Penrith City Council

114 to 146 Henry Street, 42-50 Station Street, and Allen Place Carpark Penrith, NSW

Phase 2 Environmental Site Assessment

ϕ July 2017

52152/104051 Rev A

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Abbreviations

Term	Definition
°C	Degrees Celsius
ABC	Average Background Concentration
ACL	Added Contaminant Limit
ACM	Asbestos Containing Material
AEC	Area of Environmental Control
AHD	Australian Height Datum
ASS	Acid Sulphate Soils
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
CEC	Cation Exchange Capacity
COC	Chain of Command
COPC	Contaminants of Potential Concern
CSM	Conceptual Site Model
DBYD	Dial Before You Dig
DEC	Department of Environment and Conservation
DMR	Department of Mineral Resources
DOH	Department of Health
DP	Deposited Plan
DPI	Department of Primary Industries
DQI	Data Quality Indicators
DQO	Data Quality Objectives
DSI	Detailed Site Assessment
EIL	Ecological Investigation Levels
EPA	Environmental Protection Authority
ESA	Environmental Site Assessment
ESL	Ecological Screening Level
HBM	Hazardous Building Material
HIL	Health Investigation Level
HSL	Health Screening Level
JBS&G	JBS&G Australian Pty Ltd
LCS	Laboratory Control Sample
LOR	Limit of Reporting
MGA	Map Grid of Australia
NSW	New South Wales
OCP	Organochlorine Pesticide
OPP	Organophosphorus Pesticide
PAH	Polycyclic Aromatic Hydrocarbon
PARCCS	Precision, Accuracy, Representativeness, Comparability, Completeness, Sensitivity
PCB	Polychlorinated Biphenyls
PSI	Preliminary Site Assessment
QA/QC	Quality Assurance / Quality Control
RfP	Request for Proposal
RPD	Relative Percentage Difference
TEQ	Toxic Equivalence Quotient
TRH / TPH	Total Recoverable Hydrocarbons / Total Petroleum Hydrocarbon
UCL	Upper Confidence Limit
VOC	Volatile Organic Compound

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Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by Penrith City Council (Council, the client) to provide environmental consulting services associated with the Combined Phase 1 and 2 Environmental Site Assessment (ESA) in conjunction with the delivery of a Geotechnical Investigation of ten lots located at 114 to 146 Henry Street, 42 to 50 Station Street and Allen Place carpark, Penrith, NSW (the Site). This ESA Report details the findings of the Phase 2 ESA. The legal identification of the lots and part lots which comprise the Site are provided in **Table 2.1**, which comprise a total area of approximately 1.87 hectares (ha) as shown in **Figure 1** and **2**.

It is understood that Council intends on redeveloping the Site for mixed use including recreational space and 4 to 6 storey residential apartments with retail and commercial uses. Council requires an ESA and Geotechnical Investigation to enable the potential contamination and geotechnical risks to be assessed prior to land purchase given the proposed redevelopment.

Penrith engaged Geo-Logix Pty Ltd (Geo-Logix) to conduct a preliminary ESA, Geo-Logix (2016[1]) at the property located at 134-138 Henry Street, Penrith, NSW (the preliminary assessment area, Lot 1 DP164798, **Figure 2**). The preliminary assessment was undertaken to assess the potential for contamination to exist at the site given the presence of an operational dry cleaning business within the preliminary assessment area. Geo-Logix carried out passive soil vapour assessments at two locations within the dry-cleaning shop. Chlorinated hydrocarbons were detected in soil vapour samples at concentrations in excess of the commercial land use criteria adopted for the assessment.

Sample results from the soil vapour sampling and analyses undertake as part of this investigation have indicated that there currently exists a significant chlorinated hydrocarbon impact within the vicinity of the dry cleaner. The volatile gas impact extends north of the dry cleaner, along the inferred groundwater flow direction, with exceedances of the soil vapour criteria for PCE and TCE identified from gas samples taken at probe locations SV04, SV05 and SV10 (**Figure 3C**). It is noted that the most significant concentrations were detected at location SV05, approximately in line with the inferred groundwater flow direction.

The presence of chlorinated hydrocarbons in soil vapour represent a potential risk to current and future site users and will require remediation/management for the proposed land uses. The concentration of PCE within soil vapour at location SV05 and the concentration of both PCE and TCE exceeded the adopted HIL-C criteria; these exceedances represent a risk to future onsite receptors.

Concentrations of COPC in all other samples analysed were reported to be at concentrations which did not indicate the presence of statistically significant exceedances of the adopted site assessment criteria.

Groundwater and soil concentrations within the vicinity of the dry cleaner have also indicated the presence of chlorinated hydrocarbons, primarily PCE and TCE, albeit at concentrations which were below the adopted site assessment criteria. This has indicated that the impact has migrated laterally and vertically through soil and groundwater at the Site. It is noted that no well downstream of the impact was able to be installed due to the presence of building awnings/eaves along the northern boundary of the Site. It is considered possible that additional groundwater impact may be present at the Site that has yet to be identified.

Given the Site history, the presence of buried anthropogenic materials in the form of building and demolition waste and the identification of trace levels of asbestos within soil at location JB11, it is considered likely that ACM is present at other locations at the Site. Boreholes are limited in their

[1] *'Preliminary Environmental Site Assessment Report, 134 – 138 Henry Street Penrith NSW 2750'*, Geo-Logix Pty Ltd, Reference: 1601069Rpt01FinalV01_12Aug16, 12 August 2016, Geo-Logix (2016)

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utility for the identification of buried asbestos and ACM, therefore redevelopment of the Site may uncover additional, undocumented asbestos which could potentially represent a risk to human health.

In accordance with the limitations in **Section 11**, the following conclusions are provided:

- Soil vapour concentrations within the vicinity of the dry cleaner represent a potential risk to current and future site users which will require management prior to utilisation of the Site for the proposed land uses;
- Offsite migration of chlorinated hydrocarbons is potentially occurring, north of the dry cleaner along the inferred groundwater flow direction;
- Lead impacted fill material in the vicinity of JHA02 is required to be managed prior to the utilisation of the site for the proposed land uses;
- Asbestos and ACM may be present within surficial fill materials at the Site which has not been documented as part of this DSI. Boreholes are limited in their utility for the identification of buried asbestos and ACM. During the redevelopment stage of the works, additional asbestos may be identified which could potentially represent a risk to human health and will require management/remediation during redevelopment;
- Contaminants in soils and groundwater were generally not present at concentrations representing statistically significant exceedances of the Site assessment criteria, and therefore with the exception of the aforementioned, do not represent a risk to the current or futures site users;
- No background soil concentrations or aesthetic issues were identified in this assessment;
- The Site is currently unsuitable for the proposed land uses. Subject to the implementation of an RAP which manages the identified impacts, it is considered that the Site can be made suitable for the proposed land uses; and
- The reported concentrations of chlorinated hydrocarbons in groundwater/soil vapour exceed the relevant investigation levels presented in Schedule B1 of the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPC 2013). As a result, there is a potential requirement for the site to be notified to the NSW EPA in accordance with the *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997* (NSW EPA 2015).

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1. Introduction

1.1 Introduction

JBS&G Australia Pty Ltd (JBS&G) was engaged by Penrith City Council (Council, the client) to provide environmental consulting services associated with the Combined Phase 1 and 2 Environmental Site Assessment (ESA) in conjunction with the delivery of a Geotechnical Investigation of ten lots located at 114 to 146 Henry Street, 42 to 50 Station Street and Allen Place carpark, Penrith, NSW (the Site). This ESA Report details the findings of the Phase 2 ESA. The legal identification of the lots and part lots which comprise the Site are provided in **Table 2.1**, which comprise a total area of approximately 1.87 hectares (ha) as shown in **Figure 1** and **2**.

The Site is located within a suburban setting comprising a sealed, asphaltic pavement carpark with several pedestrian and vehicular access roads, bordered by a combination of wooden guard rails, planter boxes and vegetation. The majority of the Site was an active carpark at the time of the investigation.

It is understood that Council intends on redeveloping the Site for mixed use including recreational space and 4 to 6 storey residential apartments with retail and commercial uses. Council requires an ESA and Geotechnical Investigation to enable the potential contamination and geotechnical risks to be assessed prior to land purchase given the proposed redevelopment.

This report has been developed in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards. The Geotechnical component of the assessment was completed by Pells Sullivan Meynink (PSM) and was carried out concurrently with the environmental investigation. The PSM report is included as **Appendix A**.

1.2 Objectives

The objectives of the investigation were to assess the potential for contamination based on current and historical Site activities and to draw conclusions regarding the potential contamination status of the Site for the proposed land uses, or make recommendations to enable such conclusions to be made.

1.3 Scope of Works

The agreed scope of works completed for this assessment comprised:

- A review of available Site history and background information to identify potential areas of environmental concern (AECs) and associated contaminants of potential concern (COPC), including:
    - Section 149(2&5) certificates obtained from council from three representative lots;
    - Records of stored Dangerous Goods held by WorkCover;
    - Historical aerial photographs obtained from the Department of Lands;
    - Publicly available heritage records held by the Department of Planning and Environment and Council, where readily available;
    - Records of environmental incidents, former environmental licences, or contaminated land notices or notifications, as held by the EPA; and
    - Licensed groundwater bores present within a 1.5 km radius of the Site available on the online NSW Natural Resources Atlas.
- Review of the environmental setting including a review of topography, geology, hydrogeology and meteorology of the Site and surrounding areas;
- A detailed Site inspection to identify potential AECs and confirm desktop findings;

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- Development and documentation of a conceptual site model (CSM) based on the available information;
- Development and documentation of the data quality objectives (DQOs) for the ESA in general accordance with relevant EPA guidelines;
- Implementation of a Detailed Site Investigation (DSI) program including advancement of systematic and targeted soil, soil vapour and groundwater sampling locations;
- Analysis of selected samples for a range of COPCs as identified during the Preliminary Site Investigation (PSI) component of the investigations;
- Comparison of collected data against regulator published / endorsed investigation criteria to facilitate an assessment of land use suitability;
- Comparison of collected data against guidelines of for classifying waste (EPA 2014[2]); and
- Preparation of an ESA report in general accordance with relevant EPA guidelines.

[2] *'Waste Classification Guidelines – Part 1: Classifying Waste'*, Environmental Protection Authority, November 2014 (EPA 2014)

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2. Site Condition and Surrounding Environment

2.1 Site Identification

The Site location is shown on **Figure 1**. The extent of the Site and associated cadastral boundaries are shown on **Figure 2**. The Site details are summarised in **Table 2.1** and described in detail in the following sections.

Table 2.1 Summary Site Details

Lots / DPs	Lot 1 in DP526304, DP163176 (No Lot #), Lot 2 in DP556075, Lot 10 in DP553665, Lot 11 in DP 553665, Lot 1 in DP164798, Lot 1 in DP545587, Lot 1 in DP254763, Lot 3 in DP1200790, Lot 1 in DP113118 and Allen Place Carpark
Address	114-146 Henry Street, 42-50 Station Street and Allen Place Car Park, Penrith NSW
Local Government Authority	Penrith City Council
Approximate MGA Coordinates (MGA 56)	As shown on **Figure 2**
Site Zoning	Commercial Core (B3) and Public Recreation (RE1) (Penrith 2010[3])
Current Use	Commercial and car parking
Previous Use	Commercial and car parking
Proposed Use	Mixed Use – Recreation, high density residential and commercial
Site Area	Approximately 1.87 ha

2.2 Site Description

A detailed site inspection was completed by Rohan Hammond on 31 October 2016 and again on 26 May 2017, relevant details are documented below. A photographic log is presented in **Appendix B**.

The Site comprised an approximately rectangular, large commercial car park in the centre of the Allen Place loop road and ten commercial premises on the southern side of Henry Street in Penrith. The borders of the Site were not secured and open to the public (pedestrians and vehicles) with the exception.

The Site topography did not appear to have been significantly altered from their natural alignment, comprising a slightly raised eastern section which sloped gradually downward toward the west.

The Site comprised a mixture of commercial uses at the time of the site investigation: an operational car park, dry cleaner, retail shops and cafes. High pedestrian and vehicular traffic was observed during working hours. At the beginning of the investigation (31 October 2016), a vehicular overbridge existed which was observed to link traffic from the central portion of the Allen Place Car Park to rooftop car parking on the adjacent side of Station Street, west of the Site. Throughout the course of the investigation, prior to any soil environmental sampling activities, the overbridge was demolished and ground surface reinstated by asphaltic pavements.

Approximately 95 % of the Site comprised sealed ground in the form of asphaltic pavement, concrete pathways, and building footprints with onsite drainage channels directing surface water toward the municipal stormwater system. The balance of the Site comprised unsealed grounds in the form of garden beds and unpaved areas.

Buildings at the Site have generally not been maintained to a high level of repair although no significant degradation of building materials was observed. A detailed inspection/hazardous building materials survey of the existing site structures was not undertaken as part of this investigation.

No surface water was present at the Site at the time of the investigation. No evidence of waste storage or storage tanks was observed at the Site. North of the dry cleaner, olfactory indicators of volatile chemical usage were noted. No visual indicators of gross or widespread contamination were observed. Four transformers were observed: one in the southwest and east corners of the Site and

[3] *'Penrith Local Environmental Plan 2010'*, Penrith City Council, Published 11 March 2016, Penrith 2010

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two along the northern boundary of the Allen Place Car Park, which were on raised concrete platforms. No hydrocarbon staining was observed to be associated with the transformers..

