa 2004. During the construction works, approximately 140 m³ of material was excavated and placed in seven stockpiles. The concentration of PCBs in four of these stockpiles (approximately 70 m³) exceeded the acceptable level for disposal to landfill and also the then current NEPM HIL "F" Criteria for commercial/industrial land use. The highest reported PCB concentration was 140 mg/kg. Total Petroleum Hydrocarbons (TPH) was also identified in the stockpile samples with maximum reported fraction concentrations for C₁₀ – C₁₄, C₁₅ – C₂₈ and C₂₉ – C₃₆ of 1,400, 4,500 and 1,500 mg/kg, respectively. Polycyclic aromatic hydrocarbon (PAH), chromium, copper, lead and zinc concentrations also exceeded the EPA Victoria Clean fill criteria in one or more samples.

Additional documentation provided to JBS&G presents the removal options and waste transfer certificates for the low level contaminated material. No details on the removal or treatment of the contaminated material exceeding the acceptable level for landfill disposal were provided in the additional documentation however, Neil Hildebrand – Director of ProManage, the company managing the construction and soil removal informed JBS&G that the PCB contamination was treated and the soil has been removed from the site. No evidence of the presence of the stockpiled material or possible onsite disposal of this material was observed during site works.





Legend:

- Site Boundary
- Design / Development Boundary



Job No: 51573

Client: Charter Keck Cramer

Version: DRAFT

Date: 10-Mar-2016

Drawn By: TB

Checked By: JB

Scale at A4 1:3,000



0 50 100
metres

Coor. Sys. GDA 1994 MGA Zone 55

81 – 95 Burnley Street, Richmond, Victoria

HISTORICAL AERIALS 1972 - 2016

FIGURE 4B

2.8 EPA Records

2.8.1 Priority Sites Register

Priority Sites are sites which the Environment Protection Authority Victoria (EPA) has issued a Clean-Up Notice pursuant to section 62A or a Pollution Abatement Notice (relevant to land/groundwater) pursuant to section 31A or 31B of the Victorian Environment Protection Act, 1970 (as amended). Typically, these are sites where pollution of land and/or groundwater presents an unacceptable risk to human health or the environment.

EPA maintains the Priority Sites Register as a listing of all priority sites and the register is available to the public. It is important to note that the Priority Sites Register is not a listing of all contaminated sites in Victoria, nor is it a list of all contaminated sites of which EPA has knowledge.

On 16 March 2016, a review of the Register identified one listed location in Richmond. The listed location site, 3-21a Kent St, is approximately 700 m to the west of the site. This site is described as a former Industrial site requiring ongoing management. Based on distance and hydraulic conductivity, this listed location is not expected to impact the site.

2.8.2 Issued Certificates and Statements of Audit

The EPA maintains a searchable list of properties issued with a Certificate or Statement of Environmental Audit as part of Section 53X Audit or with a report as part of a Section 53V Audit under part IXD of the Environmental Protection Act 1970 “the Act”. Fourteen audited sites were identified within approximately 500 m of the site. These are presented in Table 2.8.

Table 2.8: Summary of Environmental Audited Sites within approximately 500 m of Site

CARMs No.	Completion Date	Address	Distance from Site	Contaminants of Potential Concern (COPC)	Media Effected	GW Flow Direction
63190-1	26/08/2008	Former Victoria Chemical Company 27–37 Appleton Street, Richmond	Property immediately to the east of the site	Fill material: metals, TPH, sulphate and PAH Groundwater: TPH	Soil and groundwater	South
61182-1	2/12/2011	2-30 Burnley Street, Richmond	Approximately 150 m to the north west	Fill material: metals, PAH Groundwater: TPH, Monocyclic aromatic hydrocarbons (MAH), phenols, Volatile Organic Compounds (VOCs), metals and nitrate	Soil and groundwater	East
37706-1	19/06/2012	Lots 2,3,4 and 5A, Victoria Gardens Development, Richmond	Approximately 300 m to the north east	Soil: metals and TPH Groundwater: metals, chloride, sulphate, cyanide, nitrogen, phenols and sodium	Soil and groundwater	North east
27919-1	31/01/1996	35 – 37 North Street, Richmond	Approximately 100 m to the south east	Soil: metals, PAH	Soil	-
29262-1	27/08/1996	4 – 6 North Street, Richmond	Approximately 100 m to the south	Soil: metals, Benzo-a-pyrene (BaP), DDE	Soil	-
41761-1	2/04/2001	146-162 Burnley Street, Richmond	Approximately 400 m to the south	Fill material: metals Groundwater: metals, TPH, MAH and naphthalene	Soil and groundwater	South

CARMs No.	Completion Date	Address	Distance from Site	Contaminants of Potential Concern (COPC)	Media Effected	GW Flow Direction
55095-1	13/10/2006	166 Burnley Street, Richmond	Approximately 400 m to the south	Soil: metals, PAH, TPH Groundwater: metals, nitrate, total phenolics, ammonia and pH	Soil and groundwater	South east with mounding to the north east
64873-1	7/03/2014	609-611 and part of 627 Victoria Street, Richmond	Approximately 500 m to the north	Soil: metals, TPH, PAH Groundwater: metals, cyanide, PAH, PFOS/PFOA, TPH, ammonia	Soil and groundwater	North east
26317-1	15/06/1995	4 River Street, Richmond	Approximately 150 m to the east	Zinc, PAH	Soil	-
22058-C	14/02/1992	5 River Road, Richmond	Approximately 200 m to the east	-	-	-
29379-1	18/02/1997	2 River Street, Richmond	Approximately 300 m to the south east	Metals, PAH	Soil	-
55447-1	10/09/2004	29 River Street, Richmond	Approximately 300 m to the south east	Soil: metals and PAH Groundwater: metals	Soil and groundwater	East
55447-1	30/11/2006	39 River Street, Richmond	Approximately 350 m to the south east	Soil: Metals, PAH, TPH, MAH Groundwater: TPH	Soil and groundwater	East
37636-1	18/01/1999	20-22 River Street, Richmond	Approximately 350 m to the south east	Soil: metals, TPH and PAH Groundwater: metals, TPH	Soil and groundwater	Debated

Four of the audited locations are within approximately 150 m of the site. The former Victoria Chemical Company 27 – 37 Appleton Street, immediately to the east of the site, Richmond had historically been used for a range of industrial purposes including for the manufacture of sulphonated vegetable oils, aluminium plates, piston rings, transmissions and parquet flooring. Hotspots of chemically impacted soil and inert wastes present in the fill were identified and subsequently remediated for the audit. Following the remedial works, some minor localised heavy metal, PAH and sulphate contamination remained at the site. Groundwater monitoring identified heavy metal, cyanide, nitrate and total petroleum hydrocarbon (TPH) contamination migrating onto the site from an off-site source. However, the site is also likely to have contributed to the regional TPH groundwater pollution (PJR&A, 2008). This site was issued with a Statement of Environmental Audit proclaiming that the site is suitable for high density residential or commercial / industrial uses subject to fully sealing or only approved minor landscape areas, and groundwater is not used for drinking water, primary contact recreational or industrial water uses. Based on the inferred groundwater flow to the south (PJR&A, 2008) and the Yarra River located to the east of the site, impacted groundwater should not have extended to the site.

2-30 Burnley Street had historically been used as a Salvation Army Lodge, metal workers, dry cleaners and a furniture showroom/factory. All of the heavy metal and PAH impacted fill was subsequently removed from the site as it was surplus to development requirements. Groundwater remediation involving multi-phase vacuum extraction was subsequently undertaken to remove the LNAPL and associated dissolved phase groundwater pollution. Groundwater monitoring undertaken following the groundwater remediation demonstrated that previously identified light non aqueous phase liquid (LNAPL) was no longer present and the extent of the contaminant plume had been reduced. This site was issued with a Statement of Environmental Audit proclaiming that the site is suitable for high density residential and commercial uses if the site is fully sealed, and that

groundwater is only extracted for monitoring or clean-up. Based on the inferred groundwater flow to the east (PJR&A, 2011), it is unlikely that the impacted groundwater has extended to the site.

4-6 North Street was used as a motor garage between 1973 and 1990. Low level contamination was identified in the fill material. A statement of audit was issued, without requiring site remediation (AXIS, 1996a). 35-37 North Street had historically been used as a truck stop, scrap metal yard and car compound. Remediation of contaminated fill to a maximum of 1 m below surface was required before residential development (AXIS, 1996b). This site was subsequently issued a Certificate of Environmental Audit proclaiming that the condition of the land at the site is neither detrimental nor potentially detrimental to any beneficial use of the land.

2.8.3 Groundwater Quality Zone with Restricted Uses

The *State Environment Protection Policy (Groundwaters of Victoria)* (Groundwater SEPP) establishes the statutory framework for the prevention and management of contamination of groundwater in Victoria. A groundwater quality restricted use zone (GQRUZ) is an area identified in accordance with Clause 19 of the SEPP as having an existing level of contamination of groundwater that precludes one or more beneficial uses that would otherwise apply to that groundwater. Priority Sites are sites which the Environment Protection Authority Victoria (EPA) has issued a Clean-Up Notice pursuant to section 62A or a Pollution Abatement Notice (relevant to land/groundwater) pursuant to section 31A or 31B of the Victorian Environment Protection Act, 1970 (as amended). Typically, these are sites where pollution of land and/or groundwater presents an unacceptable risk to human health or the environment.

EPA maintains a searchable map of GQRUZs. This was viewed on 16 March 2016. The site was not identified to be located within GQRUZ, however three GQRUZs were identified within approximately 500 m of the site:

- Former Victorian Chemical Company 27 - 37 Appleton Street, Richmond
- 2-30 Burnley Street, Richmond
- Lots 2,3,4 and 5A Victoria Gardens Development, Richmond

Further details on contamination associated with these GQRUZs is discussed in Section 2.8.1.

2.9 Historical Society Records

The Royal Historical Society of Victoria Inc. (RHSV) completed a search of historical documentation on 16 March 2016 and further clarification about the location of an electrical substation was provided 13 April 2016. The Sands and McDougall (S&M) directories from 1860 to 1974 and other relevant historical information were reviewed. The following is a summary for the report provided by the RHSV.

- Between the 1880s and 1920s two residences appeared in the S&M directories at 85 and 87 Burnley Street;
- Between the 1930 and 1970s the site was occupied by Russell Manufacturing Co, a motor accessories company, and then Repco Bearing Co;
- Various industrial companies have been located on or next to the site including a rubber goods manufacturing company (Leggett Products), a sulphurous oil maker (Victorian Chemical Company), a foundry (Crusader Plate Company), a spark plug manufacturer (Aviator Manufacturing Company) have been located on Doonside or Appleton Streets; and
- An electrical substation was present on Appleton Street in the 1970s. The substation was located between Russell Manufacturing and 17 Appleton Street. Leaks or spills from this substation could be the source of the PCB discussed in Section 2.7.

The reports provided by the RHSV are included as Appendix C.

2.10 Dangerous Goods Search

On 15 March 2016, a representative from WorkSafe searched the Dangerous Goods Database for records of the storage and handling of dangerous goods at the site. Table 2.9 provides a summary of the records.

Table 2.9: Summary of Dangerous Goods Records

Class	Hazard Type	Quantity Stored (L)
<i>Dangerous Goods Stored in Bulk</i>		
2.1	Flammable gas	7,600
3	Flammable liquid	12,000
<i>Dangerous Goods Stored in Packages</i>		
3	Flammable liquid	300

The bulk storage of flammable gas and flammable liquid is consistent with the storage of gas bottles and the AST, respectively, as observed during the site inspection. The stored packages of flammable liquid were not observed on a large scale during the site inspection.

A copy of the Dangerous Goods Database Search is included as Appendix D.

2.11 Anecdotal Information

Adrian Cohen, the general manager of Harry the Hirer, was interviewed as part of the site inspection. Mr Cohen had no knowledge of historically or current largescale chemical storage at site, beyond what is discussed in Section 2.10.

2.12 Cathodic Protection Records

On 10 March 2016, a search for cathodic protection systems, which may indicate the presence of an underground storage tank (UST), was completed by Energy Safe Victoria. This search did not identify the presence of a cathodic protection system at the site.

A copy of the Energy Safe Victoria information is presented in Appendix E.

2.13 Council Records

JBS&G contacted the City of Yarra Council to request any council records on the site. A copy of the endorsed planning permit (Permit No. 6561) issued on 31 July 1992 was provided. The plan details a redevelopment of the western building on the site. A workshop is present in the south east corner of the proposed building. No other potential sources of contamination were observed on the approved plans.

2.14 Summary of Site History

The site is located in a region of Richmond where a combination of residential and commercial / industrial land use historically occurred and still occurs. A review of land Titles indicated that the site has been owned by the Aluminium and Plate Company Pty Ltd, Russell Manufacturing Company Pty Ltd and Repco Engine Parts Pty Ltd. A search conducted by RHSV identified that rubber goods manufacturing company (Leggett Products), a sulphurous oil maker (Victorian Chemical Company), a foundry (Crusader Plate Company), a spark plug manufacturer (Aviator Manufacturing Company) have been located on Doonside or Appleton Street. An electrical substation was present on Appleton Street in the 1970s. Leaks or spills from this substation could be the source of the PCB identified during building construction in 2004. While two electrical substations were identified during site works, neither location is consistent with the historic substation discussed in Section 2.9. It has been assumed that the substation identified in the 1970s, a possible source of PCB contamination, is no longer present at the site.

Environmental audits have been conducted at four locations within approximately 150 m of the site. Impacted soil and groundwater were identified at the former Victoria Chemical Company, 27 – 37 Appleton Street. Impacted soil and inert wastes present in the fill were subsequently largely remediated. Groundwater monitoring identified heavy metal, cyanide, nitrate and TPH contamination. Heavy metal and PAH impacted fill identified at 2-30 Burnley Street was removed from the site. Groundwater remediation involving multi-phase vacuum extraction was also conducted at 2-30 Burnley Street. Low level contamination in fill material was identified at 4-6 and 35-37 North Street. All four sites have subsequently been issued a Statement or Certificate of Environmental Audit.

3. Conceptual Site Model

3.1 Known and Potential Sources of Contamination

Based upon the available information, the potential sources of contamination identified during the desktop study were:

- Historical importation of fill material to generate current site levels;
- Metal and petroleum hydrocarbon contamination associated with previous site activities; and
- Potential PCB contamination associated with the electrical substation historically located on Appleton Street, on the current site.

3.2 Potential Offsite Sources of Contamination

There are commercial and industrial properties surrounding the site. These could have historically been or currently be potential offsite contamination sources. Groundwater contamination has been identified at two nearby former industrial properties near the site (refer to Section 2.8). Based on inferred groundwater flow the site is not down gradient of either of these audited locations. However, the reported inferred groundwater flow varies for assessed locations within this region of Richmond (refer to Section 2.8), it is possible, that there is an offsite contribution to groundwater contamination at the site above the regional level.

3.3 Potentially Affected Media

Based upon the available information, the media which is most likely to be affected is considered to be soil. If soil is affected, then it is possible that groundwater and potentially soil vapour will also be affected.

3.4 Human and Ecological Receptors

The primary human receptors of concern are:

- Current users of the site (including staff, visitors and subsurface maintenance workers);
- Construction workers associated with the proposed development; and
- Users of the proposed development (including staff, visitors, occupants and subsurface maintenance workers).

The primary ecological receptor of concern is the freshwater ecosystem of Yarra River located approximately 300 m east of the site.

3.5 Preferential Contamination Migration Pathways

Preferential contamination migration pathways are likely to be limited to buried services which intersect the site.

3.6 Potential and Complete Exposure Pathways

Considering that the majority of the site is covered by concrete, the potential exposure pathways of most concern is vapour intrusion.

4. Detailed Site Investigation

4.1 Scope of Work & Rationale

On 21 and 22 March 2016, 24 soil bores (SB01 to SB24) were advanced across the site to assess the areas of concern identified during the PSI and to assess general site conditions.

The DSI was undertaken in general accordance with the procedures presented in the NEPM. The number of soil assessment locations was considered to be consistent that the recommended grid based sampling density included in AS4482.1 Standards Australia (2005) *Guide to the Sampling and Investigation of Potentially Contaminated Soil Part 1: Non-Volatile and Semi-Volatile Compounds*, for the characterisation of a site.

On 12 April 19 additional soil bores were progressed at 2, 5 and / or 12 m offsets to delineate TRH and PCB soil contamination identified at SB11 and SB23.

The investigation locations are shown in Figure 4.

4.2 Soil Investigation

4.2.1 Soil Sampling Method

The sampling methodologies for the soil investigations are presented in Table 4.1.

Table 4.1: Soil Investigation Methodologies

Method	Details
Soil Bore Drilling and Sampling	- Underground services were cleared by a professional underground service locator following review of 'Dial Before you Dig' plans; - Concrete coring was required at all soil bore locations; - Soil bores were advanced to refusal, 0.5 m into natural material or a maximum depth of 2.4 m below surface using a combination of hand auger, solid auger and push tube techniques; - The soil encountered was logged in accordance with the Unified Soil Classification System (USCS); - Clean disposable gloves were used for the collection of each soil sample; - Soil samples were collected in clean acid washed sample jars provided by the laboratory; - Drilling equipment was decontaminated between sampling locations; - Samples were collected at predetermined depths, at lithology changes and/or where visual or olfactory evidence of contamination was observed; - Duplicate soil samples were collected and screened for volatile organic compounds (VOC) with a calibrated photoionisation detection (PID); - Following completion of logging and sampling, the soil bores were reinstated with soil cuttings and then capped with rapid set concrete level with the surrounding surface; and - Quality control (QC) samples were collected in accordance with the NEPM and AS4482.1. This included one intra-laboratory blind duplicate, one inter-laboratory split sample and one equipment rinsate sample for each day of sampling.

4.2.2 Soil Laboratory Analysis

The soil samples were transported to Eurofins Australia (Eurofins) in Melbourne for chemical analysis. Eurofins is accredited by the NATA for the analyses undertaken. Inter-laboratory split samples were transported to NATA accredited EnviroLab.

Samples from each soil bore were analysed as summarised in Table 4.2. Samples not tested were archived and stored under refrigerated conditions for possible future analysis.

Table 4.2: Soil Analytical Program

Analyte	Number of Samples			
	Primary	Intra-Laboratory Split	Inter-Laboratory Split	Rinsate Blank
<i>Initial Assessment (March 2016)</i>				
TRH, metals and (As, Cd, Cr, Cu, Hg, Ni, Pb and Zn)	29	2	1	2
IWRG 621 Screen	1	-	-	-
PCB	12	-	-	-
VOC	8	-	-	-
CEC, pH and clay%	2	-	-	-
<i>Additional Delineation (April 2016)</i>				
PCB	6	1	1	1
TRH	11	-	-	1

4.2.3 Soil Assessment Criteria & Investigation Levels

The following assessment criteria and investigation levels were used in the interpretation of the laboratory results. These criteria are presented with the laboratory results in the summary tables appended to this report.

The NEPM states that:

“Investigation levels and screening levels are the concentrations of a contaminant above which further appropriate investigation and evaluation will be required”.

An exceedance of an investigation or screening level does not indicate that there is a definite risk to human health or ecological receptors, but rather that further site-specific assessment may be required to quantify the potential risk.

4.2.3.1 Potential Human Health Risks

The NEPM Health based Investigation Levels (HILs) were used to assess the potential risks to human health for residential use (Setting B) or commercial / industrial use (Setting D). The HILs are based on generally conservative assumptions for the estimated exposure of site occupants in the above land use scenarios.

The NEPM also provides Health Screening Levels (HSLs) for benzene, toluene, ethyl benzene and xylenes (BTEX) and volatile petroleum hydrocarbon fractions based on vapour intrusion risks from soil contamination. These concentrations are lower than those provided in the CRC Care Technical Report No. 10 *Health screening levels for petroleum hydrocarbons in soil and groundwater* (2011) for direct contact with TRH and BTEX contaminated soil and so the NEPM criteria have been adopted for screening purposes. For TRH fractions, both the NEPM Management Limits and the direct contact criteria included in CRC Care 2011 have been adopted for screening purposes.

The NEPM describes the High Density Residential (Setting B) as being *“residential with minimal opportunities for soil access includes dwellings with fully and permanently paved yard space such as*

high-rise buildings and flats". Typically, these criteria are used where there are multiple dwellings on a site with minimal access to soil. This is typically a density greater than one dwelling per 200 m² or a residential building greater than four storeys.

The NEPM describes the Commercial / Industrial land use (Setting D) as *"Commercial / Industrial, includes premises such as shops, offices, factories and industrial sites"*.

4.2.3.2 Potential Ecological Risks

The NEPM EILs were used to assess the potential risks to the environment posed by soil remaining on site, assuming the soil is accessible. The EILs are derived for specified levels of percentage species protection depending on the intended land use within areas of ecological significance, urban residential areas and public open space, as well as commercial and industrial land uses. The NEPM describes urban residential areas and public open space as broadly consistent with the equivalent to HIL A, HIL B and HIL C land use scenarios. The land use protection levels of this generic land use is 80%. Commercial and industrial land uses are based on a 60% protection level.

The NEPM Ecological Screening Levels (ESLs) apply a weight-of-evidence approach to derive ecologically based 'Tier 1 eco soil contact' values for TPH fractions and specific compounds. The overall approach provides protective criteria based on a point estimate of the toxicant concentration that has an obvious adverse effect on 25% of test organisms for urban residential and public open space land use and 50% of test organisms for commercial / industrial land use. It is noted that data limitations did not allow for derivation of the EIL methodology and the resulting values are adopted as low reliability ESLs.

4.2.3.3 Selected Assessment Criteria

Based on the discussion above, the following Tier 1 soil criteria have been adopted relevant a high density residential or commercial land use scenario:

- EILs using the site specific guidelines calculated as provided in the NEPM (urban residential) based on site %clay, cation exchange capacity (CEC) and soil pH measurements (taken from a CEC of 30, pH of 7.5 and clay content >10% and assuming an ambient background concentration of 0 mg/kg);
- ESLs provided in the NEPM (urban residential and public open space, fine soil);
- HILs provided in the NEPM (Settings B and D);
- Vapour intrusion based HSLs provided in the NEPM (residential and commercial / industrial, for a clay medium);
- NEPM 2013 Management Limits - residential and commercial / industrial, Fine; and
- Direct contact HSLs provided in Friebe & Nadebaum (2011) (high density residential and commercial / industrial);

4.2.4 Soil Results

4.2.4.1 Field Observations

Concrete coring was required at all locations, the depth of concrete across the site varied from 0.1 to 0.26 m below surface.

All bores were drilled through concrete. Fill material of varying composition (silts, gravel or sand) or disturbed natural (typically clays) were encountered to a depth between 0.2 and 1.2 metres below surface. A layer of cemented sand approximately 0.3 m thick was present in the northern portion of the site (SB01 – SB06) at a depth between 0.25 and 1.0 m below surface. In general, the underlying natural strata comprised of brown and pale brown silty clays and weathered basalt. Refusal on

basalt occurred at locations in the southern portion of the site at depths between 0.35 and 0.9 m below surface.

Fragments of red brick were observed in the fill material at two locations in the western portion of the site (SB01 and SB02).

Perched water was observed at three locations in the central northern portion of the site (SB04 and SB11, SB11-2S).

A hydrocarbon odour was observed at SB04, SB10, SB11, SB18 and SB23. A hydrocarbon odour was observed during drilling of delineation bores at SB11-2E, SB11-2S, SB11-2W, SB11-5N, SB11-12S, SB11-5W, SB11-12S, SB23-2N and SB25-5N. Staining was observed at SB18. No other visual or olfactory evidence of contamination was observed during site works.

The soil bore logs are attached as Appendix F.

4.2.4.2 PID Results

The results of the PID screening of soil samples ranged between 0.0 and 136 ppm. Elevated readings, above 10 ppm, are presented in Table 4.3.

Table 4.3: Field Screening PID Results

Soil Bore ID	Depth (m BGL)	PID Reading (ppm)	Odour
SB03	0.55	12	-
SB03	0.8	11	-
SB04	0.8	16	Hydrocarbon
SB10	0.14	51	Hydrocarbon
	0.6	17	
	1.2	131	
	1.5	121	
	2.4	25	
SB11	0.5	21	Hydrocarbon
SB18	0.14	16	Hydrocarbon
	0.5	24	
	1.0	16	
SB11-2E	0.5	136	Hydrocarbon
	0.7	11	
SB11-2S	0.7	23	Hydrocarbon
	1.0	55	
SB11-2W	0.3	17	Hydrocarbon
	0.6	58	
	0.9	48	
SB11-5S	0.15	58	Hydrocarbon
	0.3	31	
	0.5	109	
	0.7	52	
SB11-5W	0.15	12	Hydrocarbon
	0.3	64	
SB11-5N	0.5	126	Hydrocarbon
	0.7	11	
SB11-12S	0.3	42	Hydrocarbon
	0.5	19	

Soil Bore ID	Depth (m BGL)	PID Reading (ppm)	Odour
SB23-2N	0.3	106	Slight hydrocarbon
	0.5	18	
SB23-5N	0.6	72	Slight hydrocarbon

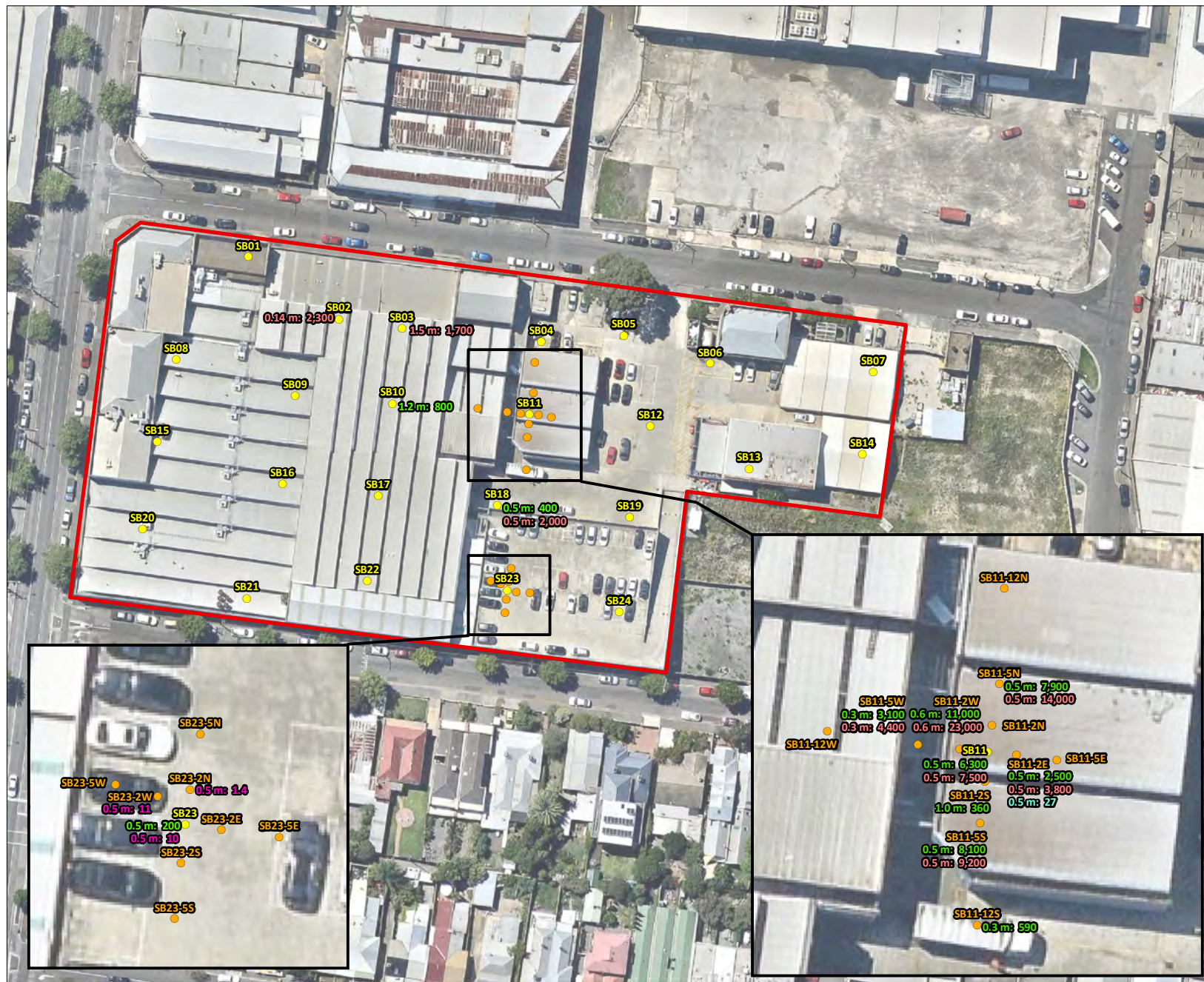
4.2.4.3 Soil Analytical Results

A summary of the soil analytical results compared to relevant criteria is attached to this report. The NATA certified laboratory reports are included in Appendix G.

The concentrations of all analytes were below the adopted assessment criteria with the exception of those presented in Table 4.4. Human health exceedances are presented in Figure 5.

Table 4.4: Soil Exceedances of Adopted Ecological and Human Health Screening Criteria

Analyte	Sample	Concentration (mg/kg)	Guideline (mg/kg)
Arsenic	SB20-0.15 F	220	100 NEPM EIL Urban Residential
Copper	SB11-0.5 F	2,500	220
	SB14-0.13 F	670	NEPM EIL Urban Residential
Zinc	SB11-0.5 F	1,700	960 NEPM EIL Urban Residential
F2 / C ₁₀ -C ₁₆ hydrocarbon fraction	SB10-1.2 N	800	120 NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil
	SB11_12S 0.3F	590	
	SB11_2E 0.5F	2,500	1,000
	SB11_2S 1.0N	360	NEPM 2013 Management Limits - Residential, Parkland and Public Open Space or Commercial / Industrial, Fine
	SB11_2W 0.6F	11,000	
	SB11_5N 0.5F	7,900	
	SB11_5S 0.5F	8,100	4,200
	SB11_5W 0.3F	3,100	CRC Care Direct Contact HSL-B Residential (High Density)
	SB11-0.5 F	6,300	
	SB18-0.5 N	400	280
C ₁₆ -C ₃₄ hydrocarbon fraction	SB23-0.5 N	200	NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m
	SB02-0.14 DN	2,300	1,300
	SB03-1.5 N	1,700	NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil
	SB11_2E 0.5F	3,800	
	SB11_2W 0.6F	23,000	3,500 / 5,000
	SB11_5N 0.5F	14,000	NEPM 2013 Management Limits - Residential, Parkland and Public Open Space or Commercial / Industrial, Fine
	SB11_5S 0.5F	9,200	
	SB11_5W 0.3F	4,400	
	SB11-0.5 F	7,500	5,800
	SB18-0.5 N	2,000	CRC Care Direct Contact HSL-B Residential (High Density)
Naphthalene	SB11_2E 0.5F	27	5 NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m
PCB	SB23_2N 0.3N	1.4	
	SB23_2W 0.5N	11	1 / 7
	SB23-0.5N	10	NEPM HIL B or HIL D



Legend:

- Site Boundary
- Grid Based Soil Bore
- Delineation Soil Bore
- 590 F2 / C10-C16 Hydrocarbon Fraction (mg/kg)
- 9,200 C16-C34 Hydrocarbon Fraction (mg/kg)
- 27 Naphthalene (mg/kg)
- 11 PCB (mg/kg)



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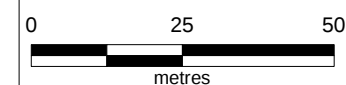
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Date: 13-May-2016

Drawn By: TB

Checked By: JB

Scale at A4 1:1,250



Coord. Sys. GDA 1994 MGA Zone 55

81 – 95 Burnley Street, Richmond, Victoria

**SOIL ASSESSMENT HUMAN HEALTH
EXCEEDENCES**

FIGURE 5

4.3 QA/QC Assessment

To ensure that results were not biased by field sampling techniques or laboratory methods, blind and field split duplicate samples were collected in the field for selected analyses by a primary and secondary laboratory.

The precision of the results for each analyte between the primary sample and the field duplicate was determined by calculating the relative percentage difference (RPD), as follows:

$$RPD = \frac{(Concentration\ 1 - Concentration\ 2) \times 100}{(Concentration\ 1 + Concentration\ 2) / 2}$$

The RPD is not calculated / considered where one or both of the duplicate results are below the laboratory reporting limits. The RPDs are included in the tabulated results. It is noted that the RPD method is skewed by low laboratory results, where a small actual difference in concentrations may result in a high RPD value. The QA/QC program is summarised in Table 4.5.

Table 4.5: QA/QC Program

QA/QC Item	Detail
QA	
Field Procedures	Field procedures were undertaken in broad accordance with the NEPM (Refer to methodology presented in this report).
Laboratories used and NATA accreditation	Eurofins was used as the primary laboratory for the analysis of samples. Envirolabs was used as the secondary laboratory for the analysis of the inter-laboratory split samples. Both these laboratories have NATA accreditation licences for the analyses undertaken.
Sample Tracking	COC documentation was used for the transport of all samples to the laboratory.
Sample Preservation and Storage	Samples were placed in laboratory supplied containers in a chilled insulated box and transported to the laboratory under COC documentation.
Holding Times	Samples were analysed within holding times.
Data Transcription	Summary results tables are appended to this report. Tables were generated using csv files provided by the laboratory to avoid transcription errors.
Laboratory Reporting Limits	The laboratory reporting limits are presented in the laboratory Certificates of Analysis included in the appendices of this report. The reporting limits were equal to or below the assessment criteria.
QC	
Soil Intra-Laboratory Duplicate	Three intra-laboratory soil duplicate were retrieved during the field investigation (DUP01 and DUP02 during March 2016 grid based assessment) and one in April 2016 (DUP04 during the delineation), the samples were submitted for heavy metals (8) and TRH analysis (March 2016), and PCB analysis (April 2016). All RPD values for duplicate pairs were below the generally excepted maximum value of 50% with the exception of C ₁₀ -C ₁₄ 1999 TPH fraction (60%), C ₁₅ -C ₂₈ 1999 TPH fraction (65%), 1999 total TPH fraction (65%) in DUP02 and C ₁₀ -C ₁₆ 2013 TRH / F2 fraction (65%). The elevated RPD values are considered to be a result of site soil heterogeneity as opposed to sampling bias. Both analytes have been identified as COPC. These elevated RPD values are not considered to affect the outcome of this assessment.
Soil Inter-Laboratory Duplicate	Two inter-laboratory soil duplicate were retrieved during the field investigation (SPLIT01 during March 2016 grid based assessment) and one in April 2016 (SPLIT04 during the delineation), the samples were submitted for heavy metals (8) and TRH analysis (March 2016), and PCB analysis (April 2016). All RPD values for duplicate pairs were below the generally excepted maximum value of 50% with the exception of lead (136%). The elevated RPD values are considered to be a result of site soil heterogeneity as opposed to sampling bias. Both samples are below the adopted assessment criteria. These elevated RPD values are not considered to affect the outcome of this assessment.
Blanks	One equipment rinsate blank (RB01) was taken during each day of soil sampling activities to verify wash down procedures. The samples were analysed for heavy metals and TRH and / or PCB. All results were below the laboratory reporting limits.

QA/QC Item	Detail
Laboratory Internal QC	The laboratory undertook internal quality assurance/quality control (QA/QC) procedures which were generally within the acceptable limits of repeatability, chemical extraction and detection. Minor exceptions are not likely to impact on the quality of the data presented.

Based on the results of the evaluation of the QA/QC data, it is considered that:

- The field and laboratory quality assurance measures implemented are considered to provide an acceptable level of confidence that the data collected and reported is appropriately complete, comparable and representative; and
- The field and laboratory quality control measures implemented are considered to provide an acceptable level of confidence that the data collected and reported is appropriately accurate and precise.

Therefore it is concluded that the data collected for the investigation is considered to be reliable and usable for reporting the contamination status of soil across the site.

5. Discussion and Conclusion

JBS&G was commissioned by Charter to undertake an ESA which included both a PSI site history review and DSI consisting of a soil assessment for the property located at 81 – 95 Burnley Street, Richmond, Victoria

5.1 PSI

The site is located in a region of Richmond where a combination of residential and commercial / industrial land use historically occurred and still occurs. A review of land Titles indicated that the site has been owned by the Aluminium and Plate Company Pty Ltd, Russell Manufacturing Company Pty Ltd and Repco Engine Parts Pty Ltd. A search conducted by RHSV identified that rubber goods manufacturing company (Leggett Products), a sulphurous oil maker (Victorian Chemical Company), a foundry (Crusader Plate Company), a spark plug manufacturer (Aviator Manufacturing Company) have been located on Doonside or Appleton Street. An electrical substation was present on Appleton Street in the 1970s. Leaks or spills from this substation could be the source of the PCB identified during building construction in 2004. It is noted that a substation is no longer present at the site in this location.

Environmental audits have been conducted at four locations within approximately 150 m of the site. Impacted soil and groundwater were identified at the former Victoria Chemical Company, 27 – 37 Appleton Street. Impacted soil and inert wastes present in the fill were subsequently largely remediated. Groundwater monitoring identified heavy metal, cyanide, nitrate and TPH contamination. Heavy metal and PAH impacted fill identified at 2-30 Burnley Street was removed from the site. Groundwater remediation involving multi-phase vacuum extraction was also conducted at 2-30 Burnley Street. Low level contamination in fill material was identified at 4-6 and 35-37 North Street. All four sites have subsequently been issued a statement or certificate of audit.

The PSI findings identified the key potential risks to be importation of fill, metal and petroleum hydrocarbon contamination associated with previous site activities and the previously identified PCB contamination possibly associated with the electrical substation.

5.2 DSI

JBS&G conducted soil sampling works to assess the potential use of the site in a commercial / industrial and high density residential setting. The assessment consisted of sampling across the site in broad regular intervals. Analyses were conducted for a broad range of chemicals associated with imported fill material, waste disposal and chemicals associated with the historical use of the site.