2.3 Surrounding Land Use

The current land uses of adjacent properties or properties across adjacent roads are summarised below.

- North – The Site is bound to the north by Henry Street and then numerous commercial premises including Fit n Fast Penrith, Queens of Hearts Community Foundation and Nepean College. Further north was an open carpark and commercial premises on Belmore Street, including Bob Jane T-Marts and Veterinary Hospital;
- East – To the east of the Site is Woodriff Street North, with commercial premises and Edwards Place carpark. Further east were a Pathology Centre and testing laboratory;
- South – The Site is bound to the south by Allen Place, following which are multiple commercial properties including cafes, a medical centre and pharmacy. Further south commercial premises are present beyond High Street; and
- West – The Site is bound to the west by Station Street, then medium to high density commercial premises. Further to the west was Peach Tree Creek and eventually the Nepean River.

2.4 Topography

Review of topographic information obtained from the Spatial Information Exchange Viewer (LPI 2015[4]) regional topographic map indicated that site has an elevation of approximately 30 m Australian Height Datum (AHD) sloping generally downwards to the west. Regional topography sloped down to the west towards the Nepean River.

Site inspection confirmed that the topography on site was not significantly altered from the natural alignment and sloped slightly downward toward Station Street, west of the Site. Localised variations in ground level were associated with cut to fill works for the construction of planted garden beds.

2.5 Geology and Soils

Reference to the 1:100 000 Geological Series Sheet for Penrith (DMR 1991[5]) indicates that the Site lays within an area identified to be underlain by Bringelly Shale Ashfield Shale of the Wianamatta Group. The geology originated in the Middle Triassic period of the Mesozoic Era, and is largely characterised by dark-grey to black claystone-siltstone and fine sandstone-siltstone laminate.

Reference to the 1:100 000 Soil Landscape Series Sheet for Penrith (DMR 1990[6]) indicates that the Site is within the Richmond Soil Landscape group. This group of landscape is characterised by quaternary terraces of the Nepean and Georges Rivers. Relatively flat (slopes <1 %) and level. Splays, levees provide local relief of <3 m. Formerly a low open woodland. Richmond soils are poorly structured orange to red clay loams, clays and sands. Texture may increase with depth. Ironstone nodules may be present. Plastic clays in drainage lines, red earths and red podzolic soils occur on terrace surfaces with earthy sands on terrace edges. Limitations of the Richmond group include high erosion hazard on terrace edges and minor localised flooding.

The lithology observed during groundwater well installation (**Appendix C**) reported a moderately deep alluvial soil setting (Clay to sandy clay present from a depth of 0.4 m to 10.5 m below ground surface (bgs)), followed by Nepean River gravels (6.1 m to 13.0 m bgs). The river gravels were, in turn, underlain by grey and black residual shale bedrock.

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4 *'Spatial Information Exchange Viewer'*, NSW Land and Property Information, Accessed 15 July 2016, https://maps.six.nsw.gov.au/

5 *Penrith 1:100 000 Geological Series Sheet 9030 (Edition 1).* Department of Mineral Resources, 1991 (DMR 1991)

6 *Penrith 1:100 000 Soil Landscape Series Sheet 9030.* Department of Mineral Resources, 1990 (DMR 1990)

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2.6 Hydrology

Rainfall is considered likely to migrate from site primarily through surface water runoff into the municipal stormwater system. Minor infiltration into the underlying porous soils and surface is also expected in areas of unsealed ground.

As discussed in **Section 2.2**, the Site is largely covered by concrete, asphaltic pavements and building footprints. As such, surface water generated during periods of rainfall is anticipated to primarily enter the municipal stormwater system; via discharge into onsite stormwater catchment infrastructure or alternatively discharge into stormwater pits within the surrounding roadways.

The nearest water body to the Site is Peach Tree Creek, approximately 1.1 km to the west of the Site boundary. Peach Tree Creek ultimately contributes to the Nepean River. Municipal stormwater discharges to the Nepean River.

2.7 Hydrogeology

Registered groundwater bore information was obtained from the NSW Department of Primary Industries groundwater mapping tools (NSW DPI 2016[7]) (**Appendix C**). A review of the registered bore information indicated that there were thirteen bores within a 1.5 km radius of the Site. The registered bore searches are summarised in **Table 2.2**.

Table 2.2 Registered Groundwater Bore Search

Bore ID	Use	Property	Standing Water Level (m bgs)	Well Depth (m)	Encountered Geology Comments
GW026231	Recreation	N/A	-	8.53	Shallow silt and loam clay (4.26 m bgs) to river gravels (4.26-8.53 m bgs)
GW029710	Domestic	N/A	6.00	7.92	Shallow loam (0-2.74 m bgs) to river gravels (2.74-7.92 m bgs)
GW101178	Test Bore	N/A	8.00	11.20	Shallow sandy clay and grey sands (0-6.00 m bgs) to coarse river gravel and cobbles (6.00-10.50 m bgs) overlying residual shale.
GW103048	Recreation	Penrith Showground	6.00	8.00	-
GW108041	Monitoring	Coreen Ave Penrith	6.70	7.50	Shallow clay (0.20-3.30 m bgs) overlying river gravels (3.30-7.50 m bgs)
GW108042	Monitoring	Coreen Ave Penrith	6.40	8.00	Shallow clay (0.20-2.50 m bgs) overlying river gravels (2.50-7.50 m bgs)
GW108043	Monitoring	Coreen Ave Penrith	6.80	9.00	Shallow clayey sands (0.20-5.40 m bgs) overlying river ravels (5.40-9.00 m bgs)
GW108044	Monitoring	Coreen Ave Penrith	6.60	9.50	Shallow fill and silty clayey sands (0.00-6.40 m bgs) overlying river gravels (6.40-9.50 m bgs)
GW108484	Recreation	Station St Penrith	-	11.00	Shallow clay (0-6.00 m bgs) to sand (6.00-8.50 mbgs) overlying river gravels (8.50-11.00 m bgs)
GW111987	Monitoring	High St Penrith	-	9.00	Shallow clay (0-3.00 m bgs) overlying river gravels (3.00-9.00 m bgs)
GW111988	Monitoring	High St Penrith	7.50	9.00	Shallow clay (0-3.00 m bgs) overlying river gravels (3.00-9.00 m bgs)
GW111989	Monitoring	High St Penrith	7.50	9.00	Shallow clay (0-3.00 m bgs) overlying river gravels (3.00-9.00 m bgs)

Based on the reported geology, topography and depth to groundwater, groundwater migration is expected to occur in a north-westerly direction, towards Peach Tree Creek approximately 1.2 km away. Groundwater has been reported in the surrounding properties within the river gravels layer.

[7] NSW Department of Primary Industries, 2015. Groundwater Monitoring Overview Map. Http://allwaterdata.water.nsw.gov.au/water.stm. Accessed 8 November 2016

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A relatively high water table (between 5 and 10 m bgs) is anticipated given the reported levels in the surrounding groundwater wells and the lack of significant variation in topographic levels.

Registered groundwater bores located within a 1.5 km radius of the Site are used for monitoring, recreational and testing purposes. Given the relatively dense urban use of the Site and surrounding properties, in addition to the identified licensed bores, there is considered to be a moderate probability of additional undocumented monitoring/irrigation bores in the vicinity of the Site. No reported utilisation of groundwater as a drinking water source has been reported.

2.8 Acid Sulfate Soils

Review of the Acid Sulfate Soil Risk Map from Australian Soil Resource Information System (ASRIS)[8] indicates that the Site is located within an area of 'low probability of occurrence of Acid Sulfate Soils'. Acid sulfate soils (ASS) are unlikely to be expected to occur in areas having this classification. This is consistent with the topographic and geological setting of the Site.

Three representative Section 149(2&5) council certificates were obtained for the Site as discussed in **Section 3.2**. The land was not identified to have redevelopment restrictions based on the likelihood of the presence of Acid Sulfate Soils.

No indicators of PASS or ASS were observed during intrusive soil investigation. On this basis, there are no further requirements for the assessment or management of ASS as part of this investigation.

2.9 Meteorology

A review of average climatic data for the nearest Bureau of Meteorology monitoring location (Penrith Lakes[9]) indicates the Site is located within the following meteorological setting:

- Average minimum temperatures vary from 5.5 ^{o}C in July to 18.5 ^{o}C in January;
- Average maximum temperatures vary from 17.7 ^{o}C in July to 30.7 ^{o}C in January;
- The average annual rainfall is approximately 728.1 mm with rainfall greater than 1 mm occurring on an average of 71.7 days per year; and
- Monthly rainfall varies from 30.6 mm in September to 121.4 mm in June with the wettest periods occurring on average in January to June.

[8] *Australian Soil Resource Information System,* http://www.asris.csiro.au/, accessed 8 November 2016 (ASRIS)

[9] http://www.bom.gov.au/climate/averages/tables/cw_067113.shtml, Commonwealth of Australia, 2013 Bureau of Meteorology, Product IDCJCM0028 prepared on 1 November 2016 and accessed by JBS&G on 8 November 2016

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3. Site History

3.1 Previous Environmental Investigations

Penrith engaged Geo-Logix Pty Ltd (Geo-Logix) to conduct a preliminary ESA, Geo-Logix (2016[10]) at the property located at 134-138 Henry Street, Penrith, NSW (the preliminary assessment area, Lot 1 DP164798, **Figure 2**). The preliminary assessment was undertaken to assess the potential for contamination to exist at the site given the presence of an operational dry cleaning business within the preliminary assessment area.

The preliminary ESA identified that the site appeared to be vacant until the 1950s where it was subsequently utilised for material storage. The building layout as observed in the current investigation was constructed during the 1960s and the dry cleaner has operated since 1977. Additionally, aerial photographs provided as part of the report indicated that a service station operated from the 1950s to the 1970s (118 Henry Street, Lot 1 DP113118, **Figure 2**) which may constitute an off-site contamination source for the preliminary assessment area. It is noted that the historical service station area forms part of the current investigation area.

Geo-Logix carried out passive soil vapour assessments at two locations within the dry-cleaning shop. Chlorinated hydrocarbons (tetrachloroethene (PCE), trichloroethene (TCE) and cis-1.2 dichloroethene (DCE)) were detected in soil vapour samples at concentrations in excess of the commercial land use criteria adopted for the assessment. Additionally, benzene, toluene, ethylbenzene and xylene (BTEX) compounds were detected within the soil vapour at concentrations above the laboratory limit of reporting (LOR) but below the commercial land use criteria. Geo-Logix did not identify onsite migration of contaminants from the former service station as a likely source for these BTEX compounds.

The preliminary ESA report identified the presence of potential asbestos containing materials (ACM) forming part of the construction of buildings within the assessment area.

3.2 Aerial Photographs

Copies of aerial photographs obtained from the Department of Land and Property Information are included in **Appendix D**. Relevant information from the aerial photograph review is summarised below.

- **1943**: The Site appeared to comprise a number of residential allotments with defined approximately rectangular boundaries discernible. The central carpark area appeared to have previously been divided into individual properties. Although the image quality is poor, residential style structures were apparent on most of the Site area with the exception of the central northern portion, which was vacant. Immediately surrounding the Site, the High Street, Woodriff Street North, Henry Street and Station Street alignments were observed.

  The surrounding site area was primarily cleared and partially developed allotments comprising several residential and commercial style structures within the immediate vicinity of the Site. The quality of the aerial photograph precluded a detailed assessment of the Site or the surrounding areas.

- **1956**: Several of the previously (1943) unoccupied properties appeared to have been developed, with residential type structures observed on most properties.

  Since the previous aerial photograph (1943), the surrounding site area underwent significant development in the form of construction of residential and commercial structures. Large structures were observed south and north of the Site which were not present in the 1943

[10] *'Preliminary Environmental Site Assessment Report, 134 – 138 Henry Street Penrith NSW 2750'*, Geo-Logix Pty Ltd, Reference: 1601069Rpt01FinalV01_12Aug16, 12 August 2016, Geo-Logix (2016)

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Aerial photograph, and many of the surrounding premises had undergone alterations to the built form.

- **1965**: The central portion of the Site was cleared and redeveloped into the Allen Place Car Park, largely as it appeared in the recent site inspection (26 May 2017). The properties on the northern boundary of the Site, abutting Henry Street, had all been demolished and reconstructed, except for 140-142 Henry Street. The dry cleaner (134-138 Henry Street) and structures along Station Street appeared to have been developed into their current form. The eastern section of the northern portion of the Site was occupied by a service station.

  The greater surrounding area appeared to have undergone significant residential and commercial redevelopment since the previous (1956) aerial photograph. Large commercial structures dominated the surrounding street frontage within this aerial photograph. Additionally, the extension of Henry Street was observed to the west of the Site.

- **1978**: Site structures were largely the same as the form observed during the Site inspection, except for the presence of the vehicular overbridge on the southern boundary. Properties at 114-116 and 140-142 Henry Street had been demolished and redeveloped between this and the previous (1965) aerial photograph, with development at 114-116 Henry Street unfinished in this photograph.