On 21 and 22 March 2016, 24 soil bores (SB01 to SB24) were advanced across the site to assess the areas of concern identified during the PSI and to assess general site conditions. On 12 April 19, additional soil bores were progressed at 2, 5 and / or 12 m offsets to delineate TRH and PCB soil contamination identified at SB11 and SB23.

The concentrations of all analytes were below the adopted assessment criteria with the exception of:

- Arsenic exceeded the site derived NEPM Urban Residential EIL guideline in one sample. The exceedance was noted to be in shallow fill material. Statistical analysis using ProUCL software indicated that the 95% upper confidence limit of the mean (95%UCL) for arsenic in the fill material / disturbed natural material was 63 mg/kg, which was below the adopted EIL assessment criterion and on that basis the slightly elevated and isolated arsenic concentration is not considered to be significant;
- Copper exceeded the site derived EIL guideline in two samples. Both exceedances were noted to be in fill material at a depth no greater than 0.5 m below surface. The 95%UCL for copper in the fill material / disturbed natural material was 659 mg/kg, which exceeds the

adopted EIL assessment criterion. The concentrations were below the adopted human health assessment criteria;

- Zinc exceeded the site derived NEPM Urban Residential EIL guideline in one sample. The exceedance was noted to be in shallow fill material. The 95%UCL for zinc in the fill material / disturbed natural material was 524 mg/kg, which was below the adopted EIL assessment criterion and on that basis the slightly elevated and isolated zinc concentrations are not considered to be significant;
- The C₁₀-C₁₆ and C₁₆-C₃₄ hydrocarbon fractions exceeded adopted ecological and human health assessment criteria for direct contact and vapour intrusion. The impacts were reported at a depth of up to 1.2 m below surface. Analysis of natural clay material at a depth of 2.4 m in an impacted area (SB04) reported hydrocarbon concentrations above the laboratory LOR but below the adopted assessment criteria. Impacted material is predominantly located in the northern central portion of the site and has been horizontally delineated as discussed in Section 5.3. It is anticipated that this impacted material would be removed from site as part of any commercial or residential development.
- Naphthalene exceeded the adopted human health vapour intrusion assessment criterion for a residential setting but not a commercial / industrial setting in one sample of location of shallow fill material. This sample was with the identified TRH plume. It is anticipated that this impacted material would be removed from site as part of any commercial or residential development.
- PCB (total) exceeded the adopted human health assessment criteria for a commercial / industrial setting in two locations and a high density residential setting in three locations. The impacts have been delineated as discussed in Section 5.3. It is anticipated that this impacted material would be removed from site as part of any commercial or residential development.

The vertical extent of adopted high density residential human health or ecological assessment criteria exceedances was limited to a maximum depth of 1.5 m below surface. No significant impacts were identified in field screening or laboratory testing in natural material at a depth of 2.4 m below surface. This suggests that groundwater contamination arising from site derived hydrocarbon or inorganic soil contamination is unlikely.

All identified soil contamination impacts have been laterally delineated. It is expected that these ecological and human health exceedances could be reasonably managed in a subsequent high density residential development with potential commercial and associated mixed uses by removing or suitably capping the material discussed in Section 5.3.

5.3 Estimated Volume of Category B and PCB Impacted Material

Disposal of soil in Victoria is managed under the *Industrial Waste Resource Guidelines* (IWRG). Soil is classified as Category A, B, C Contaminated Soil or Fill Material (most contaminated to least contaminated) by both total soil concentrations and soil leach concentrations (if an elevated total soil concentrations are detected). The presence of inert waste makes any fill material unsuitable for disposal as Fill Material for reuse within other sites.

The maximum reported PCB concentration and estimated volume are below the threshold where EPA notification is required. PCB contaminated material must be managed according to the *Notifiable Chemical Order for Polychlorinated Biphenyls* (IWRG 643).

The current analytical results have been compared to the offsite disposal soil criteria (IWRG 621). Initial results (based solely on the total concentrations obtained to date) suggest the majority of soil excavated as part of a proposed development would be classified as either Fill Material or Category C Contaminated Soil. Soil contaminants above Fill Material concentrations (other than for

some exclusions such as PCB and TRH) may also require leachability testing for the purpose of classification for offsite disposal. Leachability testing are routinely conducted in an effort to characterise the potential mobile phase of an impacted soil, the possibility for surface or groundwater contamination. Additional laboratory soil and leachability testing would be required to confirm soil classification as per IWRG guidelines for offsite disposal.

Two main areas of concern for offsite disposal were identified during the DSI. These consist of TRH concentrations exceeding the Category C Contaminated Soil guideline and PCB impacted material at concentrations greater than 2 mg/kg. Delineation works were undertaken to estimate the volumes of impacted material. Both these impacts have been delineated as presented in Figure 6.

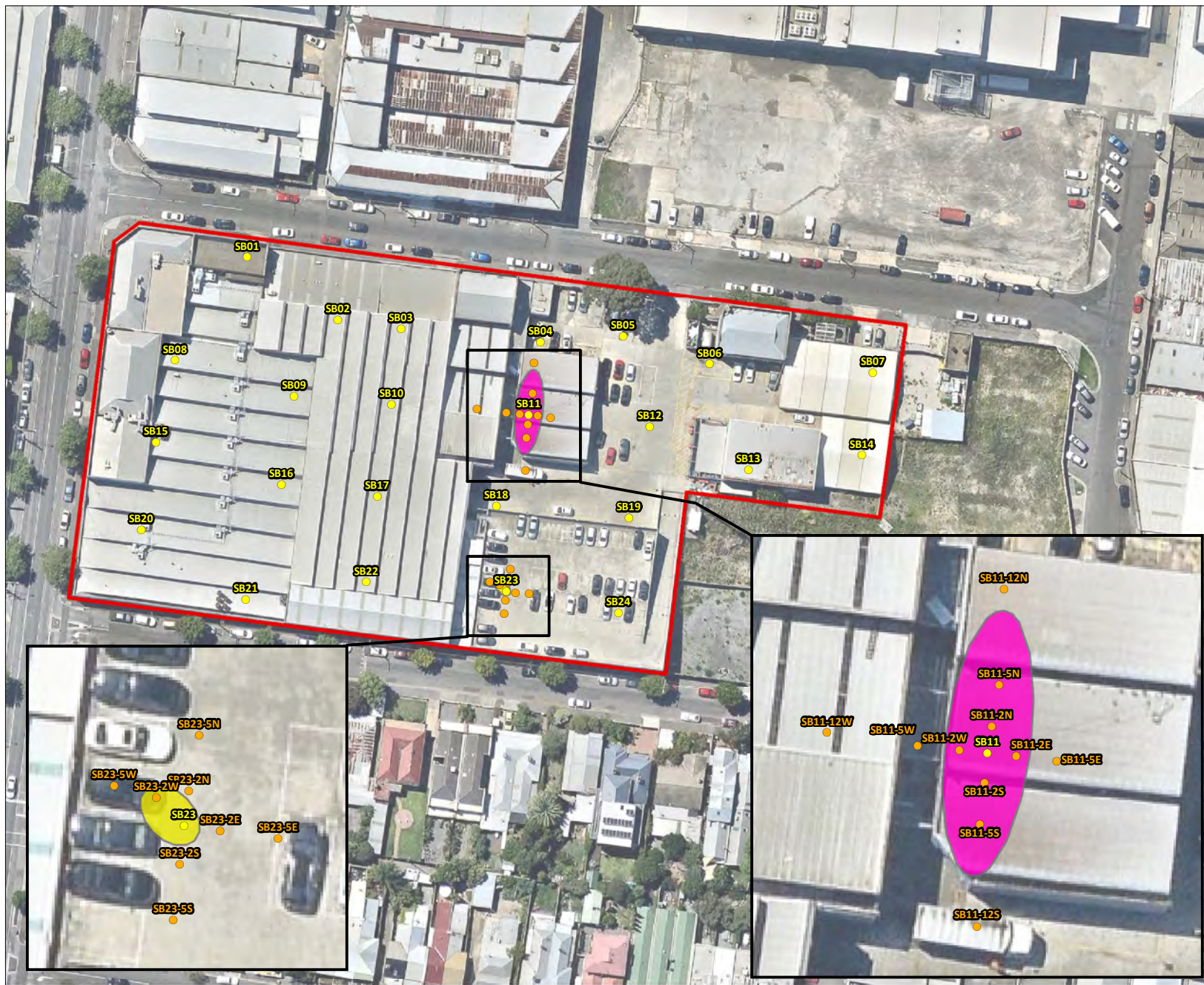
5.3.1 TRH

The area of the identified $C_{10} - C_{36}$ TRH impacts greater than 10,000 mg/kg (Category B Contaminated Soil) is estimated to be 90 m². It is noted that this may be a conservative estimate, as some reported $C_{10} - C_{36}$ TRH impacts are less than 10,000 mg/kg in the identified area. Based on the PID field screening vertical delineation in the area of SB11 and observed hydrocarbon odours, the depth of the impacted material has been assumed to be associated with fill material and the natural soil horizon, reported at a maximum depth of depth to 1.5 m below surface in the delineation soil bores. The resulting estimated volume of the TRH contaminated Category B Contaminated Soil is 135 m³.

5.3.2 PCB

The area of the identified PCB impacted material greater than 2 mg/kg (material that must be managed according to the *Notifiable Chemical Order for Polychlorinated Biphenyls*) is estimated to be 7 m². Based on an average depth to basalt rock of 0.93 m below surface and a concrete thickness 0.15 m the resulting estimated volume of the PCB contaminated material exceeding the Fill Material criterion is 5.5 m³. The PCB impacted soils can be disposed of as Category C Contaminated Soil to an appropriate landfill.

The conclusions of this report should be read in conjunction with and with regard to the limitations included in Section 6.



Legend:

- Site Boundary
 - Grid Based Soil Bore
 - Delineation Soil Bore
- PCB and TRH Impacted Soil**
- PCB >2mg/kg
 - C10-C36 TRH >10,000 mg/kg



Job No: 51573

Client: Charter Keck Cramer

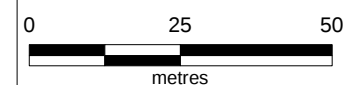
Version: DRAFT

Date: 30-May-2016

Drawn By: TB

Checked By: JB

Scale at A4 1:1,250



Coord. Sys. GDA 1994 MGA Zone 55

81 – 95 Burnley Street, Richmond, Victoria

ELEVATED TRH AND PCB CONTAMINATION AREAS

FIGURE 6

6. Limitations

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

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

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

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

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

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

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

7. References

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Victorian Government (2002). *State Environment Protection Policy (Prevention and Management of Contamination to Land)*, Environment Protection Authority of Victoria, Melbourne, Victoria
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Summary Tables



	Chlorinated Benzenes						Polychlorinated Biphenyls								Phenols																Phenols		Organic Sulfur Compounds		Miscellaneous Industrial Chemicals			
	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	Chlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Hexachlorobenzene	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,4-dimethylphenol	2,4-dinitrophenol	2,6-dichlorophenol	2-chlorophenol	2-Methylphenol	2-nitrophenol	3- & 4-Methylphenol	4-Chloro-3-Methylphenol	4-nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	phenol	Total Halogenated Phenol	Total Non-Halogenated Phenol	Total Tetrachlorophenols	Phenols (non-halogenated) EPA Vic	Phenols (halogenated) EPA Vic	Carbon disulfide	Hexachlorobutadiene	Aldrin	4,4-DDE
EQL	0.2	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	1	0.5	0.5	5	0.5	0.5	0.2	1	0.4	1	5	5	20	0.5	1	20	1			0.05	0.2	0.05	0.05
GRC Care Direct Contact HSL-B Residential (High Density) (Sept 2011)																																						
GRC Care Direct Contact HSL-D Commercial / Industrial (Sept 2011)																																						
NEPM 2013 EIL - Urban Residential (site specific)																																						
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																																						
NEPM 2013 Mgmt Limits - Residential, Parkland and Public Open Space, Fine																																						
NEPM 2013 Mgmt Limits - Commercial and industrial, Fine																																						
NEPM 2013 Soil HIL B						15								1 ^{#15}															45000									
NEPM 2013 Soil HIL D						80								7 ^{#15}															240000									
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																																						
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																																						
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																																						
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																																						
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																																						
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																																						

Field ID	Date	Lab #	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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Env Stds Comments

#1:TV taken for Chromium (III), Clay Content of >10%

#2:TV taken for CEC 30

#3:TV taken for pH 7.5 and CEC 30

#4:ESLs are of moderate reliability.

#5:ESLs are of low reliability.

#6:ESLs are of moderate reliability. To obtain F1 subtract the sum of BTEX from C6-C10.

#7:Management limits of BTEX and naphthalene are not available, hence should not be subtracted from the relevant fractions to obtain F1 and F2.

#8:Limits applied after consideration of relevant ESLs and HSLs

#9:Key limitations of HSL should be referred to prior to application in Friebel and Nadebaum (2011b and 2011d).

#10:TV adopted from Chromium (VI)

#11:Assumptions of HSL are presented in Friebel and Nadebaum (2011a and 2011b).

#12:Refer to HSL and soil saturation concentration limit.

#13:Refer to Section 8.2 and Appendix J in Friebel and Nadebaum (2011a).

#14:TV maybe be multiplied by a factor to account for biodegradation of vapour

#15:HIL relates to non-dioxin-like PCBs only. If PCB source is suspected a site-specific assessment should be undertaken

#16:To obtain F1 subtract the sum of BTEX from C6-C10.

#17:To obtain F2 subtract naohthalene from >C10-C16.



	Organochlorine Pesticides																				Herbicides & Fungicides		Ionic Balance			Other		Other	
	Aldrin + Dieldrin (Sum of Total)	Dieldrin	DDD	alpha-BHC	DDT	DDT+DDE+DDD (Sum of Total)	beta-BHC	Chlordane	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Pentachlorophenol	Toxaphene	Dinoseb	Cation Exchange Capacity	EC 1:5 soil:water	pH 1:5 soil:water	% Clay	% Moisture 103oC	2-Propanone (Acetone)	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	meq/100g	µS/cm	ph Units	%	%	mg/kg	
EQL		0.05	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	1	20	0.05	10	0.1	1	1	0.05	
CRC Care Direct Contact HSL-B Residential (High Density) (Sept 2011)																													
CRC Care Direct Contact HSL-D Commercial / Industrial (Sept 2011)																													
NEPM 2013 EIL - Urban Residential (site specific)					180																								
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																													
NEPM 2013 Mgmt Limits - Residential, Parkland and Public Open Space, Fine																													
NEPM 2013 Mgmt Limits - Commercial and Industrial, Fine																													
NEPM 2013 Soil HIL B	10					600		90					20			10			500	130	30								
NEPM 2013 Soil HIL D	45					3600		530					100			50			2500	660	160								
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																													
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																													
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																													
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																													
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																													
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																													
Field ID	Date		Lab #		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SB23_5N 0.6N	12/04/2016		498116		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	
SB23_5W 0.2F	12/04/2016		498116		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	
SB23-0.20 DN	21/03/2016		494208		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	
SB23-0.5 N	21/03/2016		494208		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	-	
SB24-0.20 DN	21/03/2016		494208		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	
SB24-0.4 N	21/03/2016		494208		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	
ProUCL Output of Fill and Disturbed Natural Material (95% UCL)					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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SDG			496680	496680		494208	494208		494208	494208		494208	8172		496680	8293	
Field ID			SB23_2E 0.7N	DUP04	RPD	SB06-0.25 F	DUP01	RPD	SB04-0.8 DN	DUP02	RPD	SB06-0.25 F	SPLIT01	RPD	SB23_2E 0.7N	SPLIT 04	RPD
Sampled Date/Time			12/04/2016	12/04/2016		21/03/2016	21/03/2016		22/03/2016	22/03/2016		21/03/2016	21/03/2016		12/04/2016	12/04/2016	
Chem_Group	ChemName	Units	EQL														
Metals & Metalloids	Arsenic (Total)	mg/kg	2 (Primary): 4 (Interlab)				21.0	16.0	27	8.6	7.2	18	21.0	<4.0	136		
	Cadmium	mg/kg	0.4				<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0		
	Chromium (Total)	mg/kg	5 (Primary): 1 (Interlab)				23.0	29.0	23	27.0	28.0	4	23.0	17.0	30		
	Copper	mg/kg	5 (Primary): 1 (Interlab)				48.0	52.0	8	8.1	6.6	20	48.0	41.0	16		
	Lead	mg/kg	5 (Primary): 1 (Interlab)				21.0	24.0	13	22.0	21.0	5	21.0	4.0	136		
	Mercury (Inorganic)	mg/kg	0.1				<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0		
	Nickel	mg/kg	5 (Primary): 1 (Interlab)				77.0	88.0	13	15.0	19.0	24	77.0	79.0	3		
	Zinc	mg/kg	5 (Primary): 1 (Interlab)				81.0	81.0	0	37.0	36.0	3	81.0	67.0	19		
TPHs (NEPC 1999)	C6-C9 Fraction	mg/kg	20 (Primary): 25 (Interlab)				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<25.0	0		
	C10-C14 Fraction	mg/kg	20 (Primary): 50 (Interlab)				<20.0	<20.0	0	21.0	39.0	60	<20.0	<50.0	0		
	C15-C28 Fraction	mg/kg	50 (Primary): 100 (Interlab)				<50.0	<50.0	0	71.0	140.0	65	<50.0	<100.0	0		
	C29-C36 Fraction	mg/kg	50 (Primary): 100 (Interlab)				<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<100.0	0		
	C10-C36 Fraction (Total)	mg/kg	50				<50.0	<50.0	0	92.0	180.0	65	<50.0	<50.0	0		
TRHs (NEPC 2013)	>C10-C16 Fraction	mg/kg	50				<50.0	<50.0	0	56.0	110.0	65	<50.0	<50.0	0		
	>C16-C34 Fraction	mg/kg	100				<100.0	<100.0	0	<100.0	110.0	10	<100.0	<100.0	0		
	>C34-C40 Fraction	mg/kg	100				<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0		
	C6-C10 Fraction	mg/kg	20 (Primary): 25 (Interlab)				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<25.0	0		
	C6 - C10 less BTEX (F1)	mg/kg	20 (Primary): 25 (Interlab)				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<25.0	0		
	>C10 - C16 less Naphthalene (F2)	mg/kg	50				<50.0	<50.0	0	56.0	110.0	65	<50.0	<50.0	0		
PAH	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<1.0	0		
PCBs	Aroclor 1260	mg/kg	0.1	<0.1	<0.1	0									<0.1	<0.1	0
	PCBs (Total)	mg/kg	0.1	<0.1	<0.1	0									<0.1		
Other	% Moisture 103oC	%	1				12.0	12.0	0	20.0	24.0	18	12.0				

*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: 50 (1-10 x EQL); 50 (10-30 x EQL); 50 (> 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	M2008	M2001	M2001
Field ID	RB01	RB01	RB02
Sampled_Date/Time	12/04/2016	22/03/2016	22/03/2016
Sample Type	Rinsate	Rinsate	Rinsate

Chem_Group	ChemName	Units	EQL			
Metals & Metalloids	Arsenic (Total)	mg/l	0.001		<0.001	<0.001
	Cadmium	mg/l	0.0002		<0.0002	<0.0002
	Chromium (Total)	mg/l	0.001		<0.001	<0.001
	Copper	mg/l	0.001		<0.001	<0.001
	Lead	mg/l	0.001		<0.001	<0.001
	Mercury (Inorganic)	mg/l	0.0001		<0.0001	<0.0001
	Nickel	mg/l	0.001		<0.001	<0.001
	Zinc	mg/l	0.001		<0.001	<0.001
Polychlorinated Biphenyls	Aroclor 1016	mg/l	0.001	<0.001		
	Aroclor 1221	mg/l	0.001	<0.001		
	Aroclor 1232	mg/l	0.001	<0.001		
	Aroclor 1242	mg/l	0.001	<0.001		
	Aroclor 1248	mg/l	0.001	<0.001		
	Aroclor 1254	mg/l	0.001	<0.001		
	Aroclor 1260	mg/l	0.001	<0.001		
	PCBs (Total)	mg/l	0.001	<0.001		
Polycyclic Aromatic Hydrocarbons	Naphthalene	mg/l	0.01	<0.01	<0.01	<0.01
TPHs (NEPC 1999)	C6-C9 Fraction	mg/l	0.02	<0.02	<0.02	<0.02
	C10-C14 Fraction	mg/l	0.05	<0.05	<0.05	<0.05
	C15-C28 Fraction	mg/l	0.1	<0.1	<0.1	<0.1
	C29-C36 Fraction	mg/l	0.1	<0.1	<0.1	<0.1
	C10-C36 Fraction (Total)	mg/l	0.1	<0.1	<0.1	<0.1
TRHs (NEPC 2013)	>C10-C16 Fraction	mg/l	0.05	<0.05	<0.05	<0.05
	>C16-C34 Fraction	mg/l	0.1	<0.1	<0.1	<0.1
	>C34-C40 Fraction	mg/l	0.1	<0.1	<0.1	<0.1
	C6-C10 Fraction	mg/l	0.02	<0.02	<0.02	<0.02
	C6 - C10 less BTEX (F1)	mg/l	0.02	<0.02	<0.02	<0.02
	>C10 - C16 less Naphthalene (F2)	mg/l	0.05	<0.05	<0.05	<0.05

Appendix A Site Photographs



PHOTO 1: Showroom in the north west of the site.



PHOTO 2: Main Warehouse Area.



PHOTO 3: Vehicle entrance in the northern portion looking south west.



PHOTO 4: Car parking area looking west towards location of SB11.



PHOTO 5: AST

Appendix B Certificates of Title

Imaged Document Cover Sheet

The document following this cover sheet is an imaged document supplied by LANDATA®, Land Victoria.

Document Type	plan
Document Identification	LP221640U
Number of Pages (excluding this cover sheet)	1
Document Assembled	10/03/2016 10:53

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The document is invalid if this cover sheet is removed or altered.

1		2		3		4		5		6		7		8	
DOONSIDE STREET 1 7383m² 2 1839m² 3 1839m² 4 1559m² 5 2004m² 6 1746m² DAVID STREET												OFFICE USE ONLY LP221640U EDITION 1			
NOTATIONS															
LAND SUBJECT TO EASEMENT NIL															
LAND APPROPRIATED OR SET APART E-1 CARRIAGEWAY PURPOSES															
OTHER NOTATIONS															
TO BE COMPLETED WHERE APPLICABLE THIS SURVEY HAS BEEN CONNECTED TO PERMANENT MARKS NOS: IN PROCLAIMED SURVEY AREA NO.															
THE LAND TO BE SUBDIVIDED IS SHOWN ENCLOSED BY THICK LINES TITLE REF: VOL.9707 FOL.046 LAST PLAN REF: C.P.159198															
PLAN OF SUBDIVISION															
COUNTY BOURKE PARISH JIKA JIKA CROWN PORTION 42 (PART)															
NUMBER OF SHEETS IN PLAN : NUMBER OF THIS SHEET : SCALE : LENGTHS ARE IN METRES OFFICE USE ONLY LP221640U VICTORIA															
CERTIFICATION BY SURVEYOR				CERTIFICATE OF MUNICIPAL CLERK				OFFICE USE ONLY							
				MUNICIPALITY COUNCIL REF.				APPROVAL DATE 7/6/19							
				LIST OF MODIFICATIONS											
				LAND	MODIFICATION	DEALING No.	DATE					A.R.T.	EDN. No.		
AMENDMENTS				LOTS 3&5 SUBDIVISION PS 317466											
CHAPMAN DICKSON Pty Ltd SURVEYING & CONSULTING SERVICES. 451 HAWTHORN ROAD, SOUTH CAULFIELD Phone (03) 523 9155				SURVEYORS REF 9157											
				DATE				MUNICIPAL CLERK				(ASSISTANT) REGISTRAR OF TITLES			

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm

ONLY CERTIFICATE A OR CERTIFICATE B TO BE COMPLETED
• DELETE WORDS NOT APPLICABLE



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

Page 1 of 1

VOLUME 10021 FOLIO 523

Security no : 124059457081R
Produced 10/03/2016 10:45 am

LAND DESCRIPTION

Lot 1 on Plan of Subdivision 221640U.
PARENT TITLE Volume 09707 Folio 046

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor

ASTRODOME HIRE PTY LTD of SUITE 2 177 - 179 RIVERSDALE ROAD HAWTHORN 3122
S067779Y 14/08/1992

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE S067782S
AUSTRALIA AND NEW ZEALAND BANKING GROUP LTD

CAVEAT as to part P898955Q

Caveator

STATE ELECTRICITY COMMISSION OF VICTORIA

Capacity SEE CAVEAT

Lodged by

STATE ELECTRICITY COMMISSION OF VICTORIA

Notices to

POWERCOR AUSTRALIA LTD of 40 MARKET STREET MELBOURNE VIC 3000

AMENDMENT OF ADDRESS ON CAVEAT AB107311H 28/02/2002

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

AGREEMENT Section 173 PLANNING AND ENVIRONMENT ACT 1987
R006473W 18/09/1990

DIAGRAM LOCATION

SEE LP221640U FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

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

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

Street Address: 81-95 BURNLEY STREET RICHMOND VIC 3121

DOCUMENT END

HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 5

Produced 10/03/2016 11:01 AM

Volume 09707 Folio 046
Folio Creation: Details Unknown
Parent titles :
Volume 01992 Folio 333
Volume 09088 Folio 447

STATEMENT END

Paper Title Images

9707/046 - Version 0, Date 29/03/1999

EP 159198Q

ORIGINAL

**NOT TO BE TAKEN FROM THE OFFICE
OF TITLES**



VICTORIA

CANCELLED

REGISTER BOOK

VOL. 9707 FOL. 046

Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

PERMANENT TRUSTEE NOMINEES (CANBERRA) LIMITED of 23-25 O'Connell Street Sydney New South Wales is the proprietor of an estate in fee simple subject to the encumbrances notified hereunder in all that piece of land in the Parish of Jika Jika County of Bourke being the land in Plan of Consolidation No.159198Q which land is shown enclosed by continuous lines on the map hereon - - - - -

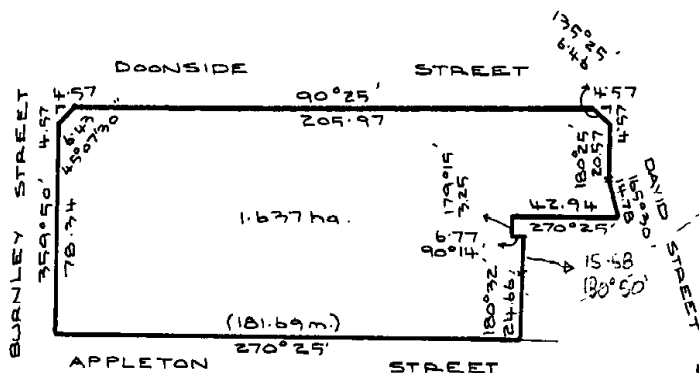
Issued pursuant to Section 97A (2)
of the Transfer of Land Act 1958
DERIVED FROM VOL.1992 FOL.333 VOL.9088 FOL.447

23 OCT. 1988

ENCUMBRANCES



P. J. Baker
Assistant Registrar of Titles



T09707-046-1-9

MEASUREMENTS ARE IN METRES

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VOL. 9707 FOL. 046

CAVEAT No. J 749779 LODGED 11-12-81

PART OF
AS TO THE WITHIN LAND

CAVEAT WITHDRAWN

14.1.87

CAVEAT No. M355376 LODGED 7 JUL 1986

CAVEAT WILL LAPSE ON

REGISTRATION OF M539433C

PROPRIETOR

MARPINE INVESTMENTS PTY. LTD.

OF 5 ST. KILDA RD. ST. KILDA

REGISTERED 29/10/86

M539433C

MORTGAGE

TRICONTINENTAL CORPORATION LIMITED

REGISTERED 29/10/86

M539434Y

MORTGAGE

P.T. LIMITED

REGISTERED 29/10/86

M840726Y

MORTGAGE TO

AUSTRALIA AND NEW ZEALAND
BANKING GROUP LIMITED

Registered

No. N695393T

CAVEAT

CAVEATOR: JONSON YANG

CAPACITY: PURCHASER/FEE SIMPLE

LODGED BY: 880N ELLA GORENSTEIN OF 5TH

FLOOR 125 SWANSTON ST.

MELBOURNE 3000

NOTICE TO: AS ABOVE

NO: P132667R

DATE: 14/4/89

CAVEAT WITHDRAWN

30 JUN 1989

LANDBASE DEVELOPMENTS PTY. LTD. OF 31

HOLROYD ST. KEW AS TO FIVE EQUAL UNDIVIDED

TENTH PARTS OR SHARES GOYSEN HOLDINGS PTY.

LTD. OF 169 ARGYLE WY. WANTIRNA SOUTH AS

TO ONE EQUAL UNDIVIDED TENTH PART OR SHARE

SUNGREAT PTY. LTD. OF 30 PROSPECT HILL RD

CAMBERWELL AS TO TWO EQUAL UNDIVIDED TENTH

PARTS OR SHARES UNIVERSAL STEEL PTY. LTD

OF 19 PINE AVE. CAMBERWELL AS TO ONE EQUAL

UNDIVIDED TENTH PART OR SHARE & M.J.T.

PTY. LTD. OF 31 HOLROYD ST. KEW AS TO ONE

EQUAL UNDIVIDED TENTH PART OR SHARE ARE

NOW PROPRIETORS AS TENANTS IN COMMON

REGISTERED 30/6/89

P285679P

MORTGAGE

ESANDA FINANCE CORPORATION LIMITED

REGISTERED 30/6/89

P285680P

CAVEAT No. P898955Q LODGED 12 JUL 1990

Affecting part of the land herein.

Caveat transferred to new C/T

This is the Sheet marked **X** referred to in the Certificate of Title entered in the Register Book Vol.

9707



Assistant Registrar of Titles

MORTGAGE

STATE BANK OF VICTORIA

REGISTERED 13/8/90

P949822R



AN AGREEMENT DATED **9-8-1990**

WITH

**The Mayor Councillors and Citizens of
the City of Richmond**

PURSUANT TO SECTION 173 OF

THE PLANNING AND ENVIRONMENT ACT 1987

AFFECTS THE LAND HEREIN

REGISTERED **18-9-1990**

NO. **R 6473W**



CANCELLED

The following Titles have been issued.

Pursuant to Regulation 10 of the

Transfer of Land Act

on **7-6-91**

Lot 1 to 6 in Vol. 10021 Fol. 523

Lot 1 to 6 in Vol. 10021 Fol. 528

LP 221640U



CANCELLED



T09707-046-2-7

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HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 3

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Volume 01992 Folio 333
Folio Creation: Details Unknown
Parent title Volume 01780 Folio 927

STATEMENT END

Paper Title Images

1992/333 - Version 0, Date 12/05/2000

Entered in the Register **CANCELLED**

Vol. 1992 Fol. 398333



VICTORIA.

Certificate of Title,

UNDER THE "TRANSFER OF LAND STATUTE."

W.H.

The Langridge Mutual Permanent Building Society
 Number 64 Smith Street Collingwood is
 now the proprietor of an Estate in Fee-simple, subject to the Encumbrances
 notified hereunder in All that piece of Land, delineated and colored
 red on the Map in the margin, being part of Crown Section forty two
 Parish of Joke Joke County of Burke Together with a right of carriage way
 over the road delineated and colored brown on the said map.

ORIGINAL CERTIFICATE.
 Not to be dealt with outside the Titles Office.

Dated the twentieth — day of February — One thousand
 eight hundred and eighty eight.

Assistant Registrar of Titles.
 ENCUMBRANCES REFERRED TO.



PLAN C.P. 59198.9
 AFFECTS LAND HEREIN

The Measurements are in Feet.

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WARNING

Vol. 1780 Fol. 353927

Transfer 208428

Application

Nature of Instrument.	Day and Hour of its Production	Names of the Parties to it.	Number or Symbol thereon.
James Fagan of Waterloo Road Collingwood Butcher now the Proprietor of the within-described Estate and Land by Transfer from the within named The Langridge Mutual Permanent Building Society registered the 7 th November 1907 at 1 o'clock in the Afternoon, and Numbered 560120		<i>M. Byrne</i> Assistant Registrar of Titles.	
Mary Anne Casey of 17 Appleton Street Richmond married woman now the Proprietor of the within-described Estate and Land by Transfer from the named James Fagan registered 14 January 1909 at 2.40 o'clock in the Afternoon, and Numbered 58723		<i>M. Casey</i> Assistant Registrar of Titles.	
Red Ink No. 4542964 Mary Ann Casey (herein called Mary Anne Casey) died on 30 th October 1947. Probate of her Will has been granted to Bridget Catherine Canavan of 25 Bulliston Road Hartwell married woman Dated 29 th January 1948 31-5-48		<i>M. Newson</i> Assistant Registrar of Titles.	CANCELLED PURSUANT TO PLAN OF CONSOLIDATION No. C.P. 1591980 See Vol. 9707 Fol. 046 19 NOV 1985 <i>M. Newson</i> Assistant Registrar of Titles.
Mary Ellen Casey of 17 Appleton Street Richmond Dressmaker is now the proprietor of the within described estate by transfer registered on 29 th January 1948 and numbered 2122671 31-5-48		<i>M. Newson</i> Assistant Registrar of Titles.	CANCELLED <i>M. Newson</i> Assistant Registrar of Titles.
MARY ELLON CASEY died on 3rd March 1979 Probate of her Will has been granted to BRIDGET CATHERINE CANAVAN of 110 Glyndon Road Camberwell Registered 1st November 1984 No. L348159R		 Assistant Registrar of Titles.	
PERMANENT TRUSTEE NOMINEES (CANBERRA) LIMITED of 23-25 O'Connell Street Sydney in the State of New South Wales is now the proprietor Registered 1st November 1984 No. L348160R		 Assistant Registrar of Titles.	

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Land Victoria

Page 1 of 5

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Volume 01780 Folio 927
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Parent title Volume 00815 Folio 837

STATEMENT END

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1780/927 - Version 0, Date 05/05/2000



Entered in the Register Book

Vol. 780 Vol. 355927

VICTORIA.

Certificate of Title,

UNDER THE "TRANSFER OF LAND STATUTE."

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ORIGINAL CERTIFICATE.
Not to be dealt with outside the Titles Office.

George Taylor McCall of Coppin Street Richmond, Blacksmith is now the proprietor of an Estate in Fee-simple, subject to the Encumbrances notified hereunder in All that piece of Land, delineated and colored red on the Map in the margin, containing nineteen perches and four tenths of a perch or thereabouts being part of Crown Station Forty two Parish of Jeka Jeka County of Bourke. Together with a right of carriage way over the road delineated and colored brown on the said map.

Dated the thirtieth day of December — One thousand eight hundred and eighty five



ENCUMBRANCES REFERRED TO.



T01780-927-1-2

Vol. 85 Fol. 162837

Transfer 160454

Application

Nature of Instrument	Day and Hour of its Production.	Names of the Parties to it.	Number or Symbol thereon.
Transfer as to part with Easement CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL 1850 Fol 3999/12 AREA AC NOS. 1/1 1/11	The 8 th day of September 1886 1. 15 o'clock in the After noon.	George Taylor McCall to Maurice Norton 1/11 Assistant Registrar of Titles.	175287
<u>Transfer as to Balance</u> ADD 9233 of Title	The 20 th day of February 1888 at 12.49 o'clock in the after noon. Vol 1992 Fol 398333	George Taylor McCall to - The Langridge Mutual Permanent Building Society Assistant Registrar of Titles.	208428
	The day of 18 at o'clock in the noon.	Assistant Registrar of Titles.	
	The day of 18 at o'clock in the noon.	Assistant Registrar of Titles.	
	The day of 18 at o'clock in the noon.	Assistant Registrar of Titles.	
	The day of 18 at o'clock in the noon.	Assistant Registrar of Titles.	