  Major redevelopment had continued to the west and east of the site comprising erection of large commercial premises and continued transformation of previously undeveloped land into car parks / commercial shop fronts.

- **1986**: The Site and surrounding area appeared to be consistent with the previous (1978) aerial photograph. Construction of the structure at 114-116 Henry Street had been completed since the previous aerial photograph. Minor additions/alterations to the built form of surrounding properties had occurred and some new structures were present.

- **1994**: The Site appeared largely the same as in the previous (1986) aerial photograph with the exception of additional vegetation in the garden areas. Two large buildings to the north and northwest of the Site had been constructed since the previous aerial photograph.

- **2005 - 2016**: The Site appeared similar to the previous aerial (1994) photograph. Large buildings continued to be erected within the surrounding area, comprising significant structures to the north, northwest and south of the Site.

3.3 EPA Records

Search of the NSW EPA database was undertaken on 8 November 2016 (**Appendix E**) for the Site and immediate surroundings. The search consisted of the:

- NSW EPA Protection of the Environment Act public register of licence, applications and notices (maintained under Section 308 of the *Protection of the Environment Operations Act 1997* (POEO Act));
- NSW EPA contaminated land public register of record of notices (under Section 58 of the *Contaminated Land Management Act 1997* (CLM Act)); and
- NSW contaminated sites notified to the EPA (under Section 60 of the CLM Act).

No prevention, clean-up or prohibitions notices and no transfer, variation, suspension, surrender or revocation of an environment protection licences has been issued under the POEO Act for the Site and immediate surroundings.

No notices have been issued under the CLM Act for the Site and immediate surroundings.

The Site and immediate surroundings are not on the list of NSW contaminated sites notified to the EPA.

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3.4 Council Section 149 Certificates

A copy of the s149 Planning Certificates for three representative lots (Lot 1 DP 113118, Lot 3 DP1200790 and Lot 10 DP553665) were obtained from Penrith City Council on 10 November 2016 and previous ESA provided by the client has also included s149 Planning Certificates for two additional lots (Lot 1 DP252457 and Lot 1 DP 164798). Relevant details are summarised below and copies of s149 Planning Certificates are included in **Appendix F.**

Given the proximity of the properties, the general similarity of historical uses and environmental setting and the absence of heritage listing within the area, it is reasonable to assume that the section 149 certificates attained for the five lots are representative of all the properties within the Site.

- The land is subject to the requirements under the Penrith City Council Local Environmental Plan 2010;
- The land is currently zoned B3 Commercial Core or B4 Mixed Use (under the provisions of the Planning Proposal for the Penrith City Park) with the exception of Lot 3 DP 1200790 was zoned RE1 Public Recreation;
- The land does not comprise critical habitat;
- The land is not identified to be situated within a Conservation Area and is not identified as containing an item of environmental heritage significance;
- The land is not affected by the Coastal Protection code under the Coastal Protection Act 1979;
- The land is not affected by Section 15 of the Mine Subsidence Compensation Act 1961 proclaiming land to be a Mine Subsidence District.
- The land is not affected by any road widening or road realignment under Division 2 of Part 3 of the Roads Act, Penrith Local Environmental Plan 2010 or an environmental planning instrument;
- The land is not within an investigation area or remediation site under Part 3 of the Contaminated Land Management Act 1997;
- The land is not subject to an investigation order or remediation order within the meaning of the Contaminated Land Management Act 1997;
- The land is not subject to a voluntary investigation proposal (or voluntary remediation proposal) that is the subject of the Environment Protection Authority's agreement under section 15 or 26 of the Contaminated Land Management Act 1997;
- The land is not the subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997; and
- All or part of the land is identified in Penrith LEP Clause 7.2 for Flood Planning. Development consent is required of any development on the land to which Clause 7.2 of the LEP applies.

3.5 Heritage

A search of the Australian Heritage Trust database did not reveal any heritage listed items at the Site or its immediate surrounds. Heritage information covers Aboriginal as well as European heritage.

A search of the NSW Heritage Inventory did not reveal any heritage listed items at the Site or immediate surrounds. Both Australian Heritage Trust and NSW Heritage information are included in **Appendix G**.

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3.6 SafeWork NSW Records

An application to search for licences for stored dangerous goods was submitted to SafeWork NSW on 10 November 2016. The report issued by SafeWork NSW is provided in **Appendix H.** No **d**angerous goods were identified to have been stored at the site. SafeWork NSW identified current storage of dangerous goods at an offsite address (117 Henry Street, Penrith) and has provided details pertaining to this licence. This is considered irrelevant to the current investigation.

3.7 Historical Land Title Records

Historical land title records from three separate lots have been summarised in **Table 3.1.** Detailed title search information is provided in **Appendix I**.

Table 3.1 Summary of Title Searches

Date of Acquisition and Term Held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and Sale
Pertaining to Lot 10 in DP553665		
1.6.1881 (1881 to 1925)	Francis Henry Woodriff (Gentleman)	Book 222 No. 132
5.8.1925 (1925 to 1935)	John Jurry Allen (Farmer)	Book 1396 No. 195
23.2.1935 (1935 to 1948)	Alfred Charles Kemp (Orchardist)	Book 1711 No. 475
14.12.1948 (1948 to 1971)	Roy William Handley (Radio and Electrical Distributor)	Book 2075 No. 355
24.5.1971 (1971 to 1977)	Peter Shaw and Associates Pty Limited	Book 3011 No. 751 Now Vol 12193 Fol 76
1.9.1977 (1977 to 1981)	A.F.Q. Pty Limited	Vol 12193 Fol 76
September 1981 (1981 to 1985)	Gwynvill Properties Pty Limited	Vol 12193 Fol 76
29.4.1985 (1985 to Date)	# Penrith City Council	Vol 12193 Fol 76 Now 10/553665
Pertaining to Lot 3 in DP1200790		
1.6.1881 (1881 to 1927)	Francis Henry Woodriff (Gentleman)	Book 222 No. 132
23.6.1927 & 22.12.1927 (1927 to 1949)	Nelson Price (Undertaker)	Book 1476 No. 306 & Book 1498 No. 679
15.9.1949 (1949 to 1950)	Rural Bank of New South Wales	Book 2098 No. 394
11.5.1950 (1950 to 1973)	William Frederick Smith (Hire Car Proprietor)	Book 2125 No. 665
7.2.1973 (1973 to 2013)	G.B. & H. Lynch Pty Limited Now G.B. & J.A. Lynch Pty Limited	Book 3084 No. 154 Now C/158845
23.9.2013 (2013 to Date)	# Penrith City Council	C/158845 Now 3/1200790
Pertaining to Lot 1 in DP 113118		
No. 1 & 1A		

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Date of Acquisition and Term Held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and Sale
21.6.1881 (1881 to 1936)	Francis Henry Woodriff (Gentleman)	Book 222 No. 132
18.4.1936 (1936 to 1939)	Emily Doolan (Married Woman)	Book 1747 No. 31
20.5.1939 (1939 to 1949)	Mabel Sarah Victoria Kemp (Married Woman)	Book 1846 No. 686
10.9.1940 (1949 to 1967)	Geoffrey Howard Upton (Sports Store Proprietor)	Book 2098 No. 958
1959	The part that we have numbered 1A on the attached cadastral became Council Public Road upon the approval of D.P. 164798, circa 1959 This road was subsequently closed The first title to issue after the road closure is Volume 13759 Folio 102 dated 20.12.1978, issuing in the name of Allen Holdings (Australia) Pty Limited	
6.3.1967 (1967 to 1973)	George Alwyn Power (Garage Proprietor)	Book 2839 No. 396
28.2.1973 (1973 to 1977)	Galvina Pty Limited	Book 3084 No. 905
21.7.1977 (1977 to 1980)	Altco Holdings Pty Limited Then Allen Holdings Pty Limited Now Allen Holdings (Australia) Pty Limited	Book 3284 No. 90 Now Vol 13820 Fol 105
No. 2 & 2A		
21.6.1881 (1881 to 1947)	Francis Henry Woodriff (Gentleman)	Book 222 No. 132
27.3.1947 (1947 to 1967)	Geoffrey Howard Upton (Boot Repairer)	Book 2025 No. 280
1959	The part that we have numbered 1A on the attached cadastral became Council Public Road upon the approval of D.P. 164798, circa 1959 This road was subsequently closed The first title to issue after the road closure is Volume 13759 Folio 102 dated 20.12.1978, issuing in the name of Allen Holdings (Australia) Pty Limited	
6.3.1967 (1967 to 1973)	George Alwyn Power (Garage Proprietor)	Book 2839 No. 396
28.2.1973 (1973 to 1977)	Galvina Pty Limited	Book 3084 No. 905
21.7.1977 (1977 to 1980)	Altco Holdings Pty Limited Then Allen Holdings Pty Limited Now Allen Holdings (Australia) Pty Limited	Book 3284 No. 90 Now Vol 13820 Fol 105
No. 3 & 3A		
21.6.1881 (1881 to 1947)	Francis Henry Woodriff (Gentleman)	Book 222 No. 132
27.3.1947 (1947 to 1947	Charles William Owen Roberts (Electrician)	Book 2032 No. 575
9.10.1947 (1947 to 1967)	Geoffrey Howard Upton (Boot Repairer)	Book 2033 No. 174

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Date of Acquisition and Term Held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and Sale
1959	The part that we have numbered 1A on the attached cadastral became Council Public Road upon the approval of D.P. 164798, circa 1959 This road was subsequently closed The first title to issue after the road closure is Volume 13759 Folio 102 dated 20.12.1978, issuing in the name of Allen Holdings (Australia) Pty Limited	
6.3.1967 (1967 to 1973)	George Alwyn Power (Garage Proprietor)	Book 2839 No. 396
28.2.1973 (1973 to 1977)	Galvina Pty Limited	Book 3084 No. 905
21.7.1977 (1977 to 1980)	Altco Holdings Pty Limited Then Allen Holdings Pty Limited Now Allen Holdings (Australia) Pty Limited	Book 3284 No. 90 Now Vol 13820 Fol 105
As a whole of the Lot		
6.3.1980 (1980 to 1987)	OPF Nominees Pty Limited	Vol 13820 Fol 105
6.10.1987 (1987 to 2006)	Alfred Moss Investments Pty Limited	Vol 13820 Fol 105 Now 1/113118
18.10.2006 (2006 to Date)	# Penrith City Council	1/113118

3.8 Integrity Assessment and Summary of Site History

The Site has been used for residential and commercial purposes since available records indicate. The EPA searches did not indicate that any industrial or commercial activities occurred at, or within close vicinity of, the Site. No dangerous goods storage licences were identified to have been issued for the Site. Based on the range of sources and the general consistency of the historical information, it is considered that the historical assessment has an acceptable level of accuracy with respect to the potentially contaminating activities historically occurring at the Site.

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4. Conceptual Site Model

4.1 Potential Areas of Environmental Concern

Based on the Site history review and observations of site conditions during the detailed site inspection, Areas of Environmental Concern (AECs) and associated Contaminants of Potential Concern (COPCs) have been identified and are presented in **Table 4.1**. AECs are graphically represented alongside site features on **Figure 2.**

Table 4.1 Areas of Environmental Concern and Contaminants of Potential Concern

Area of Environmental Concern (AEC)	Contaminants of Concern (COC)
*134-138 Henry Street (Lot 1 DP164798, **Figure 2**)* Improper disposal of dry cleaning chemicals resultant from the operation of the dry cleaner.	Volatile organic compounds (VOCs).
*118 Henry Street (Lot 1 DP113118, **Figure 2**)* Improper management of petroleum hydrocarbons associated with the former service station.	Total recoverable hydrocarbons (TRH), BTEX and heavy metals.
Whole of Site. Fill materials of unknown origin observed to be present as a result of site development activities.	Heavy metals, polycyclic aromatic hydrocarbons (PAHs, TRHs / BTEX, organochlorine pesticides (OCPs) / polychlorinated biphenyls (PCB), VOCs and asbestos.
Whole of Site. Pesticide and herbicide application associated with onsite residential maintenance activities within surficial-moderately deep fill and natural soils.	OCPs, organophosphorus pesticides (OPPs).
Whole of Site Fuel and oil spills associated with onsite residential maintenance activities associated with the residential site use (grass mowing, garden work, home vehicle maintenance, etc.) within surficial-moderately deep fill and natural soils.	TRH, BTEX and heavy metals.
Whole of Site Hazardous building materials associated with existing / former site structures within fill materials.	Asbestos, PCBs and lead.

4.2 Known Contaminated Media

The preliminary ESA, undertaken on Lot 1 DP164798, comprised the advancement of two soil vapour investigation locations advanced through the floor of the dry-cleaner. Soil vapour sampling was undertaken and the two samples were analysed for a range of COPCs. Laboratory analysis of the samples identified the presence of chlorinated solvents (PCE, TCE and DCE) at concentrations exceeding the adopted commercial land use criteria. Additionally, BTEX compounds were identified above the laboratory LOR but below the adopted land use criteria. Soil vapour within the vicinity of Lot 1 DP164798 is considered to be impacted by VOCs.

No soil, material or groundwater assessment was undertaken as part of the preliminary ESA.

4.3 Potentially Contaminated Media

Each of the AECs and corresponding COPCs identified in **Table 4.1** have the potential to result in impact to soil and groundwater (not asbestos). Contaminants including VOCs, TRH and BTEX as associated with fill material, the dry cleaner and former services station also have the potential to result in soil vapour impacts.