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Titles Office Record of Subdivision

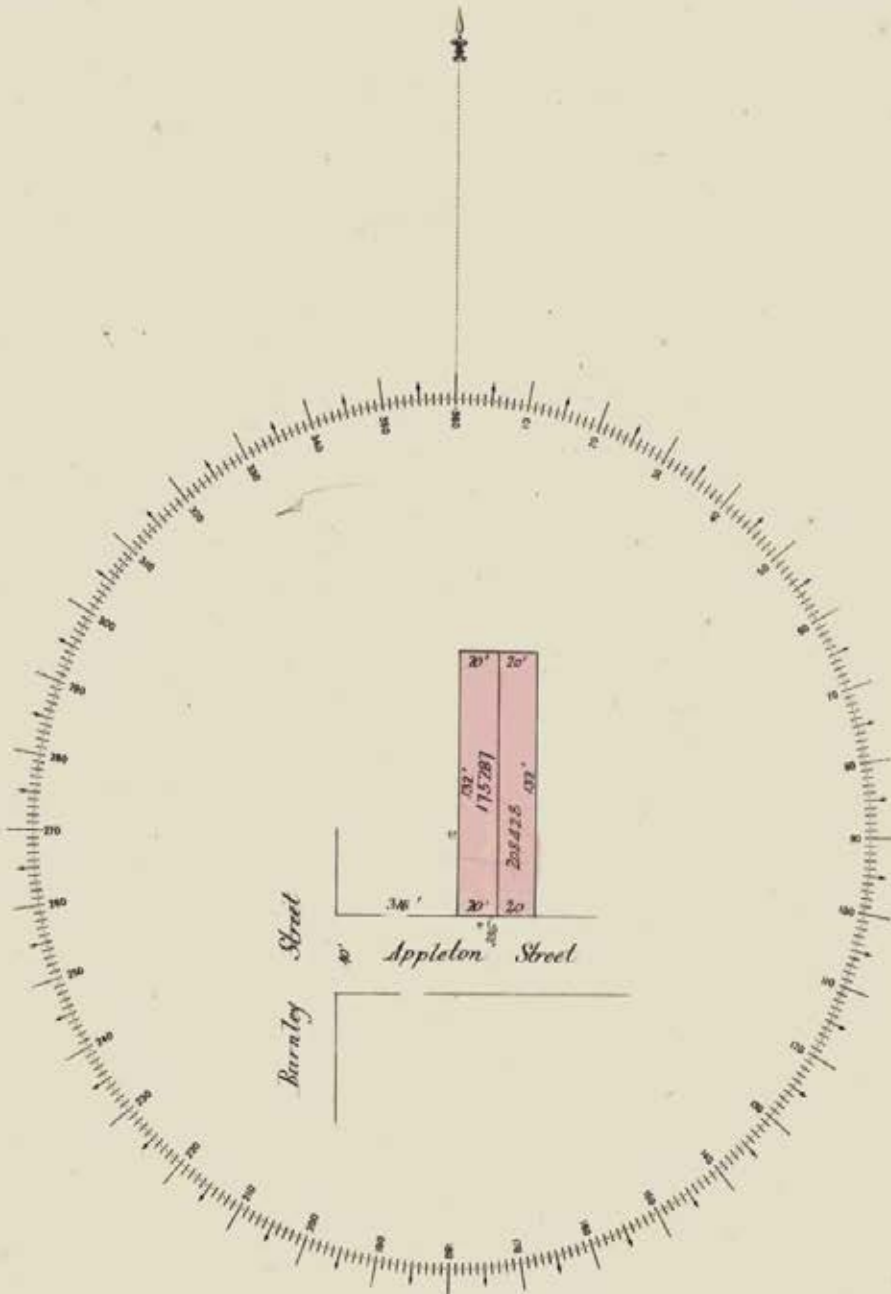
SCALE

60 feet to one inch

Register Book Vol. 1780 fol. 927

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701780-927-2-1



Natural Resources and Environment
AGRICULTURE, FISHERIES AND FORESTRY
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HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 3

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Volume 09088 Folio 447

Folio Creation: Details Unknown

Parent titles :

Volume 07575 Folio 161 to Volume 07575 Folio 162

Volume 08861 Folio 340

Volume 09047 Folio 209

STATEMENT END

Paper Title Images

9088/447 - Version 0, Date 29/08/1999

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VICTORIA

CANCELLED
REGISTER BOOK

VOL. 9088

FOL. 447

Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

REPCO ENGINE PARTS PTY. LIMITED of 81 Burnley Street Richmond is -
now the proprietor of an estate in fee simple subject to the - - - - -
encumbrances notified hereunder in ALL THAT piece of land coloured red
on the map hereon being the land in Plan of Consolidation No. 103782 --
Parish of Jika Jika County of Bourke - - - - -

Issued pursuant to Section 97A (2)
of the Transfer of Land Act 1958.

[Signature]

Assistant Registrar of Titles



ENCUMBRANCES REFERRED TO

As to parts of the land -

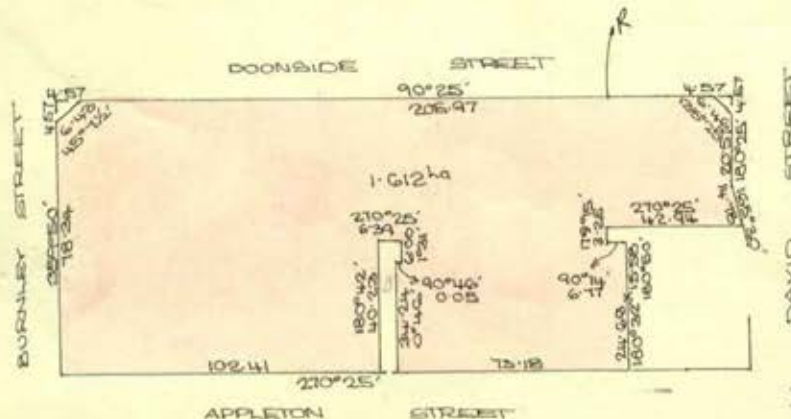
MORTGAGES B185733 C261488
D712499 -

*MORTGAGES C261488
+ D712499*

DISCHARGED

- 9 JUL 1981

**MGE 0185733 IS
DISCHARGED
- 2 FEB 1976**



MEASUREMENTS ARE IN METRES
AREA IS IN HECTARES (ha)

PLAN C.P. 159158 Q
AFFECTS LAND HEREIN

Derived from Vols. 7575 Fols. 161
7575 162
8861 340
9047 209

23rd June 1975.

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Land Victoria

Page 1 of 3

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Volume 09047 Folio 209
Folio Creation: Details Unknown
Parent title Volume 06082 Folio 249

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Paper Title Images

9047/209 - Version 0, Date 27/08/1999

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OF TITLES



VICTORIA

CANCELLED
REGISTER BOOK

VOL. 9047 FOL. 209

Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

VOL. 9047 FOL. 209

REPCO ENGINE PARTS PTY. LIMITED of 81 Burnley Street Richmond is now the proprietor of an estate in fee simple subject to the encumbrances notified-- hereunder in ALL THAT piece of land delineated and coloured red on the map-- hereon being Lot 12 on Plan of Subdivision No.13552 Parish of Jika Jika -- County of Bourke -----

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DATED the 10th day of June 1974

B. Turner

Assistant Registrar of Titles

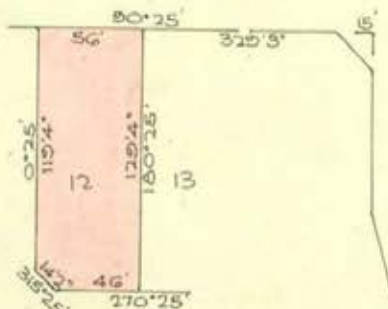


ENCUMBRANCES REFERRED TO

THE WHOLE OR PART OF
THE WHOLE OR PART OF
THE WHOLE OR PART OF
BEEN SUBDIVIDED SEE
Unregistered Plan CP103714
Misc. Plan
L.P.

DOONSIDE STREET

DAND STREET



MEASUREMENTS ARE IN FEET AND INCHES

Derived from Vol.6082 Fol.249
F338668

CANCELLED

PURSUANT TO PLAN OF CONSOLIDATION

No. C. P. 103182

Sec Vol. 9088 **Fols.** 447

23 JUN 1975



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HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 5

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Volume 08861 Folio 340
Folio Creation: Details Unknown

STATEMENT END

Paper Title Images

8861/340 - Version 0, Date 17/02/2000

ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE
OF TITLES



VICTORIA

CANCELLED

REGISTER BOOK

VOL. 8861 FOL. 340

Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

RUSSELL MANUFACTURING COMPANY PROPRIETARY LIMITED of 81 Burnley Street --
Richmond is now the proprietor of an estate in fee simple subject to the
encumbrances notified hereunder in ALL THAT piece of land delineated and --
coloured red blue and green on the map on the sheet annexed hereto -- -- --
containing Three acres three roods and one perch or thereabouts being part-
of Crown Portion 42 Parish of Jika Jika County of Bourke As to the land-
coloured blue and green Together with a right to use the land coloured --
yellow on the said map for party wall purposes -- -- --

DATED the 11th day of May 1970

J. Dwyer

Assistant Registrar of Titles



ENCUMBRANCES REFERRED TO

As to the land coloured green --

THE PARTY WALL EASEMENT reserved-
by Transfer 2180055 -- -- --

As to part of the land -- -- --

MORTGAGES B185733 and -- --
C261488 -- -- --

THE PARTIAL EASEMENT REFERRED TO ABOVE
WAS NOT REGISTERED ON 1/1/1971

THE WHOLE OR PART OF
THE WITHIN LAND HAS
BEEN SUBDIVIDED SEE
Unregistered Plan C/105112

Misc. Plan

A. P.

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LANDATA®

This document provides an image of a cancelled folio of the Register. It is not a statement
from the register of subsisting information in relation to the land to which it refers.

WARNING

MEASUREMENTS ARE IN

Derived from Certificates of Title set
out in Application D712498
Application 19177 Sec.103
D712498

VOL.

FOL.

INSTRUMENT

APPLICATION

~~MORTGAGE~~ to THE COLONIAL MUTUAL
LIFE ASSURANCE SOCIETY LIMITED
Registered 11th May 1970
No. D712499
B. T. Green
Assistant Registrar of Titles
21.1.1971

MORTGAGE as to part to COLONIAL
MUTUAL LIFE ASSURANCE SOCIETY LIMITED
Registered 11th May 1970
No. D712499



CANCELLED

PURSUANT TO PLAN OF CONSOLIDATION

No. C.P. 103782

See Vol. 9088 Fols. 447

23 JUN 1975



CANCELLED



T08861-340-1-0

ANNEXED SHEET REFERRED TO IN
CERTIFICATE OF TITLE VOL.

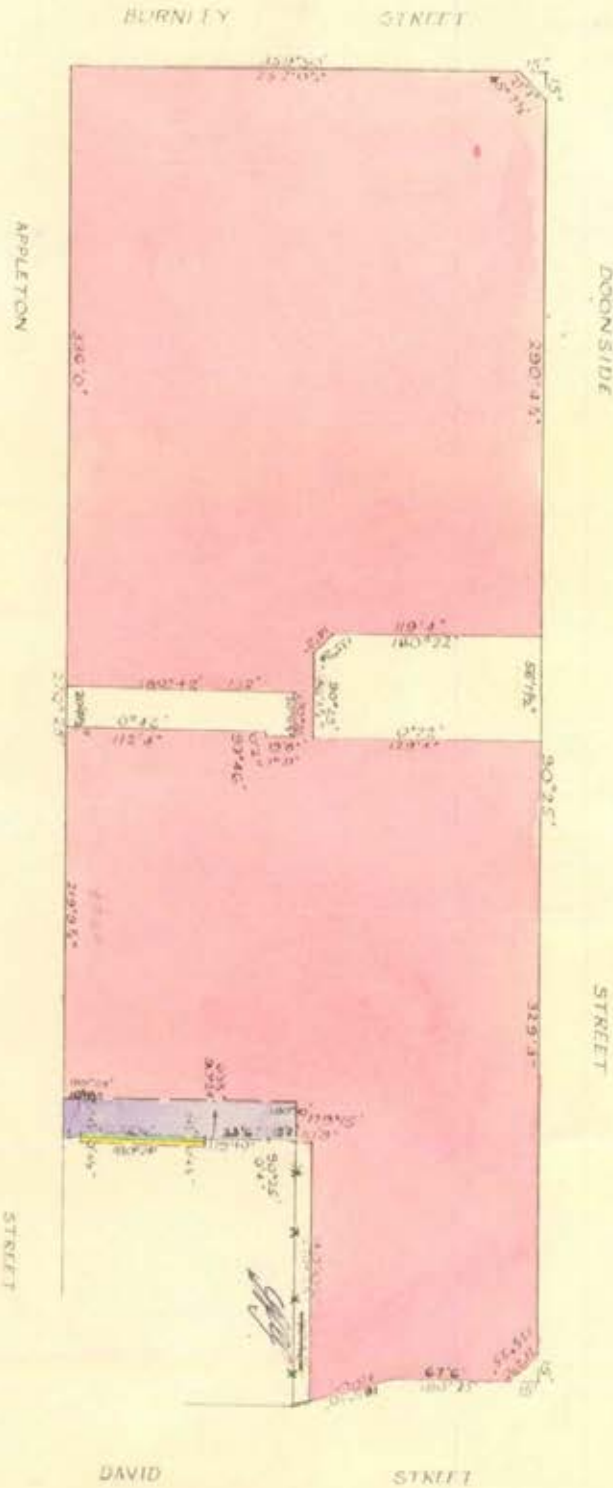
John W. J. J. J. 8861
ASSISTANT REGISTRAR OF TITLES

FOL. 340

10/11/58 13605 A
20 - 53/103
10/11/58 13605 A

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from the register of subsisting information in relation to the land to which it refers.



Measurements by Mr. J. W. J. J.

0

+



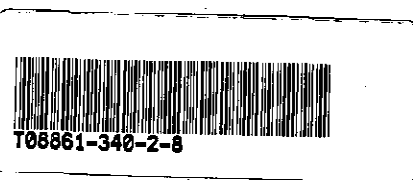
Natural Resources and Environment

AGRICULTURE RESOURCES CONSERVATION LAND MANAGEMENT

INTENTIONALLY



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HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 5

Produced 16/03/2016 10:56 AM

Volume 07575 Folio 161
Folio Creation: Details Unknown
Parent title Volume 01742 Folio 335

STATEMENT END

Paper Title Images

7575/161 - Version 1, Date 19/06/1999



VICTORIA.

Entered in the Register Book

Vol. 7575 Fol. 161

CANCELLED

Certificate of Title.

UNDER THE "TRANSFER OF LAND ACT 1928."

17-4-52

Frank Lloyd Jones Labourer and Elsie Mary Jones Married Woman both of 33 Appleton Street Richmond are now joint proprietors - - - - -

~~now the proprietors~~ of an Estate in Fee simple, subject to the Encumbrances ---
notified hereunder in All that piece of Land, delineated and coloured ---
red and blue on the map in the margin being Lot One on Plan of Subdivision No. 19793 ---
lodged in the Office of Titles and being part of Crown Portion Forty-two Parish of ---
Jika Jika County of Bourke - Together with a right to use the land coloured yellow -
on the said map for party wall purposes - - - - -

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ORIGINAL CERTIFICATE.

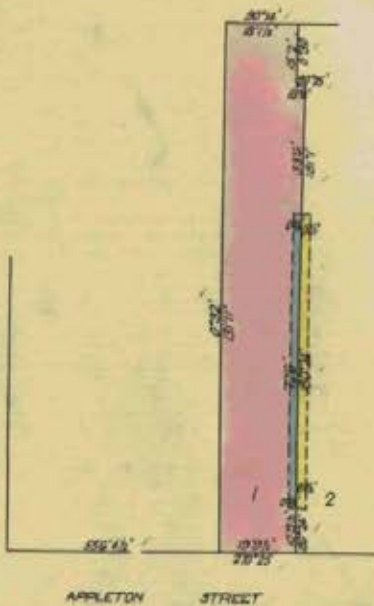
Not to be dealt with outside the Titles Office.

Dated the Seventeenth day of October One thousand nine hundred and fifty.

Assistant Registrar of Titles.

ENCUMBRANCES REFERRED TO.

As to the land coloured blue ---
THE PARTY WALL EASEMENT reserved by Instrument
of Transfer No. 2180055 in the Register Book
THE PARTY WALL EASEMENT reserved by Instrument
of Transfer No. 2180055 in the Register Book



The Measurements are in Feet and inches.



T07575-161-1-3

THE WHOLE OR PART OF
THE WILL... HAS
BEEN SUBDIVIDED SEE
Unregistered Plan
Mk. Plan
1, 2

19177
103.

Vol. 1742 Fol. 335

Transfer, 2180055

Application.

RUSSELL MANUFACTURING COMPANY PROPRIETARY LIMITED
of 81 Burnley Street Richmond is now the
proprietor by
Transfer A745799
Registered 27th May 1959



CANCELLED AS TO PART APPLICATION No. D712498
registered 11th May 1970 See Vol. 8861 Fol. 340



MORTGAGE as to part to COLONIAL MUTUAL LIFE
ASSURANCE SOCIETY LIMITED
Registered 11th May 1970
No. D712499



CANCELLED

PURSUANT TO PLAN OF CONSOLIDATION
No. C.P. 103782
See Vol. 9086 Fol. 447

23 JUN 1975



CANCELLED

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SCALE

10' = 1" inch

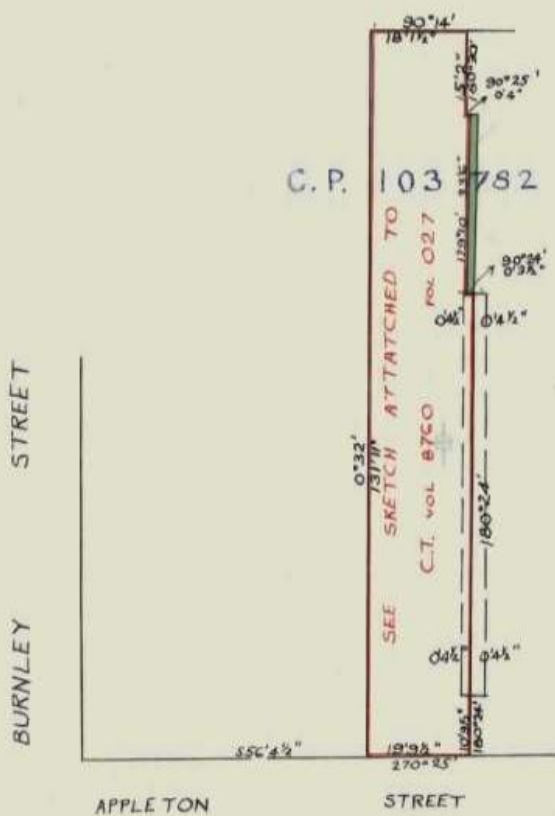
Volume 7575

Folio 161

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107575-161-2-1

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HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 3

Produced 16/03/2016 11:34 AM

Volume 06082 Folio 249
Folio Creation: Details Unknown
Parent title Volume 05755 Folio 841

STATEMENT END

Paper Title Images

6082/249 - Version 2, Date 13/09/2003



Entered in the Register Book

CANCELLED

Vol. 6082 Fol. 1216249

Certificate of Title,

UNDER THE "TRANSFER OF LAND ACT 1928."

Aluminium and Plate Company Proprietary Limited of 653 Victoria Street Abbotsford is -
now the proprietor of an Estate in Fee-simple, subject to the Encumbrances---
notified hereunder in All that piece of Land, delineated and coloured---
red on the map in the margin containing One acre and Thirty-one perches or thereabouts
being Lots 12, 13, 14, 15, 16, 17 and 18 on Plan of Subdivision No. 13552 lodged in the
Office of Titles and being part of Crown Portion Forty-two Parish of Jika Jika County
of Bourke - - - - -

Dated the Twenty-first day of November
thousand nine hundred and thirty-six.

Assistant Registrar of Titles.

ENCUMBRANCES REFERRED TO.



T06082-249-1-3

DUPLICATE AMENDED
MacInnes
17.4.69

NO DEDUCTION TO BE REGISTERED UNTIL
PLAN IS AMENDED ON DUPLICATE
SEE AO 46911, 12 108113 (Civ 528)

DUPLICATE AMENDED
MacInnes
22.11.65

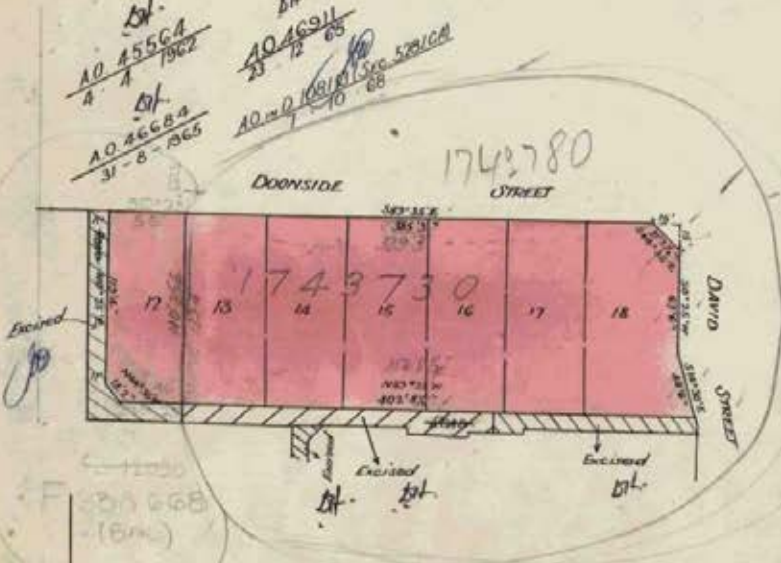
NO DEDUCTION TO BE REGISTERED UNTIL
PLAN IS AMENDED ON DUPLICATE
SEE APPN 316 Sec 528

The Measurements are in Feet and Inches

ORIGINAL CERTIFICATE.
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CRUSADER-PLATE-COMPANY PROPRIETARY LIMITED

Vol. 2-11-39



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HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 11

Produced 16/03/2016 12:51 PM

Volume 05755 Folio 841

Folio Creation: Details Unknown

Parent titles :

Volume 00324 Folio 787
Volume 00565 Folio 908
Volume 01021 Folio 021
Volume 01173 Folio 570
Volume 01262 Folio 231
Volume 01286 Folio 124 to Volume 01286 Folio 186
Volume 01318 Folio 486
Volume 01363 Folio 548
Volume 01534 Folio 771
Volume 01924 Folio 710
Volume 02041 Folio 132
Volume 03169 Folio 668
Volume 03955 Folio 973
Volume 04748 Folio 596
Volume 05095 Folio 824
Volume 05439 Folio 798

STATEMENT END

Paper Title Images

5755/841 - Version 3, Date 23/04/2014

CANCELLED



Entered in the Register Book

Vol. 5755 Fol. 1150841

VICTORIA.

Certificate of Title,

UNDER THE "TRANSFER OF LAND ACT 1928."

Edward Lesslie Newbigin of "Montalto" Montalto Avenue Toorak Manager and The -
Trustees Executors and Agency Company Limited of 412 Collins Street Melbourne ---
are now joint proprietors -----

now the proprietors of an Estate in Fee-simple, subject to the Encumbrances
notified hereunder in All that piece of Land, delineated and coloured
red, blue and green on the map on the sheet annexed hereto containing sixteen acres
Two roods and thirty perches or thereabouts being part of Crown Portions Forty-two -
and Forty-three Parish of Joka Joka County of Bourke - As to the land colored blue
Together with a right of carriage way over the road colored brown on the said map --

ORIGINAL CERTIFICATE.
Not to be dealt with outside the Titles Office.

Dated the Eighteenth
thousand nine hundred and thirty.

day of July

Assistant Registrar of Titles.

ENCUMBRANCES REFERRED TO.

As to the land colored green ---

ANY EASEMENTS affecting the same ---



PART OF THE WITHIN LAND IS
SHOWN AS A ROAD (AND/OR
DRAIN) ON L.P. 13562



The Measurements are in

WARNING: THE IMAGE OF THIS DOCUMENT OF THE REGISTER HAS BEEN DIGITALLY AMENDED.
NO FURTHER AMENDMENTS ARE TO BE MADE TO THE ORIGINAL DOCUMENT OF THE REGISTER.

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64753	1534	306771
112008	1824	384710
204021	2041	408132
334570	3109	633668
352231	3455	709773
257124	4748	949596
257196	5025	1018824
263436	5439	1087748
272548		

Transfer. Application.
Red Ink No. 314 5170

CAVEAT NO 88342 LODGED 31st August 1932 *P*
affecting part of the land herein
CAVEAT NO 88342 Lapsed 17th November 1933 *BHS*

CAVEAT NO 88560 LODGED 14th November 1932 *BHS*
affecting part of the land herein.
CAVEAT NO 88560 Lapsed 2nd December 1935 *P*

TRANSFER AS TO PART to
Alan Clements Blazey
registered
on 2nd December 1935 numbered 1597753.
CANCELLED AS TO PART See Certificate of Title
Vol 6005 Fol 1200983
Affogoso
Assistant Registrar of Titles

TRANSFER AS TO PART and CREATION OF
EASEMENT to *Charles Ruvolet Proprietary Limited*
registered
on 2nd October 1936 numbered 1628654
CANCELLED AS TO PART See Certificate of Title
Vol 6082 Fol 1216248
Affogoso
Assistant Registrar of Titles

TRANSFER AS TO PART to
Aluminium and Plate Company Proprietary Limited
registered
on 2nd November 1936 numbered 1631732
CANCELLED AS TO PART See Certificate of Title
Vol 6082 Fol 1216249
Affogoso
Assistant Registrar of Titles

TRANSFER AS TO PART to
Geo. Pizze & Son Limited
registered
on 5th December 1936 numbered 16331
CANCELLED AS TO PART See Certificate of Title
Vol 6089 Fol 1217637
Affogoso
Assistant Registrar of Titles

TRANSFER AS TO PART to *Brown*
Investments Proprietary Limited
registered
on 7th August 1937 numbered 167
CANCELLED AS TO PART See Certificate of Title
Vol 6133 Fol 1226425
Affogoso
Assistant Registrar of Titles

TRANSFER AS TO PART to
Builders Steel Form Supply Company Limited
registered
on 17th January 1938 numbered 1675607
CANCELLED AS TO PART See Certificate of Title
Vol 6193 Fol 1238467
Affogoso
Assistant Registrar of Titles

TRANSFER AS TO PART to
Russell Manufacturing Company Proprietary Limited
registered
on 17th November 1933 numbered 1535111.
CANCELLED AS TO PART See Certificate of Title
Vol 5871 Fol 1174018
L. Kennedy
Assistant Registrar of Titles

TRANSFER AS TO PART to
Platers Proprietary Limited
registered
on 14th September 1934 numbered 1558781
CANCELLED AS TO PART See Certificate of Title
Vol 5919 Fol 1183621
Affogoso
Assistant Registrar of Titles

TRANSFER AS TO PART to
Platers Proprietary Limited
registered
on 22nd January 1935 numbered 1568367.
CANCELLED AS TO PART See Certificate of Title
Vol 5942 Fol 1188208
Affogoso
Assistant Registrar of Titles

TRANSFER AS TO PART to *Edward Smithy Bowden*
John Lyons and Cyril Norman Foster
registered
on 14th September 1934 numbered 1558680
CANCELLED AS TO PART See Certificate of Title
Vol 5947 Fol 1189264
Affogoso
Assistant Registrar of Titles

TRANSFER AS TO PART to
Mc Pherson's Proprietary Limited
registered
on 1st October 1935 numbered 1591549
CANCELLED AS TO PART See Certificate of Title
Vol 5992 Fol 1198210
Affogoso
Assistant Registrar of Titles

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For Confirmation of Endorsement see annexed sheet marked A

This is the Annexed Sheet referred to in
Certificate of Title entered in the Register
Book, Vol. 5755 Fol. 1150841

Mr. Hae

Assistant Registrar of Titles.

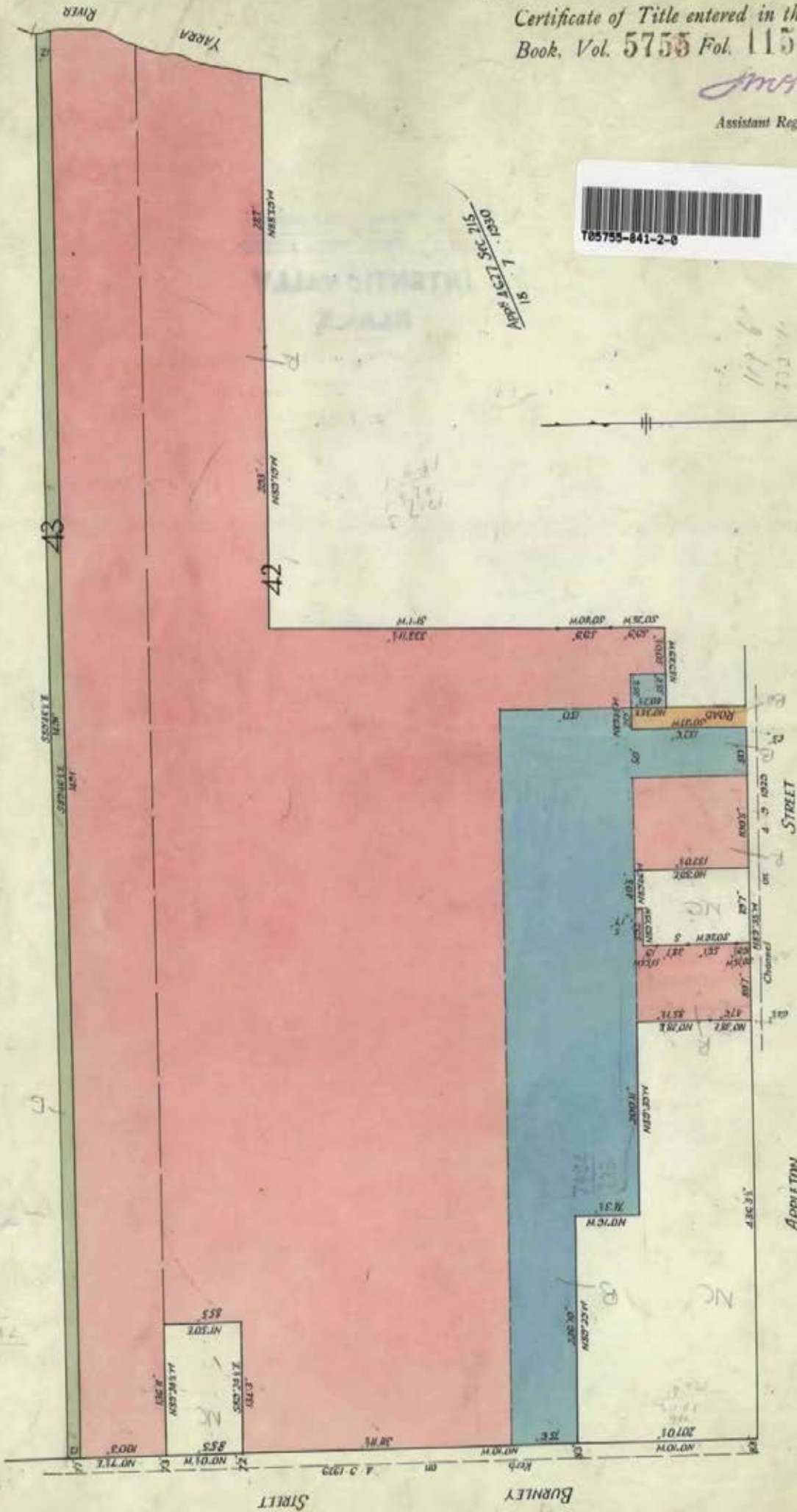


185755-841-2-8

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Department of Environment and Planning
Resources and Environment

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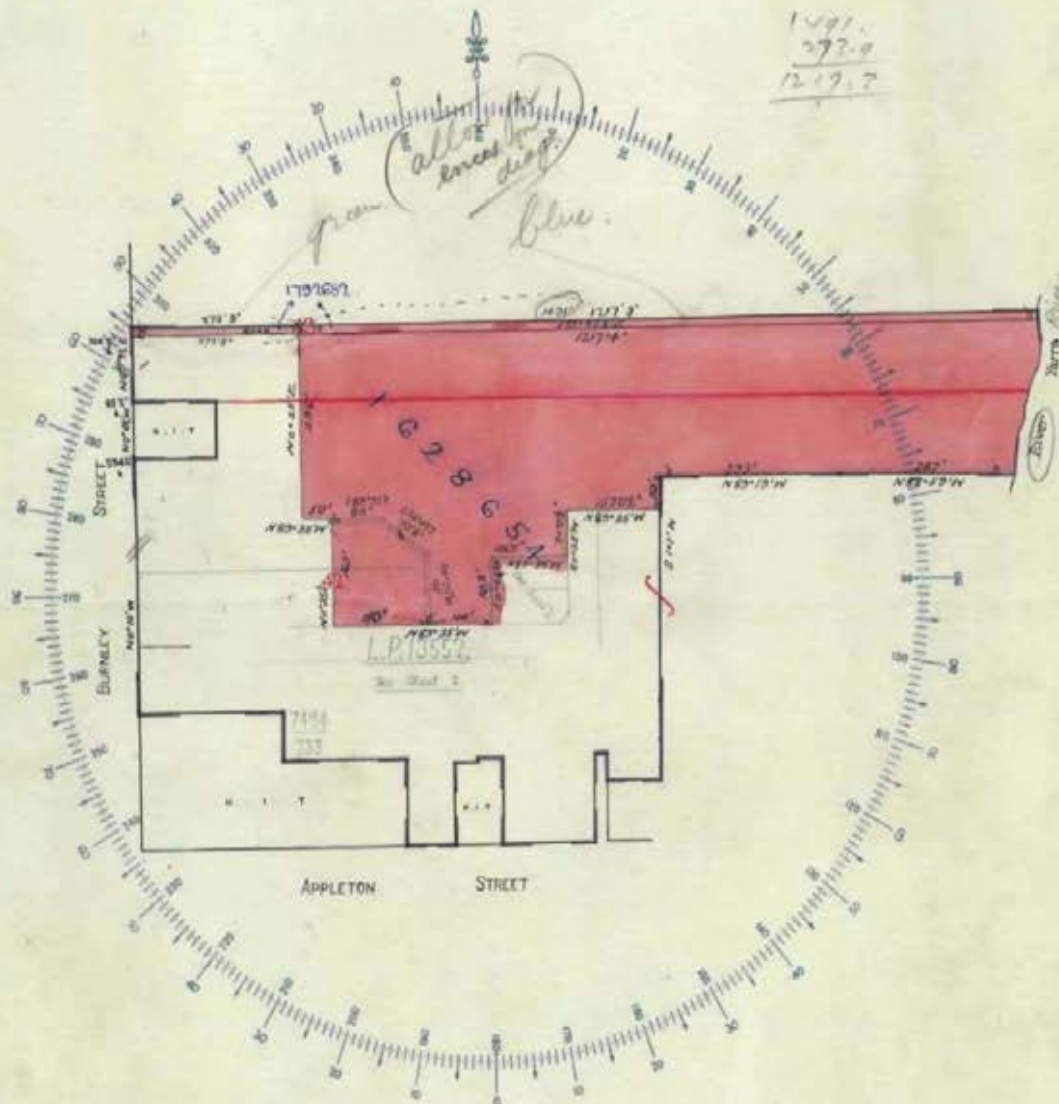
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SCALE: 200 feet to one inch.

V5755 fol. 1150841

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Sheet 1
Sheet 2 attached



T05755-841-3-8



Natural Resources and Environment

AGRICULTURE • RESOURCES • CONSERVATION • LAND MANAGEMENT

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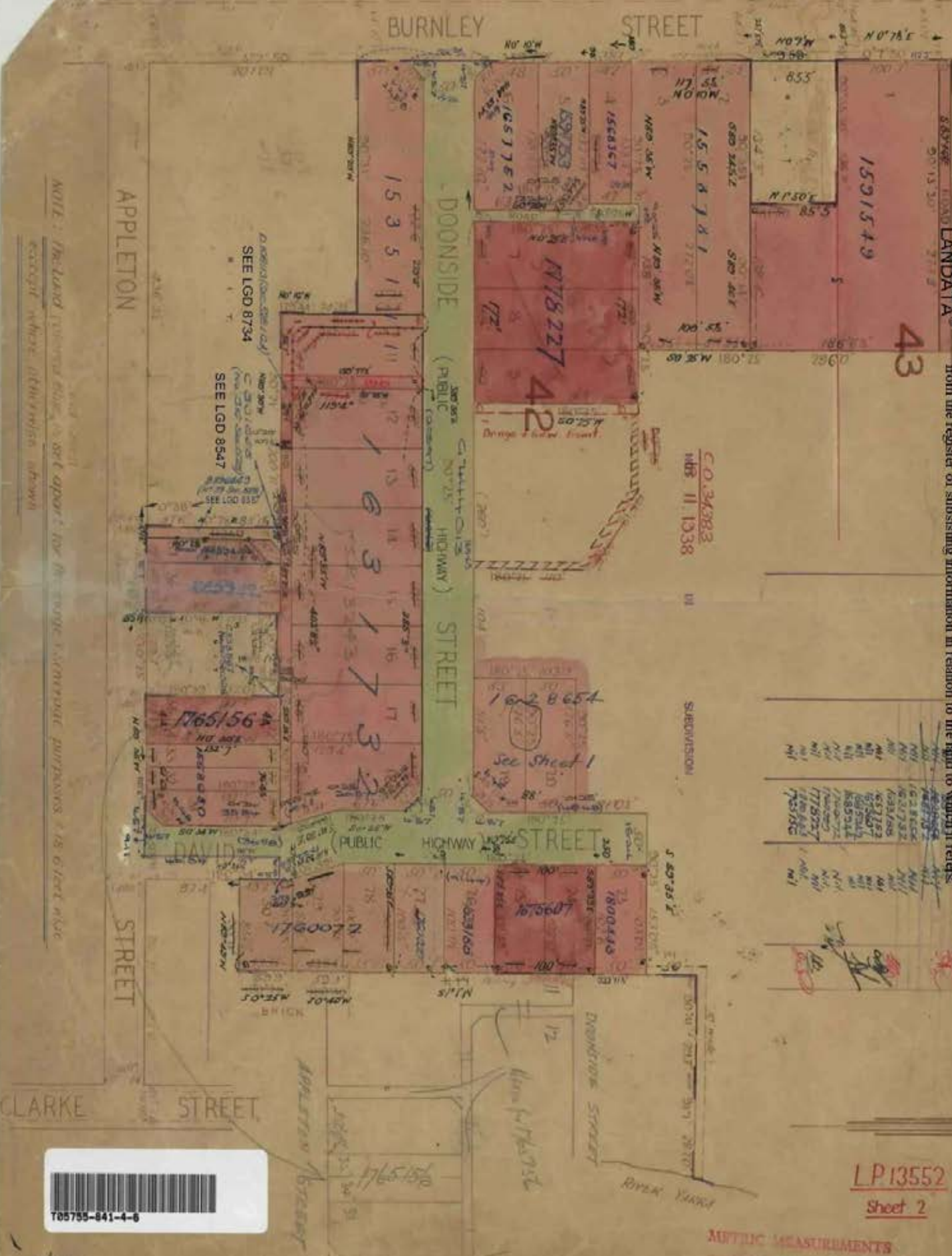
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VOL. 5755 Fol 1150811
SCALE 80 feet to an inch

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NOTE: The land shown above is not apart from the above-mentioned purposes is direct view
except where otherwise shown



LP13552
Sheet 2

AUTRIC MEASUREMENTS
SUNSHINE BLUE

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 Natural Resources and Environment
AGRICULTURE • RESOURCES • CONSERVATION • LAND MANAGEMENT

This is the Sheet marked *H* referred to in Certificate of Title entered in the Register Book Vol. 25755 Fol. 1150841



105755-841-5-4

ORIGINAL

Assistant Registrar of Titles.