It is anticipated the greatest level of potential impact will be to surface or shallow soils. This is a consequence of the surface application of the source of impact, generally comprising soil (waste, ash, lead paint, asbestos, etc) or liquids (fuels, pesticides/herbicides, lubricants, etc.). If impact is found in surface soils, it may be found to have leached / migrated deeper into the soil profile.

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Where chlorinated solvents (PCE, TCE and DCE) are identified to be present within the soil vapour, there remains the potential for significant primary source impacts to exist deeper within the soil and/or groundwater at the Site.

Where fill materials are present, soils have been disturbed, or waste material buried, there is a potential that environmental impact may also be present at depth, consistent with the depth of the disturbance. Anthropogenic materials are commonly present in impacted fill materials and can be used as an indication of the depth of disturbance. Where fill materials impacted with chemical based contaminants are identified, there is a potential the impact may have migrated laterally and vertically below the fill material.

Natural soils at depth at the Site are considered potentially impacted by historical site activities (particularly fuel/oil storage and dry-cleaning). The extent of the impact to natural soils will be dependent upon the size and severity of the overlying impact as well as the properties of the natural soils.

4.4 Potential for Migration from Site

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

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

The potential contaminants of concern identified as part of the Site history review and site inspection are generally in solid (e.g. asbestos and metals) liquid (e.g. TPH, PAH, BTEX, OCPs, OPPs and PCBs) or gaseous (e.g. VOCs, BTEX, Volatile TRH) form.

The ground surfaces overlying AECs are primarily comprised of sealed asphaltic or concrete pavements, building footprints with limited unsealed or vegetated ground. As such, there is considered to be a reasonable potential for water soluble contaminants present on hardstand pavements to migrate from the Site via infiltration into the municipal stormwater. Contaminants present within the soil profile are considered unlikely to migrate from the site via infiltration into the municipal stormwater system. Migration from the Site via infiltration into the groundwater is considered to be a likely pathway in the presence of significant liquid and/or liquid soluble (heavy metals) COPCs. Windblown dust is considered to be unlikely unless hardstands and/or vegetation is removed from the Site surfaces during site redevelopment/maintenance activities.

Given the nature of the AECs (dry-cleaning and service station), it is considered likely that localised impacts to soil, groundwater and/or soil vapour may be present at an extent which may result in migration of contamination at a scale where off-site migration would require to be addressed.

4.5 Potential Human and Ecological Receptors

Potential human receptors of environmental impact include future residents, visitors and construction/maintenance contractors engaged to work at the Site, who may potentially be exposed to COPCs through inhalation or direct contact with impacted soils or groundwater present within the Site. Additionally, migration of contaminants via infiltration into the groundwater, windblown dusts and windblown vapour also poses a risk to sensitive human receptors.

Should redevelopment of the Site occur, potential human receptors may in the future include:

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- Potential dermal contact with and ingestion of impacted soils / groundwater as present at shallow depths and/or accessible by future excavations by site workers and/or occupants; and/or
- Potential Inhalation of vapours migrating upwards and laterally from fill and/or natural soil.

The Site is primarily covered by hardstand pavements and building footprints, however several of the identified AECs have the potential to impact onsite ecological receptors. Possible off-site ecological receptors are limited to potential impacts associated with groundwater and surface runoff water (if present) migrating from the Site via the municipal stormwater system.

4.6 Potential and Complete Exposure Pathways

Future human receptors on the Site could be potentially exposed to soil contaminants by oral, dermal and inhalation pathways. Direct contact pathways (oral and dermal) will only be relevant for near surface soils for most site users. However, potential construction and future intrusive / excavation worker exposures could occur for deeper soils. Inhalation pathways are relevant where asbestos, volatile or semi-volatile COPCs are present.

4.7 Preferential Pathways

For the purpose of this assessment, preferential pathways have been identified as natural and/or man-made pathways that result in the preferential migration of COPC as either liquids or gasses.

Man-made preferential pathways are likely present throughout the Site, generally associated with areas of previously disturbed fill material, service easements, alluvial soil channels, and at near surface depths over the remainder of the Site. Fill materials, including those surrounding subsurface infrastructure, and disturbed natural soil are anticipated to have a higher permeability than the underlying natural soil and/or bedrock, with the exception of the highly permeable Nepean River Gravels anticipated at depth.

Nepean river gravels, anticipated to be present at depth, are considered to be a natural preferential pathway due to their high hydraulic conductivity.

4.8 Source to Receptor Pathway Summary

Table 4.2 below presents a summary of potential source to receptor pathways identified in **Section 4.1** to **4.7.**

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Table 4.2 Conceptual Site Model Source to Receptor Summary

Area of Environmental Concern	Contaminant of Potential Concern / Form	Pathway -> Uptake	Receptor
Lot 1 DP164798 (dry-cleaner)	VOCs / Liquid	Infiltration into the Groundwater -> Biological uptake into the ecosystem	Downstream ecological receptors (Peach Tree Creek) Current and future recreational users and construction/maintenance staff at Peach Tree Creek
		Physical contact -> Oral or dermal ingestion	Current and future construction/maintenance workers and/or occupants of the Site
	VOCs / vapour	Intrusion into buildings and ambient atmosphere -> Inhalation	Current/future site users (construction and maintenance workers and/or occupants)
Lot 1 DP113118 (former service station)	TRH, BTEX / liquid	Infiltration into the Groundwater -> Biological uptake into the ecosystem	Downstream ecological receptors (Peach Tree Creek) Current/future recreational users and construction maintenance staff at Peach Tree Creek
	TRH, BTEX / vapour	Intrusion into buildings and ambient atmosphere -> Inhalation	Current/future site users (construction/maintenance workers and/or occupants)
	Heavy metals / solid	Physical contact -> Oral or dermal ingestion	Current/future site users (construction/maintenance workers and/or occupants)
		Physical Contact -> Biological uptake into root systems	Current and future onsite sensitive ecological receptors (flora)
Whole of Site	Heavy metals / solid	Physical contact -> Oral or dermal ingestion	Current/future site users (construction and maintenance workers and/or occupants)
		Infiltration into the Groundwater -> Biological uptake into the ecosystem	Downstream ecological receptors (Peach Tree Creek) Current and future recreational users and construction/maintenance staff at Peach Tree Creek
	Asbestos / solid	Inhalation	Current/future site users (construction and maintenance workers and/or occupants)
		Off-site migration via windblown dust -> Inhalation	Off-site sensitive human and ecological receptors
		Physical Contact -> Biological uptake into root systems	Current and future onsite sensitive ecological receptors (flora)
	TPH, PAH, BTEX, OCPs, OPPs and PCBs / liquid	Infiltration into the Groundwater -> Biological uptake into the ecosystem	Downstream ecological receptors (Peach Tree Creek) Current and future recreational users and construction/maintenance staff at Peach Tree Creek
		Physical contact -> Oral or dermal ingestion	Current and future construction/maintenance workers and/or occupants of the Site
		Physical Contact -> Biological uptake into root systems	Current and future onsite sensitive ecological receptors (flora)

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5. Sampling and Analysis Plan

5.1 Data Quality Objectives

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

5.1.1 State the Problem

It is understood that the Site owner, Penrith City Council, requires an assessment of the potential risks to human health and the environment associated with site contamination under proposed general development scheme for the Site (**Appendix J)** for the Site.

Information on potential site contamination conditions inferred from the desktop review and observations made during the site inspection resulted in the development of the conceptual site model presented in **Section 4.**

5.1.2 Identify the Decision

Based on the decision making process for assessing urban redevelopment sites detailed in DEC (2006[11]), the following decisions must be made:

- Are there any unacceptable risks to likely future onsite receptors?
- Are there any issues relating to background soil concentrations that exceed appropriate site soil criteria?
- Are there any impacts of chemical mixtures?
- Are there any aesthetic issues at the Site?
- Is there any evidence of, or potential for, migration of contaminants from the Site?
- Is a site management strategy required?

5.1.3 Identify Inputs to the Decision

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

- Desktop review;
- Detailed site inspection/walkover;
- Physical observations and interpretation of fill and natural material through the collection of soil samples;
- Development of appropriate assessment criteria for evaluation of soil impacts;
- Field parameters measured utilising calibrated equipment during the intrusive investigation including physicochemical parameters of groundwater and assessment of volatile vapours emanating from soils;
- Laboratory analysis of soil, groundwater and soil vapour samples of potentially contaminated media for COPC; and
- Confirmation that data generated by sample analysis are of an acceptable quality to allow reliable comparison to assessment criteria by assessment of quality assurance / quality control as per the data quality indicators established in **Section 5.1.6**.

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

[11] *'Contaminated Sites: Guidelines for the NSW Site Auditor Scheme, 2nd* Edition', NSW Environmental Protection Authority, EPA 2006

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5.1.4 Define the Study Boundaries

The study boundaries are limited to the cadastral boundaries of the Site. The Site area and approximate Map Grid of Australia (MGA) boundary points are shown on **Figure 2.** The vertical extent of the investigation was to a maximum depth of 15 m, with analysis of soil samples to a maximum depth of 2.0 m bgs.

Due to the project objectives, seasonality was not assessed as part of this investigation. Data are therefore representative of the timing and duration of the current investigation.

5.1.5 Develop and Decision Rule

Soil analytical data were assessed against the appropriate criteria as identified in **Section 6**. Statistical analyses of the data were undertaken, where appropriate in accordance with relevant guidance documents. The following statistical criteria were adopted:

- The 95 % Upper Confidence Limit (UCL) on the average concentration for each analyte (calculated for samples collected from consistent soil horizons, stratigraphy or material types) must be below the adopted criterion;
- No single analyte concentration shall exceed 250 % of the adopted criterion; and
- The standard deviation of the results must be less than 50 % of the criterion.

Statistical analyses were undertaken on datasets generated from environmental samples taken within distinct general site use areas. Where redevelopment of individual lots is proposed, the statistical analyses undertaken are not applicable and analytical data from within the proposed redevelopment lots would need to be assessed independently.

The decision rules adopted to answer the decisions identified in **Section 5.1.2** are summarised in **Table 5.1**.

Table 5.1 Summary of Decision Rules

Decisions Required to be Made	Decision Rule
1. Are there any unacceptable risks to onsite future receptors?	Analytical data was compared against EPA endorsed criteria. Statistical analysis of the data was completed in accordance with relevant guidance documents, as appropriate, to facilitate the decisions. The criteria in **Section 6.2**, and the following statistical criteria were adopted with respect to soils: Either: the reported concentrations were all below the Site criteria; Or: the average site concentration for each analyte was below the adopted site criterion; no single analyte concentration exceeded 250% of the adopted site criterion; and the standard deviation of the results was less than 50% of the Site criterion; And: the 95% UCL of the average concentration for each analyte was below the adopted site criterion. If the statistical criteria stated above were satisfied, the answer to the decision was No. If the statistical criteria were not satisfied, the answer to the decision was Yes.
2. Are there any background contamination issues?	Background soil concentrations as detailed in Trace Element Concentrations in Soils from Rural and Urban Areas of Australia (Henry Olzworthy *Et Al*. 1995[12]) were used for comparison of site soil data. If there were any contaminants at concentrations substantially outside background ranges, then the answer was yes, otherwise the answer was no
2. Are there any chemical mixtures?	Was there more than one group of contaminants present which increase the risk of harm? If there was, the answer to the decision was Yes. Otherwise, the answer to the decision was No.

[12] '*Trace Element Concentrations in Soils from Rural and Urban Areas of Australia*', Henry Olszowy *Et Al*., (Henry Olszowy *et Al.* 1995)

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Decisions Required to be Made	Decision Rule
3. Are there any aesthetic issues?	If there were any Asbestos Containing Material (ACM) fragments on the ground surface, any unacceptable odours, any soil discolouration, or excessive amounts of anthropogenic material, the answer to the decision was Yes. Otherwise, the answer to the decision was No.
4. Is there any evidence of, or potential for, migration of contaminants from the Site?	Based on assessment results, was there any evidence of, or the potential for, unacceptable contaminant concentrations to migrate from the Site? If yes, the answer to the decisions was Yes. Otherwise, the answer to the decision was No.
5. Is a site management strategy required?	Is the answer to any of the above decisions Yes? If yes, a site management strategy is required to address unacceptable contamination concerns at the Site so as to make the Site suitable for permissible site uses. If no, a site management strategy is not required and the Site is considered suitable, from a contamination view point for the proposed use.

5.1.6 Specific Limits on Decision Errors

This step is to establish the decision maker's tolerable limits on decision errors, which are used to establish performance goals for limiting uncertainty in the data. Data generated during this project must be appropriate to allow decisions to be made with confidence.

Specific limits for this project have been adopted in accordance with the appropriate guidance from the NSW EPA, National Environmental Protection Measure (NEPM) (NEPC 2013[13]), appropriate Data Quality Indicators (DQIs, used to assess quality assurance / quality control) and standard JBS&G procedures for field sampling and handling.