TRANSFER AS TO PART to

Eileen Mary Derick registered
on 13th April 1938 numbered 1685942
CANCELLED AS TO PART See Certificate of Title
Vol. 6193 Fol. 1238468

Assistant Registrar of Titles

TRANSFER AS TO PART to

*Edwin James Lynch and
Anne Elizabeth Lynch* registered
on 13th April 1938 numbered 1685944
CANCELLED AS TO PART See Certificate of Title
Vol. 6193 Fol. 1238469

Assistant Registrar of Titles

Red Ink No. 3763380.

THE TRUSTEES EXECUTORS AND --
AGENCY COMPANY LIMITED of 401 Collins Street --
Melbourne the survivor of the proprietors named --
herein, is by direction of The Commissioner of --
Titles, now registered as sole proprietor of the --
land now comprised herein.

DATED
13th June 1939.

Assistant Registrar of Titles.

TRANSFER AS TO PART to

Francis McEwan registered
on 22nd January 1940 numbered 1760072
CANCELLED AS TO PART See Certificate of Title
Vol. 6359 Fol. 1271114

Assistant Registrar of Titles

TRANSFER AS TO PART to

Benny Warburton Sutton registered
on 2nd February 1940 numbered 1760999
CANCELLED AS TO PART See Certificate of Title
Vol. 6359 Fol. 1271775

Assistant Registrar of Titles

TRANSFER AS TO PART to

Samuel Horace Williams registered
on 1st July 1940 numbered 1778227
CANCELLED AS TO PART See Certificate of Title
Vol. 6411 Fol. 1282159

Assistant Registrar of Titles

TRANSFER AS TO PART to

McPherson's Proprietary Limited registered
on 29th October 1940 numbered 1792682
CANCELLED AS TO PART See Certificate of Title
Vol. 6431 Fol. 1286164

Assistant Registrar of Titles

TRANSFER AS TO PART to

Jeanie Myrtle Boyd registered
on 9th January 1941 numbered 1800443
CANCELLED AS TO PART See Certificate of Title
Vol. 6467 Fol. 1293281

Assistant Registrar of Titles

TRANSFER AS TO PART to

*Victorian Chemical Company
Proprietary Limited* registered
on 12th March 1940 numbered 1765156
CANCELLED AS TO PART See Certificate of Title
Vol. 6535 Fol. 1306890

Assistant Registrar of Titles

Transfer as to part under Section
Act 6299.

Registered 4th April 1962

Numbered 8396449

See Government Gazette dated 22/62

No. 20 Page 590.

Cancelled as to part See Certificate of Title

Vol. 8394 Fol. 062

TRANSFER AS TO PART No. C 301868
under Act NO 6299 see 1828
registered 31 August 1965

CANCELLED AS TO PART

See Vol. 8590 Fol. 596

TRANSFER AS TO PART No. C 393567 (567)

UNDER ACT No. 6299 registered 23/12/62

CANCELLED AS TO PART See Vol. 8616 Fol. 401

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19-7-62
6299

TRANSFER AS TO BALANCE No. *G444013*
registered *15th December 1976*
CANCELLED See Vol. 9214 *PaD* 439



CANCELLED

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Appendix C Victorian Historical Society Records



ROYAL HISTORICAL SOCIETY OF VICTORIA INC.

239 A'Beckett Street, Melbourne 3000

Date: 16 March 2016

Attention: Ashleigh O'Shea

Company: JBS&G

From: Gerardine Horgan (Administrative Officer)

SITE SEARCH: 81-95 Burnley Street, Richmond VIC 3121

The site is located on the east side of Burnley Street between Doonside Street and Appleton Street, stretching eastward to David Street.

Richmond has been a manufacturing centre since the mid 19th century. Burnley Street first appeared in the Sands and McDougall Directories in 1870, Appleton Street first appeared in 1880, and Doonside Street (Avenue) first appeared in 1937. Houses first appeared in the 1880s along Appleton Street.

Year	81 – 95 Burnley Street	Doonside Street	Appleton Street
1880s – 1920s	Only 2 residences appear, # 85 and # 87.	No buildings in this period.	1884 there were 8 residences, and by 1924 there were 10 houses.
1934	# 85 and 87 were Residences, and # 89/95 was Russell Manufacturing Co. P/L - motor accessories.	No Buildings.	#5 to #35, were 11 houses.
1944	#81-95 Russell Mfg. Co. P/L. – motor parts.	Leggett Products – Rubber Goods. Aviator Mfg. Co. P/L. - Airplane spark plugs.	#13-35, 8 houses. #43-49 Victorian Chemical Co. P/L. – sulphurous oil maker.
1954	#81-95 Russell Mfg. Co. P/L. – motor parts.	Leggett Products – rubber goods.	#13-21, 5 houses. #27-35, 4 houses.



ROYAL HISTORICAL SOCIETY OF VICTORIA INC.

239 A'Beckett Street, Melbourne 3000

		Vickers Ruwolt P.L. –Factory.	#43-49 Vict. Chemical Co. – sulphurous oil manufacturer.
1964	#81-95 Russell Mfg. Co. P/L. – motor accessories.	Crusader Plate Co. P/L. – Foundry. Russell Mfg. Co. P/L - motor accessories.	#17-35 - 5 houses. #43-49 Vict. Chemical Co. P/L. – sulphurous oils manufacturer.
1974	#81-95 Russell Manufacturing Co. P/L. - motor accessories. Repco Bearing Co. P/L. – Motor Engineers.	Crusader Plate Co. P/L. – Foundry. Russell Mfg Co. P/L. – motor accessories.	S.E.C. Sub Station. #17 and 35 – 2 houses. Russell Mfg. Co. P/L. – storage. #37-49 Vict. Chemical Co. P/L. -Chemical manufacturers.

Google Earth: in 2000 shows buildings covering the entire block to David Street. The buildings along David Street were demolished in 2006.

Research by Belinda Williams.

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Tel: (03) 9326 9288

Email: office@historyvictoria.org.au ABN 36 520 675 471

Find out more about us on our website: www.historyvictoria.org.au

Fax: (03) 9326 9477

Reg. No: A2529



ROYAL HISTORICAL SOCIETY OF VICTORIA INC.

239 A'Beckett Street, Melbourne 3000

Date: 13 April 2016
Attention: Tom Statham
Company: JBSG
From: Gerardine Horgan (Administrative Officer)

SITE SEARCH: 81 -95 Burnley Street, Richmond, 3121

In addition to the site search done on 16 March 2016 for this location a further search of the Sands and McDougall Directories was done from 1969 to 1974. This showed that the S.E.C Sub Station appeared in 1970 in Appleton Street.

By 1964 the houses along Appleton Street numbered 13 and 15 were pulled down and taken over by Russell Manufacturing. #17 is still there.

In Appleton Street in 1969: listed off 95 Burnley Street - was #17 Miss Mary Casey = house, #21-27 Russell Manufacturing storage; #33 Tobias, S. R. =house; #35 Timmins, Mrs M. E. = house; #42-49 Victorian Chemical Company – sulphonated oils manufacturer; then David Street.

In Appleton Street in 1970 and 1974: off 95 Burnley Street – was S.E.C substation; #17 Miss Mary Casey; Russell Manufacturing storage and car park (no number); #35 Timmins, Mrs M. E.; #37-49 Victorian Chemical Company – sulphonated oils manufacturer.

There is no number for the SEC Sub Station – it would have been between Russell Manufacturing and Miss Mary Casey's house.

Research by Margaret Fleming.

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Appendix D WorkSafe Dangerous Goods Records

Reference: H16/00111

15 March 2016

Ashleigh O'Shea
Administrative Assistant
JBS& G
43 Stubbs Street
KENSINGTON VIC 3031

Dear Ms O'Shea

**Your Ref: Dangerous Goods Database Search
171 Buckingham Street Richmond
81-95 Burnley Street Richmond**

I refer to your email received on 8 March 2016, and confirm that we have searched our database records for the above address'. I advise that WorkSafe Victoria has found a record of Dangerous Goods Storage and Handling for the premises. A print out is attached.

For queries on this matter, please do not hesitate to contact the Licensing Branch on telephone 1300 852 562 or facsimile 1300 060 727.

Yours sincerely



**Rachael Griffin
Senior Licensing Officer
WorkSafe Victoria**

Search results for 171 Buckingham Street Richmond– No Records

Search and Enquire

ADDRESS SEARCH CRITERIA
(Exact Address)

Action	Full Address
-	171 BUCKINGHAM STREET, RICHMOND 3121
-	+
-	
-	☐
-	
-	

W A R N I N G

No Licences are Registered at the
1st Premise(s)

81-95 Burnley Street Richmond – Record Found

Licence Search List by Number										Page
Licence										
Ref	Gen	Type	Number	Start Date	Expiry Date	Issue Date	Reas	Appl	Type	Status
☐	DGS	DSH	98046238	14/12/2012	12/12/2017	14/12/2012	RES	New		Issued
HARRY THE KILNER P/L				81-95 BURNLEY STREET, RICHMOND 3121						

LIST LICENCE / HAZARD ITEMS				
Licence Type: DSH Storage and Handling Notification				
Notification No: 98046238		Appl Type: New		Status: Issued
Hazard: DGS Dangerous Goods Storage				
Hazard Type: DGBLK		DANGEROUS GOODS STORED IN BULK		
Page				
Display Class		Quantity Type		Qty Stored
2.1		L		7600
3		L		12000

LIST LICENCE / HAZARD ITEMS

Licence Type: DSH Storage and Handling Notification
 Notification No: 9804623E Appl Type: New Status: Issued

Hazard: DGS Dangerous Goods Storage
 Hazard Type: DGFCK DANGEROUS GOODS STORED IN PACKAGES Pa

Display Class	Quantity Typ	Qty Stored
3	L	300

Appendix E Energy Safe Victoria Records

10 March, 2016

TO: Ashleigh O'Shea
JBS&G

Ph: 03 9372 6800

SEARCH FOR CATHODIC PROTECTION SYSTEMS

With reference to your email of 07/03/2016, a search of the CP database has failed to identify any cathodic protection systems that have been registered at the following location:

- **81-95 Burnley Street, Richmond VIC 3121.**

Yours sincerely



Peter Wade

MANAGER ELECTROLYSIS MITIGATION

Disclaimer

Energy Safe Victoria provides this information in good faith, but cannot guarantee the accuracy or validate the information provided. The Cathodic Protection (CP) database is a register of currently operating Cathodic Protection systems in Victoria and was established in 1970. The CP database is administered under the Electricity Safety Act 1998 and the Electricity Safety (Cathodic Protection) Regulations 2009.

Some underground fuel tanks may not be listed in the CP database including: if the tank is not metallic (therefore not requiring CP); the tank is metallic but CP was not installed; the CP system was not registered, or the CP system has been de-commissioned.

If you believe underground tanks may be present and not shown on ESV's database you should conduct your own tests and investigations.

Appendix F Soil Borehole Logs



SB01

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: M.Close

Contractor: Enviro Drill

Total Hole Depth (mbgs): 0.7

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
	0.10			Fill	Clayey Gravelly SAND - fine/medium , grey, moist	SB01 0.1 F PID = 3.5 ppm	
	0.30			Fill	Clayey Gravelly SAND - fine/medium , grey, moist	SB01 0.3 F PID = 4 ppm	
	0.50			Fill	Clayey Gravelly SAND - fine/medium , grey, moist	SB01 0.5 F PID = 3.6 ppm	
	0.70				Borehole SB01 terminated at 0.7m		
	1.0						Refusal on red scoria sand / brick at 0.7 m
	1.5						
	2.0						
	2.5						
	3.0						



SB02

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 22/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 1.2

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
	0.14		x	CH-MH	Silty CLAY - Disturbed Natural - medium plasticity, dark brown, gravel, greater than plastic limit.	SB02 0.14 DN PID = 2.8 ppm	
	0.30		x	CH-MH	Silty CLAY - Disturbed Natural - medium plasticity, dark brown, greater than plastic limit	SB02 0.3 DN PID = 3.4 ppm	
	0.5		x				
Push Tube	0.60			Fill	Cemented sand		
	0.70		x	CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB02 0.7 N PID = 3.1 ppm	
	1.0		x				
	1.00		x	CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit		
	1.10		x	CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit	SB02 1.2 N PID = 3.7 ppm	
	1.20				Borehole SB02 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						



SB03

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 22/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 150

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Solid Flight Auger				Fill	Surface / materials CONCRETE		
	0.26			Fill	Cemented sand		
	0.55			CL-ML	Silty CLAY - Disturbed Natural - fine/medium, dark brown, greater than plastic limit	SB03 0.55 DN PID = 12 ppm	
	0.80			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit	SB03 0.8 N PID = 10.7 ppm	
	1.00			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit		
	1.10			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit	SB03 1.1 N PID = 6.7 ppm	
	1.50				Borehole SB03 terminated at 1.5m	SB03 1.5 N PID = 10.4 ppm	
	2.0						
	2.5						
	3.0						



SB04

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 22/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 2.4

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
	0.10			Fill	Gravelly SAND - fine / medium, brown, moist	SB04 0.1 F PID = 0.4 ppm	
	0.30			CL-ML	Silty CLAY - Disturbed Natural - medium plasticity, brown, greater than plastic limit		
	0.50			CL-ML	Silty CLAY - Disturbed Natural - medium plasticity, brown, greater than plastic limit	SB04 0.5 DN PID = 2.1 ppm	
Push Tube	0.80			CL-ML	Silty CLAY - Disturbed Natural - medium plasticity, brown, greater than plastic limit	SB04 0.8 N PID = 15.7 ppm	Hydrocarbon odour and perched water observed
	0.90			Fill	Cemented sand		Hydrocarbon odour and perched water observed
	1.00			CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB04 1.1 N PID = 5.4 ppm	Hydrocarbon odour and perched water observed
	1.50			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit	SB04 1.5 N PID = 2.7 ppm	
	2.20			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit	SB04 2.4 N PID = 2.9 ppm	
	2.40				Borehole SB04 terminated at 2.4m		
	2.5						
	3.0						



SB05

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 1.3

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
	0.12			Fill	Gravelly SAND - fine / medium, dark brown, clay, moist		
	0.25			Fill	Gravelly SAND - fine / medium, dark brown, clay, moist	SB05 0.25 F PID = 3.5 ppm	
	0.40			Fill	Cemented sand	SB05 0.4 F PID = 3.1 ppm	
Push Tube	0.60			Fill	Cemented sand		
	0.80			CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB05 0.8 N PID = 2.5 ppm	
	1.00			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit		
	1.10			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit	SB05 1.3 N PID = 3.5 ppm	
	1.30				Borehole SB05 terminated at 1.3m		
	1.5						
	2.0						
	2.5						
	3.0						



SB06

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 1.3

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		DUP01 and SPLIT01 collected
	0.10			Fill	Gravelly SAND - fine / medium, dark brown, clay, moist		
	0.25			Fill	Gravelly SAND - fine / medium, dark brown, clay, moist	SB06 0.25 F PID = 3.1 ppm	
	0.5						
Push Tube	0.60			Fill	Cemented sand	SB06 0.6 F PID = 2.6 ppm	
	0.80			CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB06 0.8 N PID = 3.1 ppm	
	1.0			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit		
	1.20			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit	SB06 1.3 N PID = 1.5 ppm	
	1.30				Borehole SB06 terminated at 1.3m		
	1.5						
	2.0						
	2.5						
	3.0						



SB07

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 1.2

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
		0.14		Fill	Gravelly SAND - fine / medium, dark brown, clay, moist	SB07 0.14 PID = 1.7 ppm	
		0.30		Fill	Gravelly SAND - fine / medium, dark brown, clay, moist, glass inclusions, concrete inclusions	SB07 0.3 F PID = 3 ppm	
	0.5						
		0.65		SM	Silty SAND - fine / medium, dark orange, moist	SB07 0.65 N PID = 5 ppm	
Push Tube		0.80	x	CH-MH	Silty CLAY - high plasticity, dark brown, moist		
	1.0		x				
		1.00	x	CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit		
			x			SB07 1.2 N PID = 3 ppm	
	1.20				Borehole SB07 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						



SB08

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: M. Close

Contractor: Enviro Drill

Total Hole Depth (mbgs): 0.9

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
		0.12		Fill	Gravelly silty SAND - brown and red	SB08 0.12 F PID = 2.7 ppm	
		0.30		CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit, basalt floater	SB08 0.3 N PID = 3.9 ppm	
		0.50		CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB08 0.5 N PID = 3.8 ppm	
		0.60		CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB08 0.7 N PID = 3.7 ppm	
	0.90				Borehole SB08 terminated at 0.9m		
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						



SB09

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 22/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 0.9

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
Push Tube		0.10		CH-MH	Silty CLAY - Disturbed Natural - medium plasticity, brown, gravel, greater than plastic limit	SB09 0.1 DN PID = 2.6 ppm	
		0.20		BASALT	Basalt floater		
		0.30		CH-MH	Silty Clay - high plasticity, dark brown, greater than plastic limit	SB09 0.3 N PID = 3.3 ppm	
		0.40		CH-MH	Silty Clay - high plasticity, dark brown, greater than plastic limit		
	0.5	0.50		CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit		
						SB09 0.6 N PID = 3.1 ppm	
						SB09 0.9 N PID = 3.7 ppm	
	0.90				Borehole SB09 terminated at 0.9m		Refusal on basalt at 0.9 m
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						



SB10

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 2.4

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
	0.14			Fill	Silty SAND - fine / medium, dark brown, moist	SB10 0.14 F PID = 61.4 ppm	Hydrocarbon odour
	0.5			Fill	Red Brick		
	0.60			ML	SILT - Disturbed Natural - dark grey, moist	SB10 0.6 DN PID = 17.2 ppm	Hydrocarbon odour
Push Tube	1.10			Fill	Cemented sand		
	1.20			CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB10 1.2 N PID = 131 ppm	Hydrocarbon odour
	1.30			CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit		
	1.5					SB10 1.5 N PID = 121 ppm	Hydrocarbon odour
	2.0						
	2.40				Borehole SB10 terminated at 2.4m	SB10 2.4 N PID = 25 ppm	Hydrocarbon odour
	2.5						
	3.0						



SB11

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 0.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Solid Flight Auger and Auger				Fill	Surface / materials CONCRETE		
		0.15		Fill	Gravelly SAND - fine / medium, brown, moist		
		0.40		Fill	Gravelly SAND - wet, steel strap inclusions		
	0.5	0.50			Borehole SB11 terminated at 0.5m	SB11 0.5 F PID = 21 ppm	Perched water observed Perched water observed Scrap metal prevented further advancement with drill rig, perched water prevented further advancement with hand auger
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						



SB12

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 1.2

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
	0.16			Fill	Gravelly SAND - fine / medium, grey, moist, concrete inclusions	SB12 0.16 F PID = 0.3 ppm	
	0.40			Fill	Gravelly SAND - fine / medium, grey, moist	SB12 0.14 F PID = 0.7 ppm	
Push Tube	0.70			CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB12 0.7 N PID = 1.1 ppm	
	1.00			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit		
	1.10			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit	SB12 1.2 N PID = 0.8 ppm	
	1.20				Borehole SB12 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						



SB13

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 1.2

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger		0.11		Fill	Surface / materials CONCRETE		
				Fill	Sandy GRAVEL - fine, dark brown, moist	SB13 0.11 F PID = 3.1 ppm	
		0.31		Fill	CONCRETE		
		0.41		Fill	Sandy GRAVEL - fine, dark brown, moist	SB13 0.41 F PID = 2.8 ppm	
	0.5	0.50		CH-MH	Silty CLAY - medium plasticity, dark brown, greater than plastic limit		
Push Tube		0.80		CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB13 0.8 N PID = 4.8 ppm	
		1.00		CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit		
		1.10		CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit	SB13 1.2 N PID = 3.7 ppm	
		1.20			Borehole SB13 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						



SB14

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 1.2

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
		0.18		Fill	Gravelly SAND - fine / medium, drk brown, clay, moist, red brick inclusions	SB14 0.18 F PID = 3.6 ppm	
		0.40		CL-ML	Silty CLAY - Disturbed Natural - greater than plastic limit		
	0.5	0.60		SG	Gravelly SAND - fine / medium, dark brown, clay, moist	SB14 0.6 F PID = 3.6 ppm	
Push Tube		0.70		CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB14 0.7 N PID = 3.5 ppm	
	1.0	1.00		CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit		
		1.10		CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit	SB14 1.2 N PID = 3 ppm	
	1.20				Borehole SB14 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						



SB15

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: M.Close

Contractor: Enviro Drill

Total Hole Depth (mbgs): 0.7

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
	0.12			ML-CL-GC	Clayey gravelly SILT - Disturbed Natural - brown grey, moist	SB15 0.12 DN PID = 2.6 ppm	
	0.20			CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB15 0.2 DN PID = 3.2 ppm	
	0.40			CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB15 0.4 DN PID = 4.1 ppm	
	0.50			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit	SB15 0.5 DN PID = 3.5 ppm	
	0.70				Borehole SB15 terminated at 0.7m		
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						



SB16

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 22/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 0.4

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
		0.10		CL-ML	Silty CLAY - Disturbed Natural - greater than plastic limit, traces of clay	SB16 0.1 DN PID = 2.2 ppm	
Push Tube		0.20	x	CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit		
		0.30	x	CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB16 0.4 N PID = 4.2 ppm	
		0.40			Borehole SB16 terminated at 0.4m		Refusal on basalt at 0.4 m
	0.5						
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						



SB17

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 22/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 0.8

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		Refusal on basalt at 0.8 m
	0.14			CL-ML	Silty CLAY - Disturbed Natural - greater than plastic limit, traces of gravel	SB17 0.14 DN PID = 1.6 ppm	
	0.30			CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit		
	0.5					SB17 0.5 N PID = 2.3 ppm	
Push Tube	0.60			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit		
	0.70			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit, basalt fragment inclusions	SB17 0.8 N PID = 3.7 ppm	
	0.80				Borehole SB17 terminated at 0.8m		
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						



SB18

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 22/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 1

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
		0.14		Fill	Silty SAND - fine / medium, brown, moist	SB18 0.14 F PID = 15.6 ppm	
		0.30		CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit		Dark staining, slight hydrocarbon odour
Push Tube		0.50		CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB18 0.5 N PID = 23.9 ppm	Darker staining, slight hydrocarbon odour
		0.60		CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit, basalt fragment inclusions		
	1.0					SB18 1 N PID = 16.2 ppm	Less staining, less odour
	1.00				Borehole SB18 terminated at 1m		Refusal on basalt at 1.0 m
	1.5						
	2.0						
	2.5						
	3.0						



SB19

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 1.2

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
	0.20			SM	Silty SAND - Disturbed Natural - fine / medium, dark brown, clay, moist, red brick inclusions	SB19 0.2 F PID = 4 ppm	
	0.5						
	0.50			ML-CL	Clayey SILT - grey, moist, traces of clay	SB19 0.5 DN PID = 3.4 ppm	
Push Tube	0.70			CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB19 0.7 N PID = 3.8 ppm	
	0.90			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit		
	1.00			CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit		
						SB19 1.2 N PID = 2.4 ppm	
	1.20				Borehole SB19 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						



SB20

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: M.Close

Contractor: Enviro Drill

Total Hole Depth (mbgs): 0.9

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
		0.15		Fill	Clayey SAND - fine / medium, orange brown, moist	SB20 0.15 F PID = 3.1 ppm	
		0.30		CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB20 0.3 N PID = 2.2 ppm	
		0.50		CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit	SB20 0.5 N PID = 3.1 ppm	
		0.70		CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit	SB20 0.7 N PID = 2.7 ppm	
		0.90			Borehole SB20 terminated at 0.9m		
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						



SB21

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 22/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 1

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
	0.13			ML-SM	Sandy SILT - Disturbed Natural - fine / medium, brown, moist	SB21 0.13 DN PID = 2.7 ppm	
	0.20			ML-SM	Sandy SILT - fine / medium, brown, moist		
Push Tube	0.5						
	0.50			MUDSTONE	SILTSTONE, white and orange		
	0.60			BASALT	Weathered basalt	SB21 0.6 N PID = 1.9 ppm	
	1.0					SB21 1.0 N PID = 4.2 ppm	
	1.00				Borehole SB21 terminated at 1m		
	1.5						
	2.0						
	2.5						
	3.0						



SB22

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 22/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 0.35

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		Refusal on basalt at 0.35 m
	0.10		x	CH-MH	Silty CLAY - Disturbed Natural - medium plasticity, brown, greater than plastic limit	SB22 0.1 DN PID = 3.9 ppm	
	0.20		x	CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit	SB22 0.3 N PID = 3.7 ppm	
	0.35		x		Borehole SB22 terminated at 0.35m		
	0.5						
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						



SB23

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 0.55

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
	0.20		x	CH-MH	Silty CLAY - Disturbed Natural - medium plasticity, pale brown, greater than plastic limit, basalt fragment inclusions	SB23 0.2 DN PID = 4.9 ppm	
	0.5		x				
	0.50		x	CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit, basalt fragment inclusions	SB23 0.5 N PID = 5.6 ppm	Hydrocarbon odour
	0.55				Borehole SB23 terminated at 0.55m		Refusal on basalt at 0.55 m
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						



SB24

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 21/03/2016

Logged By: T.Statham

Contractor: Enviro Drill

Total Hole Depth (mbgs): 0.9

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / materials CONCRETE		
	0.20		x	CH-MH	Silty CLAY - Disturbed Natural - medium plasticity, pale brown, greater than plastic limit, basalt fragment inclusions	SB24 0.2 DN PID = 1.7 ppm	
	0.40		x	CH-MH	Silty CLAY - high plasticity, pale brown, greater than plastic limit	SB24 0.4 N PID = 1.8 ppm	
	0.60		x	CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit, basalt fragment inclusions		
	0.70		x	CH-MH	Silty CLAY - high plasticity, dark brown, greater than plastic limit, basalt fragment inclusions	SB24 0.9 N PID = 1.4 ppm	
Push Tube	0.90				Borehole SB24 terminated at 0.9m		Refusal on basalt at at 0.9 m
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						



SB11_12N

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - fine grain size, pale grey, 20% gravel, fine / medium gravel, dry	SB11_12N 0.15 F PID = 1.5 ppm	
	0.30			Fill	Gravelly SAND - fine / medium sand grain size, brown, 10% gravel, dry	SB11_12N 0.3 F PID = 1 ppm	
Push Tube	0.5						
	0.60			CL	CLAY - low plasticity, grey, less than plastic limit	SB11_12N 0.6 N PID = 0.8 ppm	
	0.80			CL	CLAY - low plasticity, grey, less than plastic limit	SB11_12N 0.8 N PID = 0.7 ppm	
	1.0						
	1.20			CL	CLAY - medium plasticity, grey, less than plastic limit		
	1.30			CL	CLAY - medium plasticity, grey, less than plastic limit		
	1.5				Borehole SB11_12N terminated at 1.5m		
	2.0						



SB11_12S

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 1.2

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - fine / medium sand grain size, dark grey, dry	SB11_12S 0.15 F PID = 7.8 ppm	
	0.30			Fill	Gravelly CLAY - low plasticity, dark grey, dry	SB11_12S 0.3 F PID = 41.6 ppm	Hydrocarbon Odour
Push Tube	0.50			CL	CLAY - low plasticity, grey, less than plastic limit	SB11_12S 0.5 N PID = 18.9 ppm	Hydrocarbon Odour
	0.80			CL	CLAY - medium plasticity, grey, less than plastic limit	SB11_12S 0.8 N PID = 8.1 ppm	Hydrocarbon Odour
	1.00			CL	CLAY - medium plasticity, pale grey, less than plastic limit	SB11_12S 1.2 N PID = 3.2 ppm	
	1.20				Borehole SB11_12S terminated at 1.2m		
	1.5						
	2.0						



SB11_12W

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 1

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - fine grain size, black, dry	SB11_12W 0.15 F PID = 1.5 ppm	
	0.30			Fill	Gravelly SAND - fine grain size, brown, dry	SB11_12W 0.3 F PID = 1.2 ppm	
	0.50			CL	CLAY - low plasticity, grey, less than plastic limit	SB11_12W 0.5 N PID = 0.8 ppm	
	0.80			CL	CLAY - low plasticity, grey, less than plastic limit	SB11_12W 0.8 N PID = 0.7 ppm	
	0.90			CL	CLAY - low plasticity, grey, less than plastic limit		
	1.00				Borehole SB11_12W terminated at 1m		
	1.5						
	2.0						



SB11_2E

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - fine / medium grain size, brown, 20% gravel, dry	SB11_2E 0.15 F PID = 0.5 ppm	Red Brick Inclusions
	0.30			Fill	Gravelly SAND - fine / medium grain size, brown, 20% gravel, dry	SB11_2E 0.3 F PID = 0.5 ppm	Red Brick Inclusions
Push Tube	0.50			Fill	Gravelly SAND - fine / medium grain size, dark grey, 5% gravel, moist	SB11_2E 0.5 F PID = 135.9 ppm	Red Brick Inclusions / Hydrocarbon Odour
	0.70			CL	CLAY - low plasticity, grey, less than plastic limit	SB11_2E 0.7 N PID = 10.5 ppm	Hydrocarbon Odour
	1.10			CL	CLAY - high plasticity, pale grey, less than plastic limit	SB11_2E 1.1 N PID = 2.8 ppm	Hydrocarbon Odour
	1.50				Borehole SB11_2E terminated at 1.5m		
	2.0						



SB11_2N

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 0.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - fine / medium, brown, 20% gravel, fine / medium gravel, dry	SB11_2N 0.15 F PID = 0.5 ppm	
Push Tube	0.30			Fill	Gravelly SAND - fine / medium, brown, 10% gravel, fine / medium gravel dry	SB11_2N 0.3 F PID = 1.8 ppm	
	0.40			Fill	Gravelly SAND - fine / medium, dark brown, 10% gravel, fine / medium gravel, dry	SB11_2N 0.5 F PID = 2.2 ppm	
	0.5						
	0.60				Borehole SB11_2N terminated at 0.5m		Refusal at 0.6m
	1.0						
	1.5						
	2.0						



SB11_2S

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - fine grain size, pale brown, 20% gravel, fine / medium gravel, dry	SB11_2S 0.15 F PID = 1.8 ppm	
	0.30			Fill	Gravelly SAND - fine / medium grain size, brown, 10% gravel, dry	SB11_2S 0.3 F PID = 0.5 ppm	
	0.50			Fill	Gravelly SAND - fine / medium grain size, grey, 10% gravel, wet	SB11_2S 0.5 F PID = 3.6 ppm	Perched Water
Push Tube	0.70			Fill	Gravelly SAND - fine / medium grain size, dark grey, 10% gravel, wet	SB11_2S 0.7 F PID = 22.8 ppm	Perched Water / Hydrocarbon Odour
	1.00			CL	CLAY - low plasticity, grey, less than plastic limit	SB11_2S 1.0 N PID = 54.9 ppm	Hydrocarbon Odour
	1.20			CL	CLAY - low plasticity, grey, less than plastic limit		
	1.5					SB11_2S 1.5 N	
	1.50				Borehole SB11_2S terminated at 1.5m		Hydrocarbon Odour
	2.0						



SB11_2W

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 1.2

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - fine / medium grain size, brown, 20% gravel, dry	SB11_2W 0.15 F PID = 2 ppm	
	0.30			Fill	Gravelly SAND - fine / medium grain size, brown, 20% gravel, dry	SB11_2W 0.3 F PID = 17.1 ppm	
	0.60			Fill	Gravelly SAND - fine / medium grain size, dark grey, 10% gravel, moist	SB11_2W 0.6 F PID = 57.8 ppm	Hydrocarbon Odour/ Dup01 and Split01 collected
	0.90			Fill	Gravelly SAND - fine / medium grain size, dark grey, 10% gravel, moist	SB11_2W 0.9 F PID = 47.7 ppm	
Push Tube	1.00			Fill	Gravelly SAND - fine / medium grain size, dark grey, 10% gravel, moist		
	1.20				Borehole SB11_2W terminated at 1.2m		Refusal at 1.2m
	1.5						
	2.0						



SB11_5E

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - fine / medium grain size, brown, 20% gravel, dry	SB11_5E 0.15 F PID = 0.5 ppm	
	0.30			Fill	Gravelly SAND - fine / medium grain size, brown, 10% gravel, dry	SB11_5E 0.3 F PID = 0.5 ppm	
Push Tube	0.50			Fill	Gravelly SAND - fine / medium grain size, grey, 10% gravel, dry	SB11_5E 0.5 F PID = 1.1 ppm	
	0.70			CL	CLAY - low plasticity, dark gry, less than plastic limit	SB11_5E 0.7 N PID = 0.6 ppm	
	1.00			CL	CLAY - low plasticity, grey, less than plastic limit	SB11_5E 1.1 N PID = 0.5 ppm	
	1.10			CL	CLAY - medium plasticity, pale grey, less than plastic limit		
	1.50				Borehole SB11_5E terminated at 1.5m		
	2.0						



SB11_5N

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
		0.15		Fill	Gravelly SAND - fine / medium grain size, pale brown, 30% gravel, dry	SB11_5N 0.15 F PID = 0.2 ppm	
		0.30		Fill	Gravelly SAND - fine / medium grain size, brown, 10% gravel, dry	SB11_5N 0.3 F PID = 0.2 ppm	
		0.50		Fill	SAND - fine / medium grain size, grey, 5% gravel, fine / medium, moist	SB11_5N 0.5 F PID = 125.7 ppm	Hydrocarbon Odour
Push Tube		0.70		CL	CLAY - low plasticity, grey, less than plastic limit	SB11_5N 0.7 N PID = 10.8 ppm	Hydrocarbon Odour/ Dup02 and Split02 collected
		1.0					
		1.10		CL	CLAY - low plasticity, pale grey, less than plastic limit	SB11_5N 1.1 N PID = 7.9 ppm	Hydrocarbon Odour
		1.5			Borehole SB11_5N terminated at 1.5m		
		2.0					



SB11_5S

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - fine grain size, dark brown, dry	SN11_5S 0.15 F PID = 57.8 ppm	Hydrocarbon Odour
	0.30			Fill	Gravelly SAND - fine / medium size grain, dark brown, dry	SB11_5S 0.3 F PID = 30.9 ppm	Hydrocarbon Odour
	0.50			Fill	Gravelly SAND - fine / medium size grain, grey, dry	SB11_5S 0.5 F PID = 109.1 ppm	Hydrocarbon Odour
	0.70			Fill	Sandy GRAVEL - fine / coarse sand grain size	SB11_5S 0.7 F PID = 51.6 ppm	Hydrocarbon Odour
Push Tube	1.20			CL	CLAY - grey, less than plastic limit	SB11_5S 1.2 N PID = 8.1 ppm	
	1.30			CL	CLAY - pale grey, less than plastic limit		
	1.50				Borehole SB11_5S terminated at 1.5m		
	2.0						



SB11_5W

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		Hydrocarbon Odour
	0.15			Fill	Gravelly SAND - fine / medium grain size, dark grey, fine / medium gravel, dry	SB11_5W 0.15 F PID = 11.8 ppm	
	0.30			Fill	Gravelly SAND - fine / medium grain size, dark grey, fine / medium gravel, dry	SB11_5W 0.3 F PID = 64.1 ppm	
Push Tube	0.50			CL	CLAY - medium plasticity, grey, less than plastic limit	SB11_5W 0.5 N PID = 4.8 ppm	
	0.70			CL	CLAY - medium plasticity, pale grey, less than plastic limit	SB11_5W 0.7 N PID = 1.7 ppm	
	1.10			CH	CLAY - high plasticity, pale grey, less than plastic limit	SB11_5W 1.1 N PID = 1.2 ppm	
	1.20			CH	CLAY - high plasticity, pale grey, less than plastic limit		
	1.50				Borehole SB11_5W terminated at 1.5m		
	2.0						



SB23_2E

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 1.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		Dup04 and Split04 collected
	0.15			Fill	Gravelly SAND - fine / medium grain size, dark grey, dry	SB23_2E 0.15 F PID = 1.1 ppm	
Push Tube	0.30			CL	CLAY - low plasticity, grey, less than plastic limit	SB23_2E 0.3 N PID = 1.2 ppm	
	0.50			CL	CLAY - low plasticity, grey, less than plastic limit	SB23_2E 0.5 N PID = 1 ppm	
	0.70			CL	CLAY - medium plasticity, grey, basalt inclusions, less than plastic limit	SB23_2E 0.7 N PID = 1.9 ppm	
	0.90			CL	CLAY - medium plasticity, grey, basalt inclusions, less than plastic limit	SB23_2E 1.0 N PID = 1 ppm	
	1.00			CL	CLAY - medium plasticity, grey, basalt inclusions, wet		
	1.50				Borehole SB23_2E terminated at 1.5m		
	2.0						



SB23_2N

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 0.6

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - fine grain size, pale grey, 20% gravel, dry	SB23_2N 0.15 F PID = 1.2 ppm	
	0.30			CL	CLAY - dark grey, less than plastic limit	SB23_2N 0.3 N PID = 105.7 ppm	Slight Hydrocarbon Odour
	0.50			CL	CLAY - dark grey, less than plastic limit	SB23_2N 0.5 N PID = 17.5 ppm	Slight Hydrocarbon Odour
	0.55			CL	CLAY - dark grey, less than plastic limit		
	0.60				Borehole SB23_2N terminated at 0.6m		Refusal at 0.6 m on basalt
	1.0						
	1.5						
	2.0						