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

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

- **Precision** – measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD) of duplicate samples.
- **Accuracy** – measures the bias in a measurement system. The accuracy of the laboratory data that are generated during this study is a measure of the closeness of the analytical results obtained by a method to the 'true' value. Accuracy is assessed by reference to the analytical results of laboratory control samples, laboratory spikes and analyses against reference standards.
- **Representativeness** – expresses the degree which sample data accurately and precisely represent a characteristic of a population or an environmental condition. Representativeness is achieved by collecting samples on a representative basis across the Site, and by using an adequate number of sample locations to characterise the Site to the required accuracy.
- **Comparability** – expresses the confidence with which one data set can be compared with another. This is achieved through maintaining a level of consistency in techniques used to collect samples; and ensuring analysing laboratories use consistent analysis techniques; and reporting methods.

[13] National Environmental Protection (Assessment of Site Contamination) Measure 1999. As compiled 16 May 2013 National Environmental Council (NEPC 2013)

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- **Completeness** – is defined as the percentage of measurements made which are judged to be valid measurements. The completeness goal is set at there being sufficient valid data generated during the study.
- **Sensitivity** – expresses the appropriateness of the chosen field and laboratory methods, including the limits of reporting, in producing reliable data in relation to the adopted site assessment criteria.

Table 5.2 Data Quality Indicators

Data Quality Indicators	Frequency	Data Quality Criteria
Precision		
Split duplicates (intra laboratory)	1 / 20 samples	<50% RPD[1]
Blind duplicates (inter laboratory)	1 / 20 samples	<50% RPD[1]
Laboratory Duplicates	1 / 20 samples	<50% RPD[1]
Accuracy		
Surrogate spikes	All organic samples	70-130%
Laboratory control samples	1 per lab batch	70-130%
Matrix spikes	1 per lab batch	70-130%
Representativeness		
Sampling appropriate for media and analytes	All samples	-[2]
Samples extracted and analysed within holding times.	-	Soil: organics (14 days), inorganics (6 months)
Laboratory Blanks	1 per lab batch	<LOR
Trip spike	1 per lab batch	70-130% recovery
Storage blank	1 per lab batch	<LOR
Rinsate sample	1 per sampling event/media	<LOR
Comparability		
Standard operating procedures for sample collection & handling	All Samples	All Samples
Standard analytical methods used for all analyses	All Samples	NATA accreditation
Consistent field conditions, sampling staff and laboratory analysis	All Samples	All samples[2]
Limits of reporting appropriate and consistent	All Samples	All samples[2]
Completeness		
Sample description and COCs completed and appropriate	All Samples	All samples[2]
Appropriate documentation	All Samples	All samples[2]
Satisfactory frequency and result for QC samples		95% compliance
Data from critical samples is considered valid	-	Critical samples valid
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted Site assessment criteria	All samples	LOR ≤ site assessment criteria

[1] If the RPD between duplicates is greater than the pre-determined data quality indicator, a judgment will be made as to whether the excess is critical in relation to the validation of the data set or unacceptable sampling error is occurring in the field.

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

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5.2 Optimise the Design of Obtaining Data

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

5.2.1 Soil, Groundwater and Soil Vapour Investigation Program

EPA 1995 recommends that 30 sampling points are conducted for sites up to 2.0 ha.

The presence of significant building footprints precluded the assessment of the site via systematic sampling. As such, a combination of systematic and judgemental sampling was undertaken.

A total of 20 soil investigation locations were placed on a generally systematic grid. An additional eight locations were targeted towards AECs identified during the preliminary ESA, Geo-logix (2016)), desktop review and site inspection phases of the assessment.

The soil sampling and analysis program is presented in **Table 5.3**.

A total of three groundwater monitoring wells were installed as part of the intrusive geotechnical investigation. All three wells were sampled for the purposes of assessing the potential for groundwater contamination at the Site.

A total of ten targeted soil vapour locations were installed surrounding AECs identified to have the potential for soil vapour impacts.

5.2.2 Soil Sampling Methodology

Soil sampling was completed via a combination of manual and mechanical excavation using hand auger, push tube and solid flight auger drilling methods. Soil samples were generally collected from the soil surface or immediately underlying hardstand pavements, and then 0.5 m intervals to a maximum depth of 1.9-2.0 m bgs. Where significantly differing soil stratigraphy was encountered, the soil sampling density was increased to ensure that each material type was sampled for potential analysis.. Soil samples were collected from the surface to natural materials at every investigation location.

During the collection of soil samples, features such as seepage, discolouration, staining, odours and other indicators of contamination were noted. A calibrated Photo Ionisation Detector (PID) was utilised to screen for volatile organic compounds (VOCs) within the sampled material. Calibration records are presented in **Appendix K**.

Soil samples were collected using a trowel and new pair of nitrile gloves and immediately transferred to laboratory supplied sample jars and bags. The sample containers were then transferred to a chilled esky for sample preservation prior to and during shipment to the testing laboratory. A chain-of-custody form was completed and forwarded with the samples to the testing laboratory. Based upon field observations, samples were analysed in accordance with the analytical schedule detailed in **Table 5.3**.

5.2.3 Groundwater Sampling Methodology

Groundwater Monitoring Well Installation

Three geotechnical investigation locations conducted by PSM were converted into groundwater monitoring wells. Two monitoring wells were installed along the southern border of the Site and one directly adjacent to the dry cleaner to assess groundwater conditions at the boundaries of the site.

Each of the wells was installed to 12 m below ground surface (bgs). The wells were constructed from 50 mm unplasticised polyvinyl chloride (uPVC) screen and casing, combined with a lockable cap and steel gatic cover. The screen was installed such that the encountered water level was within the screened interval, allowing for the detection of Light Non-Aqueous Phase Liquids (LNAPLs), if

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present. Surrounding the uPVC screen a graded (2mm) sand was utilised to construct a 'gravel pack' which limited clogging of the screen with excess soils. Additionally, above the screened interval, a bentonite seal was installed to reduce the potential for surface water, perched water and/or liquid phase contaminants to enter the well. The steel gatic cover was installed in concrete consistent with the surrounds.

Well Development and Sampling

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

Each monitoring well was then gauged with an Interface Probe (IP) which can detect Non-Aqueous Phase Liquids (NAPLs). If NAPLs were present within the well they were collected with a disposable plastic bailer. If no significant NAPLs were present, the groundwater at each well was then purged with a low flow peristaltic pump, using fresh disposable Low Density Poly-ethylene (LDPE) tubing and silicon, to remove the standing water. During removal, physiochemical parameters (pH, electrical conductivity, dissolved oxygen, reduction-oxidation potential and temperature) were monitored until stabilisation. Groundwater samples were taken from the end of the disposable LDPE tubing after parameter stabilisation has occurred.

Collected groundwater samples were immediately filtered (as necessary) and transferred to laboratory supplied sample bottles. The sample containers were then transferred to a chilled iced box for sample preservation prior to and during shipment to the testing laboratory. A chain of custody form was completed and forwarded with the samples. Samples were analysed in accordance with the laboratory schedule (**Table 5.3**).

5.2.4 Soil Vapour Sampling Methodology

Ten soil vapour probes were installed surrounding identified dry-cleaner and former service station. Soil vapour probes were installed via the following process:

- Clearance of proposed soil vapour locations by a professionally licenced service locator;
- Puncture of surface hardstand (concrete or asphaltic pavement) via rotary hammer drill, with a 20 mm drill bit, through to the underlying soils;
- 'Flossing' of the drill hole to remove excess concrete dust and/or soil;
- Installation of a 200 – 400 mm nylon tube, fitted with steel mesh filter on the bottom and closed three-way on the accessible end, into the drill hole;
- Sealing of the drill hole via application of of air drying clay covered by a concrete/bentonite slurry;
- Application of a 'shroud' comprising an air tight container lined with isopropyl alcohol doused material to the base of the nylon tube, where sealed in place with the bentonite slurry;
- Purging of the drill hole via pumping through a calibrated mx6 multi-gas detector;
- Concentrations of oxygen (O_2), VOCs and carbon dioxide (CO_2) were monitored throughout purging until stabilization had occurred;
- Where detections of VOCs indicated a leak was present and isopropyl alcohol vapour was intruding into the nylon tube, the soil vapour probe was removed and reinstalled;
- Where purging was successful, and no leak was indicated by monitored parameters, 6.0 L of soil vapour was removed from the sub-slab vapour probe using a 140 mL hand drawn syringe. The syringe was connected to the back end of a carbon tube with a separate three-

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way valve, allowing for soil vapour to be drawn over the activated carbon, and then expelled through an exhaust valve; and

- Removal of the soil vapour probe post-sampling and reinstatement of the drill hole with concrete, consistent with the surrounds.

5.2.5 Decontamination

Prior to the commencement of sampling activities, non-disposable sampling equipment, including the hand trowel and hand auger, was cleaned with a high-pressure water/detergent spray, rinsed with water and then air dried. The equipment was then inspected to ensure that no soil, oil, debris or other contaminants were apparent on the equipment prior to the commencement of works.

Push tube sleeves were removed from the advancement casing and laid on clean plastic sheets for inspection, soil samples were collected directly from the push tube sleeve. A new pair of disposable nitrile gloves were used to collect each sample.

Sampling equipment including, hand trowels, hand augers and the push tube head were subsequently decontaminated using the above process between each sampling location and new disposable liners were used at each location advanced via push tube. Decontamination records are presented in **Appendix K**.

A rinsate sample from the trowel was collected at the completion of field sampling activities to determine the effectiveness of the decontamination procedures implemented on re-usable sampling equipment.

5.2.6 Duplicate and Triplicate Sample Preparation

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

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

The collected groundwater samples were extracted from the groundwater wells after purging and placed consecutively into the primary, blind and split duplicates. Groundwater samples were not homogenised in order to minimise the loss of volatiles.

The collected soil vapour samples were extracted from soil vapour probes after purging. The soil vapour probe at location SV01 was left for a period of 1 hour after the primary soil vapour sample was extracted to allow for pressure equalization and then subsequently resampled to collect a blind duplicate. A split duplicate was not collected for soil vapour samples due to the inconsistency of analytical laboratory methods.

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

5.2.7 Laboratory Analysis

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

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Table 5.3 Analytical Schedule

Sample Type	No. of Sampling Locations	Analyses (exc. QA/QC)
Soil	20 borehole sampling locations 8 hand auger locations	Heavy metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn) – 35 samples TRH/BTEX – 20 samples PAH/Phenols – 20 samples VOCs – 15 samples Asbestos – 20 samples (500 ml NEPC 2013) + visual OCPs – 8 samples PCBs – 8 samples Ecological parameters – 4 samples
Vapour	10 sub-slab vapour locations	VOCs 8260 – 10 samples TRH – 3 samples Isopropanol – 10 samples
Water	3 Groundwater Wells	Heavy metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn) – 3 samples TRH/BTEX – 3 samples PAH low levels – 3 samples VOCs – 3 samples

In addition to the above primary analyses, to address the DQIs, field duplicate and triplicate soil samples were analysed at a rate of one per 20 primary samples. A rinsate sample was obtained from non-disposable soil sampling equipment each day that soil or groundwater sampling was undertaken, plus a single trip spike and single trip blank accompanied each sample batch.

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6. Assessment Criteria

6.1 Regulatory Guidelines

Development of site assessment criteria and the associated scope of investigation was undertaken with consideration to aspects of the following guidelines, as relevant:

- *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1)*, National Environment Protection Council (NEPC 2013);
- *Contaminated Sites: Sampling Design Guidelines*, NSW EPA, 1995 (EPA 1995);
- *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites*, NSW OEH, 2011 (OEH 2011); and
- *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme*, 2nd Edition, NSW EPA, 2006 (DEC 2006).

6.2 Assessment Criteria Selection

As per the decision process for assessment of urban development site (DEC 2006), a set of health and ecological assessment thresholds derived from NEPC (2013) was used for evaluation of site contamination data collected for this assessment. Given the proposed mixed uses of the Site (residential, public open space and commercial/industrial), as noted in **Section 1.1**, the Site has been compared distinct land use criteria for each of the proposed development areas. The western site portion falls within the 'Proposed Green Spaces' and the eastern portion of the Site falls within the Proposed Building Development and Green Spaces portion (as shown on **Figure 2**). The Site is zoned Commercial Core (B3) and Public Recreation (RE1) under the Penrith Local Environmental Plan 2010 (Penrith 2010).

Where there are no NSW EPA endorsed thresholds for individual COPC the laboratory limit of reporting (LOR) was adopted as an initial screening value for the purposes of this assessment.

The results of asbestos analysis were assessed in general accordance with NEPC (2013) including DOH (2009[14]) guidance.

The adopted site criteria are presented in **Table A,** the soil analytical summary tables. Relevant guidelines have been adopted from Section 6 of Schedule B1 NEPC (2013) and are presented below:

Health Based Criteria

Relevant tables:

- Table 1A(1) 'Health Investigation Levels for Soil contaminants';
- Table 1A(2) 'Interim Soil Vapour Health Investigation Levels for Volatile Organic Chlorinated Compounds';
- Table 1A(3) Soil HSLs for Vapour Intrusion;
- Table 1A(4) Groundwater HSLs for Vapour Intrusion; and
- Table 1A(5) Soil Vapour HSLs for Vapour Intrusion.

Proposed Building Development and Green Spaces

Land use scenarios adopted:

[14] *Guidelines for the Assessment Remediation and Management of Asbestos-Contaminated Sites in Western Australia*, May 2009. Western Australia Department of Health (DOH), (DOH 2009)

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- Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments (HIL-B and HSL-B);
- Public open space such as parks and playgrounds (HIL-C and HSL-C);
- Commercial/industrial; including premises such as shops and offices (HIL-D and HSL-D);

Proposed Green Spaces

The land use scenario adopted for Proposed Green Spaces site portion is 'public open space such as parks and playgrounds (HIL-C and HSL-C)'

Ecological Screening Levels

Ecological Screening Levels (ESLs) for the site were obtained from Table 1B(6) 'ESLs for TPH Fractions F1-F4, BTEX and Benzo(a)pyrene in Soil' under 'Urban residential and public open space' and 'commercial and industrial' land use scenarios.

Management Limits

Management limits for consideration of the formation of Light Non-Aqueous Phase Liquids (LNAPLS), fire and explosive hazards, and effects on buried infrastructure have been obtained from Table 1B(7) 'Management Limits for TPH Fractions F1-F4 in Soil' under 'Urban residential and public open space' and 'commercial and industrial' land use scenarios. Based on site observations discussed in **Section 8.1**, a fine soil texture was adopted for comparison of results.

6.2.1 Groundwater Investigation Levels

No registered groundwater bores have been identified as being used for the extraction of drinking water and given the urbanised nature of the Site, it is not expected that water within the relevant aquifer is utilised by the public for the purposes of drinking through direct extraction. However, as a conservative criteria set, the health and aesthetics based Australian Drinking Water Guidelines NWQMS (2016[15]) for drinking water have been adopted for the purposes of the assessment. A conservative criteria set for the assessment of worker exposure risk during redevelopment works involving interaction with groundwater has been adopted from the NWQMS (2016) as 10x the drinking water criteria for health and aesthetics.

To assess the potential risk of contaminated groundwater migrating from the Site to Peach Tree Creek, reference has been made to the Australian and New Zealand Guidelines for Fresh and Marine Water Quality ANZECC ARMCANZ (2000[16]) Table 3.4.1 'Trigger values for toxicants at alternative levels of protection'. Given the heavily urbanised nature of the receiving water body, a 95 % protection of species value has been adopted.

6.2.2 Derivation of Site Specific Ecological Investigation Levels

Site specific EILs were derived in accordance with the methodology outlined within NEPC (2013). Added Contaminant Limits (ACLs) were obtained from the following tables within the NEPC (2013):

- Table 1B(1) Soil-specific Added Contaminant Limits for Aged Zinc in Soil;
- Table 1B(2) Soil-specific Added Contaminant Limits for Aged Copper in Soil;
- Table 1B(3) Soil-specific Added Contaminant Limits for Aged Chromium III and Nickel in Soil;
- Table 1B(4) Generic Added Contaminant Limits for Lead In Soils Irrespective of Their Physicochemical Properties; and

[15] *'Australian Drinking Water Guidelines 6'*, National Water Quality management Strategy, Version 3.3, November 2016, NWQMS (2016)

[16] *'Australian and New Zealand Guidelines for Fresh and Marine Water Quality – The Guidelines'*, October 2000, Australian and New Zealand Environment and Conservation Council / Agriculture and Resource Management Council of Australia and New Zealand, Volume 1, Chapters 1-7, ANZECC ARMCANZ (2000)

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- Table 1B(5) Generic EILs for Aged Arsenic, Fresh DDT and Fresh Naphthalene in Soils Irrespective of Their Physicochemical Properties.

Four representative soil samples (JB01 1.1-1.2, JB11 0.35-0.45, JB12 1.1-1.2 and JB20 1.9-2.0) were submitted for laboratory analysis to determine physical parameters including Cation Exchange Capacity (CEC), pH and % Clay. Detailed laboratory reports and chain of custody documentation is provided in **Appendix L**.

Values for Average Background Concentrations (ABCs) were obtained from Trace Element Concentrations in Soils from Rural and Urban Areas of Australia (Henry Olzworthy *Et Al*. 1995).

Table 6.1 details ABCs, Added Contaminant Limits and derived EILs. All values are in mg/kg unless otherwise specified.

Table 6.1 Derivation of EILs

Physical Parameters					
Sample	**Cation Exchange Capacity (meq/100g)**	**pH (pH units)**		**% Clay**	
JB01 1.1-1.2	13	5.6		43	
JB11 0.35-0.45	17	8.3		28	
JB12 1.1-1.2	13	7.7		39	
JB20 1.9-2.0	20	7.6		30	
Conservative Value->	15.75	7.3		35	
Investigation Levels					
		ACL		**EIL**	
Contaminant	**ABC**	**Residential / Open Space**	**Commercial / Industrial**	**Residential / Open Space**	**Commercial / Industrial**
Arsenic	Not Applicable	100	160	100	160
Chromium (III)	12	400	660	412	672
Copper	49	130[1]	190[1]	179	239
DDT	Not Applicable	180	640	180	640
Lead	303	1100	1800	1403	2103
Naphthalene	Not Applicable	170	370	170	370
Nickel	6	170	290	176	296
Zinc	142	270[2]	420[2]	412	562

[1] Selected utilising the pH value to determine the most conservative ACL.
[2] Selected based on value for pH and CEC resulting in the most conservative ACL.

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7. Quality Assurance/Quality Control

7.1 QA/QC Results

Analysis of the Quality Analysis / Quality Control (QA/QC) has been undertaken for the analytical results as summarised in **Table 7.1** and discussed in **Section 7.2**. Detailed QA/QC results are included in the laboratory reports in **Appendix L**, and in the Quality Assurance/Control in **Appendix M.**

Table 7.1 QA/QC Results Summary

Data Quality Indicator	Results	DQI met?
Precision		
Soil Blind duplicates (intra laboratory)	0-98 % RPD Intra laboratory samples were analysed at a rate greater than 1 in 20 samples.	Partial[1]
Soil split duplicates (inter laboratory)	0-61 % RPD Inter laboratory samples were analysed at a rate greater than 1 in 20 samples.	Partial[1]
Groundwater blind duplicates (intra laboratory)	0-100 % RPD Intra laboratory samples were analysed at a rate of 1 in 3 samples.	Partial[1]
Groundwater split duplicates (inter laboratory)	0-153 % RPD Inter laboratory samples were analysed at a rate of 1 in 3 samples.	Partial[1]
Soil vapour blind duplicate (intra laboratory)	0 % RPD Intra laboratory samples were analysed at a rate of 1 in 10 samples.	Yes
Laboratory duplicates	0-50 % RPD Intra laboratory samples were analysed at a rate of 1 in 20 samples.	Yes
Accuracy		
Surrogate spikes	INT-139% Recovery Surrogate spikes were completed for all organic samples	Partial[1]
Laboratory Control Samples	54-130 % Recovery Laboratory control samples were completed for all organic and metals samples	Partial[1]
Matrix spikes	51- 131% Recovery Matrix spikes were completed for all organic and metals samples	Partial[1]
Representativeness		
Sampling appropriate for media and analytes	All sampling conducted in accordance with JBS&G procedures	Yes
Laboratory blanks	<LOR – EQL	Partial[1]
Samples extracted and analysed within holding times.	Samples analysed for VOCs were extracted outside of holding times	Partial[1]
Trip spikes	85%-111%	Yes
Trip blanks	<LOR	Yes
Rinsate blank	<LOR-EQL	Partial[1]
Comparability		
Standard operating procedures used for sample collection & handling	Three JBS&G field scientists used standard operating procedures throughout works.	Yes
Standard analytical methods used	Standard analytical methods used as listed detailed in **Appendix L**	Yes
Consistent field conditions, sampling staff and laboratory analysis	Sampling was conducted by three field staff members using standard operating procedures in the same conditions throughout the works. The laboratories remained consistent throughout the investigation.	Yes
Limits of reporting appropriate and consistent	Limits of reporting were consistent and appropriate.	Yes
Completeness		

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Data Quality Indicator	Results	DQI met?
Soil description & Chains of Custody completed	All borehole logs and Chains of Custody were completed appropriately.	Yes
Appropriate documentation	All appropriate field documentation processes were undertaken. Borehole logs and Calibration/ Decontamination records are included as **Appendix K**.	Yes
Satisfactory frequency/result for QC samples	The QC results are considered adequate for the purposes of the investigation.	Yes
Data from critical samples is considered valid	Data from critical samples is considered valid.	Yes
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted site assessment criteria	Appropriate laboratory analysis methods and detection limits were considered to have been achieved during the field and laboratory phases of this investigation.	Partial[1]

1. See discussion of DQI exceedances in **Section 7.2**.

7.2 QA/QC Discussion

7.2.1 Precision

Soil Duplicates

The primary soil sample analytical results were within the acceptable limits of deviation from the intra laboratory duplicate analytical results for all analytes with the exception of the following:

- Copper (55 % - JB09 0.15-0.20 and QC20170506-2); and
- Zinc (98 % - JB09 0.15-0.2 and QC20170506-2).

The primary soil samples analytical results were within the acceptable limits of deviation from the inter laboratory duplicate analytical results for all analytes with the exception of the following:

- Arsenic (6 % - JB18 0.1-0.2 and QA20170506-1);
- Chromium (36 % - JB09 0.15-0.2 and QA20170506-2); and
- Copper (60 % - JB09 0.15-0.2 and QA20170506-2).

The RPDs for the intra-laboratory and inter-laboratory duplicates are presented in **Appendix M** and are considered to be the result of heterogeneity in the soil samples collected. The elevated RPD results are not considered to influence the outcome of the investigation.

Groundwater Duplicates

The primary groundwater samples were within the acceptable limits of deviation from the intra laboratory duplicate analytical results for all analytes with the exception of the following analytes:

- Mercury (inorganic) (67 % - PSM01 and QC01-W);
- TPH Fraction C_{15}-C_{28} (93 % - PSM01 and QC01-W); and
- TRH Fraction C_{16}-C_{34} (100 % - PSM01 and QC01-W).

The primary groundwater samples agreed with the inter laboratory duplicate analytical results for all analytes with the exception of the following analytes:

- Mercury (inorganic) (67 % - PSM01 and QC01-W/A);
- TPH Fraction C_{15}-C_{28} (144 % - PSM01 and QC01-W/A); and
- TRH Fraction C_{16}-C_{34} (153 % - PSM01 and QC01-W/A).

The RPDs for the intra-laboratory and inter-laboratory duplicates are presented in **Appendix M** and are considered to be the result of heterogeneity in the groundwater samples collected. The elevated RPD results are not considered to influence the outcome of the investigation.

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Soil Vapour Duplicates

The primary soil vapour sample analytical results agreed with the intra laboratory duplicate analytical results for all analytes.

All laboratory duplicates returned RPDs within the acceptable limits.

On this basis the DQIs for precision are considered to have been achieved for this investigation.

7.2.2 Accuracy

Surrogate spike recoveries were within the acceptable range of 70-130%, with the exception of the following over-recoveries:

OCP Surrogates:

- Dibutylchlorendate with a recovery of 134 % in sample JB11 0.05-0.15.

PAH Surrogates:

- p-terphenyl-d14 with recoveries of 134 % (JB01 0.05-0.3), 142 % (RINS 6-5-17) and 145 % (RINS 7-5-17); and
- 2-Fluorobiphenyl with a recovery of 146 % (JHA01 0.25-0.4).

VOC Surrogates:

- 4-bromofluorobenzene with recoveries of 141 % (JB17 0.1-0.25) and 149 % (JB14 0.1-0.3); and
- fluorobenzene with a recovery of 132 % in sample SV05_FRONT.

These deviations from the acceptance criteria were not considered to have an impact on the conclusions of this assessment as no OCP, PAH or VOC compounds were reported above the assessment criteria in any of the analysed samples. Given the potential for over-reporting indicated by these deviations from the accuracy DQO, the actual concentrations of OCP, PAH or VOC compounds are likely to be less than those reported in these samples. The following under-recoveries of surrogates occurred:

OCP Surrogates:

- Tetrachloro-m-xylene with a recovery of 62 % in sample RINS 26-5-17.

PAH Surrogates:

- No recovery percentage was provided for 2-Fluorobiphenyl in sample RINS 26-5-17, laboratory notes indicated that interference occurred within the sample matrix. 2-Fluorobiphenyl was reported to be recovered 67 % (PSM01), 67 % (PSM02), 68 % (PSM03) and 63 % (QC01_W); and
- No recovery percentage was provided for p-Tertphenyl-d14 in sample RINS 26-5-17, laboratory notes indicated that interference occurred within the sample matrix. p-Tertphenyl-d14 was reported to be recovered 67 % in sample JHA04 0.2-0.4.

VOC Surrogates:

- Fluorobenzene with a recovery of 67 % (RINS 26-5-17), 63 % (JHA07 0.4-0.6), 59 % (JHA07 1.3-1.5), 68 % (PSM01), 69 % (QC01_W) and 59 % (QC20170526-1);
- 4-Bromofluorobenzene with a recovery of 68 % (JHA01 0.25-0.4), 63 % (JHA02 0.3-0.5) and 65 % (JHA06 0.4-0.6).

Interference in the sample matrix RINS 26-5-17 and potential under reporting of COPCs is not considered to have affected the accuracy of the dataset for drawing conclusions with respect to the

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decision rules noted in **Section 5.1.5**. It is noted that all samples listed above were within the NATA acceptable limits of 50-150 %, with the exception of the interference noted within RINS 26-5-17, for the analytical methods undertaken.