SB23_2S

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 0.6

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - brown, dry	SB23_2S 0.15 F PID = 1.2 ppm	
	0.30			Fill	Gravelly CLAY - low plasticity, dark brown, less than plastic limit	SB23_2S 0.3 F PID = 3.8 ppm	
	0.40			Fill	Gravelly CLAY - low plasticity, dark brown, less than plastic limit	SB23_2S 0.5 F PID = 3.2 ppm	
	0.5						
	0.60				Borehole SB23_2S terminated at 0.6m		
	1.0						
	1.5						
	2.0						



SB23_2W

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 1.2

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		Refusal on Basalt at 1.2m
	0.15			Fill	Gravelly SAND - fine / medium grain size, dark grey, dry	SB23_2W 0.15 F PID = 0.6 ppm	
	0.30			Fill	Sandy Gravelly CLAY - low plasticity, brown, dry	SB23_2W 0.3 F PID = 0.7 ppm	
Push Tube	0.50			CL	CLAY - low plasticity, grey, less than plastic limit	SB23_2W 0.5 N PID = 3.5 ppm	
	0.70			CL	CLAY - low plasticity, grey, less than plastic limit	SB23_2W 0.7 N PID = 1 ppm	
	1.00			CL	CLAY - low plasticity, grey, less than plastic limit	SB23_2W 1.0 N PID = 0.9 ppm	
	1.10			BASALT	BASALT		
	1.20				Borehole SB23_2W terminated at 1.2m		
	1.5						
	2.0						



SB23_5E

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 0.5

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - fine sand grain size, pale grey, 20% gravel, fine / medium gravel, dry	SB23_5E 0.15 F PID = 0.7 ppm	
	0.30			Fill	Gravelly SAND - fine sand grain size, pale grey, 20% gravel, fine / medium gravel, dry	SB23_5E 0.3 F PID = 1.4 ppm	
Push Tube	0.40			Fill	Gravelly Clayey SAND - fine sand grain size, pale grey, 20% gravel, fine / medium gravel, dry		
	0.45			BASALT	BASALT	SB23_5E 0.4 F PID = 0.3 ppm	
	0.50				Borehole SB23_5E terminated at 0.5m		Refusal on Basalt at 0.5m
	1.0						
	1.5						
	2.0						



SB23_5N

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 0.8

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - fine grain size, pale grey, 20% gravel, fine / medium gravel , dry	SB23_5N 0.15 F PID = 0.9 ppm	
	0.30			Fill	Gravelly Clayey SAND - fine / medium sand grain size, dark grey, fine / medium gravel, dry	SB23_5N 0.3 F PID = 0.8 ppm	
	0.50			CL	CLAY - low plasticity, dark grey, fine / medium, less than plastic limit	SB23_5S 0.5 N PID = 0.8 ppm	
						SB23_5N 0.6 N PID = 71.8 ppm	
	0.80				Borehole SB23_5N terminated at 0.8m		Dup03 and Split03 collected Slight Hydrocarbon Odour Refusal on Basalt at 0.8m
	1.0						
	1.5						
	2.0						



SB23_5S

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 0.6

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - fine / medium sand grain size, brown, 20% gravel, fine / medium gravel, dry		
	0.30			Fill	Gravelly SAND - fine / medium plasticity, brown, 10% gravel, dry		
	0.40			CL	CLAY - low plasticity, dark brown, less than plastic limit		
	0.50			BASALT	BASALT		
	0.60				Borehole SB23_5S terminated at 0.6m		
	1.0						
	1.5						
	2.0						



SB23_5W

Project Number: 51573

Client: Charter KC

Project Name: Environmental Site Assessment

Site Address: 81 - 95 Burnley Street, Richmond

Date: 12/04/2016

Logged By: M.Close

Contractor: Drill Worx

Total Hole Depth (mbgs): 0.3

Bore Diameter (mm): 100

Eastings (GDA 94):

Northings (GDA 94):

Zone/Area:

Reference Level: Ground Surface

Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Surface / material CONCRETE		
	0.15			Fill	Gravelly SAND - fine grain size, pale grey, 25% fine / medium gravel, dry	SB23_5W 0.15 F PID = 0.7 ppm SB23_5W 0.2 F PID = 1.5 ppm	
	0.20			Fill	Gravelly SAND - fine grain size, pale grey, 25% fine / medium gravel, dry		
Push Tube	0.25			BASALT	BASALT		
	0.30				Borehole SB23_5W terminated at 0.3m		Refusal on Basalt at 0.3m
	0.5						
	1.0						
	1.5						
	2.0						

Appendix G Laboratory Certificates and Chain of Custody Documentation

JBS&G (Australia) Pty Ltd

Abstract

22. Do not use the word "and" in the title.

1509

12505 Street, C.A.S.A. 5704, V6C 2T1
T: 604 272 5800 F: 604 272 5500
E: info@casavancouver.org



CLIENT: DFC		LABORATORY: Sydney M37		LABORATORY BATCH NO.	
SITE/PROJECT NAME: Surina Street		COD Reference: 150001		SAMPLERS	
SEND REPORT TO: BSGS		SEND INVOICE TO: BSGS		PHONE: 08 54177112 FAX: 08 54177115	
DATA NEEDED S/N: Standard Parameters		REPORT NEEDED BY:		REPORT FORMAT: HARD COPY FAX/NO EMAIL YES	
SITE/PROJECT NUMBER: 15191		QUOTE #:		STATE: Victoria	
REQUISITIONED BY:		RECEIVED BY:		METHOD OF SUPPLY:	
NAME: Tom Eddart		DATE: 23/02/15		NAME: <i>Colin...</i> DATE: <i>23/2</i>	
OF: BSGS		TIME: AM		OF: <i>EF...</i> TIME: <i>3:30p</i>	
NAME:		DATE:		DATE:	
OF:		TIME:		TIME:	
P.O. NO.		COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:		ANALYSIS REQUIRED:	
FOR LAB USE ONLY		Please forward results and invoice to: <i>bsg@bsg.com.au</i>		Container Type and Preservation Codes P = Neutral Plastic; H = Heavy Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Jar; S = Solvent Washed Glass Bottle; W = HCl Preserved Vial; PC = HCl Preserved Plastic; PS = Sulphuric Acid Preserved Plastic; SS = Sulphuric Acid Preserved Glass Bottle; Z = Zinc Aspartate Preserved Bottle; S1 = Sodium Phosphate Preserved Plastic; E = EDTA Preserved Bottle; S2 = Sterile Bottle; D = Other.	
COOLER SEAL		Isolam@bsg.com.au			
Yes		No			
Broken		No			
COOLER TEMP		No			
SAMPLE DATA		CONTAINER DATA			
SAMPLE ID	MATRIX	DATE	TYPE	TYPE & PRESERVATIVE	NO. of Tests
SS01	10 F	21/02/15	PU	200 Glass Jar	1
SS01	11 F	21/02/15	PU	200 Glass Jar	1
SS01	15 F	21/02/15	PU	200 Glass Jar	1
SS02	0.14 DN	21/02/15	PU	200 Glass Jar	1
SS02	0.3 DN	21/02/15	PU	200 Glass Jar	1
SS03	0.7 H	21/02/15	PU	200 Glass Jar	1
SS03	1.2 H	21/02/15	PU	200 Glass Jar	1
SS03	0.55 DN	21/02/15	PU	200 Glass Jar	1
SS03	0.5 H	21/02/15	PU	200 Glass Jar	1
SS03	1.1 H	21/02/15	PU	200 Glass Jar	1
SS03	1.2 H	21/02/15	PU	200 Glass Jar	1
SS04	2.10 F	21/02/15	PU	200 Glass Jar	1
SS04	0.4 DN	21/02/15	PU	200 Glass Jar	1
SS04	0.8 DN	21/02/15	PU	200 Glass Jar	1
SS04	1.1 N	21/02/15	PU	200 Glass Jar	1
SS04	1.5 N	21/02/15	PU	200 Glass Jar	1
SS04	2.4 N	21/02/15	PU	200 Glass Jar	1
SS05	2.35 F	21/02/15	PU	200 Glass Jar	1
SS05	2.4 F	21/02/15	PU	200 Glass Jar	1
SS05	2.8 N	21/02/15	PU	200 Glass Jar	1
SS05	1.3 N	21/02/15	PU	200 Glass Jar	1
SS06	0.25 F	21/02/15	PU	200 Glass Jar	1
SS06	1.5 F	21/02/15	PU	200 Glass Jar	1
SS06	2.8 H	21/02/15	PU	200 Glass Jar	1
SS06	1.3 H	21/02/15	PU	200 Glass Jar	1
SS07	0.14 F	21/02/15	PU	200 Glass Jar	1
SS07	1.3 F	21/02/15	PU	200 Glass Jar	1

494208

JBS&G (Australia) Pty Ltd

姓名: _____
 注册编号: "00000" 0000 0000
 1-4 567890 1-2 3456789
 姓名: _____

4100 S. Harbor Blvd. • Suite 200 • San Diego, CA 92106
 Tel: 619 591-6600 • Fax: 619 591-6600

[illegible]

2000

CHAIN OF CUSTODY DOCUMENTATION

JBS&G (Australia) Pty Ltd

Melbourne

31 Dandenong Road, KENDAL VIC 3172
T +61 3 9491 1111 F +61 3 9491 1115
M 08 2843 1111 A 08 2843 1111Melbourne
45 Stokes Street, KENDAL VIC 3172
T +61 3 9491 1111 F +61 3 9491 1115
M 08 2843 1111 A 08 2843 1111

CLIENT CODE		LABORATORY: Eudorah MS		LABORATORY BATCH NO:																				
SITE/PROJECT NAME: Bumbly Street		DOC Reference: M201		SAMPLERS:																				
SEND REPORT TO: JBS&G		SEND INVOICE TO: JBS&G		PHONE: 08 2843 1111 FAX: 08 2843 1115																				
DATA USED BY: Standard Turnaround		REPORT NEEDED BY:		REPORT FORMAT: HARD COPY FAX NO: EMAIL: YES																				
SITE/PROJECT NUMBER: 51572		QUOTE #:		STATE: Victoria																				
RELINQUISHED BY:		RECEIVED BY:		METHOD OF SHIPMENT:																				
NAME: Tom Sabat		NAME: Catherine		DATE: 23/3																				
DATE: 23/3/2014		DATE: 23/3		CONSIGNMENT NOTES:																				
OFF: JBS&G		OFF: Palmer		TIME: 3:30 PM																				
NAME:		NAME:		TRANSPORT CO. NAME:																				
OFF:		OFF:		TIME:																				
P.O. NO.:		CONSENT/SPECIAL HANDLING/STORAGE OR DISPOSAL:		ANALYSIS REQUIRED:																				
FOR LAB USE ONLY		Please forward results and invoice to: abraham@jbsg.com.au		Container Type and Preservative Codes: P = Neutral Plastic Jar, H = Nitric Acid Preserved Jar, S = Solvent Washed Glass Jar, W = Solvent Washed Glass Bottle, YC = HCl Preserved Vial, PC = HCl Preserved Plastic PS = Sulfuric Acid Preserved Plastic, SS = Sulfuric Acid Preserved Glass Bottle, Z = Zinc Acetate Preserved Bottle, ST = Solvent Washed Plastic Preserved Plastic, E = EDTA Preserved Bottle, S = Sterile Bottle, O = Other.																				
COOLER SEAL		Isachan@jbsg.com.au																						
Yes ... No ...		bowler@jbsg.com.au																						
COOLER TEMP: deg C																								
SAMPLE DATA		CONTAINER DATA																						
SAMPLE ID	UNIT	DATE	TIME	TYPE & PRESERVATIVE	NC	CH	MD	TRT	POB	IMPROV Screen	pH	DOC	VOL											NOTES
5514	1.2 N	SOIL	21/03/2014	PM	200 Glass Jar																			
5515	0.12 DN	SOIL	21/03/2014	PM	200 Glass Jar			X																
5516	1.2 N	SOIL	21/03/2014	PM	200 Glass Jar																			
5517	1.4 N	SOIL	21/03/2014	PM	200 Glass Jar																			
5518	1.5 N	SOIL	21/03/2014	PM	200 Glass Jar																			
5519	0.12 DN	SOIL	21/03/2014	PM	200 Glass Jar			X																
5520	1.3 N	SOIL	21/03/2014	PM	200 Glass Jar																			
5521	0.14 DN	SOIL	21/03/2014	PM	200 Glass Jar			X																
5522	0.6 N	SOIL	21/03/2014	PM	200 Glass Jar				X															
5523	0.6 N	SOIL	21/03/2014	PM	200 Glass Jar																			
5524	0.14 F	SOIL	21/03/2014	PM	200 Glass Jar			X																
5525	0.5 N	SOIL	21/03/2014	PM	200 Glass Jar			X	X				X											
5526	1.0 N	SOIL	21/03/2014	PM	200 Glass Jar								X											
5527	0.20 F	SOIL	21/03/2014	PM	200 Glass Jar			X																
5528	0.5 DN	SOIL	21/03/2014	PM	200 Glass Jar				X															
5529	0.2 N	SOIL	21/03/2014	PM	200 Glass Jar																			
5530	1.2 N	SOIL	21/03/2014	PM	200 Glass Jar																			
5531	0.15 F	SOIL	21/03/2014	PM	200 Glass Jar			X																
5532	0.3 N	SOIL	21/03/2014	PM	200 Glass Jar																			
5533	0.15 DN	SOIL	21/03/2014	PM	200 Glass Jar			X																
5534	0.1 N	SOIL	21/03/2014	PM	200 Glass Jar				X															
5535	0.02 DN	SOIL	21/03/2014	PM	200 Glass Jar			X																

494208

CHAIN OF CUSTODY DOCUMENTATION

JBS&G (Australia) Pty Ltd

Address
34 Deagon Drive, Deagon VIC 3207
T +61 3 9421 1111 F +61 3 9421 1111
A/CN 101 220 429 - 101 11 100 220 429

Webcam
45 Sussex Street, KENSINGTON VIC 3015
T +61 3 9421 1600 F +61 3 9421 1600



CLIENT NO:		LABORATORY EQUIPMENT		LABORATORY BATCH NO:										
SITE/PROJECT NAME: Sunny Slope		DOC Reference: M301		SAMPLERS:										
SEND REPORT TO: JBS&G		SEND NOTICE TO: JBS&G		PHONE: 08 6434 7111 FAX: 08 6434 7115										
DATA NEEDED BY: Standard Turnaround		REPORT NEEDED BY:		REPORT FORMAT: HARD COPY FAX/NO EMAIL YES										
SITE/PROJECT NUMBER: 51573		QUOTE #:		STATE: Victoria										
RESUBMITTED BY:		RECEIVED BY:		METHOD OF SHIPMENT:										
NAME: Tim Searan		NAME: <u>Cochrane</u>		DATE: <u>2/11</u>										
OF: JBS&G		OF: <u>EA/Inst</u>		DATE: <u>3-2011</u>										
NAME:		NAME:		DATE:										
OF:		OF:		DATE:										
PRJ NO:		COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:		ANALYSIS REQUIRED:										
FOR LAB USE ONLY:		Please forward results and invoice to: labres/rs@jbsg.com.au		Container Type and Preservative Codes P=Neutral Plastic, N=No Acid Preservative, D=Sodium hydroxide Preserved, J=Solvent Washed Jar, S=Solvent cleaned Glass Bottle, VC=HCl Preserved Vial, PC=HCl Preserved Plastic, PB=Sulfuric Acid Preserved Plastic, BS=Sulfuric Acid Preserved Glass Bottle, Z=Zinc Acetate Preserved Bottle, ST=Sodium Thiosulfate Preserved Plastic, E=EDTA Preserved Bottle, GT=Stainless Steel, O=Other.										
COOLER SEAL:		Yes..... No.....												
Yes..... No.....		Name: <u>rs@jbsg.com.au</u>												
Yes..... No.....		Name: <u>bowler@jbsg.com.au</u>												
COOLER TEMP: deg C		Name: <u>bowler@jbsg.com.au</u>												
SAMPLE DATA				CONTAINER DATA										
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	NO	PH	PCN	W/RECEIVED	SCREEN	PH, DEG, W/RECEIVED	VOC	OTHER	NOTES	
SE25-	0.5 N	SOIL	21/03/2011	PM	250 Glass Jar	1	-	X	X					
SE24-	0.25 IN	SOIL	21/03/2011	PM	250 Glass Jar	1	-	X						
SE24-	0.4 N	SOIL	21/03/2011	PM	250 Glass Jar	1	-		X					
SE24-	0.5 N	SOIL	21/03/2011	PM	250 Glass Jar	1	-							
DUPN1		SOIL	21/03/2011	PM	250 Glass Jar	1	-	X						
DUPN2		SOIL	22/03/2011	PM	250 Glass Jar	1	-	X						
SPLD1		SOIL	21/03/2011	PM	250 Glass Jar	1	-	X						
SPLD2		SOIL	17/03/2011	PM	250 Glass Jar	1	-							
RSW1		WATER	22/03/2011	PM	Amber, metal 2 X 40mL Vial			X						
RSW2		WATER	22/03/2011	PM	Amber, metal 2 X 40mL Vial			X						
TOTAL:						24	12	1	1	2	3	2	2	2

494208

Certificate of Analysis

JBS & G Australia (SA & VIC) P/L
38 Dequetteville Terrace
Kent Town
SA 5067



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: **Jim Bowler**

Report **494208-S**

Project name **BURNLEY STREET**

Project ID **51573**

Received Date **Mar 23, 2016**

Client Sample ID			SB01-0.10 F	SB02-0.14 DN	SB03-0.55 DN	SB03-0.8 N
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23434	M16-Ma23435	M16-Ma23436	M16-Ma23437
Date Sampled			Mar 21, 2016	Mar 22, 2016	Mar 22, 2016	Mar 22, 2016
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	85	1300	-
TRH C29-C36	50	mg/kg	< 50	< 50	920	-
TRH C10-36 (Total)	50	mg/kg	< 50	85	2200	-
Volatile Organics						
1.1-Dichloroethane	0.05	mg/kg	-	-	< 0.05	-
1.1-Dichloroethene	0.05	mg/kg	-	-	< 0.05	-
1.1.1-Trichloroethane	0.05	mg/kg	-	-	< 0.05	-
1.1.1.2-Tetrachloroethane	0.05	mg/kg	-	-	< 0.05	-
1.1.2-Trichloroethane	0.05	mg/kg	-	-	< 0.05	-
1.1.2.2-Tetrachloroethane	0.05	mg/kg	-	-	< 0.05	-
1.2-Dibromoethane	0.05	mg/kg	-	-	< 0.05	-
1.2-Dichlorobenzene	0.05	mg/kg	-	-	< 0.05	-
1.2-Dichloroethane	0.05	mg/kg	-	-	< 0.05	-
1.2-Dichloropropane	0.05	mg/kg	-	-	< 0.05	-
1.2.3-Trichloropropane	0.05	mg/kg	-	-	< 0.05	-
1.2.4-Trimethylbenzene	0.05	mg/kg	-	-	< 0.05	-
1.3-Dichlorobenzene	0.05	mg/kg	-	-	< 0.05	-
1.3-Dichloropropane	0.05	mg/kg	-	-	< 0.05	-
1.3.5-Trimethylbenzene	0.05	mg/kg	-	-	< 0.05	-
1.4-Dichlorobenzene	0.05	mg/kg	-	-	< 0.05	-
2-Butanone (MEK)	0.05	mg/kg	-	-	< 0.05	-
2-Propanone (Acetone)	0.05	mg/kg	-	-	< 0.05	-
4-Chlorotoluene	0.05	mg/kg	-	-	< 0.05	-
4-Methyl-2-pentanone (MIBK)	0.05	mg/kg	-	-	< 0.05	-
Allyl chloride	0.05	mg/kg	-	-	< 0.05	-
Benzene	0.1	mg/kg	-	-	< 0.1	-
Bromobenzene	0.05	mg/kg	-	-	< 0.05	-
Bromochloromethane	0.05	mg/kg	-	-	< 0.05	-
Bromodichloromethane	0.05	mg/kg	-	-	< 0.05	-
Bromoform	0.05	mg/kg	-	-	< 0.05	-
Bromomethane	0.05	mg/kg	-	-	< 0.05	-
Carbon disulfide	0.05	mg/kg	-	-	< 0.05	-
Carbon Tetrachloride	0.05	mg/kg	-	-	< 0.05	-

Client Sample ID			SB01-0.10 F Soil	SB02-0.14 DN Soil	SB03-0.55 DN Soil	SB03-0.8 N Soil
Sample Matrix			M16-Ma23434	M16-Ma23435	M16-Ma23436	M16-Ma23437
Eurofins mgt Sample No.			Mar 21, 2016	Mar 22, 2016	Mar 22, 2016	Mar 22, 2016
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
Chlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Chloroethane	0.05	mg/kg	-	-	< 0.05	-
Chloroform	0.05	mg/kg	-	-	< 0.05	-
Chloromethane	0.05	mg/kg	-	-	< 0.05	-
cis-1.2-Dichloroethene	0.05	mg/kg	-	-	< 0.05	-
cis-1.3-Dichloropropene	0.05	mg/kg	-	-	< 0.05	-
Dibromochloromethane	0.05	mg/kg	-	-	< 0.05	-
Dibromomethane	0.05	mg/kg	-	-	< 0.05	-
Dichlorodifluoromethane	0.05	mg/kg	-	-	< 0.05	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
Iodomethane	0.05	mg/kg	-	-	< 0.05	-
Isopropyl benzene (Cumene)	0.05	mg/kg	-	-	< 0.05	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
Methylene Chloride	0.05	mg/kg	-	-	< 0.05	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Styrene	0.05	mg/kg	-	-	< 0.05	-
Tetrachloroethene	0.05	mg/kg	-	-	< 0.05	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
trans-1.2-Dichloroethene	0.05	mg/kg	-	-	< 0.05	-
trans-1.3-Dichloropropene	0.05	mg/kg	-	-	< 0.05	-
Trichloroethene	0.05	mg/kg	-	-	< 0.05	-
Trichlorofluoromethane	0.05	mg/kg	-	-	< 0.05	-
Vinyl chloride	0.05	mg/kg	-	-	< 0.05	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
Fluorobenzene (surr.)	1	%	-	-	69	-
4-Bromofluorobenzene (surr.)	1	%	-	-	72	-
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 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchloroendate (surr.)	1	%	-	-	-	128
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	102
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	110	2300	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-

Client Sample ID			SB01-0.10 F	SB02-0.14 DN	SB03-0.55 DN	SB03-0.8 N
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23434	M16-Ma23435	M16-Ma23436	M16-Ma23437
Date Sampled			Mar 21, 2016	Mar 22, 2016	Mar 22, 2016	Mar 22, 2016
Test/Reference	LOR	Unit				
% Clay	1	%	15	-	-	-
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	170	-	-	-
pH (1:5 Aqueous extract)	0.1	pH Units	9.4	-	-	-
% Moisture	1	%	14	18	18	19
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	27	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	22	18	8.8	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	8.7	26	31	-
Copper	5	mg/kg	33	21	11	-
Lead	5	mg/kg	71	110	15	-
Mercury	0.1	mg/kg	< 0.1	0.2	< 0.1	-
Nickel	5	mg/kg	10	28	15	-
Zinc	5	mg/kg	57	64	15	-

Client Sample ID			SB03-1.5 N	SB04-0.10 F	SB04-0.8 DN	SB04-2.4 N
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23438	M16-Ma23439	M16-Ma23440	M16-Ma23441
Date Sampled			Mar 22, 2016	Mar 22, 2016	Mar 22, 2016	Mar 22, 2016
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	-	21	< 20
TRH C15-C28	50	mg/kg	1000	-	71	< 50
TRH C29-C36	50	mg/kg	650	-	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	1700	-	92	< 50
Volatile Organics						
1.1-Dichloroethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.1-Dichloroethene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.1.1-Trichloroethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.1.1.2-Tetrachloroethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.1.2-Trichloroethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.1.2.2-Tetrachloroethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.2-Dibromoethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.2-Dichloroethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.2-Dichloropropane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.2.3-Trichloropropane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.2.4-Trimethylbenzene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.3-Dichloropropane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.3.5-Trimethylbenzene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
2-Butanone (MEK)	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
2-Propanone (Acetone)	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
4-Chlorotoluene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
4-Methyl-2-pentanone (MIBK)	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05

Client Sample ID			SB03-1.5 N	SB04-0.10 F	SB04-0.8 DN	SB04-2.4 N
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23438	M16-Ma23439	M16-Ma23440	M16-Ma23441
Date Sampled			Mar 22, 2016	Mar 22, 2016	Mar 22, 2016	Mar 22, 2016
Test/Reference	LOR	Unit				
Volatile Organics						
Allyl chloride	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Bromobenzene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Bromochloromethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Bromodichloromethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Bromoform	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Bromomethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Carbon disulfide	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Carbon Tetrachloride	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Chlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Chloroethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Chloroform	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Chloromethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
cis-1.2-Dichloroethene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
cis-1.3-Dichloropropene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Dibromochloromethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Dibromomethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Dichlorodifluoromethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Iodomethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Isopropyl benzene (Cumene)	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Methylene Chloride	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Styrene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Tetrachloroethene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
trans-1.3-Dichloropropene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Trichloroethene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Trichlorofluoromethane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Vinyl chloride	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Xylenes - Total	0.3	mg/kg	< 0.3	-	< 0.3	< 0.3
Fluorobenzene (surr.)	1	%	84	-	87	59
4-Bromofluorobenzene (surr.)	1	%	78	-	89	62
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 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	56	< 50
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1232	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1242	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1248	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1254	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1260	0.1	mg/kg	-	< 0.1	-	-
Total PCB*	0.1	mg/kg	-	< 0.1	-	-

Client Sample ID			SB03-1.5 N	SB04-0.10 F	SB04-0.8 DN	SB04-2.4 N
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23438	M16-Ma23439	M16-Ma23440	M16-Ma23441
Date Sampled			Mar 22, 2016	Mar 22, 2016	Mar 22, 2016	Mar 22, 2016
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Dibutylchloredate (surr.)	1	%	-	92	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	124	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	-	56	< 50
TRH >C16-C34	100	mg/kg	1700	-	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	-	< 100	< 100
% Moisture	1	%	19	16	20	18
Heavy Metals						
Arsenic	2	mg/kg	8.8	-	8.6	< 2
Cadmium	0.4	mg/kg	< 0.4	-	< 0.4	< 0.4
Chromium	5	mg/kg	27	-	27	14
Copper	5	mg/kg	7.1	-	8.1	< 5
Lead	5	mg/kg	11	-	22	5.5
Mercury	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Nickel	5	mg/kg	17	-	15	8.8
Zinc	5	mg/kg	13	-	37	7.2

Client Sample ID			SB05-0.25 F	SB06-0.25 F	SB07-0.14 F	SB07-0.65 N
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23442	M16-Ma23443	M16-Ma23444	M16-Ma23445
Date Sampled			Mar 21, 2016	Mar 21, 2016	Mar 21, 2016	Mar 21, 2016
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	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	410	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	150	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	560	< 50
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 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	-	-	-
Total PCB*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchloredate (surr.)	1	%	78	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	113	-	-	-

Client Sample ID			SB05-0.25 F	SB06-0.25 F	SB07-0.14 F	SB07-0.65 N
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23442	M16-Ma23443	M16-Ma23444	M16-Ma23445
Date Sampled			Mar 21, 2016	Mar 21, 2016	Mar 21, 2016	Mar 21, 2016
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	580	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
% Moisture	1	%	9.7	12	13	13
Heavy Metals						
Arsenic	2	mg/kg	21	21	11	13
Cadmium	0.4	mg/kg	< 0.4	< 0.4	2.8	< 0.4
Chromium	5	mg/kg	24	23	120	15
Copper	5	mg/kg	60	48	87	12
Lead	5	mg/kg	23	21	51	170
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	110	77	51	11
Zinc	5	mg/kg	41	81	480	96

Client Sample ID			SB08-0.12 F	SB09-0.10 DN	SB10-0.6 DN	SB10-1.2 N
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23446	M16-Ma23447	M16-Ma23448	M16-Ma23449
Date Sampled			Mar 21, 2016	Mar 22, 2016	Mar 22, 2016	Mar 22, 2016
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	21	-	750
TRH C15-C28	50	mg/kg	440	860	-	920
TRH C29-C36	50	mg/kg	150	290	-	150
TRH C10-36 (Total)	50	mg/kg	590	1200	-	1800
Volatile Organics						
1.1-Dichloroethane	0.05	mg/kg	-	-	-	< 0.05
1.1-Dichloroethene	0.05	mg/kg	-	-	-	< 0.05
1.1.1-Trichloroethane	0.05	mg/kg	-	-	-	< 0.05
1.1.1.2-Tetrachloroethane	0.05	mg/kg	-	-	-	< 0.05
1.1.2-Trichloroethane	0.05	mg/kg	-	-	-	< 0.05
1.1.2.2-Tetrachloroethane	0.05	mg/kg	-	-	-	< 0.05
1.2-Dibromoethane	0.05	mg/kg	-	-	-	< 0.05
1.2-Dichlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.2-Dichloroethane	0.05	mg/kg	-	-	-	< 0.05
1.2-Dichloropropane	0.05	mg/kg	-	-	-	< 0.05
1.2.3-Trichloropropane	0.05	mg/kg	-	-	-	< 0.05
1.2.4-Trimethylbenzene	0.05	mg/kg	-	-	-	0.09
1.3-Dichlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.3-Dichloropropane	0.05	mg/kg	-	-	-	< 0.05
1.3.5-Trimethylbenzene	0.05	mg/kg	-	-	-	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	-	-	-	< 0.05
2-Butanone (MEK)	0.05	mg/kg	-	-	-	< 0.05
2-Propanone (Acetone)	0.05	mg/kg	-	-	-	< 0.05
4-Chlorotoluene	0.05	mg/kg	-	-	-	< 0.05
4-Methyl-2-pentanone (MIBK)	0.05	mg/kg	-	-	-	< 0.05
Allyl chloride	0.05	mg/kg	-	-	-	< 0.05

Client Sample ID			SB08-0.12 F Soil M16-Ma23446 Mar 21, 2016	SB09-0.10 DN Soil M16-Ma23447 Mar 22, 2016	SB10-0.6 DN Soil M16-Ma23448 Mar 22, 2016	SB10-1.2 N Soil M16-Ma23449 Mar 22, 2016
Sample Matrix						
Eurofins mgt Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Bromobenzene	0.05	mg/kg	-	-	-	< 0.05
Bromochloromethane	0.05	mg/kg	-	-	-	< 0.05
Bromodichloromethane	0.05	mg/kg	-	-	-	< 0.05
Bromoform	0.05	mg/kg	-	-	-	< 0.05
Bromomethane	0.05	mg/kg	-	-	-	< 0.05
Carbon disulfide	0.05	mg/kg	-	-	-	< 0.05
Carbon Tetrachloride	0.05	mg/kg	-	-	-	< 0.05
Chlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Chloroethane	0.05	mg/kg	-	-	-	< 0.05
Chloroform	0.05	mg/kg	-	-	-	< 0.05
Chloromethane	0.05	mg/kg	-	-	-	< 0.05
cis-1.2-Dichloroethene	0.05	mg/kg	-	-	-	< 0.05
cis-1.3-Dichloropropene	0.05	mg/kg	-	-	-	< 0.05
Dibromochloromethane	0.05	mg/kg	-	-	-	< 0.05
Dibromomethane	0.05	mg/kg	-	-	-	< 0.05
Dichlorodifluoromethane	0.05	mg/kg	-	-	-	< 0.05
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
Iodomethane	0.05	mg/kg	-	-	-	< 0.05
Isopropyl benzene (Cumene)	0.05	mg/kg	-	-	-	< 0.05
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
Methylene Chloride	0.05	mg/kg	-	-	-	< 0.05
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Styrene	0.05	mg/kg	-	-	-	< 0.05
Tetrachloroethene	0.05	mg/kg	-	-	-	< 0.05
Toluene	0.1	mg/kg	-	-	-	< 0.1
trans-1.2-Dichloroethene	0.05	mg/kg	-	-	-	< 0.05
trans-1.3-Dichloropropene	0.05	mg/kg	-	-	-	< 0.05
Trichloroethene	0.05	mg/kg	-	-	-	< 0.05
Trichlorofluoromethane	0.05	mg/kg	-	-	-	< 0.05
Vinyl chloride	0.05	mg/kg	-	-	-	< 0.05
Xylenes - Total	0.3	mg/kg	-	-	-	< 0.3
Fluorobenzene (surr.)	1	%	-	-	-	67
4-Bromofluorobenzene (surr.)	1	%	-	-	-	70
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 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	-	800
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	-
Total PCB*	0.1	mg/kg	-	-	< 0.1	-
Dibutylchloroendate (surr.)	1	%	-	-	83	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	97	-

Client Sample ID			SB08-0.12 F	SB09-0.10 DN	SB10-0.6 DN	SB10-1.2 N
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23446	M16-Ma23447	M16-Ma23448	M16-Ma23449
Date Sampled			Mar 21, 2016	Mar 22, 2016	Mar 22, 2016	Mar 22, 2016
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	-	800
TRH >C16-C34	100	mg/kg	600	1200	-	1100
TRH >C34-C40	100	mg/kg	< 100	< 100	-	< 100
% Moisture	1	%	12	17	9.4	24
Heavy Metals						
Arsenic	2	mg/kg	8.2	15	-	15
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	6.5	21	-	42
Copper	5	mg/kg	8.7	41	-	10
Lead	5	mg/kg	40	430	-	16
Mercury	0.1	mg/kg	< 0.1	0.5	-	< 0.1
Nickel	5	mg/kg	< 5	16	-	18
Zinc	5	mg/kg	24	600	-	19

Client Sample ID			SB10-2.4 N	^{G01} SB11-0.5 F	SB12-0.16 F	SB13-0.11 F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23450	M16-Ma23451	M16-Ma23452	M16-Ma23453
Date Sampled			Mar 22, 2016	Mar 21, 2016	Mar 21, 2016	Mar 21, 2016
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 100	< 20	< 20
TRH C10-C14	20	mg/kg	120	3200	< 20	< 20
TRH C15-C28	50	mg/kg	74	9900	470	< 50
TRH C29-C36	50	mg/kg	< 50	160	140	< 50
TRH C10-36 (Total)	50	mg/kg	190	13000	610	< 50
Volatile Organics						
1,2,4-Trichlorobenzene	0.2	mg/kg	-	< 0.25	-	-
Hexachlorobutadiene	0.2	mg/kg	-	< 0.25	-	-
1,1-Dichloroethane	0.05	mg/kg	< 0.05	< 0.25	-	-
1,1-Dichloroethene	0.05	mg/kg	< 0.05	< 0.25	-	-
1,1,1-Trichloroethane	0.05	mg/kg	< 0.05	< 0.25	-	-
1,1,1,2-Tetrachloroethane	0.05	mg/kg	< 0.05	< 0.25	-	-
1,1,2-Trichloroethane	0.05	mg/kg	< 0.05	< 0.25	-	-
1,1,2,2-Tetrachloroethane	0.05	mg/kg	< 0.05	< 0.25	-	-
1,2-Dibromoethane	0.05	mg/kg	< 0.05	< 0.25	-	-
1,2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.25	-	-
1,2-Dichloroethane	0.05	mg/kg	< 0.05	< 0.25	-	-
1,2-Dichloropropane	0.05	mg/kg	< 0.05	< 0.25	-	-
1,2,3-Trichloropropane	0.05	mg/kg	< 0.05	< 0.25	-	-
1,2,4-Trimethylbenzene	0.05	mg/kg	2.9	6.3	-	-
1,3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.25	-	-
1,3-Dichloropropane	0.05	mg/kg	< 0.05	< 0.25	-	-
1,3,5-Trimethylbenzene	0.05	mg/kg	0.49	1.4	-	-
1,4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.25	-	-
2-Butanone (MEK)	0.05	mg/kg	< 0.05	< 0.25	-	-
2-Propanone (Acetone)	0.05	mg/kg	< 0.05	< 0.25	-	-
4-Chlorotoluene	0.05	mg/kg	< 0.05	< 0.25	-	-

Client Sample ID			SB10-2.4 N	G01SB11-0.5 F	SB12-0.16 F	SB13-0.11 F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23450	M16-Ma23451	M16-Ma23452	M16-Ma23453
Date Sampled			Mar 22, 2016	Mar 21, 2016	Mar 21, 2016	Mar 21, 2016
Test/Reference	LOR	Unit				
Volatile Organics						
4-Methyl-2-pentanone (MIBK)	0.05	mg/kg	< 0.05	< 0.25	-	-
Allyl chloride	0.05	mg/kg	< 0.05	< 0.25	-	-
Benzene	0.1	mg/kg	< 0.1	< 0.25	-	-
Bromobenzene	0.05	mg/kg	< 0.05	< 0.25	-	-
Bromochloromethane	0.05	mg/kg	< 0.05	< 0.25	-	-
Bromodichloromethane	0.05	mg/kg	< 0.05	< 0.25	-	-
Bromoform	0.05	mg/kg	< 0.05	< 0.25	-	-
Bromomethane	0.05	mg/kg	< 0.05	< 0.25	-	-
Carbon disulfide	0.05	mg/kg	< 0.05	< 0.25	-	-
Carbon Tetrachloride	0.05	mg/kg	< 0.05	< 0.25	-	-
Chlorobenzene	0.05	mg/kg	< 0.05	< 0.25	-	-
Chloroethane	0.05	mg/kg	< 0.05	< 0.25	-	-
Chloroform	0.05	mg/kg	< 0.05	< 0.25	-	-
Chloromethane	0.05	mg/kg	< 0.05	< 0.25	-	-
cis-1.2-Dichloroethene	0.05	mg/kg	< 0.05	< 0.25	-	-
cis-1.3-Dichloropropene	0.05	mg/kg	< 0.05	< 0.25	-	-
Dibromochloromethane	0.05	mg/kg	< 0.05	< 0.25	-	-
Dibromomethane	0.05	mg/kg	< 0.05	< 0.25	-	-
Dichlorodifluoromethane	0.05	mg/kg	< 0.05	< 0.25	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	0.6	-	-
Iodomethane	0.05	mg/kg	< 0.05	< 0.25	-	-
Isopropyl benzene (Cumene)	0.05	mg/kg	< 0.1	0.58	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	0.8	-	-
Methylene Chloride	0.05	mg/kg	< 0.05	< 0.25	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.25	-	-
Styrene	0.05	mg/kg	< 0.05	< 0.25	-	-
Tetrachloroethene	0.05	mg/kg	< 0.05	< 0.25	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.25	-	-
trans-1.2-Dichloroethene	0.05	mg/kg	< 0.05	< 0.25	-	-
trans-1.3-Dichloropropene	0.05	mg/kg	< 0.05	< 0.25	-	-
Trichloroethene	0.05	mg/kg	< 0.05	< 0.25	-	-
Trichlorofluoromethane	0.05	mg/kg	< 0.05	< 0.25	-	-
Vinyl chloride	0.05	mg/kg	< 0.05	< 0.25	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	1.0	-	-
Fluorobenzene (surr.)	1	%	63	79	-	-
4-Bromofluorobenzene (surr.)	1	%	68	86	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	0.7	7.5	1.6	< 0.5
TRH C6-C10	20	mg/kg	34	< 100	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	34	< 100	< 20	< 20
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	120	6300	< 50	< 50
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	-	-
Acenaphthene	0.5	mg/kg	-	< 5	-	-
Acenaphthylene	0.5	mg/kg	-	< 1	-	-
Anthracene	0.5	mg/kg	-	1.0	-	-
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID			SB10-2.4 N	G01SB11-0.5 F	SB12-0.16 F	SB13-0.11 F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23450	M16-Ma23451	M16-Ma23452	M16-Ma23453
Date Sampled			Mar 22, 2016	Mar 21, 2016	Mar 21, 2016	Mar 21, 2016
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	-	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	-	< 0.5	-	-
Benzo(g,h,i)perylene	0.5	mg/kg	-	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Chrysene	0.5	mg/kg	-	< 0.5	-	-
Dibenz(a,h)anthracene	0.5	mg/kg	-	< 0.5	-	-
Fluoranthene	0.5	mg/kg	-	0.7	-	-
Fluorene	0.5	mg/kg	-	8.1	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	-	-
Naphthalene	0.5	mg/kg	-	2.7	-	-
Phenanthrene	0.5	mg/kg	-	8.3	-	-
Pyrene	0.5	mg/kg	-	1.5	-	-
Total PAH*	0.5	mg/kg	-	22	-	-
2-Fluorobiphenyl (surr.)	1	%	-	113	-	-
p-Terphenyl-d14 (surr.)	1	%	-	104	-	-
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	-	-
α-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.1	-	-
β-BHC	0.05	mg/kg	-	< 0.05	-	-
δ-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	-	-
γ-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	0.05	mg/kg	-	< 0.05	-	-
Toxaphene	1	mg/kg	-	< 1	-	-
Dibutylchloroendate (surr.)	1	%	-	80	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	97	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1232	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1242	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1248	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1254	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1260	0.1	mg/kg	-	< 0.1	< 0.1	-
Total PCB*	0.1	mg/kg	-	< 0.1	< 0.1	-
Dibutylchloroendate (surr.)	1	%	-	80	136	-
Tetrachloro-m-xylene (surr.)	1	%	-	97	109	-

Client Sample ID			SB10-2.4 N	G01SB11-0.5 F	SB12-0.16 F	SB13-0.11 F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23450	M16-Ma23451	M16-Ma23452	M16-Ma23453
Date Sampled			Mar 22, 2016	Mar 21, 2016	Mar 21, 2016	Mar 21, 2016
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	-	-
2,4-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
2,4,5-Trichlorophenol	1.0	mg/kg	-	< 1	-	-
2,4,6-Trichlorophenol	1.0	mg/kg	-	< 1	-	-
2,6-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
4-Chloro-3-methylphenol	1.0	mg/kg	-	< 1	-	-
Pentachlorophenol	1.0	mg/kg	-	< 1	-	-
Tetrachlorophenols - Total	1.0	mg/kg	-	< 1	-	-
Total Halogenated Phenol*	1	mg/kg	-	< 1	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	-	< 20	-	-
2-Methyl-4,6-dinitrophenol	5	mg/kg	-	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	-	-
2-Nitrophenol	1.0	mg/kg	-	< 1	-	-
2,4-Dimethylphenol	0.5	mg/kg	-	< 0.5	-	-
2,4-Dinitrophenol	5	mg/kg	-	< 5	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	-	-
4-Nitrophenol	5	mg/kg	-	< 5	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-	-
Phenol-d6 (surr.)	1	%	-	115	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	120	6300	50	< 50
TRH >C16-C34	100	mg/kg	< 100	7500	610	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
% Clay	1	%	-	7.5	-	-
Chromium (hexavalent)	1	mg/kg	-	< 1	-	-
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	-	240	-	-
Cyanide (total)	5	mg/kg	-	< 5	-	-
Fluoride	100	mg/kg	-	290	-	-
pH (1:5 Aqueous extract)	0.1	pH Units	-	9.3	-	-
% Moisture	1	%	23	14	14	9.6
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	-	33	-	-
Heavy Metals						
Arsenic	2	mg/kg	6.3	16	18	27
Cadmium	0.4	mg/kg	< 0.4	4.6	0.5	< 0.4
Chromium	5	mg/kg	42	15	24	26
Copper	5	mg/kg	7.2	2500	71	55
Lead	5	mg/kg	8.1	750	65	26
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	-	< 10	-	-
Nickel	5	mg/kg	20	47	51	110
Selenium	2	mg/kg	-	< 2	-	-
Silver	5	mg/kg	-	< 5	-	-
Tin	10	mg/kg	-	150	-	-
Zinc	5	mg/kg	15	1700	110	41

Client Sample ID			SB13-0.4 F	SB14-0.18 F	SB15-0.12 DN	SB16-0.10 DN
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23454	M16-Ma23455	M16-Ma23456	M16-Ma23457
Date Sampled			Mar 21, 2016	Mar 21, 2016	Mar 21, 2016	Mar 22, 2016
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	-	140	70	< 50
TRH C29-C36	50	mg/kg	-	160	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	-	300	70	< 50
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 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	< 50	< 50
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	-	-	-
Total PCB*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchloroendate (surr.)	1	%	128	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	112	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	280	120	< 100
TRH >C34-C40	100	mg/kg	-	120	< 100	< 100
% Moisture	1	%	6.9	19	22	20
Heavy Metals						
Arsenic	2	mg/kg	-	14	8.0	8.4
Cadmium	0.4	mg/kg	-	0.8	< 0.4	< 0.4
Chromium	5	mg/kg	-	38	32	33
Copper	5	mg/kg	-	670	22	10
Lead	5	mg/kg	-	430	810	18
Mercury	0.1	mg/kg	-	< 0.1	0.2	< 0.1
Nickel	5	mg/kg	-	25	30	19
Zinc	5	mg/kg	-	650	170	32

Client Sample ID			SB17-0.14 DN Soil	SB17-0.5 N Soil	SB18-0.14 F Soil	SB18-0.5 N Soil
Sample Matrix			M16-Ma23458	M16-Ma23459	M16-Ma23460	M16-Ma23461
Eurofins mgt Sample No.			Mar 22, 2016	Mar 22, 2016	Mar 22, 2016	Mar 22, 2016
Date Sampled						
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	-	25	300
TRH C15-C28	50	mg/kg	310	-	370	1700
TRH C29-C36	50	mg/kg	120	-	130	280
TRH C10-36 (Total)	50	mg/kg	430	-	530	2300
Volatile Organics						
1.1-Dichloroethane	0.05	mg/kg	-	-	-	< 0.05
1.1-Dichloroethene	0.05	mg/kg	-	-	-	< 0.05
1.1.1-Trichloroethane	0.05	mg/kg	-	-	-	< 0.05
1.1.1.2-Tetrachloroethane	0.05	mg/kg	-	-	-	< 0.05
1.1.2-Trichloroethane	0.05	mg/kg	-	-	-	< 0.05
1.1.2.2-Tetrachloroethane	0.05	mg/kg	-	-	-	< 0.05
1.2-Dibromoethane	0.05	mg/kg	-	-	-	< 0.05
1.2-Dichlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.2-Dichloroethane	0.05	mg/kg	-	-	-	< 0.05
1.2-Dichloropropane	0.05	mg/kg	-	-	-	< 0.05
1.2.3-Trichloropropane	0.05	mg/kg	-	-	-	< 0.05
1.2.4-Trimethylbenzene	0.05	mg/kg	-	-	-	0.07
1.3-Dichlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.3-Dichloropropane	0.05	mg/kg	-	-	-	< 0.05
1.3.5-Trimethylbenzene	0.05	mg/kg	-	-	-	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	-	-	-	< 0.05
2-Butanone (MEK)	0.05	mg/kg	-	-	-	< 0.05
2-Propanone (Acetone)	0.05	mg/kg	-	-	-	< 0.05
4-Chlorotoluene	0.05	mg/kg	-	-	-	< 0.05
4-Methyl-2-pentanone (MIBK)	0.05	mg/kg	-	-	-	< 0.05
Allyl chloride	0.05	mg/kg	-	-	-	< 0.05
Benzene	0.1	mg/kg	-	-	-	< 0.1
Bromobenzene	0.05	mg/kg	-	-	-	< 0.05
Bromochloromethane	0.05	mg/kg	-	-	-	< 0.05
Bromodichloromethane	0.05	mg/kg	-	-	-	< 0.05
Bromoform	0.05	mg/kg	-	-	-	< 0.05
Bromomethane	0.05	mg/kg	-	-	-	< 0.05
Carbon disulfide	0.05	mg/kg	-	-	-	< 0.05
Carbon Tetrachloride	0.05	mg/kg	-	-	-	< 0.05
Chlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Chloroethane	0.05	mg/kg	-	-	-	< 0.05
Chloroform	0.05	mg/kg	-	-	-	< 0.05
Chloromethane	0.05	mg/kg	-	-	-	< 0.05
cis-1.2-Dichloroethene	0.05	mg/kg	-	-	-	< 0.05
cis-1.3-Dichloropropene	0.05	mg/kg	-	-	-	< 0.05
Dibromochloromethane	0.05	mg/kg	-	-	-	< 0.05
Dibromomethane	0.05	mg/kg	-	-	-	< 0.05
Dichlorodifluoromethane	0.05	mg/kg	-	-	-	< 0.05
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
Iodomethane	0.05	mg/kg	-	-	-	< 0.05
Isopropyl benzene (Cumene)	0.05	mg/kg	-	-	-	< 0.05
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
Methylene Chloride	0.05	mg/kg	-	-	-	< 0.05

Client Sample ID			SB17-0.14 DN Soil	SB17-0.5 N Soil	SB18-0.14 F Soil	SB18-0.5 N Soil
Sample Matrix			M16-Ma23458	M16-Ma23459	M16-Ma23460	M16-Ma23461
Eurofins mgt Sample No.			Mar 22, 2016	Mar 22, 2016	Mar 22, 2016	Mar 22, 2016
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Styrene	0.05	mg/kg	-	-	-	< 0.05
Tetrachloroethene	0.05	mg/kg	-	-	-	< 0.05
Toluene	0.1	mg/kg	-	-	-	< 0.1
trans-1.2-Dichloroethene	0.05	mg/kg	-	-	-	< 0.05
trans-1.3-Dichloropropene	0.05	mg/kg	-	-	-	< 0.05
Trichloroethene	0.05	mg/kg	-	-	-	< 0.05
Trichlorofluoromethane	0.05	mg/kg	-	-	-	< 0.05
Vinyl chloride	0.05	mg/kg	-	-	-	< 0.05
Xylenes - Total	0.3	mg/kg	-	-	-	< 0.3
Fluorobenzene (surr.)	1	%	-	-	-	68
4-Bromofluorobenzene (surr.)	1	%	-	-	-	67
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 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	< 50	400
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	< 0.1	-	< 0.1
Total PCB*	0.1	mg/kg	-	< 0.1	-	< 0.1
Dibutylchloroendate (surr.)	1	%	-	127	-	115
Tetrachloro-m-xylene (surr.)	1	%	-	121	-	116
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	-	< 50	400
TRH >C16-C34	100	mg/kg	430	-	510	2000
TRH >C34-C40	100	mg/kg	< 100	-	< 100	< 100
% Moisture	1	%	16	22	18	21
Heavy Metals						
Arsenic	2	mg/kg	24	-	12	8.0
Cadmium	0.4	mg/kg	< 0.4	-	< 0.4	< 0.4
Chromium	5	mg/kg	42	-	32	63
Copper	5	mg/kg	130	-	51	10.0
Lead	5	mg/kg	660	-	74	20
Mercury	0.1	mg/kg	2.9	-	< 0.1	< 0.1
Nickel	5	mg/kg	31	-	42	50
Zinc	5	mg/kg	410	-	200	550

Client Sample ID			SB18-1.0 N	SB19-0.20 F	SB19-0.5 DN	SB20-0.15 F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23462	M16-Ma23463	M16-Ma23464	M16-Ma23465
Date Sampled			Mar 22, 2016	Mar 21, 2016	Mar 21, 2016	Mar 21, 2016
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	-	290	-	< 50
TRH C29-C36	50	mg/kg	-	240	-	< 50
TRH C10-36 (Total)	50	mg/kg	-	530	-	< 50
Volatile Organics						
1.1-Dichloroethane	0.05	mg/kg	< 0.05	-	-	-
1.1-Dichloroethene	0.05	mg/kg	< 0.05	-	-	-
1.1.1-Trichloroethane	0.05	mg/kg	< 0.05	-	-	-
1.1.1.2-Tetrachloroethane	0.05	mg/kg	< 0.05	-	-	-
1.1.2-Trichloroethane	0.05	mg/kg	< 0.05	-	-	-
1.1.2.2-Tetrachloroethane	0.05	mg/kg	< 0.05	-	-	-
1.2-Dibromoethane	0.05	mg/kg	< 0.05	-	-	-
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05	-	-	-
1.2-Dichloroethane	0.05	mg/kg	< 0.05	-	-	-
1.2-Dichloropropane	0.05	mg/kg	< 0.05	-	-	-
1.2.3-Trichloropropane	0.05	mg/kg	< 0.05	-	-	-
1.2.4-Trimethylbenzene	0.05	mg/kg	< 0.05	-	-	-
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05	-	-	-
1.3-Dichloropropane	0.05	mg/kg	< 0.05	-	-	-
1.3.5-Trimethylbenzene	0.05	mg/kg	< 0.05	-	-	-
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05	-	-	-
2-Butanone (MEK)	0.05	mg/kg	< 0.05	-	-	-
2-Propanone (Acetone)	0.05	mg/kg	< 0.05	-	-	-
4-Chlorotoluene	0.05	mg/kg	< 0.05	-	-	-
4-Methyl-2-pentanone (MIBK)	0.05	mg/kg	< 0.05	-	-	-
Allyl chloride	0.05	mg/kg	< 0.05	-	-	-
Benzene	0.1	mg/kg	< 0.1	-	-	-
Bromobenzene	0.05	mg/kg	< 0.05	-	-	-
Bromochloromethane	0.05	mg/kg	< 0.05	-	-	-
Bromodichloromethane	0.05	mg/kg	< 0.05	-	-	-
Bromoform	0.05	mg/kg	< 0.05	-	-	-
Bromomethane	0.05	mg/kg	< 0.05	-	-	-
Carbon disulfide	0.05	mg/kg	< 0.05	-	-	-
Carbon Tetrachloride	0.05	mg/kg	< 0.05	-	-	-
Chlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Chloroethane	0.05	mg/kg	< 0.05	-	-	-
Chloroform	0.05	mg/kg	< 0.05	-	-	-
Chloromethane	0.05	mg/kg	< 0.05	-	-	-
cis-1.2-Dichloroethene	0.05	mg/kg	< 0.05	-	-	-
cis-1.3-Dichloropropene	0.05	mg/kg	< 0.05	-	-	-
Dibromochloromethane	0.05	mg/kg	< 0.05	-	-	-
Dibromomethane	0.05	mg/kg	< 0.05	-	-	-
Dichlorodifluoromethane	0.05	mg/kg	< 0.05	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
Iodomethane	0.05	mg/kg	< 0.05	-	-	-
Isopropyl benzene (Cumene)	0.05	mg/kg	< 0.05	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
Methylene Chloride	0.05	mg/kg	< 0.05	-	-	-

Client Sample ID			SB18-1.0 N	SB19-0.20 F	SB19-0.5 DN	SB20-0.15 F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23462	M16-Ma23463	M16-Ma23464	M16-Ma23465
Date Sampled			Mar 22, 2016	Mar 21, 2016	Mar 21, 2016	Mar 21, 2016
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Styrene	0.05	mg/kg	< 0.05	-	-	-
Tetrachloroethene	0.05	mg/kg	< 0.05	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
trans-1.2-Dichloroethene	0.05	mg/kg	< 0.05	-	-	-
trans-1.3-Dichloropropene	0.05	mg/kg	< 0.05	-	-	-
Trichloroethene	0.05	mg/kg	< 0.05	-	-	-
Trichlorofluoromethane	0.05	mg/kg	< 0.05	-	-	-
Vinyl chloride	0.05	mg/kg	< 0.05	-	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	-
Fluorobenzene (surr.)	1	%	68	-	-	-
4-Bromofluorobenzene (surr.)	1	%	66	-	-	-
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 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	-	< 50
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	-
Total PCB*	0.1	mg/kg	-	-	< 0.1	-
Dibutylchloroendate (surr.)	1	%	-	-	123	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	117	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	< 50	-	< 50
TRH >C16-C34	100	mg/kg	-	520	-	< 100
TRH >C34-C40	100	mg/kg	-	< 100	-	< 100
% Moisture	1	%	24	29	16	8.4
Heavy Metals						
Arsenic	2	mg/kg	-	18	-	220
Cadmium	0.4	mg/kg	-	1.1	-	< 0.4
Chromium	5	mg/kg	-	63	-	75
Copper	5	mg/kg	-	190	-	7.0
Lead	5	mg/kg	-	740	-	13
Mercury	0.1	mg/kg	-	1.0	-	< 0.1
Nickel	5	mg/kg	-	35	-	13
Zinc	5	mg/kg	-	930	-	13

Client Sample ID			SB21-0.13 DN	SB22-0.10 DN	SB22-0.3 N	SB23-0.20 DN
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23466	M16-Ma23467	M16-Ma23468	M16-Ma23469
Date Sampled			Mar 22, 2016	Mar 22, 2016	Mar 22, 2016	Mar 21, 2016
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	-	40
TRH C15-C28	50	mg/kg	430	430	-	290
TRH C29-C36	50	mg/kg	240	110	-	120
TRH C10-36 (Total)	50	mg/kg	670	540	-	450
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	-	28
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	-	28
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	-	71
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	-
Total PCB*	0.1	mg/kg	-	-	< 0.1	-
Dibutylchloroendate (surr.)	1	%	-	-	129	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	110	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	-	71
TRH >C16-C34	100	mg/kg	700	530	-	390
TRH >C34-C40	100	mg/kg	< 100	< 100	-	< 100
% Moisture	1	%	4.2	19	20	14
Heavy Metals						
Arsenic	2	mg/kg	8.4	6.9	-	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	190	35	-	23
Copper	5	mg/kg	130	8.1	-	34
Lead	5	mg/kg	64	15	-	17
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Nickel	5	mg/kg	210	23	-	48
Zinc	5	mg/kg	100	17	-	49

Client Sample ID			SB23-0.5 N	SB24-0.20 DN	SB24-0.4 N	DUP01
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ma23470	M16-Ma23471	M16-Ma23472	M16-Ma23473
Date Sampled			Mar 21, 2016	Mar 21, 2016	Mar 21, 2016	Mar 21, 2016
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	160	< 20	-	< 20
TRH C15-C28	50	mg/kg	300	< 50	-	< 50
TRH C29-C36	50	mg/kg	95	< 50	-	< 50
TRH C10-36 (Total)	50	mg/kg	560	< 50	-	< 50
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
TRH C6-C10	20	mg/kg	50	< 20	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	50	< 20	-	< 20
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	200	< 50	-	< 50
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	< 0.1	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	< 0.1	-
Aroclor-1232	0.1	mg/kg	< 0.1	-	< 0.1	-
Aroclor-1242	0.1	mg/kg	< 0.1	-	< 0.1	-
Aroclor-1248	0.1	mg/kg	< 0.1	-	< 0.1	-
Aroclor-1254	0.1	mg/kg	10	-	< 0.1	-
Aroclor-1260	0.1	mg/kg	0.3	-	< 0.1	-
Total PCB*	0.1	mg/kg	10	-	< 0.1	-
Dibutylchloroendate (surr.)	1	%	92	-	100	-
Tetrachloro-m-xylene (surr.)	1	%	124	-	105	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	200	< 50	-	< 50
TRH >C16-C34	100	mg/kg	360	< 100	-	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	-	< 100
% Moisture	1	%	21	16	17	12
Heavy Metals						
Arsenic	2	mg/kg	6.8	11	-	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	55	37	-	29
Copper	5	mg/kg	19	19	-	52
Lead	5	mg/kg	29	90	-	24
Mercury	0.1	mg/kg	< 0.1	0.3	-	< 0.1
Nickel	5	mg/kg	32	19	-	88
Zinc	5	mg/kg	35	88	-	81

Client Sample ID			DUP02
Sample Matrix			Soil
Eurofins mgt Sample No.			M16-Ma23474
Date Sampled			Mar 21, 2016
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	39
TRH C15-C28	50	mg/kg	140
TRH C29-C36	50	mg/kg	< 50
TRH C10-36 (Total)	50	mg/kg	180
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 less Naphthalene (F2) ^{N01}	50	mg/kg	110
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
TRH >C10-C16	50	mg/kg	110
TRH >C16-C34	100	mg/kg	110
TRH >C34-C40	100	mg/kg	< 100
% Moisture	1	%	24
Heavy Metals			
Arsenic	2	mg/kg	7.2
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	28
Copper	5	mg/kg	6.6
Lead	5	mg/kg	21
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	19
Zinc	5	mg/kg	36

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 (regarding both quality and NATA accreditation).

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

Description	Testing Site	Extracted	Holding Time
Vic EPA IWRG 621 (Solids)			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Mar 29, 2016	14 Day
- Method: TRH C6-C36 - LTM-ORG-2010			
Volatile Organics	Melbourne	Mar 24, 2016	7 Day
- Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Mar 24, 2016	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Polycyclic Aromatic Hydrocarbons	Melbourne	Mar 29, 2016	14 Day
- Method: USEPA 8270 Polycyclic Aromatic Hydrocarbons			
Organochlorine Pesticides	Melbourne	Mar 29, 2016	14 Day
- Method: USEPA 8081 Organochlorine Pesticides			
Polychlorinated Biphenyls	Melbourne	Mar 29, 2016	28 Day
- Method: USEPA 8082 Polychlorinated Biphenyls			
Phenols (Halogenated)	Melbourne	Mar 29, 2016	14 Day
- Method: USEPA 8270 Phenols			
Phenols (non-Halogenated)	Melbourne	Mar 29, 2016	14 Day
- Method: USEPA 8270 Phenols			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Mar 29, 2016	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Chromium (hexavalent)	Melbourne	Mar 24, 2016	28 Day
- Method: APHA 3500-Cr Hexavalent Chromium- (Extraction:- USEPA3060)			
Cyanide (total)	Melbourne	Mar 24, 2016	14 Day
- Method: LTM-INO-4020 Total Free WAD Cyanide by CFA			
Fluoride	Melbourne	Mar 31, 2016	28 Day
- Method: NEPC 404 (Fusion followed by ISE)			
pH (1:5 Aqueous extract)	Melbourne	Mar 24, 2016	7 Day
- Method: LTM-GEN-7090 pH in soil by ISE			
IWRG 621 Metals : Metals M12	Melbourne	Mar 24, 2016	28 Day
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
% Clay	Brisbane	Mar 29, 2016	6 Day
- Method: LTM-GEN-7040			
Metals M8	Melbourne	Mar 24, 2016	28 Day
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
Conductivity (1:5 aqueous extract at 25°C)	Melbourne	Mar 24, 2016	7 Day
- Method: LTM-INO-4030			
Ion Exchange Properties	Melbourne	Mar 30, 2016	
% Moisture	Melbourne	Mar 24, 2016	14 Day
- Method: LTM-GEN-7080 Moisture			

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Fax: 08 8431 7115

Received: Mar 23, 2016 3:50 PM
Due: Apr 1, 2016
Priority: 5 Day
Contact Name: Tom Statham

Eurofins | mgt Client Manager: Sarah Gould

Sample Detail					% Clay	HOLD	pH (1:5 Aqueous extract)	Polychlorinated Biphenyls	Metals M8	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	Vic EPA IWRG 621 (Solids)
Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID										
SB01-0.10 F	Mar 21, 2016		Soil	M16-Ma23434	X		X		X		X	X	X	
SB02-0.14 DN	Mar 22, 2016		Soil	M16-Ma23435					X		X		X	
SB03-0.55 DN	Mar 22, 2016		Soil	M16-Ma23436					X	X	X		X	
SB03-0.8 N	Mar 22, 2016		Soil	M16-Ma23437				X			X			
SB03-1.5 N	Mar 22, 2016		Soil	M16-Ma23438					X	X	X		X	
SB04-0.10 F	Mar 22, 2016		Soil	M16-Ma23439				X			X			
SB04-0.8 DN	Mar 22, 2016		Soil	M16-Ma23440					X	X	X		X	
SB04-2.4 N	Mar 22, 2016		Soil	M16-Ma23441					X	X	X		X	
SB05-0.25 F	Mar 21, 2016		Soil	M16-Ma23442				X	X		X		X	

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Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SB06-0.25 F	Mar 21, 2016		Soil	M16-Ma23443					X		X		X	
SB07-0.14 F	Mar 21, 2016		Soil	M16-Ma23444					X		X		X	
SB07-0.65 N	Mar 21, 2016		Soil	M16-Ma23445					X		X		X	
SB08-0.12 F	Mar 21, 2016		Soil	M16-Ma23446					X		X		X	
SB09-0.10 DN	Mar 22, 2016		Soil	M16-Ma23447					X		X		X	
SB10-0.6 DN	Mar 22, 2016		Soil	M16-Ma23448				X			X			
SB10-1.2 N	Mar 22, 2016		Soil	M16-Ma23449					X	X	X		X	
SB10-2.4 N	Mar 22, 2016		Soil	M16-Ma23450					X	X	X		X	
SB11-0.5 F	Mar 21, 2016		Soil	M16-Ma23451	X						X	X		X
SB12-0.16 F	Mar 21, 2016		Soil	M16-Ma23452				X	X		X		X	

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Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SB13-0.11 F	Mar 21, 2016		Soil	M16-Ma23453					X		X		X	
SB13-0.4 F	Mar 21, 2016		Soil	M16-Ma23454				X			X			
SB14-0.18 F	Mar 21, 2016		Soil	M16-Ma23455					X		X		X	
SB15-0.12 DN	Mar 21, 2016		Soil	M16-Ma23456					X		X		X	
SB16-0.10 DN	Mar 22, 2016		Soil	M16-Ma23457					X		X		X	
SB17-0.14 DN	Mar 22, 2016		Soil	M16-Ma23458					X		X		X	
SB17-0.5 N	Mar 22, 2016		Soil	M16-Ma23459				X			X			
SB18-0.14 F	Mar 22, 2016		Soil	M16-Ma23460					X		X		X	
SB18-0.5 N	Mar 22, 2016		Soil	M16-Ma23461				X	X	X	X		X	
SB18-1.0 N	Mar 22, 2016		Soil	M16-Ma23462						X	X			

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Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SB19-0.20 F	Mar 21, 2016		Soil	M16-Ma23463					X		X		X	
SB19-0.5 DN	Mar 21, 2016		Soil	M16-Ma23464				X			X			
SB20-0.15 F	Mar 21, 2016		Soil	M16-Ma23465					X		X		X	
SB21-0.13 DN	Mar 22, 2016		Soil	M16-Ma23466					X		X		X	
SB22-0.10 DN	Mar 22, 2016		Soil	M16-Ma23467					X		X		X	
SB22-0.3 N	Mar 22, 2016		Soil	M16-Ma23468				X			X			
SB23-0.20 DN	Mar 21, 2016		Soil	M16-Ma23469					X		X		X	
SB23-0.5 N	Mar 21, 2016		Soil	M16-Ma23470				X	X		X		X	
SB24-0.20 DN	Mar 21, 2016		Soil	M16-Ma23471					X		X		X	
SB24-0.4 N	Mar 21, 2016		Soil	M16-Ma23472				X			X			

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Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
DUP01	Mar 21, 2016		Soil	M16-Ma23473					X		X		X	
DUP02	Mar 21, 2016		Soil	M16-Ma23474					X		X		X	
RB01	Mar 22, 2016		Water	M16-Ma23475					X				X	
RB02	Mar 22, 2016		Water	M16-Ma23476					X				X	
SB01-0.3 F	Mar 21, 2016		Soil	M16-Ma23477		X								
SB01-0.5 F	Mar 21, 2016		Soil	M16-Ma23478		X								
SB02-0.3 DN	Mar 22, 2016		Soil	M16-Ma23479		X								
SB02-0.7 N	Mar 22, 2016		Soil	M16-Ma23480		X								
SB02-1.2 N	Mar 22, 2016		Soil	M16-Ma23481		X								
SB03-1.1 N	Mar 22, 2016		Soil	M16-Ma23482		X								

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Sample Detail					% Clay	HOLD	pH (1:5 Aqueous extract)	Polychlorinated Biphenyls	Metals M8	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	Vic EPA IWRG 621 (Solids)
Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SB04-0.5 DN	Mar 22, 2016		Soil	M16-Ma23483		X								
SB04-1.1 N	Mar 22, 2016		Soil	M16-Ma23484		X								
SB04-1.5 N	Mar 22, 2016		Soil	M16-Ma23485		X								
SB05-0.4 F	Mar 21, 2016		Soil	M16-Ma23486		X								
SB05-0.8 N	Mar 21, 2016		Soil	M16-Ma23487		X								
SB05-1.3 N	Mar 21, 2016		Soil	M16-Ma23488		X								
SB06-0.6 F	Mar 21, 2016		Soil	M16-Ma23489		X								
SB06-0.8 N	Mar 21, 2016		Soil	M16-Ma23490		X								
SB06-1.3 N	Mar 21, 2016		Soil	M16-Ma23491		X								
SB07-0.3 F	Mar 21, 2016		Soil	M16-Ma23492		X								

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Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SB07-1.2 N	Mar 21, 2016		Soil	M16-Ma23493		X								
SB08-0.3 N	Mar 21, 2016		Soil	M16-Ma23494		X								
SB08-0.5 N	Mar 21, 2016		Soil	M16-Ma23495		X								
SB08-0.7 N	Mar 21, 2016		Soil	M16-Ma23496		X								
SB09-0.3 N	Mar 22, 2016		Soil	M16-Ma23497		X								
SB09-0.6 N	Mar 22, 2016		Soil	M16-Ma23498		X								
SB09-0.9 N	Mar 22, 2016		Soil	M16-Ma23499		X								
SB10-0.14 F	Mar 22, 2016		Soil	M16-Ma23500		X								
SB10-1.5 N	Mar 22, 2016		Soil	M16-Ma23501		X								
SB12-0.4 F	Mar 21, 2016		Soil	M16-Ma23502		X								

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Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SB12-0.7 N	Mar 21, 2016		Soil	M16-Ma23503		X								
SB12-1.2 N	Mar 21, 2016		Soil	M16-Ma23504		X								
SB13-0.8 N	Mar 21, 2016		Soil	M16-Ma23505		X								
SB13-1.2 N	Mar 21, 2016		Soil	M16-Ma23506		X								
SB14-0.6 F	Mar 21, 2016		Soil	M16-Ma23507		X								
SB14-0.7 N	Mar 21, 2016		Soil	M16-Ma23508		X								
SB14-1.2 N	Mar 21, 2016		Soil	M16-Ma23509		X								
SB15-0.2 N	Mar 21, 2016		Soil	M16-Ma23510		X								
SB15-0.4 N	Mar 21, 2016		Soil	M16-Ma23511		X								
SB15-0.5 N	Mar 21, 2016		Soil	M16-Ma23512		X								

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Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SB16-0.3 N	Mar 21, 2016		Soil	M16-Ma23513		X								
SB17-0.8 N	Mar 21, 2016		Soil	M16-Ma23514		X								
SB19-0.7 N	Mar 21, 2016		Soil	M16-Ma23515		X								
SB19-1.2 N	Mar 21, 2016		Soil	M16-Ma23516		X								
SB20-0.3 N	Mar 21, 2016		Soil	M16-Ma23517		X								
SB20-0.5 N	Mar 21, 2016		Soil	M16-Ma23518		X								
SB20-0.7 N	Mar 21, 2016		Soil	M16-Ma23519		X								
SB21-0.6 N	Mar 22, 2016		Soil	M16-Ma23520		X								
SB21-1.0 N	Mar 21, 2016		Soil	M16-Ma23521		X								
SB24-0.9 N	Mar 21, 2016		Soil	M16-Ma23522		X								

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Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SPLIT02	Mar 17, 2016		Soil	M16-Ma23523		X								

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. 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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per Kilogram

ug/l: micrograms per litre

ppb: Parts per billion

org/100ml: Organisms per 100 millilitres

MPN/100mL: Most Probable Number of organisms per 100 millilitres

mg/l: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Nephelometric Turbidity Units

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. 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.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (Eurofins mgt uses NATA accredited in-house method LTM-GEN-7010)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 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 50-150% - Phenols 20-130%.