Laboratory control sample (LCS) recoveries were within the acceptable range of 70-130% except for two speciated phenols. Slight under recoveries for speciated phenols are not considered to have resulted in deviation, from DQOs pertaining to accuracy, such that the dataset cannot be relied upon for making the decisions listed in **Section 5.1.5.**

Matrix spike recoveries were within the acceptable range of 70-130% except for sample JHA06 1.0-1.2. A matrix spike for OCPs was undertaken in which a recovery of 51 % was achieved, indicating sample matrix interference. No OCPs were detected within this sample, and the LOR was significantly less than the site criteria for all OCPs. Under-recovery for this sample is still within the tolerable limits with regards to making decisions using the dataset.

On this basis the DQIs for accuracy are considered to have been achieved for this investigation.

7.2.3 Representativeness

The extraction and analysis of selected soil samples was completed within the recommended holding times for all analytes.

A rinsate sample was collected following decontamination of all non-disposable sampling equipment for each day of the primary soil sampling event and the subsequent targeted soil sampling / groundwater monitoring event. All analyte concentrations in the rinsate blanks were below the laboratory limit of reporting (LOR) with the exception of chromium and copper. Chromium (in RINS 6-5-17 and 7-5-17) and copper (RINS 26-5-17) were detected at the reporting limit. No statistically significant exceedances of the site criteria for these heavy metals were reported and therefore the potential for cross contamination has not detrimentally affected the representativeness of the dataset for the intended purpose. Decontamination records are presented in **Appendix K**.

A trip spike was submitted with the soil samples collected during the assessment. Trip spike recoveries for analytes was within the acceptable limit of 70-130%.

A trip blank was submitted with each laboratory batch for soil or groundwater samples collected during the assessment. There were no reported concentrations of BTEX compounds above the laboratory LOR.

All laboratory blanks analysed reported analyte concentrations less than the laboratory LOR with the exception of the following:

- 4-Nitrophenol (0.001 mg/L);
- Benzo(a)anthracene (0.001 mg/L);
- Benzo(b&j)fluoranthene (0.001 mg/L); and
- Chrysene (0.001 mg/L).

No detections of the aforementioned analytes were reported at or near the adopted site criteria, therefore potential laboratory contamination has not affected the reliability of the dataset for the intended purpose.

All field equipment was decontaminated appropriately as per the procedure identified in **Section 5.2.3**. Collected samples were immediately placed into the sample containers, sealed and then placed into chilled eskies to minimise volatile loss.

Based on the above comments the DQIs for representativeness were considered to have been satisfactorily achieved.

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7.2.4 Comparability

Eurofins, the primary laboratory, and Envirolab Services, the secondary laboratory, are NATA accredited for all analytical methods used. The laboratories used similar analytical methods and the analytical data were comparable between laboratories as indicated by the results of duplicate analysis. Where different LORs were adopted by the laboratories, this did not impact upon the usability of the data given that all values were considerably less than the adopted assessment criteria.

The samples collected for assessment purposes are considered comparable as all samples were collected by experienced JBS&G personnel in accordance with standard JBS&G sampling methods.

7.2.5 Completeness

All laboratory and field documentation is complete and correct. Chain of custody documentation is provided with laboratory reports in **Appendix M**. Bore hole logs are presented in **Appendix N**.

The frequency of analysis of all QA/QC samples was considered appropriate and valid.

7.2.6 Sensitivity

The adopted soil analytical methods provided suitable LORs with respect to the adopted site assessment criteria.

7.2.7 QA/QC Conclusions

The field sampling and handling procedures across the Site produced QA/QC results which indicate that soil, groundwater and soil vapour data collected is of an acceptable quality.

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

On the basis of the results of the field and laboratory QA/QC program, the soil data is of an acceptable quality upon which to draw conclusions regarding the environmental condition of the Site.

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8. Results

8.1 Soil Observations

Soil sampling was conducted on 6, 7 and 26 May 2017 at the sampling locations shown on **Figure 3A**. Borehole logs are included in **Appendix N**.

As discussed in **Section 2.2**, the majority of the Site is covered by buildings, concrete slabs and asphaltic pavement. Unsealed surfaces were comprised entirely of tree/garden beds with surface gravel cover.

A summary of soil conditions present at the Site is presented as follows. A total of twenty environmental boreholes were advanced for the purposes of soil sampling, as well as nine boreholes advanced for the purposes of geotechnical investigation, via mechanical drill rig. Additionally, eight hand augers were advanced from the ground surface to natural material. Fill material was encountered to depths ranging between 0.2 and 2.0 m below ground surface (m bgs), with natural materials generally being encountered between 0.2 and 0.4 m bgs. Fill material comprised a range of silts and clays which varied in sand content, colours were observed to be primarily brown and grey with some orange/yellow clays also observed. Fill contained varying proportions of gravels, however indicators of anthropogenic materials were observed. Three distinct natural materials were encountered during the investigation: (0.2m – 10.5 m bgs) silty/sandy clay which graded to a higher sand content with depth, (6.1 m – 13.0 m) Nepean River gravels and (>11.7 m) shale bedrock.

No ACM, odours or staining were observed on site surfaces or within the soil profile at any investigation location. No PID readings >1 ppm were observed during field screening for volatiles during soil sampling.

8.2 Soil Contamination Analytical Results

Detailed laboratory reports and chain of custody documentation are provided in **Appendix L**. Summarised soil analytical data for COPCs are presented in **Table A(1)** and **Table A(2)**. Statistical analyses undertaken on the data set are presented in **Appendix P** and are discussed in **Section 8.2.1 to Section 8.2.6**.

8.2.1 Metals

Individual heavy metals concentrations were reported at levels less than the adopted health and ecological based assessment criteria with the exception of the following:

The concentration of lead in sample JHA02 0.3-0.5 (910 mg/kg) exceeded the HIL-C investigation criterion. The concentration of lead reported in JHA02 0.3-0.5 is less than 250 % of the HIL-C site investigation criterion, the standard deviation for the lead concentration dataset for fill samples collected within the 'Proposed Green Spaces' development area was less than half of the HIL-C criterion and the 95 % UCL for the data set was less than the HIL-C criterion. The analysis shows that this exceedances of the HIL-C lead criterion is not statistically significant and thus the concentration is unlikely to pose a risk to future human receptors.

The concentrations of copper in samples JHA02 0.1-0.3 (230 mg/kg) and JHA02 0.3-0.5 (910 mg/kg) exceeded the EIL-B investigation criterion. The concentrations reported in both samples were less than 250 % of the EIL-B site investigation criterion, the standard deviation for the copper concentration dataset for fill samples collected within the 'Proposed Green Spaces' development area was less than half of the EIL-B criterion and the 95 % UCL for the dataset was less than the EIL-B criterion. The analysis shows that this exceedances of the EIL-B copper criterion is not statistically significant and thus the concentration is unlikely to pose a risk to future ecological receptors at the site.

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8.2.2 Polycyclic Aromatic Hydrocarbons

Total PAH, B(a)P and carcinogenic PAHs as B(a)P Toxic Equivalence Quotient (TEQ) values for the analysed samples were generally reported at concentrations less than the adopted site assessment criteria. One notable exception is the concentration of B(a)P at location JHA02 0.3-0.5 (0.9 mg/kg), which exceeded the adopted ESL for the Residential and Public Open Space' land use scenario. Statistical analysis of this exceedance as part of the larger dataset for B(a)P concentrations within fill materials at the Site indicated that this minor exceedance did not comprise a statistically significant exceedance of the Site criterion.

8.2.3 Total Recoverable Hydrocarbons and BTEX Compounds

Concentrations of all TRH were reported below the adopted health and ecological site assessment criteria in all soil samples selected for analysis.

Concentrations of all BTEX were reported below the adopted health and ecological site assessment criteria in all soil samples selected for analysis.

8.2.4 Organochlorine Pesticides and Polychlorinated Biphenyls

Concentrations of OCP compounds were reported below the adopted health and ecological assessment criteria for all soil samples selected for analysis.

Concentrations of total PCB compounds were reported below the adopted health and ecological assessment criteria for all soil samples selected for analysis

8.2.5 Volatile Organic Compounds

Concentrations of all VOCs were reported to be below the adopted health and ecological assessment criteria for all samples selected for analysis.

8.2.6 Asbestos

ACM was not observed during site sampling activities. Asbestos was not detected at concentrations above the assessment criteria in soil samples submitted to the laboratory for analysis although trace asbestos fines were identified in near surface fill at JB11.

8.3 Groundwater Field Observations

A groundwater monitoring event (GME) was conducted on 26 May 2017 by Rohan Hammond, an appropriately trained and experienced environmental consultant. A summary of groundwater conditions encountered during the GME is presented in **Table 8.1, Table 8.2** and **Table 8.3** below. Groundwater monitoring well locations are provided on **Figure 3B**.

Table 8.1 Groundwater Geospatial Characteristics

Well Reference	Easting	Northing	Relative Level (m below PSM03)	Depth to Groundwater (m below top of casing)	Relative Groundwater Level (Below PSM02)
PSM01	286759	6262856	-1.22	6.96	-0.17
PSM02	286646	6262847	-1.06	6.95	0
PSM03	286617	6262929	0	8.05	-0.04

Based on the data presented above, and assuming relatively consistent subsurface conditions are present across the Site, the inferred groundwater flow direction is northwest with a gradient of 0.007 m head per metre in the direction of groundwater flow.

Table 8.2 Groundwater Field Physicochemical Parameters

Well Reference	Dissolved Oxygen (mg/L)	Electrical Conductivity (µS/cm)	pH (units)	Oxidation Reduction Potential (mV)[1]	Temperature (°C)
PSM01	0.31	6770	6.65	-219.0	20.7
PSM02	0.06	1675	7.05	-242.1	20.9
PSM03	0.18	5403	7.11	-131.9	22.0

1. Oxidation Reduction Potential was measured with an Ag/AgCl probe in a solution of 3.5 moles potassium chloride and deionized water.

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Table 8.3 Groundwater Field Physicochemical Parameters

Well Reference	Odour	Sheen	Turbidity	Colour
PSM01	Non-odorous	No sheen	Slightly turbid	brown
PSM02	Sulphide odour	Slight oily sheen	Turbid	Dark brown
PSM03	Non-odorous	No sheen	Slightly turbid	Grey

8.4 Groundwater Analytical Results

Detailed laboratory reports and chain of custody documentation are provided in **Appendix L**. Summarised soil analytical data for COPCs are presented in **Table B(1)**. The results are discussed in **Section 8.4.1 to Section 8.4.4**.

8.4.1 Metals

Heavy metals concentrations within the analysed samples were all reported to be below the adopted site assessment criteria.

8.4.2 Total Recoverable Hydrocarbons and BTEX Compounds

TRH compounds were all reported to be at concentrations below the adopted site criteria within the analysed samples. It is noted that concentrations of TRHs significantly above LOR, were detected at PSM02. During the installation of PSM02, a polymer emulsion fluid (EZ-MUD) was utilised to facilitate advancement of the borehole into underlying shale bedrock. TRHs were also detected at PSM01 and PSM03, where installation did not require the use of the Polymer emulsion fluid.

BTEX compounds were generally reported to be at concentrations below the adopted site criteria with the notable exception of toluene. Toluene was detected at a maximum concentration of 0.094 mg/L in the groundwater sample collected at PSM01 (within triplicate sample QC01-W/A), exceeding the health and aesthetic based drinking water criteria.

8.4.3 Polycyclic Aromatic Hydrocarbons

PAH compounds were all reported to be at concentrations below the adopted site criteria within the analysed samples.

8.4.4 Volatile Organic Compounds

VOC compounds were generally reported to be at concentrations below the adopted site criteria within the analysed samples with the exception of the tetrachloroethene, which was detected at a concentration of 0.059 mg/L in the groundwater sample taken from PSM01, exceeding the health based drinking water criterion of 0.05 mg/L.

8.5 Soil Vapour Contamination Analytical Results

Detailed laboratory reports and chain of custody documentation are provided in **Appendix L**. Summarised soil analytical data for COPCs are presented in **Table C(1)**. Results are discussed in **Section 8.4.1** to **Section 8.4.2**.

Concentrations of contaminants within soil vapour were converted from total mass values provided within laboratory documentation via the application of conversion factor as shown below.

$$Concentration\ in\ \frac{mg}{m^3} = \frac{laboratory\ result\ (in\ \mu g) * 1000}{\left(\frac{1000}{6\ L\ sample\ Volume}\right)}$$

8.5.1 Volatile Organic Compounds

Concentrations of VOCs were generally reported to be below the laboratory LOR and the relevant site assessment criteria. The following chlorinated solvents were reported to have been detected within the carbon media at masses indicating exceedances of the site assessment criteria.

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Tetrachloroethane (PCE):

- SV04: 10 µg of PCE was detected within the carbon medium indicating a soil vapour concentration of 1.667 mg/m^3;
- SV05: 340 µg of PCE was detected within the carbon medium indicating a soil vapour concentration of 56.67 mg/m^3; and
- SV10: 87 µg of PCE was detected within the carbon medium indicating a soil vapour concentration of 14.5 mg/m^3.