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							
1.2.4-Trichlorobenzene	mg/kg	< 0.2			0.2	Pass	
Hexachlorobutadiene	mg/kg	< 0.2			0.2	Pass	
1.1-Dichloroethane	mg/kg	< 0.05			0.05	Pass	
1.1-Dichloroethene	mg/kg	< 0.05			0.05	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.05			0.05	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.05			0.05	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.05			0.05	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.05			0.05	Pass	
1.2-Dibromoethane	mg/kg	< 0.05			0.05	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.05			0.05	Pass	
1.2-Dichloroethane	mg/kg	< 0.05			0.05	Pass	
1.2-Dichloropropane	mg/kg	< 0.05			0.05	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.05			0.05	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.05			0.05	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.05			0.05	Pass	
1.3-Dichloropropane	mg/kg	< 0.05			0.05	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.05			0.05	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.05			0.05	Pass	
2-Butanone (MEK)	mg/kg	< 0.05			0.05	Pass	
2-Propanone (Acetone)	mg/kg	< 0.05			0.05	Pass	
4-Chlorotoluene	mg/kg	< 0.05			0.05	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.05			0.05	Pass	
Allyl chloride	mg/kg	< 0.05			0.05	Pass	
Benzene	mg/kg	< 0.1			0.1	Pass	
Bromobenzene	mg/kg	< 0.05			0.05	Pass	
Bromochloromethane	mg/kg	< 0.05			0.05	Pass	
Bromodichloromethane	mg/kg	< 0.05			0.05	Pass	
Bromoform	mg/kg	< 0.05			0.05	Pass	
Bromomethane	mg/kg	< 0.05			0.05	Pass	
Carbon disulfide	mg/kg	< 0.05			0.05	Pass	
Carbon Tetrachloride	mg/kg	< 0.05			0.05	Pass	
Chlorobenzene	mg/kg	< 0.05			0.05	Pass	
Chloroethane	mg/kg	< 0.05			0.05	Pass	
Chloroform	mg/kg	< 0.05			0.05	Pass	
Chloromethane	mg/kg	< 0.05			0.05	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.05			0.05	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.05			0.05	Pass	
Dibromochloromethane	mg/kg	< 0.05			0.05	Pass	
Dibromomethane	mg/kg	< 0.05			0.05	Pass	
Dichlorodifluoromethane	mg/kg	< 0.05			0.05	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.05			0.05	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.05			0.05	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Methylene Chloride	mg/kg	< 0.05			0.05	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Styrene	mg/kg	< 0.05			0.05	Pass	
Tetrachloroethene	mg/kg	< 0.05			0.05	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
trans-1,2-Dichloroethene	mg/kg	< 0.05			0.05	Pass	
trans-1,3-Dichloropropene	mg/kg	< 0.05			0.05	Pass	
Trichloroethene	mg/kg	< 0.05			0.05	Pass	
Trichlorofluoromethane	mg/kg	< 0.05			0.05	Pass	
Vinyl chloride	mg/kg	< 0.05			0.05	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	
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	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4,5-Trichlorophenol	mg/kg	< 1			1.0	Pass	
2,4,6-Trichlorophenol	mg/kg	< 1			1.0	Pass	
2,6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1.0	Pass	
Pentachlorophenol	mg/kg	< 1			1.0	Pass	
Tetrachlorophenols - Total	mg/kg	< 1			1.0	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4,6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4,6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2,4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dinitrophenol	mg/kg	< 5			5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
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							
% Clay	%	< 1			1	Pass	
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Conductivity (1:5 aqueous extract at 25°C)	uS/cm	< 10			10	Pass	
Cyanide (total)	mg/kg	< 5			5	Pass	
Fluoride	mg/kg	< 100			100	Pass	
Method Blank							
Ion Exchange Properties							
Cation Exchange Capacity	meq/100g	< 0.05			0.05	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	
Mercury	mg/kg	< 0.1			0.1	Pass	
Molybdenum	mg/kg	< 10			10	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	
Silver	mg/kg	< 5			5	Pass	
Tin	mg/kg	< 10			10	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	101			70-130	Pass	
TRH C10-C14	%	113			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	70			70-130	Pass	
1.1.1-Trichloroethane	%	90			70-130	Pass	
1.2-Dichlorobenzene	%	80			70-130	Pass	
1.2-Dichloroethane	%	91			70-130	Pass	
Benzene	%	92			70-130	Pass	
Ethylbenzene	%	94			70-130	Pass	
m&p-Xylenes	%	95			70-130	Pass	
Toluene	%	94			70-130	Pass	
Trichloroethene	%	93			70-130	Pass	
Xylenes - Total	%	95			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	75			70-130	Pass	
TRH C6-C10	%	92			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
4.4'-DDD	%	78			70-130	Pass	
4.4'-DDE	%	99			70-130	Pass	
4.4'-DDT	%	93			70-130	Pass	
a-BHC	%	125			70-130	Pass	
Aldrin	%	115			70-130	Pass	
b-BHC	%	120			70-130	Pass	
d-BHC	%	123			70-130	Pass	
Dieldrin	%	88			70-130	Pass	
Endosulfan I	%	98			70-130	Pass	
Endosulfan II	%	105			70-130	Pass	
Endosulfan sulphate	%	123			70-130	Pass	
Endrin	%	94			70-130	Pass	
Endrin aldehyde	%	107			70-130	Pass	
Endrin ketone	%	120			70-130	Pass	
g-BHC (Lindane)	%	121			70-130	Pass	
Heptachlor	%	118			70-130	Pass	
Heptachlor epoxide	%	111			70-130	Pass	
Hexachlorobenzene	%	119			70-130	Pass	
Methoxychlor	%	96			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	80			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	119			70-130	Pass	
LCS - % Recovery							
% Clay	%	100			70-130	Pass	
Chromium (hexavalent)	%	95			70-130	Pass	
Cyanide (total)	%	95			70-130	Pass	
Fluoride	%	89			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	89			80-120	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Cadmium			%	101			80-120	Pass	
Chromium			%	109			80-120	Pass	
Copper			%	114			80-120	Pass	
Lead			%	107			80-120	Pass	
Mercury			%	104			75-125	Pass	
Mercury			%	106			75-125	Pass	
Molybdenum			%	107			80-120	Pass	
Nickel			%	108			80-120	Pass	
Selenium			%	84			80-120	Pass	
Silver			%	106			80-120	Pass	
Tin			%	80			80-120	Pass	
Zinc			%	110			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	M16-Ma24478	NCP	%	78			70-130	Pass	
1.1.1-Trichloroethane	M16-Ma24478	NCP	%	93			70-130	Pass	
1.2-Dichlorobenzene	M16-Ma24478	NCP	%	75			70-130	Pass	
1.2-Dichloroethane	M16-Ma24478	NCP	%	88			70-130	Pass	
Trichloroethene	M16-Ma24478	NCP	%	91			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M16-Ma23436	CP	%	89			75-125	Pass	
Cadmium	M16-Ma23436	CP	%	76			75-125	Pass	
Chromium	M16-Ma23436	CP	%	79			75-125	Pass	
Copper	M16-Ma23436	CP	%	91			75-125	Pass	
Lead	M16-Ma23436	CP	%	104			75-125	Pass	
Mercury	M16-Ma23436	CP	%	109			70-130	Pass	
Molybdenum	M16-Ma23436	CP	%	76			75-125	Pass	
Nickel	M16-Ma23436	CP	%	100			75-125	Pass	
Silver	M16-Ma23436	CP	%	83			75-125	Pass	
Zinc	M16-Ma23436	CP	%	97			75-125	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	M16-Ma19269	NCP	%	111			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M16-Ma23444	CP	%	78			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
Benzene	M16-Ma23444	CP	%	76			70-130	Pass	
Ethylbenzene	M16-Ma23444	CP	%	77			70-130	Pass	
m&p-Xylenes	M16-Ma23444	CP	%	72			70-130	Pass	
o-Xylene	M16-Ma23444	CP	%	74			70-130	Pass	
Toluene	M16-Ma23444	CP	%	81			70-130	Pass	
Xylenes - Total	M16-Ma23444	CP	%	73			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M16-Ma23444	CP	%	72			70-130	Pass	
TRH C6-C10	M16-Ma23444	CP	%	73			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Cadmium	M16-Ma23449	CP	%	90			75-125	Pass	
Chromium	M16-Ma23449	CP	%	106			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Copper	M16-Ma23449	CP	%	109			75-125	Pass	
Lead	M16-Ma23449	CP	%	85			75-125	Pass	
Mercury	M16-Ma23449	CP	%	104			70-130	Pass	
Molybdenum	M16-Ma23449	CP	%	87			75-125	Pass	
Nickel	M16-Ma23449	CP	%	94			75-125	Pass	
Silver	M16-Ma23449	CP	%	97			75-125	Pass	
Zinc	M16-Ma23449	CP	%	88			75-125	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M16-Ma22898	NCP	%	88			70-130	Pass	
Acenaphthylene	M16-Ma22898	NCP	%	95			70-130	Pass	
Anthracene	M16-Ma22898	NCP	%	99			70-130	Pass	
Benz(a)anthracene	M16-Ma22898	NCP	%	104			70-130	Pass	
Benzo(a)pyrene	M16-Ma22898	NCP	%	84			70-130	Pass	
Benzo(b&j)fluoranthene	M16-Ma22898	NCP	%	98			70-130	Pass	
Benzo(g,h,i)perylene	M16-Ma22898	NCP	%	78			70-130	Pass	
Benzo(k)fluoranthene	M16-Ma22898	NCP	%	90			70-130	Pass	
Chrysene	M16-Ma22898	NCP	%	89			70-130	Pass	
Dibenz(a,h)anthracene	M16-Ma22898	NCP	%	82			70-130	Pass	
Fluoranthene	M16-Ma22898	NCP	%	79			70-130	Pass	
Fluorene	M16-Ma22898	NCP	%	93			70-130	Pass	
Indeno(1,2,3-cd)pyrene	M16-Ma22898	NCP	%	77			70-130	Pass	
Naphthalene	M16-Ma22898	NCP	%	84			70-130	Pass	
Phenanthrene	M16-Ma22898	NCP	%	90			70-130	Pass	
Pyrene	M16-Ma22898	NCP	%	78			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4,4'-DDD	M16-Ma22555	NCP	%	113			70-130	Pass	
4,4'-DDE	M16-Ma22555	NCP	%	99			70-130	Pass	
4,4'-DDT	M16-Ma22555	NCP	%	100			70-130	Pass	
a-BHC	M16-Ma22555	NCP	%	71			70-130	Pass	
Aldrin	M16-Ma22555	NCP	%	93			70-130	Pass	
b-BHC	M16-Ma22555	NCP	%	95			70-130	Pass	
d-BHC	M16-Ma22555	NCP	%	108			70-130	Pass	
Dieldrin	M16-Ma22555	NCP	%	97			70-130	Pass	
Endosulfan I	M16-Ma22555	NCP	%	72			70-130	Pass	
Endosulfan II	M16-Ma22555	NCP	%	104			70-130	Pass	
Endosulfan sulphate	M16-Ma22555	NCP	%	74			70-130	Pass	
Endrin	M16-Ma22555	NCP	%	116			70-130	Pass	
Endrin aldehyde	M16-Ma22555	NCP	%	107			70-130	Pass	
Endrin ketone	M16-Ma22555	NCP	%	109			70-130	Pass	
g-BHC (Lindane)	M16-Ma22555	NCP	%	93			70-130	Pass	
Heptachlor	M16-Ma22555	NCP	%	113			70-130	Pass	
Heptachlor epoxide	M16-Ma22555	NCP	%	117			70-130	Pass	
Hexachlorobenzene	M16-Ma22555	NCP	%	89			70-130	Pass	
Methoxychlor	M16-Ma22555	NCP	%	104			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	M16-Ma22898	NCP	%	42			30-130	Pass	
4-Chloro-3-methylphenol	M16-Ma22898	NCP	%	78			30-130	Pass	
Pentachlorophenol	M16-Ma22898	NCP	%	30			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4,6-dinitrophenol	M16-Ma22898	NCP	%	48			30-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Methyl-4.6-dinitrophenol	M16-Ma22898	NCP	%	37			30-130	Pass	
2-Methylphenol (o-Cresol)	M16-Ma22898	NCP	%	91			30-130	Pass	
2.4-Dimethylphenol	M16-Ma22898	NCP	%	84			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M16-Ma22898	NCP	%	89			30-130	Pass	
Dinoseb	M16-Ma22898	NCP	%	44			30-130	Pass	
Phenol	M16-Ma22898	NCP	%	88			30-130	Pass	
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	M16-Ma22968	NCP	%	97			70-130	Pass	
Cyanide (total)	M16-Ma22555	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M16-Ma23456	CP	%	96			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M16-Ma23456	CP	%	101			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Cadmium	M16-Ma23461	CP	%	79			75-125	Pass	
Chromium	M16-Ma23461	CP	%	78			75-125	Pass	
Copper	M16-Ma23461	CP	%	110			75-125	Pass	
Lead	M16-Ma23461	CP	%	115			75-125	Pass	
Mercury	M16-Ma23461	CP	%	94			70-130	Pass	
Molybdenum	M16-Ma23461	CP	%	79			75-125	Pass	
Nickel	M16-Ma23461	CP	%	102			75-125	Pass	
Silver	M16-Ma23461	CP	%	81			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
				Result 1	Result 2	RPD			
% Clay	M15-No21176	NCP	%	33	35	7.0	30%	Pass	
Conductivity (1:5 aqueous extract at 25°C)	M16-Ma22963	NCP	uS/cm	99	98	1.0	30%	Pass	
pH (1:5 Aqueous extract)	M16-Ma23690	NCP	pH Units	6.0	5.9	pass	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Mercury	M16-Ma23435	CP	mg/kg	0.2	0.1	7.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M16-Ma23436	CP	mg/kg	8.8	10	13	30%	Pass	
Cadmium	M16-Ma23436	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M16-Ma23436	CP	mg/kg	31	31	1.0	30%	Pass	
Copper	M16-Ma23436	CP	mg/kg	11	11	<1	30%	Pass	
Lead	M16-Ma23436	CP	mg/kg	15	16	3.0	30%	Pass	
Mercury	M16-Ma23436	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M16-Ma23436	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Nickel	M16-Ma23436	CP	mg/kg	15	16	2.0	30%	Pass	
Selenium	M16-Ma23436	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M16-Ma23436	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Tin	M16-Ma23436	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M16-Ma23436	CP	mg/kg	15	15	2.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M16-Ma23437	CP	%	19	19	2.0	30%	Pass	

Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	M16-Ma23441	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.2.4-Trichlorobenzene	M16-Ma23441	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Hexachlorobutadiene	M16-Ma23441	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
1.1-Dichloroethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.1-Dichloroethene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.1.1-Trichloroethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.1.1.2-Tetrachloroethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.1.2-Trichloroethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.1.2.2-Tetrachloroethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.2-Dibromoethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.2-Dichlorobenzene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.2-Dichloroethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.2-Dichloropropane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.2.3-Trichloropropane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.2.4-Trimethylbenzene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.3-Dichlorobenzene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.3-Dichloropropane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.3.5-Trimethylbenzene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.4-Dichlorobenzene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
2-Butanone (MEK)	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
2-Propanone (Acetone)	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4-Chlorotoluene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Allyl chloride	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Benzene	M16-Ma23441	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Bromobenzene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Bromochloromethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Bromodichloromethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Bromoform	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Bromomethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Carbon disulfide	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Carbon Tetrachloride	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Chlorobenzene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Chloroethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Chloroform	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Chloromethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
cis-1.2-Dichloroethene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
cis-1.3-Dichloropropene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dibromochloromethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dibromomethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dichlorodifluoromethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Ethylbenzene	M16-Ma23441	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Isopropyl benzene (Cumene)	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
m&p-Xylenes	M16-Ma23441	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
o-Xylene	M16-Ma23441	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Tetrachloroethene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toluene	M16-Ma23441	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1.2-Dichloroethene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
trans-1.3-Dichloropropene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Trichloroethene	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Trichlorofluoromethane	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Vinyl chloride	M16-Ma23441	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Xylenes - Total	M16-Ma23441	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	M16-Ma23441	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	M16-Ma23441	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	M16-Ma23443	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C10-C14	M16-Ma23443	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M16-Ma23443	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M16-Ma23443	CP	mg/kg	< 50	< 50	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Benzene	M16-Ma23443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	M16-Ma23443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	M16-Ma23443	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
o-Xylene	M16-Ma23443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	M16-Ma23443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total	M16-Ma23443	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	M16-Ma23443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	M16-Ma23443	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
TRH >C10-C16	M16-Ma23443	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M16-Ma23443	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M16-Ma23443	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	M16-Ma23447	CP	%	17	18	6.0	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Mercury	M16-Ma23447	CP	mg/kg	0.5	0.4	15	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M16-Ma23448	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
g-BHC (Lindane)	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M16-Ma23448	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M16-Ma23448	CP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M16-Ma23448	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M16-Ma23448	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M16-Ma23448	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M16-Ma23448	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M16-Ma23448	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M16-Ma23448	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M16-Ma23448	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M16-Ma23448	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M16-Ma23449	CP	mg/kg	15	20	26	30%	Pass
Cadmium	M16-Ma23449	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M16-Ma23449	CP	mg/kg	42	43	2.0	30%	Pass
Copper	M16-Ma23449	CP	mg/kg	10	11	2.0	30%	Pass
Lead	M16-Ma23449	CP	mg/kg	16	18	10	30%	Pass
Mercury	M16-Ma23449	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M16-Ma23449	CP	mg/kg	< 10	< 10	<1	30%	Pass
Nickel	M16-Ma23449	CP	mg/kg	18	19	5.0	30%	Pass
Selenium	M16-Ma23449	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M16-Ma23449	CP	mg/kg	< 5	< 5	<1	30%	Pass
Tin	M16-Ma23449	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M16-Ma23449	CP	mg/kg	19	21	9.0	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M16-Ma22316	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M16-Ma23451	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
a-BHC	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M16-Ma23451	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
b-BHC	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M16-Ma23451	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M16-Ma23451	CP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M16-Ma23451	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M16-Ma23451	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M16-Ma23451	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M16-Ma23451	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M16-Ma23451	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M16-Ma23451	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M16-Ma23451	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M16-Ma23451	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	M16-Ma23006	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Cyanide (total)	M16-Ma22549	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Fluoride	M16-Ma26673	NCP	mg/kg	110	< 100	8.6	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C10-C14	M16-Ma23455	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M16-Ma23455	CP	mg/kg	140	210	39	30%	Fail Q15
TRH C29-C36	M16-Ma23455	CP	mg/kg	160	140	18	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
TRH >C10-C16	M16-Ma23455	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M16-Ma23455	CP	mg/kg	280	350	22	30%	Pass
TRH >C34-C40	M16-Ma23455	CP	mg/kg	120	< 100	72	30%	Fail Q15
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	M16-Ma23457	CP	%	20	21	5.0	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Mercury	M16-Ma23460	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M16-Ma23461	CP	mg/kg	8.0	7.1	12	30%	Pass
Cadmium	M16-Ma23461	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M16-Ma23461	CP	mg/kg	63	65	2.0	30%	Pass
Copper	M16-Ma23461	CP	mg/kg	10.0	10	2.0	30%	Pass

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Lead	M16-Ma23461	CP	mg/kg	20	14	34	30%	Fail
Mercury	M16-Ma23461	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M16-Ma23461	CP	mg/kg	< 10	< 10	<1	30%	Pass
Nickel	M16-Ma23461	CP	mg/kg	50	51	2.0	30%	Pass
Selenium	M16-Ma23461	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M16-Ma23461	CP	mg/kg	< 5	< 5	<1	30%	Pass
Tin	M16-Ma23461	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M16-Ma23461	CP	mg/kg	550	550	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	M16-Ma23467	CP	%	19	20	3.0	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	M16-Ma23469	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.2.4-Trichlorobenzene	M16-Ma23469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Hexachlorobutadiene	M16-Ma23469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
1.1-Dichloroethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.1-Dichloroethene	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.1.1-Trichloroethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.1.1.2-Tetrachloroethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.1.2-Trichloroethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.1.2.2-Tetrachloroethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.2-Dibromoethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.2-Dichlorobenzene	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.2-Dichloroethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.2-Dichloropropane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.2.3-Trichloropropane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.2.4-Trimethylbenzene	M16-Ma23469	CP	mg/kg	0.64	0.37	54	30%	Fail
1.3-Dichlorobenzene	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.3-Dichloropropane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.3.5-Trimethylbenzene	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1.4-Dichlorobenzene	M16-Ma23469	CP	mg/kg	0.27	0.19	32	30%	Fail
2-Butanone (MEK)	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
2-Propanone (Acetone)	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4-Chlorotoluene	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Allyl chloride	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Benzene	M16-Ma23469	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Bromobenzene	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Bromochloromethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Bromodichloromethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Bromoform	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Bromomethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Carbon disulfide	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Carbon Tetrachloride	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Chlorobenzene	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Chloroethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Chloroform	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Chloromethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
cis-1.2-Dichloroethene	M16-Ma23469	CP	mg/kg	0.34	< 0.05	200	30%	Fail
cis-1.3-Dichloropropene	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dibromochloromethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Dibromomethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dichlorodifluoromethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Ethylbenzene	M16-Ma23469	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Isopropyl benzene (Cumene)	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
m&p-Xylenes	M16-Ma23469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
o-Xylene	M16-Ma23469	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Tetrachloroethene	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toluene	M16-Ma23469	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1,2-Dichloroethene	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
trans-1,3-Dichloropropene	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Trichloroethene	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Trichlorofluoromethane	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Vinyl chloride	M16-Ma23469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Xylenes - Total	M16-Ma23469	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	M16-Ma23469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	M16-Ma23469	CP	mg/kg	28	25	10	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M16-Ma23474	CP	mg/kg	7.2	7.9	9.0	30%	Pass
Cadmium	M16-Ma23474	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M16-Ma23474	CP	mg/kg	28	29	3.0	30%	Pass
Copper	M16-Ma23474	CP	mg/kg	6.6	7.3	9.0	30%	Pass
Lead	M16-Ma23474	CP	mg/kg	21	22	5.0	30%	Pass
Mercury	M16-Ma23474	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M16-Ma23474	CP	mg/kg	< 10	< 10	<1	30%	Pass
Nickel	M16-Ma23474	CP	mg/kg	19	18	7.0	30%	Pass
Selenium	M16-Ma23474	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M16-Ma23474	CP	mg/kg	< 5	< 5	<1	30%	Pass
Tin	M16-Ma23474	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M16-Ma23474	CP	mg/kg	36	41	13	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
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
Q15	The RPD reported passes Eurofins mgt's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Sarah Gould	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Huong Le	Senior Analyst-Inorganic (VIC)
Mele Singh	Senior Analyst-Organic (VIC)
Richard Corner	Senior Analyst-Inorganic (QLD)



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

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Certificate of Analysis

JBS & G Australia (SA & VIC) P/L
38 Dequetteville Terrace
Kent Town
SA 5067



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: **Jim Bowler**

Report **494208-W**

Project name **BURNLEY STREET**

Project ID **51573**

Received Date **Mar 23, 2016**

Client Sample ID			RB01	RB02
Sample Matrix			Water	Water
Eurofins mgt Sample No.			M16-Ma23475	M16-Ma23476
Date Sampled			Mar 22, 2016	Mar 22, 2016
Test/Reference	LOR	Unit		
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	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1
TRH C10-36 (Total)	0.1	mg/L	< 0.1	< 0.1
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 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05	< 0.05
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1
Heavy Metals				
Arsenic	0.001	mg/L	< 0.001	< 0.001
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002
Chromium	0.001	mg/L	< 0.001	< 0.001
Copper	0.001	mg/L	< 0.001	< 0.001
Lead	0.001	mg/L	< 0.001	< 0.001
Mercury	0.0001	mg/L	< 0.0001	< 0.0001
Nickel	0.001	mg/L	< 0.001	< 0.001
Zinc	0.001	mg/L	< 0.001	< 0.001

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 (regarding both quality and NATA accreditation).

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

Description	Testing Site	Extracted	Holding Time
Vic EPA IWRG 621 (Solids)			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Mar 30, 2016	7 Day
- Method: TRH C6-C36 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Mar 24, 2016	7 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Mar 30, 2016	7 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Metals M8	Melbourne	Mar 24, 2016	28 Day
- Method: LTM-MET-3040 Metals in Waters by ICP-MS			

Company Name: JBS & G Australia (SA & VIC) P/L
Address: 38 Dequetteville Terrace
Kent Town
SA 5067
Project Name: BURNLEY STREET
Project ID: 51573

Order No.:
Report #: 494208
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Mar 23, 2016 3:50 PM
Due: Apr 1, 2016
Priority: 5 Day
Contact Name: Tom Statham

Eurofins | mgt Client Manager: Sarah Gould

Sample Detail					% Clay	HOLD	pH (1:5 Aqueous extract)	Polychlorinated Biphenyls	Metals M8	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	Vic EPA IWRG 621 (Solids)
Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID										
SB01-0.10 F	Mar 21, 2016		Soil	M16-Ma23434	X		X		X		X	X	X	
SB02-0.14 DN	Mar 22, 2016		Soil	M16-Ma23435					X		X		X	
SB03-0.55 DN	Mar 22, 2016		Soil	M16-Ma23436					X	X	X		X	
SB03-0.8 N	Mar 22, 2016		Soil	M16-Ma23437				X			X			
SB03-1.5 N	Mar 22, 2016		Soil	M16-Ma23438					X	X	X		X	
SB04-0.10 F	Mar 22, 2016		Soil	M16-Ma23439				X			X			
SB04-0.8 DN	Mar 22, 2016		Soil	M16-Ma23440					X	X	X		X	
SB04-2.4 N	Mar 22, 2016		Soil	M16-Ma23441					X	X	X		X	
SB05-0.25 F	Mar 21, 2016		Soil	M16-Ma23442				X	X		X		X	

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Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SB06-0.25 F	Mar 21, 2016		Soil	M16-Ma23443					X		X		X	
SB07-0.14 F	Mar 21, 2016		Soil	M16-Ma23444					X		X		X	
SB07-0.65 N	Mar 21, 2016		Soil	M16-Ma23445					X		X		X	
SB08-0.12 F	Mar 21, 2016		Soil	M16-Ma23446					X		X		X	
SB09-0.10 DN	Mar 22, 2016		Soil	M16-Ma23447					X		X		X	
SB10-0.6 DN	Mar 22, 2016		Soil	M16-Ma23448				X			X			
SB10-1.2 N	Mar 22, 2016		Soil	M16-Ma23449					X	X	X		X	
SB10-2.4 N	Mar 22, 2016		Soil	M16-Ma23450					X	X	X		X	
SB11-0.5 F	Mar 21, 2016		Soil	M16-Ma23451	X						X	X		X
SB12-0.16 F	Mar 21, 2016		Soil	M16-Ma23452				X	X		X		X	

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Sample Detail					% Clay	HOLD	pH (1:5 Aqueous extract)	Polychlorinated Biphenyls	Metals M8	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	Vic EPA IWRG 621 (Solids)
Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SB13-0.11 F	Mar 21, 2016		Soil	M16-Ma23453					X		X		X	
SB13-0.4 F	Mar 21, 2016		Soil	M16-Ma23454				X			X			
SB14-0.18 F	Mar 21, 2016		Soil	M16-Ma23455					X		X		X	
SB15-0.12 DN	Mar 21, 2016		Soil	M16-Ma23456					X		X		X	
SB16-0.10 DN	Mar 22, 2016		Soil	M16-Ma23457					X		X		X	
SB17-0.14 DN	Mar 22, 2016		Soil	M16-Ma23458					X		X		X	
SB17-0.5 N	Mar 22, 2016		Soil	M16-Ma23459				X			X			
SB18-0.14 F	Mar 22, 2016		Soil	M16-Ma23460					X		X		X	
SB18-0.5 N	Mar 22, 2016		Soil	M16-Ma23461				X	X	X	X		X	
SB18-1.0 N	Mar 22, 2016		Soil	M16-Ma23462						X	X			

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Sample Detail					% Clay	HOLD	pH (1:5 Aqueous extract)	Polychlorinated Biphenyls	Metals M8	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	Vic EPA IWRG 621 (Solids)
Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SB19-0.20 F	Mar 21, 2016		Soil	M16-Ma23463					X		X		X	
SB19-0.5 DN	Mar 21, 2016		Soil	M16-Ma23464				X			X			
SB20-0.15 F	Mar 21, 2016		Soil	M16-Ma23465					X		X		X	
SB21-0.13 DN	Mar 22, 2016		Soil	M16-Ma23466					X		X		X	
SB22-0.10 DN	Mar 22, 2016		Soil	M16-Ma23467					X		X		X	
SB22-0.3 N	Mar 22, 2016		Soil	M16-Ma23468				X			X			
SB23-0.20 DN	Mar 21, 2016		Soil	M16-Ma23469					X		X		X	
SB23-0.5 N	Mar 21, 2016		Soil	M16-Ma23470				X	X		X		X	
SB24-0.20 DN	Mar 21, 2016		Soil	M16-Ma23471					X		X		X	
SB24-0.4 N	Mar 21, 2016		Soil	M16-Ma23472				X			X			

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Sample Detail					% Clay	HOLD	pH (1:5 Aqueous extract)	Polychlorinated Biphenyls	Metals M8	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	Vic EPA IWRG 621 (Solids)
Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
DUP01	Mar 21, 2016		Soil	M16-Ma23473					X		X		X	
DUP02	Mar 21, 2016		Soil	M16-Ma23474					X		X		X	
RB01	Mar 22, 2016		Water	M16-Ma23475					X				X	
RB02	Mar 22, 2016		Water	M16-Ma23476					X				X	
SB01-0.3 F	Mar 21, 2016		Soil	M16-Ma23477		X								
SB01-0.5 F	Mar 21, 2016		Soil	M16-Ma23478		X								
SB02-0.3 DN	Mar 22, 2016		Soil	M16-Ma23479		X								
SB02-0.7 N	Mar 22, 2016		Soil	M16-Ma23480		X								
SB02-1.2 N	Mar 22, 2016		Soil	M16-Ma23481		X								
SB03-1.1 N	Mar 22, 2016		Soil	M16-Ma23482		X								

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Sample Detail					% Clay	HOLD	pH (1:5 Aqueous extract)	Polychlorinated Biphenyls	Metals M8	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	Vic EPA IWRG 621 (Solids)
Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SB04-0.5 DN	Mar 22, 2016		Soil	M16-Ma23483		X								
SB04-1.1 N	Mar 22, 2016		Soil	M16-Ma23484		X								
SB04-1.5 N	Mar 22, 2016		Soil	M16-Ma23485		X								
SB05-0.4 F	Mar 21, 2016		Soil	M16-Ma23486		X								
SB05-0.8 N	Mar 21, 2016		Soil	M16-Ma23487		X								
SB05-1.3 N	Mar 21, 2016		Soil	M16-Ma23488		X								
SB06-0.6 F	Mar 21, 2016		Soil	M16-Ma23489		X								
SB06-0.8 N	Mar 21, 2016		Soil	M16-Ma23490		X								
SB06-1.3 N	Mar 21, 2016		Soil	M16-Ma23491		X								
SB07-0.3 F	Mar 21, 2016		Soil	M16-Ma23492		X								

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Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SB07-1.2 N	Mar 21, 2016		Soil	M16-Ma23493		X								
SB08-0.3 N	Mar 21, 2016		Soil	M16-Ma23494		X								
SB08-0.5 N	Mar 21, 2016		Soil	M16-Ma23495		X								
SB08-0.7 N	Mar 21, 2016		Soil	M16-Ma23496		X								
SB09-0.3 N	Mar 22, 2016		Soil	M16-Ma23497		X								
SB09-0.6 N	Mar 22, 2016		Soil	M16-Ma23498		X								
SB09-0.9 N	Mar 22, 2016		Soil	M16-Ma23499		X								
SB10-0.14 F	Mar 22, 2016		Soil	M16-Ma23500		X								
SB10-1.5 N	Mar 22, 2016		Soil	M16-Ma23501		X								
SB12-0.4 F	Mar 21, 2016		Soil	M16-Ma23502		X								

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Kent Town
SA 5067
Project Name: BURNLEY STREET
Project ID: 51573

Order No.:
Report #: 494208
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Mar 23, 2016 3:50 PM
Due: Apr 1, 2016
Priority: 5 Day
Contact Name: Tom Statham

Eurofins | mgt Client Manager: Sarah Gould

Sample Detail					% Clay	HOLD	pH (1:5 Aqueous extract)	Polychlorinated Biphenyls	Metals M8	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	Vic EPA IWRG 621 (Solids)
Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SB12-0.7 N	Mar 21, 2016		Soil	M16-Ma23503		X								
SB12-1.2 N	Mar 21, 2016		Soil	M16-Ma23504		X								
SB13-0.8 N	Mar 21, 2016		Soil	M16-Ma23505		X								
SB13-1.2 N	Mar 21, 2016		Soil	M16-Ma23506		X								
SB14-0.6 F	Mar 21, 2016		Soil	M16-Ma23507		X								
SB14-0.7 N	Mar 21, 2016		Soil	M16-Ma23508		X								
SB14-1.2 N	Mar 21, 2016		Soil	M16-Ma23509		X								
SB15-0.2 N	Mar 21, 2016		Soil	M16-Ma23510		X								
SB15-0.4 N	Mar 21, 2016		Soil	M16-Ma23511		X								
SB15-0.5 N	Mar 21, 2016		Soil	M16-Ma23512		X								

Company Name: JBS & G Australia (SA & VIC) P/L
Address: 38 Dequetteville Terrace
Kent Town
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Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SB16-0.3 N	Mar 21, 2016		Soil	M16-Ma23513		X								
SB17-0.8 N	Mar 21, 2016		Soil	M16-Ma23514		X								
SB19-0.7 N	Mar 21, 2016		Soil	M16-Ma23515		X								
SB19-1.2 N	Mar 21, 2016		Soil	M16-Ma23516		X								
SB20-0.3 N	Mar 21, 2016		Soil	M16-Ma23517		X								
SB20-0.5 N	Mar 21, 2016		Soil	M16-Ma23518		X								
SB20-0.7 N	Mar 21, 2016		Soil	M16-Ma23519		X								
SB21-0.6 N	Mar 22, 2016		Soil	M16-Ma23520		X								
SB21-1.0 N	Mar 21, 2016		Soil	M16-Ma23521		X								
SB24-0.9 N	Mar 21, 2016		Soil	M16-Ma23522		X								

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Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794					X									
External Laboratory														
SPLIT02	Mar 17, 2016		Soil	M16-Ma23523		X								

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. 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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per Kilogram

ug/l: micrograms per litre

ppb: Parts per billion

org/100ml: Organisms per 100 millilitres

MPN/100mL: Most Probable Number of organisms per 100 millilitres

mg/l: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Nephelometric Turbidity Units

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. 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.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (Eurofins mgt uses NATA accredited in-house method LTM-GEN-7010)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 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 50-150% - Phenols 20-130%.

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/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							
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 - 2013 NEPM Fractions							
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							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.001			0.001	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	94			70-130	Pass	
TRH C10-C14	%	107			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	78			70-130	Pass	
TRH C6-C10	%	86			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	124			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	97			80-120	Pass	
Cadmium	%	96			80-120	Pass	
Chromium	%	94			80-120	Pass	
Copper	%	95			80-120	Pass	
Lead	%	109			80-120	Pass	
Mercury	%	102			75-125	Pass	
Nickel	%	96			80-120	Pass	
Zinc	%	97			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	M16-Ma23009	NCP	%	92			75-125	Pass	
Cadmium	M16-Ma23009	NCP	%	91			75-125	Pass	
Chromium	M16-Ma23009	NCP	%	90			75-125	Pass	
Copper	M16-Ma23009	NCP	%	91			75-125	Pass	
Lead	M16-Ma23009	NCP	%	113			75-125	Pass	
Mercury	M16-Ma23009	NCP	%	107			70-130	Pass	
Nickel	M16-Ma23009	NCP	%	90			75-125	Pass	
Zinc	M16-Ma23009	NCP	%	93			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M16-Ma23476	CP	%	70			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M16-Ma23476	CP	%	79			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 C10-C14	M16-Ma23724	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M16-Ma23724	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	M16-Ma23724	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M16-Ma23724	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M16-Ma23724	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	M16-Ma23724	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M16-Ma23009	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	M16-Ma23009	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M16-Ma23009	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	M16-Ma23009	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	M16-Ma23009	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	M16-Ma23009	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	M16-Ma23009	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	M16-Ma23009	NCP	mg/L	< 0.001	< 0.001	<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.

Authorised By

Sarah Gould	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Mele Singh	Senior Analyst-Organic (VIC)



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

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Envirolab Services Pty Ltd - Melbourne | ABN 37 112 535 645 - 002

CERTIFICATE OF ANALYSIS

8172

Client:

JBS&G Australia Pty Ltd
38 Dequetteville Tce
Kent Town
SA 5067

Attention: Tom Statham

Sample log in details:

Your Reference:

51573 - Burnley Street

No. of samples:

1 Soil

Date samples received / completed instructions received

24/03/2016 / 24/03/2016

Analysis Details:

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

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

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

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

Report Details:

Date results requested by: / Issue Date:

4/04/16 / 4/04/16

Date of Preliminary Report:

Not Issued

NATA accreditation number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025.

Tests not covered by NATA are denoted with *.

Results Approved By:

Analisa Mathrick
Laboratory Manager



Envirolab Reference: 8172
Revision No: R 00

vTRH(C6-C10)/BTEXN in Soil		
Our Reference:	UNITS	8172-1
Your Reference	-----	SPLIT01
Date Sampled	-----	21/03/2016
Type of sample		Soil
Date extracted	-	24/03/2016
Date analysed	-	29/03/2016
vTRHC ₆ - C ₉	mg/kg	<25
vTRHC ₆ - C ₁₀	mg/kg	<25
TRHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	101

TRH Soil C10-C40 NEPM		
Our Reference:	UNITS	8172-1
Your Reference	-----	SPLIT01
Date Sampled	-----	21/03/2016
Type of sample		Soil
Date extracted	-	24/03/2016
Date analysed	-	30/03/2016
TRHC ₁₀ - C ₁₄	mg/kg	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH>C ₁₀ -C ₁₆	mg/kg	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	71

Acid Extractable metals in soil		
Our Reference:	UNITS	8172-1
Your Reference	-----	SPLIT01
Date Sampled	-----	21/03/2016
Type of sample		Soil
Date digested	-	29/03/2016
Date analysed	-	29/03/2016
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	17
Copper	mg/kg	41
Lead	mg/kg	4
Mercury	mg/kg	<0.1
Nickel	mg/kg	79
Zinc	mg/kg	67

Moisture		
Our Reference:	UNITS	8172-1
Your Reference	-----	SPLIT01
Date Sampled	-----	21/03/2016
Type of sample		Soil
Date prepared	-	23/03/2016
Date analysed	-	29/03/2016
Moisture	%	14

Method ID	Methodology Summary
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. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-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. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 12 hours.

Client Reference: 51573 - Burnley Street

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH(C6-C10)/BTEXN in Soil						Base II Duplicate II %RPD		
Date extracted	-			24/03/2016	[NT]	[NT]	LCS-1	24/03/2016
Date analysed	-			29/03/2016	[NT]	[NT]	LCS-1	29/03/2016
vTRHC ₆ - C ₉	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-1	86%
vTRHC ₆ - C ₁₀	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-1	86%
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	LCS-1	82%
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	LCS-1	85%
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-1	87%
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	LCS-1	88%
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-1	88%
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	100	[NT]	[NT]	LCS-1	101%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
TRHSoil C10-C40 NEPM						Base II Duplicate II %RPD		
Date extracted	-			24/03/2016	[NT]	[NT]	LCS-1	24/03/2016
Date analysed	-			30/03/2016	[NT]	[NT]	LCS-1	30/03/2016
TRHC ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-1	84%
TRHC ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	82%
TRHC ₂₉ - C ₃₆	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	80%
TRH>C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-1	84%
TRH>C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	82%
TRH>C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	80%
Surrogate o-Terphenyl	%		Org-003	65	[NT]	[NT]	LCS-1	129%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date digested	-			29/03/2016	[NT]	[NT]	LCS-1	29/03/2016
Date analysed	-			29/03/2016	[NT]	[NT]	LCS-1	29/03/2016
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	LCS-1	96%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	LCS-1	99%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	100%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	102%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	98%

Client Reference: 51573 - Burnley Street

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	LCS-1	111%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	100%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	99%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank				
Moisture								
Date prepared	-			[NT]				
Date analysed	-			[NT]				
Moisture	%	0.1	Inorg-008	[NT]				

Report Comments:

Asbestos ID was analysed by Approved Identifier:
Asbestos ID was authorised by Approved Signatory:

Not applicable for this job
Not applicable for this job

INS: Insufficient sample for this test
NR: Test not required
<: Less than

PQL: Practical Quantitation Limit
RPD: Relative Percent Difference
>: Greater than

NT: Not tested
NA: Test not required
LCS: Laboratory Control Sample

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.

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: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-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.

CHAIN OF CUSTODY DOCUMENTATION

JBS&G (Australia) Pty Ltd

Adelaide

38 Dequetteville Tce KENT TOWN SA 5067

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ACN 100 220 479 - ABN 62 100 220 479

Melbourne

43 Stubbs Street KENSINGTON VIC 3031

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CLIENT: CKC		LABORATORY: Eurofins MGT		LABORATORY BATCH NO.:	
SITE/PROJECT NAME: Burnley Street		COC Reference #: M2008		SAMPLERS: MC	
SEND REPORT TO: JBS&G		SEND INVOICE TO: JBS&G		PHONE: 08 8431 7113 FAX: 08 8431 7115	
DATA NEEDED BY: Standard Turnaround		REPORT NEEDED BY:		REPORT FORMAT: HARD: NO FAX: NO E-MAIL: YES	
SITE/PROJECT NUMBER: 51573		QUOTE #:		STATE: Victoria	
RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT:	
NAME: Tom Statham		NAME: <i>[Signature]</i>		DATE: 13/4	
DATE: 13/4/2016		DATE: 13/4		CONSIGNMENT NOTE NO.:	
OF: JBS&G		OF: <i>[Signature]</i>		TIME: 12:38pm	
TIME: AM		TIME: 12:38pm		TRANSPORT CO. NAME:	
NAME:		NAME:		DATE:	
DATE:		DATE:		TIME:	
OF:		OF:		TIME:	
P.O. NO.:		COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:		ANALYSIS REQUIRED	
FOR LAB USE ONLY		Please forward results and invoice to:		*Container Type and Preservative Codes: P = Neutral Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Jar; S = Solvent Washed Glass Bottle; VC = HCL Preserved Vial; PC = HCL Preserved Plastic; PS = Sulfuric Acid Preserved Plastic; BS = Sulfuric Acid Preserved Glass Bottle; Z = Zinc Acetate Preserved Bottle; ST = Sodium Thiosulfate Preserved Plastic; E = EDTA Preserved Bottles; ST = Sterile Bottle; O = Other.	
COOLER SEAL		labresults@bsg.com.au			
Yes _____ No _____		tstatham@bsg.com.au			
Broken _____ Intact _____		bowler@bsg.com.au			
COOLER TEMP: deg.C		mcloze@bsg.com.au			
SAMPLE DATA		CONTAINER DATA			
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	NO.
SB11_2E 0.15 F	Soil	12/04/2016		Soil Jar	1
SB11_2E 0.3 F	Soil	12/04/2016		Soil Jar	1
SB11_2E 0.5 F	Soil	12/04/2016		Soil Jar	1
SB11_2E 0.7 N	Soil	12/04/2016		Soil Jar	1
SB11_2E 1.1 N	Soil	12/04/2016		Soil Jar	1
SB11_2W 0.15 F	Soil	12/04/2016		Soil Jar	1
SB11_2W 0.3 F	Soil	12/04/2016		Soil Jar	1
SB11_2W 0.5 F	Soil	12/04/2016		Soil Jar	1
SB11_2W 0.9 F	Soil	12/04/2016		Soil Jar	1
SB11_2N 0.15 F	Soil	12/04/2016		Soil Jar	1
SB11_2N 0.3 F	Soil	12/04/2016		Soil Jar	1
SB11_2N 0.5 F	Soil	12/04/2016		Soil Jar	1
SB11_2S 0.15 F	Soil	12/04/2016		Soil Jar	1
SB11_2S 0.3 F	Soil	12/04/2016		Soil Jar	1
SB11_2S 0.5 F	Soil	12/04/2016		Soil Jar	1
SB11_2S 0.7 F	Soil	12/04/2016		Soil Jar	1
SB11_2S 1.0 N	Soil	12/04/2016		Soil Jar	1
SB11_5S 0.15 F	Soil	12/04/2016		Soil Jar	1
SB11_5S 0.3 F	Soil	12/04/2016		Soil Jar	1
SB11_5S 0.5 F	Soil	12/04/2016		Soil Jar	1
SB11_5S 0.7 F	Soil	12/04/2016		Soil Jar	1
SB11_5S 1.2 N	Soil	12/04/2016		Soil Jar	1
SB11_5W 0.15 F	Soil	12/04/2016		Soil Jar	1
SB11_5W 0.3 F	Soil	12/04/2016		Soil Jar	1
SB11_5W 0.5 N	Soil	12/04/2016		Soil Jar	1
SB11_5W 0.7 N	Soil	12/04/2016		Soil Jar	1
SB11_5W 1.1 N	Soil	12/04/2016		Soil Jar	1

CHAIN OF CUSTODY DOCUMENTATION

JBS&G (Australia) Pty Ltd

Adelaide

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T: +61 8 8431 7113 F: +61 8 8431 7115

Melbourne

43 Stubbs Street KENSINGTON VIC 3031
T: +61 3 9372 6800 F: +61 3 9372 6900

ACN 100 220 475 ABN 62 100 220 475



CLIENT: CKC		LABORATORY: Eurofins MGT		LABORATORY BATCH NO.:	
SITE/PROJECT NAME: Burnley Street		COC Reference #: M2008		SAMPLERS: MC	
SEND REPORT TO: JBS&G		SEND INVOICE TO: JBS&G		PHONE: 08 8431 7113 FAX: 08 8431 7115	
DATA NEEDED BY: Standard Turnaround		REPORT NEEDED BY:		REPORT FORMAT: HARD: NO FAX: NO E-MAIL: YES	
SITE/PROJECT NUMBER: 51573		QUOTE #:		STATE: Victoria	
RELINQUISHED BY:		RECEIVED BY:		METHOD OF SHIPMENT:	
NAME: Tom Statham		NAME:		DATE:	
DATE: 13/4/2016		DATE:		CONSIGNMENT NOTE NO.	
OF: JBS&G		OF:		TIME:	
TIME: AM		TIME:		TRANSPORT CO. NAME:	
NAME:		NAME:		DATE:	
DATE:		DATE:		TIME:	
OF:		OF:		TIME:	
P.Q. NO.:		COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:		ANALYSIS REQUIRED	
FOR LAB USE ONLY		Please forward results and invoice to: labresults@jbsg.com.au		*Container Type and Preservative Codes: P = Neutral Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Jar; S = Solvent Washed Glass Bottle; VC = HCL Preserved Vial; PC = HCL Preserved Plastic; PS = Sulfuric Acid Preserved Plastic; BS = Sulfuric Acid Preserved Glass Bottle; Z = Zinc Acetate Preserved Bottle; ST = Sodium Thiosulfate Preserved Plastic; E = EDTA Preserved Bottles; ST = Sterile Bottle; O = Other.	
COOLER SEAL		tstatham@jbsg.com.au			
Yes _____ No _____		jbowler@jbsg.com.au			
Broken _____ Intact _____		mcloze@jbsg.com.au			
COOLER TEMP: deg.C					
SAMPLE DATA		CONTAINER DATA			
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	NO.
SB11_5N 0.15 F	Soil	12/04/2016		Soil Jar	1
SB11_5N 0.3 F	Soil	12/04/2016		Soil Jar	1
SB11_5N 0.5 F	Soil	12/04/2016		Soil Jar	1
SB11_5N 0.7 N	Soil	12/04/2016		Soil Jar	1
SB11_5N 1.1 N	Soil	12/04/2016		Soil Jar	1
SB11_5E 0.15 F	Soil	12/04/2016		Soil Jar	1
SB11_5E 0.3 F	Soil	12/04/2016		Soil Jar	1
SB11_5E 0.5 F	Soil	12/04/2016		Soil Jar	1
SB11_5E 0.7 N	Soil	12/04/2016		Soil Jar	1
SB11_5E 1.1 N	Soil	12/04/2016		Soil Jar	1
SB11_12N 0.15 F	Soil	12/04/2016		Soil Jar	1
SB11_12N 0.3 F	Soil	12/04/2016		Soil Jar	1
SB11_12N 0.6 N	Soil	12/04/2016		Soil Jar	1
SB11_12N 0.8 N	Soil	12/04/2016		Soil Jar	1
SB11_12N 1.2 N	Soil	12/04/2016		Soil Jar	1
SB11_12S 0.15 F	Soil	12/04/2016		Soil Jar	1
SB11_12S 0.3 F	Soil	12/04/2016		Soil Jar	1
SB11_12S 0.5 N	Soil	12/04/2016		Soil Jar	1
SB11_12S 0.8 N	Soil	12/04/2016		Soil Jar	1
SB11_12S 1.2 N	Soil	12/04/2016		Soil Jar	1
SB11_12W 0.15 F	Soil	12/04/2016		Soil Jar	1
SB11_12W 0.3 F	Soil	12/04/2016		Soil Jar	1
SB11_12W 0.5 N	Soil	12/04/2016		Soil Jar	1
SB11_12W 1.0 N	Soil	12/04/2016		Soil Jar	1
SB23_2E 0.15 F	Soil	12/04/2016		Soil Jar	1
SB23_2E 0.3 N	Soil	12/04/2016		Soil Jar	1
SB23_2E 0.5 N	Soil	12/04/2016		Soil Jar	1

*NOTES Please hold all unanalysed samples

JBS&G (Australia) Pty Ltd

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62 100 220 479

[illegible]

Certificate of Analysis

JBS & G Australia (SA & VIC) P/L
38 Dequetteville Terrace
Kent Town
SA 5067



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: **Jim Bowler**

Report **496680-S**

Project name **BURNLEY STREET**

Project ID **51573**

Received Date **Apr 13, 2016**

Client Sample ID			SB11_5E 0.5F	SB11_12N 0.3F	SB11_12S 0.3F	SB11_12W 0.3F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ap12094	M16-Ap12095	M16-Ap12096	M16-Ap12097
Date Sampled			Apr 12, 2016	Apr 12, 2016	Apr 12, 2016	Apr 12, 2016
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	50	< 20	280	< 20
TRH C15-C28	50	mg/kg	550	< 50	1200	78
TRH C29-C36	50	mg/kg	160	< 50	130	< 50
TRH C10-36 (Total)	50	mg/kg	760	< 50	1600	78
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 less Naphthalene (F2) ^{N01}	50	mg/kg	120	< 50	590	< 50
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	120	< 50	590	< 50
TRH >C16-C34	100	mg/kg	610	< 100	960	110
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
% Moisture	1	%	17	8.2	21	14

Client Sample ID			SB23_2E 0.7N	SB23_2W 0.5N	SB23_2N 0.3N	SB23_2S 0.5F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ap12098	M16-Ap12099	M16-Ap12100	M16-Ap12101
Date Sampled			Apr 12, 2016	Apr 12, 2016	Apr 12, 2016	Apr 12, 2016
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	11	1.4	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	11	1.4	< 0.1
Dibutylchloroendate (surr.)	1	%	129	121	128	112
Tetrachloro-m-xylene (surr.)	1	%	133	137	136	118

Client Sample ID			SB23_2E 0.7N	SB23_2W 0.5N	SB23_2N 0.3N	SB23_2S 0.5F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			M16-Ap12098	M16-Ap12099	M16-Ap12100	M16-Ap12101
Date Sampled			Apr 12, 2016	Apr 12, 2016	Apr 12, 2016	Apr 12, 2016
Test/Reference	LOR	Unit				
% Moisture	1	%	24	19	22	27

Client Sample ID			DUP04
Sample Matrix			Soil
Eurofins mgt Sample No.			M16-Ap12102
Date Sampled			Apr 12, 2016
Test/Reference	LOR	Unit	
Polychlorinated Biphenyls			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1
Total PCB*	0.1	mg/kg	< 0.1
Dibutylchloroendate (surr.)	1	%	137
Tetrachloro-m-xylene (surr.)	1	%	129
% Moisture	1	%	23

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 (regarding both quality and NATA accreditation).

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: TRH C6-C36 - LTM-ORG-2010	Melbourne	Apr 15, 2016	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: TRH C6-C40 - LTM-ORG-2010	Melbourne	Apr 15, 2016	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: TRH C6-C40 - LTM-ORG-2010	Melbourne	Apr 15, 2016	14 Day
Polychlorinated Biphenyls - Method: USEPA 8082 Polychlorinated Biphenyls	Melbourne	Apr 15, 2016	28 Day
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Apr 14, 2016	14 Day

Company Name: JBS & G Australia (SA & VIC) P/L
Address: 38 Dequetteville Terrace
Kent Town
SA 5067
Project Name: BURNLEY STREET
Project ID: 51573

Order No.:
Report #: 496680
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Apr 13, 2016 12:38 PM
Due: Apr 20, 2016
Priority: 5 Day
Contact Name: Tom Statham

Eurofins | mgt Client Manager: Sarah Gould

Sample Detail					HOLD	Polychlorinated Biphenyls	Moisture Set	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
SB11_5E 0.5F	Apr 12, 2016		Soil	M16-Ap12094			X	X
SB11_12N 0.3F	Apr 12, 2016		Soil	M16-Ap12095			X	X
SB11_12S 0.3F	Apr 12, 2016		Soil	M16-Ap12096			X	X
SB11_12W 0.3F	Apr 12, 2016		Soil	M16-Ap12097			X	X
SB23_2E 0.7N	Apr 12, 2016		Soil	M16-Ap12098		X	X	
SB23_2W 0.5N	Apr 12, 2016		Soil	M16-Ap12099		X	X	
SB23_2N 0.3N	Apr 12, 2016		Soil	M16-Ap12100		X	X	

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Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
SB23_2S 0.5F	Apr 12, 2016		Soil	M16-Ap12101		X	X	
DUP04	Apr 12, 2016		Soil	M16-Ap12102		X	X	
RB01	Apr 12, 2016		Water	M16-Ap12103		X		X
SB11_2E 0.15F	Apr 12, 2016		Soil	M16-Ap12104	X			
SB11_2E 0.3F	Apr 12, 2016		Soil	M16-Ap12105	X			
SB11_2E 0.5F	Apr 12, 2016		Soil	M16-Ap12106	X			
SB11_2E 0.7N	Apr 12, 2016		Soil	M16-Ap12107	X			
SB11_2E 1.1N	Apr 12, 2016		Soil	M16-Ap12108	X			
SB11_2W 0.15F	Apr 12, 2016		Soil	M16-Ap12109	X			

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Sample Detail					HOLD	Polychlorinated Biphenyls	Moisture Set	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
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Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
SB11_2W 0.3F	Apr 12, 2016		Soil	M16-Ap12110	X			
SB11_2W 0.6F	Apr 12, 2016		Soil	M16-Ap12111	X			
SB11_2W 0.9F	Apr 12, 2016		Soil	M16-Ap12112	X			
SB11_2N 0.15F	Apr 12, 2016		Soil	M16-Ap12113	X			
SB11_2N 0.3F	Apr 12, 2016		Soil	M16-Ap12114	X			
SB11_2N 0.5F	Apr 12, 2016		Soil	M16-Ap12115	X			
SB11_2S 0.15F	Apr 12, 2016		Soil	M16-Ap12116	X			
SB11_2S 0.3F	Apr 12, 2016		Soil	M16-Ap12117	X			
SB11_2S 0.5F	Apr 12, 2016		Soil	M16-Ap12118	X			

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Sample Detail					HOLD	Polychlorinated Biphenyls	Moisture Set	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
SB11_2S 0.7F	Apr 12, 2016		Soil	M16-Ap12119	X			
SB11_2S 1.0N	Apr 12, 2016		Soil	M16-Ap12120	X			
SB11_5S 0.15F	Apr 12, 2016		Soil	M16-Ap12121	X			
SB11_5S 0.3F	Apr 12, 2016		Soil	M16-Ap12122	X			
SB11_5S 0.5F	Apr 12, 2016		Soil	M16-Ap12123	X			
SB11_5S 0.7F	Apr 12, 2016		Soil	M16-Ap12124	X			
SB11_5S 1.2N	Apr 12, 2016		Soil	M16-Ap12125	X			
SB11_5W 0.15F	Apr 12, 2016		Soil	M16-Ap12126	X			
SB11_5W 0.3F	Apr 12, 2016		Soil	M16-Ap12127	X			

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Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
SB11_5W 0.5N	Apr 12, 2016		Soil	M16-Ap12128	X			
SB11_5W 0.7N	Apr 12, 2016		Soil	M16-Ap12129	X			
SB11_5W 1.1N	Apr 12, 2016		Soil	M16-Ap12130	X			
SB11_5N 0.15F	Apr 12, 2016		Soil	M16-Ap12131	X			
SB11_5N 0.3F	Apr 12, 2016		Soil	M16-Ap12132	X			
SB11_5N 0.5F	Apr 12, 2016		Soil	M16-Ap12133	X			
SB11_5N 0.7N	Apr 12, 2016		Soil	M16-Ap12134	X			
SB11_5N 1.1N	Apr 12, 2016		Soil	M16-Ap12135	X			
SB11_5E 0.15F	Apr 12, 2016		Soil	M16-Ap12136	X			

Company Name: JBS & G Australia (SA & VIC) P/L
Address: 38 Dequetteville Terrace
Kent Town
SA 5067
Project Name: BURNLEY STREET
Project ID: 51573

Order No.:
Report #: 496680
Phone: 08 8431 7113
Fax: 08 8431 7115

Received: Apr 13, 2016 12:38 PM
Due: Apr 20, 2016
Priority: 5 Day
Contact Name: Tom Statham

Eurofins | mgt Client Manager: Sarah Gould

Sample Detail					HOLD	Polychlorinated Biphenyls	Moisture Set	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
SB11_5E 0.3F	Apr 12, 2016		Soil	M16-Ap12137	X			
SB11_5E 0.7N	Apr 12, 2016		Soil	M16-Ap12138	X			
SB11_5E 1.1N	Apr 12, 2016		Soil	M16-Ap12139	X			
SB11_12N 0.15F	Apr 12, 2016		Soil	M16-Ap12140	X			
SB11_12N 0.6N	Apr 12, 2016		Soil	M16-Ap12141	X			
SB11_12N 0.8N	Apr 12, 2016		Soil	M16-Ap12142	X			
SB11_12N 1.2N	Apr 12, 2016		Soil	M16-Ap12143	X			
SB11_12S	Apr 12, 2016		Soil	M16-Ap12144	X			

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Sample Detail					HOLD	Polychlorinated Biphenyls	Moisture Set	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
0.15F								
SB11_12S 0.5N	Apr 12, 2016		Soil	M16-Ap12145	X			
SB11_12S 0.8N	Apr 12, 2016		Soil	M16-Ap12146	X			
SB11_12S 1.2N	Apr 12, 2016		Soil	M16-Ap12147	X			
SB11_12W 0.15F	Apr 12, 2016		Soil	M16-Ap12148	X			
SB11_12W 0.5N	Apr 12, 2016		Soil	M16-Ap12149	X			
SB11_12W	Apr 12, 2016		Soil	M16-Ap12150	X			

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Sample Detail					HOLD	Polychlorinated Biphenyls	Moisture Set	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
1.0N								
SB23_2E 0.15F	Apr 12, 2016		Soil	M16-Ap12151	X			
SB23_2E 0.3N	Apr 12, 2016		Soil	M16-Ap12152	X			
SB23_2E 0.5N	Apr 12, 2016		Soil	M16-Ap12153	X			
SB23_2E 1.0N	Apr 12, 2016		Soil	M16-Ap12154	X			
SB23_2W 0.15F	Apr 12, 2016		Soil	M16-Ap12155	X			
SB23_2W 0.3F	Apr 12, 2016		Soil	M16-Ap12156	X			
SB23_2W 0.7N	Apr 12, 2016		Soil	M16-Ap12157	X			
SB23_2W 1.0N	Apr 12, 2016		Soil	M16-Ap12158	X			

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Sample Detail					HOLD	Polychlorinated Biphenyls	Moisture Set	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
SB23_2N 0.15F	Apr 12, 2016		Soil	M16-Ap12159	X			
SB23_2N 0.5N	Apr 12, 2016		Soil	M16-Ap12160	X			
SB23_2S 0.15F	Apr 12, 2016		Soil	M16-Ap12161	X			
SB23_2S 0.3F	Apr 12, 2016		Soil	M16-Ap12162	X			
SB23_5N 0.15F	Apr 12, 2016		Soil	M16-Ap12163	X			
SB23_5N 0.3F	Apr 12, 2016		Soil	M16-Ap12164	X			
SB23_5N 0.6N	Apr 12, 2016		Soil	M16-Ap12165	X			
SB23_5S 0.15F	Apr 12, 2016		Soil	M16-Ap12166	X			

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Sample Detail					HOLD	Polychlorinated Biphenyls	Moisture Set	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
SB23 5S 0.3F	Apr 12, 2016		Soil	M16-Ap12167	X			
SB23 5S 0.5N	Apr 12, 2016		Soil	M16-Ap12168	X			
SB23 5E 0.15F	Apr 12, 2016		Soil	M16-Ap12169	X			
SB23 5E 0.3F	Apr 12, 2016		Soil	M16-Ap12170	X			
SB23 5E 0.4F	Apr 12, 2016		Soil	M16-Ap12171	X			
SB23 5W 0.15F	Apr 12, 2016		Soil	M16-Ap12172	X			
SB23 5W 0.2F	Apr 12, 2016		Soil	M16-Ap12173	X			
DUP01	Apr 12, 2016		Soil	M16-Ap12174	X			
SPLIT01	Apr 12, 2016		Soil	M16-Ap12175	X			

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Sample Detail					HOLD	Polychlorinated Biphenyls	Moisture Set	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
DUP02	Apr 12, 2016		Soil	M16-Ap12176	X			
SPLIT02	Apr 12, 2016		Soil	M16-Ap12177	X			
DUP03	Apr 12, 2016		Soil	M16-Ap12178	X			
SPLIT03	Apr 12, 2016		Soil	M16-Ap12179	X			

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. 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.

****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. 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.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 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 50-150% - Phenols 20-130%.

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								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions								
Naphthalene			mg/kg	< 0.5		0.5	Pass	
TRH C6-C10			mg/kg	< 20		20	Pass	
Method Blank								
Polychlorinated Biphenyls								
Aroclor-1016			mg/kg	< 0.1		0.1	Pass	
Aroclor-1221			mg/kg	< 0.1		0.1	Pass	
Aroclor-1232			mg/kg	< 0.1		0.1	Pass	
Aroclor-1242			mg/kg	< 0.1		0.1	Pass	
Aroclor-1248			mg/kg	< 0.1		0.1	Pass	
Aroclor-1254			mg/kg	< 0.1		0.1	Pass	
Aroclor-1260			mg/kg	< 0.1		0.1	Pass	
Total PCB*			mg/kg	< 0.1		0.1	Pass	
Method Blank								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions								
TRH >C10-C16			mg/kg	< 50		50	Pass	
TRH >C16-C34			mg/kg	< 100		100	Pass	
TRH >C34-C40			mg/kg	< 100		100	Pass	
LCS - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions								
TRH C6-C9			%	92		70-130	Pass	
TRH C10-C14			%	98		70-130	Pass	
LCS - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions								
Naphthalene			%	116		70-130	Pass	
TRH C6-C10			%	90		70-130	Pass	
LCS - % Recovery								
Polychlorinated Biphenyls								
Aroclor-1260			%	102		70-130	Pass	
LCS - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions								
TRH >C10-C16			%	98		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								
TRH C6-C9		B16-Ap11039	NCP	%	94	70-130	Pass	
TRH C10-C14		M16-Ap11971	NCP	%	87	70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions								
Naphthalene		B16-Ap11039	NCP	%	82	70-130	Pass	
TRH C6-C10		B16-Ap11039	NCP	%	95	70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions								
TRH >C10-C16		M16-Ap11971	NCP	%	87	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	M16-Ap12099	CP	%	130			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 C10-C14	M16-Ap11970	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M16-Ap11970	NCP	mg/kg	130	100	20	30%	Pass	
TRH C29-C36	M16-Ap11970	NCP	mg/kg	160	120	25	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M16-Ap11970	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M16-Ap11970	NCP	mg/kg	240	200	20	30%	Pass	
TRH >C34-C40	M16-Ap11970	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M16-Ap12095	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M16-Ap12095	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M16-Ap12095	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	M16-Ap14884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	M16-Ap14884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	M16-Ap14884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	M16-Ap14884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	M16-Ap14884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	M16-Ap14884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	M16-Ap12098	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	M16-Ap12098	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M16-Ap12100	CP	%	22	21	2.0	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.

Authorised By

Sarah Gould	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Huong Le	Senior Analyst-Inorganic (VIC)
Mele Singh	Senior Analyst-Organic (VIC)



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

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Certificate of Analysis

JBS & G Australia (SA & VIC) P/L
38 Dequetteville Terrace
Kent Town
SA 5067



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: Jim Bowler

Report 496680-W
Project name BURNLEY STREET
Project ID 51573
Received Date Apr 13, 2016

Client Sample ID			RB01
Sample Matrix			Water
Eurofins mgt Sample No.			M16-Ap12103
Date Sampled			Apr 12, 2016
Test/Reference	LOR	Unit	
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 C10-36 (Total)	0.1	mg/L	< 0.1
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 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05
Polychlorinated Biphenyls			
Aroclor-1016	0.001	mg/L	< 0.001
Aroclor-1221	0.001	mg/L	< 0.001
Aroclor-1232	0.001	mg/L	< 0.001
Aroclor-1242	0.001	mg/L	< 0.001
Aroclor-1248	0.001	mg/L	< 0.001
Aroclor-1254	0.001	mg/L	< 0.001
Aroclor-1260	0.001	mg/L	< 0.001
Total PCB*	0.001	mg/L	< 0.001
Dibutylchloroendate (surr.)	1	%	70
Tetrachloro-m-xylene (surr.)	1	%	108
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1

Sample History

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

A recent review of our 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 (regarding both quality and NATA accreditation).

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: TRH C6-C36 - LTM-ORG-2010	Melbourne	Apr 19, 2016	7 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: TRH C6-C40 - LTM-ORG-2010	Melbourne	Apr 14, 2016	7 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: TRH C6-C40 - LTM-ORG-2010	Melbourne	Apr 19, 2016	7 Day
Polychlorinated Biphenyls - Method: USEPA 8082 Polychlorinated Biphenyls	Melbourne	Apr 19, 2016	7 Day

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Contact Name: Tom Statham

Eurofins | mgt Client Manager: Sarah Gould

Sample Detail					HOLD	Polychlorinated Biphenyls	Moisture Set	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
SB11_5E 0.5F	Apr 12, 2016		Soil	M16-Ap12094			X	X
SB11_12N 0.3F	Apr 12, 2016		Soil	M16-Ap12095			X	X
SB11_12S 0.3F	Apr 12, 2016		Soil	M16-Ap12096			X	X
SB11_12W 0.3F	Apr 12, 2016		Soil	M16-Ap12097			X	X
SB23_2E 0.7N	Apr 12, 2016		Soil	M16-Ap12098		X	X	
SB23_2W 0.5N	Apr 12, 2016		Soil	M16-Ap12099		X	X	
SB23_2N 0.3N	Apr 12, 2016		Soil	M16-Ap12100		X	X	

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Fax: 08 8431 7115

Received: Apr 13, 2016 12:38 PM
Due: Apr 20, 2016
Priority: 5 Day
Contact Name: Tom Statham

Eurofins | mgt Client Manager: Sarah Gould

Sample Detail					HOLD	Polychlorinated Biphenyls	Moisture Set	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
SB23_2S 0.5F	Apr 12, 2016		Soil	M16-Ap12101		X	X	
DUP04	Apr 12, 2016		Soil	M16-Ap12102		X	X	
RB01	Apr 12, 2016		Water	M16-Ap12103		X		X
SB11_2E 0.15F	Apr 12, 2016		Soil	M16-Ap12104	X			
SB11_2E 0.3F	Apr 12, 2016		Soil	M16-Ap12105	X			
SB11_2E 0.5F	Apr 12, 2016		Soil	M16-Ap12106	X			
SB11_2E 0.7N	Apr 12, 2016		Soil	M16-Ap12107	X			
SB11_2E 1.1N	Apr 12, 2016		Soil	M16-Ap12108	X			
SB11_2W 0.15F	Apr 12, 2016		Soil	M16-Ap12109	X			

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Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
SB11_2W 0.3F	Apr 12, 2016		Soil	M16-Ap12110	X			
SB11_2W 0.6F	Apr 12, 2016		Soil	M16-Ap12111	X			
SB11_2W 0.9F	Apr 12, 2016		Soil	M16-Ap12112	X			
SB11_2N 0.15F	Apr 12, 2016		Soil	M16-Ap12113	X			
SB11_2N 0.3F	Apr 12, 2016		Soil	M16-Ap12114	X			
SB11_2N 0.5F	Apr 12, 2016		Soil	M16-Ap12115	X			
SB11_2S 0.15F	Apr 12, 2016		Soil	M16-Ap12116	X			
SB11_2S 0.3F	Apr 12, 2016		Soil	M16-Ap12117	X			
SB11_2S 0.5F	Apr 12, 2016		Soil	M16-Ap12118	X			

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Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
SB11_2S 0.7F	Apr 12, 2016		Soil	M16-Ap12119	X			
SB11_2S 1.0N	Apr 12, 2016		Soil	M16-Ap12120	X			
SB11_5S 0.15F	Apr 12, 2016		Soil	M16-Ap12121	X			
SB11_5S 0.3F	Apr 12, 2016		Soil	M16-Ap12122	X			
SB11_5S 0.5F	Apr 12, 2016		Soil	M16-Ap12123	X			
SB11_5S 0.7F	Apr 12, 2016		Soil	M16-Ap12124	X			
SB11_5S 1.2N	Apr 12, 2016		Soil	M16-Ap12125	X			
SB11_5W 0.15F	Apr 12, 2016		Soil	M16-Ap12126	X			
SB11_5W 0.3F	Apr 12, 2016		Soil	M16-Ap12127	X			

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Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
SB11_5W 0.5N	Apr 12, 2016		Soil	M16-Ap12128	X			
SB11_5W 0.7N	Apr 12, 2016		Soil	M16-Ap12129	X			
SB11_5W 1.1N	Apr 12, 2016		Soil	M16-Ap12130	X			
SB11_5N 0.15F	Apr 12, 2016		Soil	M16-Ap12131	X			
SB11_5N 0.3F	Apr 12, 2016		Soil	M16-Ap12132	X			
SB11_5N 0.5F	Apr 12, 2016		Soil	M16-Ap12133	X			
SB11_5N 0.7N	Apr 12, 2016		Soil	M16-Ap12134	X			
SB11_5N 1.1N	Apr 12, 2016		Soil	M16-Ap12135	X			
SB11_5E 0.15F	Apr 12, 2016		Soil	M16-Ap12136	X			

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Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
SB11_5E 0.3F	Apr 12, 2016		Soil	M16-Ap12137	X			
SB11_5E 0.7N	Apr 12, 2016		Soil	M16-Ap12138	X			
SB11_5E 1.1N	Apr 12, 2016		Soil	M16-Ap12139	X			
SB11_12N 0.15F	Apr 12, 2016		Soil	M16-Ap12140	X			
SB11_12N 0.6N	Apr 12, 2016		Soil	M16-Ap12141	X			
SB11_12N 0.8N	Apr 12, 2016		Soil	M16-Ap12142	X			
SB11_12N 1.2N	Apr 12, 2016		Soil	M16-Ap12143	X			
SB11_12S	Apr 12, 2016		Soil	M16-Ap12144	X			

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Sample Detail					HOLD	Polychlorinated Biphenyls	Moisture Set	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
0.15F								
SB11_12S 0.5N	Apr 12, 2016		Soil	M16-Ap12145	X			
SB11_12S 0.8N	Apr 12, 2016		Soil	M16-Ap12146	X			
SB11_12S 1.2N	Apr 12, 2016		Soil	M16-Ap12147	X			
SB11_12W 0.15F	Apr 12, 2016		Soil	M16-Ap12148	X			
SB11_12W 0.5N	Apr 12, 2016		Soil	M16-Ap12149	X			
SB11_12W	Apr 12, 2016		Soil	M16-Ap12150	X			

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Sample Detail					HOLD	Polychlorinated Biphenyls	Moisture Set	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
1.0N								
SB23_2E 0.15F	Apr 12, 2016		Soil	M16-Ap12151	X			
SB23_2E 0.3N	Apr 12, 2016		Soil	M16-Ap12152	X			
SB23_2E 0.5N	Apr 12, 2016		Soil	M16-Ap12153	X			
SB23_2E 1.0N	Apr 12, 2016		Soil	M16-Ap12154	X			
SB23_2W 0.15F	Apr 12, 2016		Soil	M16-Ap12155	X			
SB23_2W 0.3F	Apr 12, 2016		Soil	M16-Ap12156	X			
SB23_2W 0.7N	Apr 12, 2016		Soil	M16-Ap12157	X			
SB23_2W 1.0N	Apr 12, 2016		Soil	M16-Ap12158	X			

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Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
SB23_2N 0.15F	Apr 12, 2016		Soil	M16-Ap12159	X			
SB23_2N 0.5N	Apr 12, 2016		Soil	M16-Ap12160	X			
SB23_2S 0.15F	Apr 12, 2016		Soil	M16-Ap12161	X			
SB23_2S 0.3F	Apr 12, 2016		Soil	M16-Ap12162	X			
SB23_5N 0.15F	Apr 12, 2016		Soil	M16-Ap12163	X			
SB23_5N 0.3F	Apr 12, 2016		Soil	M16-Ap12164	X			
SB23_5N 0.6N	Apr 12, 2016		Soil	M16-Ap12165	X			
SB23_5S 0.15F	Apr 12, 2016		Soil	M16-Ap12166	X			

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Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
SB23 5S 0.3F	Apr 12, 2016		Soil	M16-Ap12167	X			
SB23 5S 0.5N	Apr 12, 2016		Soil	M16-Ap12168	X			
SB23 5E 0.15F	Apr 12, 2016		Soil	M16-Ap12169	X			
SB23 5E 0.3F	Apr 12, 2016		Soil	M16-Ap12170	X			
SB23 5E 0.4F	Apr 12, 2016		Soil	M16-Ap12171	X			
SB23 5W 0.15F	Apr 12, 2016		Soil	M16-Ap12172	X			
SB23 5W 0.2F	Apr 12, 2016		Soil	M16-Ap12173	X			
DUP01	Apr 12, 2016		Soil	M16-Ap12174	X			
SPLIT01	Apr 12, 2016		Soil	M16-Ap12175	X			

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Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
DUP02	Apr 12, 2016		Soil	M16-Ap12176	X			
SPLIT02	Apr 12, 2016		Soil	M16-Ap12177	X			
DUP03	Apr 12, 2016		Soil	M16-Ap12178	X			
SPLIT03	Apr 12, 2016		Soil	M16-Ap12179	X			

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. 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.

****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. 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.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 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 50-150% - Phenols 20-130%.

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/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									
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									
Polychlorinated Biphenyls									
Aroclor-1016			mg/L	< 0.001			0.001	Pass	
Aroclor-1221			mg/L	< 0.001			0.001	Pass	
Aroclor-1232			mg/L	< 0.001			0.001	Pass	
Aroclor-1242			mg/L	< 0.001			0.001	Pass	
Aroclor-1248			mg/L	< 0.001			0.001	Pass	
Aroclor-1254			mg/L	< 0.001			0.001	Pass	
Aroclor-1260			mg/L	< 0.001			0.001	Pass	
Total PCB*			mg/L	< 0.001			0.001	Pass	
Method Blank									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
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	
LCS - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions									
TRH C6-C9			%	110			70-130	Pass	
TRH C10-C14			%	116			70-130	Pass	
LCS - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
Naphthalene			%	109			70-130	Pass	
TRH C6-C10			%	110			70-130	Pass	
LCS - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
TRH >C10-C16			%	119			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									
TRH C10-C14		M16-Ap11980	NCP	%	124		70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
TRH >C10-C16		M16-Ap11980	NCP	%	127		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									
TRH C6-C9		M16-Ap13441	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C10-C14		M16-Ap13366	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
TRH C15-C28		M16-Ap13366	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass
TRH C29-C36		M16-Ap13366	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass

Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	M16-Ap13441	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass
TRH C6-C10	M16-Ap13441	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M16-Ap05584	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Aroclor-1221	M16-Ap05584	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Aroclor-1232	M16-Ap05584	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Aroclor-1242	M16-Ap05584	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Aroclor-1248	M16-Ap05584	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Aroclor-1254	M16-Ap05584	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Aroclor-1260	M16-Ap05584	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Total PCB*	M16-Ap05584	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
TRH >C10-C16	M16-Ap13366	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
TRH >C16-C34	M16-Ap13366	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass
TRH >C34-C40	M16-Ap13366	NCP	mg/L	< 0.1	< 0.1	<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.

Authorised By

Sarah Gould	Analytical Services Manager
Harry Bacalis	Senior Analyst-Volatile (VIC)
Mele Singh	Senior Analyst-Organic (VIC)



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

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CERTIFICATE OF ANALYSIS

8293

Client:

JBS&G Australia Pty Ltd
38 Dequetteville Tce
Kent Town
SA 5067

Attention: Tom Statham

Sample log in details:

Your Reference:	51573 - Burnley Street
No. of samples:	1 Soil
Date samples received / completed instructions received	14/04/2016 / 14/04/2016

Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

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

Report Details:

Date results requested by: / Issue Date:	21/04/16 / 21/04/16
Date of Preliminary Report:	Not Issued

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Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:

Analisa Mathrick
Laboratory Manager



PCBs in Soil		
Our Reference:	UNITS	8293-1
Your Reference	-----	SPLIT 04
Date Sampled	-----	12/04/2016
Type of sample		Soil
Date extracted	-	18/04/2016
Date analysed	-	19/04/2016
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Surrogate TCLMX	%	90

Moisture		
Our Reference:	UNITS	8293-1
Your Reference	-----	SPLIT 04
Date Sampled	-----	12/04/2016
Type of sample		Soil
Date prepared	-	18/04/2016
Date analysed	-	19/04/2016
Moisture	%	26

Method ID	Methodology Summary
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD or GC-MS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 12 hours.

Client Reference: 51573 - Burnley Street

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			18/04/2016	[NT]	[NT]	LCS-1	18/04/2016
Date analysed	-			19/04/2016	[NT]	[NT]	LCS-1	20/04/2016
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	LCS-1	116%
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		Org-012	102	[NT]	[NT]	LCS-1	90%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Moisture				
Date prepared	-			[NT]
Date analysed	-			[NT]
Moisture	%	0.1	Inorg-008	[NT]

Report Comments:

Asbestos ID was analysed by Approved Identifier:
Asbestos ID was authorised by Approved Signatory:

Not applicable for this job
Not applicable for this job

INS: Insufficient sample for this test
NR: Test not required
<: Less than

PQL: Practical Quantitation Limit
RPD: Relative Percent Difference
>: Greater than

NT: Not tested
NA: Test not required
LCS: Laboratory Control Sample

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.

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: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-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.

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Document Status

Rev No.	Author	Reviewer	Approved for Issue		
		Name	Name	Signature	Date
1	Tom Statham / Jim Bowler	David Nunn	David Nunn		30 May 2016