Trichloroethene (TCE);

- SV05: 56 µg of TCE was detected within the carbon medium indicating a soil vapour concentration of 9.33 mg/m^3; and
- SV10: 21 µg of TCE was detected within the carbon medium indicating a soil vapour concentration of 3.5 mg/m^3.

8.5.2 Total Recoverable Hydrocarbons

A single detection of TRH above the laboratory LOR was reported in sample SV04; 11 µg of TRH was detected indicating a soil vapour concentration of 1.833 mg/m^3. This concentration is significantly less than the site assessment criteria.

The balance of the carbon tubes analysed were not identified to contain TRHs above the laboratory LOR.

8.6 Waste Classification

A preliminary waste classification has been undertaken based on the available soil analytical data. Summarised soil analytical data compared against waste classification criteria is provided in **Table D(1)**.

COPCs were generally reported to be at concentrations below the GSW waste classification criteria except for minor metals and PAH exceedances as discussed below. Indicative waste classifications for each of the analysed samples is provided in **Table D(1)**

Heavy Metals Exceedances

Lead

Lead was generally reported to be at concentrations less than the GSW waste classification criterion (100 mg/kg) with the exception of the following samples: JB01 0.05-0.3 (110 mg/kg), JB03 0.05-0.2 (120 mg/kg), JB04 0.4-0.5 (110 mg/kg), JB05 0.1-0.2 (120 mg/kg), JB20 1.7-1.8 (110 mg/kg), JHA02 0.1-0.3 and JHA02 0.3-0.5.

JHA02 0.1-0.3 and JHA02 0.3-0.5 were submitted to a Toxicity Characteristic Leachate Procedure (TCLP) and the leachate fluid was analysed for lead concentrations. Comparison against SCC1 and TCLP1 has indicated results less than the relevant criterion and is therefore classified as GSW.

Nickel

Nickel was generally reported to be at concentrations less than the GSW waste classification criterion (40 mg/kg) with the exception of samples JB12 0.1-0.25 which was reported at a concentration of 75 mg/kg and JHA04 0.2-0.4 with a reported concentration of 58 mg/kg. No leach testing was undertaken for this material and as a result the preliminary classification is RSW.

PAHs

PAHs were all reported to be at concentrations less than the GSW waste classification criteria with the exception of Benzo(a)pyrene in sample JHA02 0.3-0.5, which was reported to be at a

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concentration of (0.9 mg/kg), exceeding the CT1 criteria. No leach testing was undertaken for this material and as a result the preliminary classification is RSW.

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9. Discussion

Based on the decision-making process for assessing urban redevelopment sites detailed in DEC (2006) and discussed in **Section 6.1.2**, the decisions required to be made are discussed below.

9.1 Contaminant Distribution Summary

Sample results from the soil vapour assessment have indicated that there currently exists a significant chlorinated hydrocarbon impact within the vicinity of the dry cleaner (134-138 Henry Street). The volatile gas impact extends north of the dry cleaner, along the inferred groundwater flow direction, with exceedances of the soil vapour criteria for PCE and TCE identified from gas samples taken at probe locations SV04, SV05 and SV10 (**Figure 3C**). It is noted that the most significant concentrations were detected at location SV05, approximately in line with the inferred groundwater flow direction.

Groundwater and soil concentrations within the vicinity of the dry cleaner have also indicated the presence of chlorinated hydrocarbons, primarily PCE and TCE, albeit at concentrations which were below the adopted site assessment criteria. This has indicated that the impact has migrated laterally and vertically through soil and groundwater at the Site.

PCE and its degradation products, in their pure form, are dense non-aqueous phase liquids (DNAPLs). DNAPLs, once introduced to the environment, tend to sink until confined by a non-permeable barrier present within the local environmental system. It is considered likely that the shale bedrock layer has acted as a confining barrier and that the chlorinated hydrocarbon migration has been halted at approximately 11.5 – 12.0 m bgs, at the interface of the Nepean River gravels and shale bedrock. It is noted that no free phase non-aqueous liquids such as DNAPLs were detected during the GME.

It is noted that no well downstream of the impact was able to be installed due to the presence of building awnings/eaves along the northern boundary of the Site. It is considered possible that additional groundwater impact may be present at the Site that has yet to be identified.

Soil vapour analytical results indicated a minor detection of TRH at location SV04, west of the former service station. Given the lack of significant soil vapour concentrations for TRH within samples taken from the vicinity of the former service station, it is considered unlikely that a significant impact is present as a result of former, undocumented USTs or hydrocarbon spills.

9.2 Potential Risks to Future Onsite Receptors

The presence of chlorinated hydrocarbons in soil vapour represent a potential risk to current and future site users and will require remediation/management for the proposed land uses. The concentration of PCE within soil vapour at location SV05 and the concentration of both PCE and TCE exceeded the adopted HIL-C criteria; these exceedances represent a risk to future onsite receptors.

The concentration of PCE (0.059 mg/L) and toluene (0.094 mg/L) within groundwater sampled from location PSM01 exceeded the adopted drinking water criteria of 0.05 mg/L and 0.025 mg/L respectively. These concentrations represent an unacceptable risk to future onsite receptors.

Concentrations of COPC in all other samples analysed were reported to be at concentrations which did not indicate the presence of statistically significant exceedances of the adopted site assessment criteria.

Given the Site history, the presence of buried anthropogenic materials in the form of building and demolition waste and the identification of trace levels of asbestos within soil at location JB11, it is considered likely that ACM is present at other locations at the Site. Boreholes are limited in their utility for the identification of buried asbestos and ACM, therefore redevelopment of the Site may uncover additional, undocumented asbestos which could potentially represent a risk to human health.

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9.3 Background Soil Contamination

Metals concentrations within natural soil samples analysed were within published background ranges as detailed in **Section 6.2.1**.

9.4 Chemical Mixtures

Soil vapour samples analysed at locations SV04, SV05 and SV10 were reported to have concentrations of both PCE and TCE above the adopted site assessment criteria. The exposure pathway (inhalation) and physiological effects of these contaminants is similar and this may have compounding detrimental effects to the health of future site users.

There were no soil or groundwater samples analysed which indicated the presence of a chemical mixture requiring further consideration.

9.5 Aesthetic Issues

No visible ACM, odours, or stains were observed during the soil or soil vapour investigation.

9.6 Potential Migration of Contaminants

Based on the presence of significant chlorinated hydrocarbon concentrations in soil, groundwater and soil vapour there is potential that contaminant migration (particularly PCE and TCE in groundwater) from the Site is currently occurring. Primary migration is considered likely to be in the approximate direction of the groundwater flow, as indicated by the soil vapour results.

The lack of significant contaminant concentrations in any of the remaining soil, soil vapour or groundwater samples has indicated that the potential for off-site migration of contamination requiring management is low.

The source of elevated TRH concentrations in groundwater across the site is unclear. While the reported concentrations do not pose a risk to future site users additional works are required to identify the source of the contamination and whether there is potential for its migration from the site.

9.7 Site Management Strategy

Based on the proposed land use, the scope of work completed for this assessment and the limitations presented in **Section 11**, there are considered to be unacceptable risks at the Site which require management prior to utilization of the Site for the proposed land uses.

Management of impacts will be required within the vicinity of the dry cleaner and soil sampling location JHA02. A remedial action plan (RAP) will be required to be produced to identify the preferred remedial methodology.

Additionally, site management controls including protocols to manage unexpected finds should be implemented during any ground disturbance works associated with site development.

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10. Conclusions & Recommendations

In accordance with the limitations in **Section 11**, the following conclusions are provided.

- Soil vapour concentrations within the vicinity of the dry cleaner represent a potential risk to current and future site users which will require management prior to utilisation of the Site for the proposed land uses;
- Offsite migration of chlorinated hydrocarbons is potentially occurring, north of the dry cleaner along the inferred groundwater flow direction;
- Lead impacted fill material in the vicinity of JHA02 is required to be managed prior to the utilisation of the site for the proposed land uses;
- Asbestos and ACM may be present within surficial fill materials at the Site which has not been documented as part of this DSI. Boreholes are limited in their utility for the identification of buried asbestos and ACM. During the redevelopment stage of the works, additional asbestos may be identified which could potentially represent a risk to human health and will require management/remediation during redevelopment;
- Contaminants in soils and groundwater were generally not present at concentrations representing statistically significant exceedances of the Site assessment criteria, and therefore with the exception of the aforementioned, do not represent a risk to the current or futures site users;
- No background soil concentrations or aesthetic issues were identified in this assessment;
- The Site is currently unsuitable for the proposed land uses. Subject to the implementation of an RAP which manages the identified impacts, it is considered that the Site can be made suitable for the proposed land uses; and
- The reported concentrations of chlorinated hydrocarbons in groundwater/soil vapour exceed the relevant investigation levels presented in Schedule B1 of the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPC 2013). As a result, there is a potential requirement for the site to be notified to the NSW EPA in accordance with the *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997* (NSW EPA 2015).

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11. Limitations

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

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

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

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

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

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

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

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Figures

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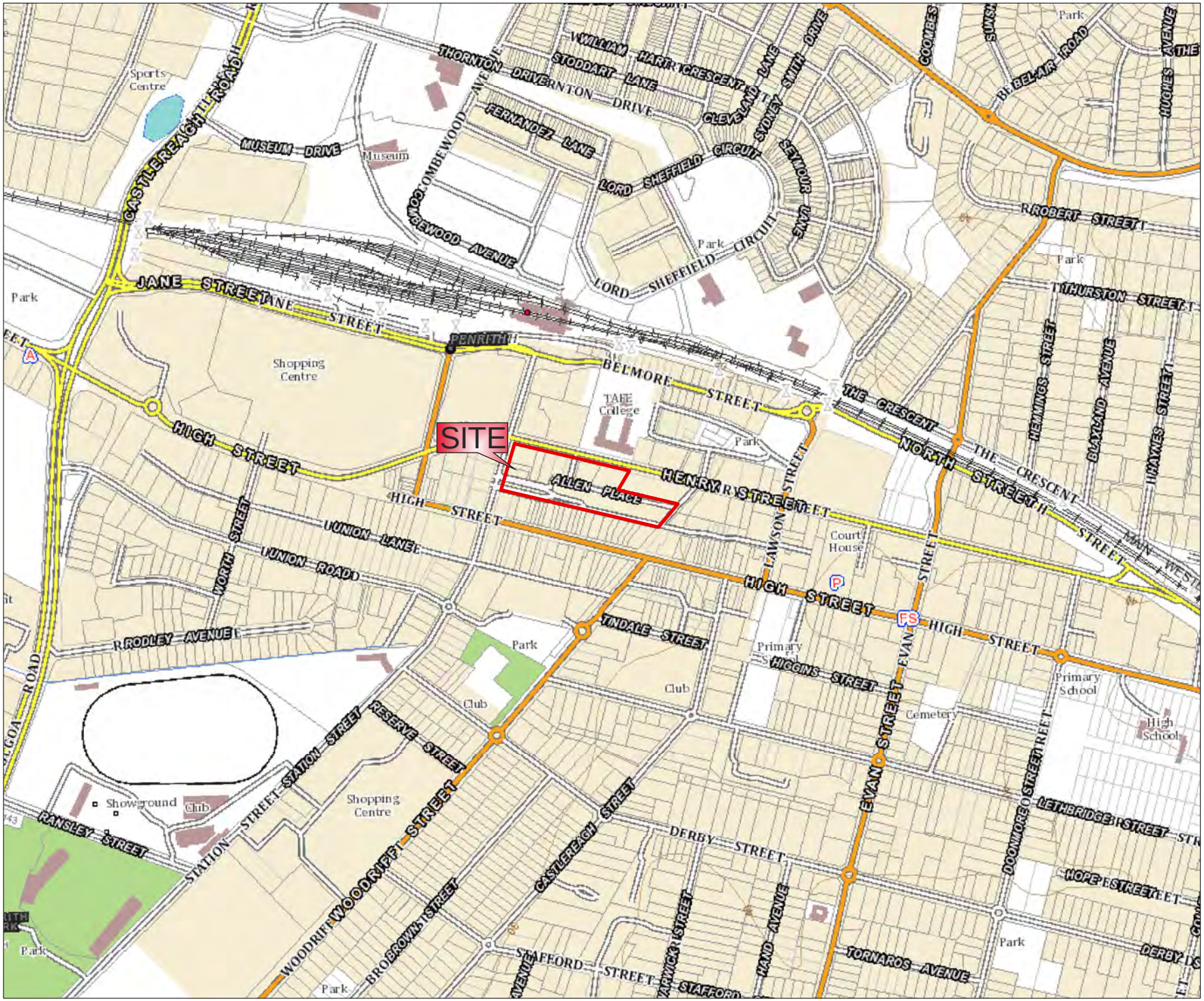

Legend:

Approximate Site Boundary

JBS&G

Job No: 52372

Client: Penrith City Council

Version: R01 Rev A	Date: 14-Jun-2017
Drawn By: SE	Checked By: KY

Scale 1:8,500

0 100 200

metres

Coor. Sys. GDA 1994 MGA Zone 56

114 - 146 Henry Street and Allen Place Carpark, Penrith, NSW

SITE LOCATION

FIGURE 1

Reference: SIX Maps www.maps.six.nsw.gov.au, accessed 17-11-2016

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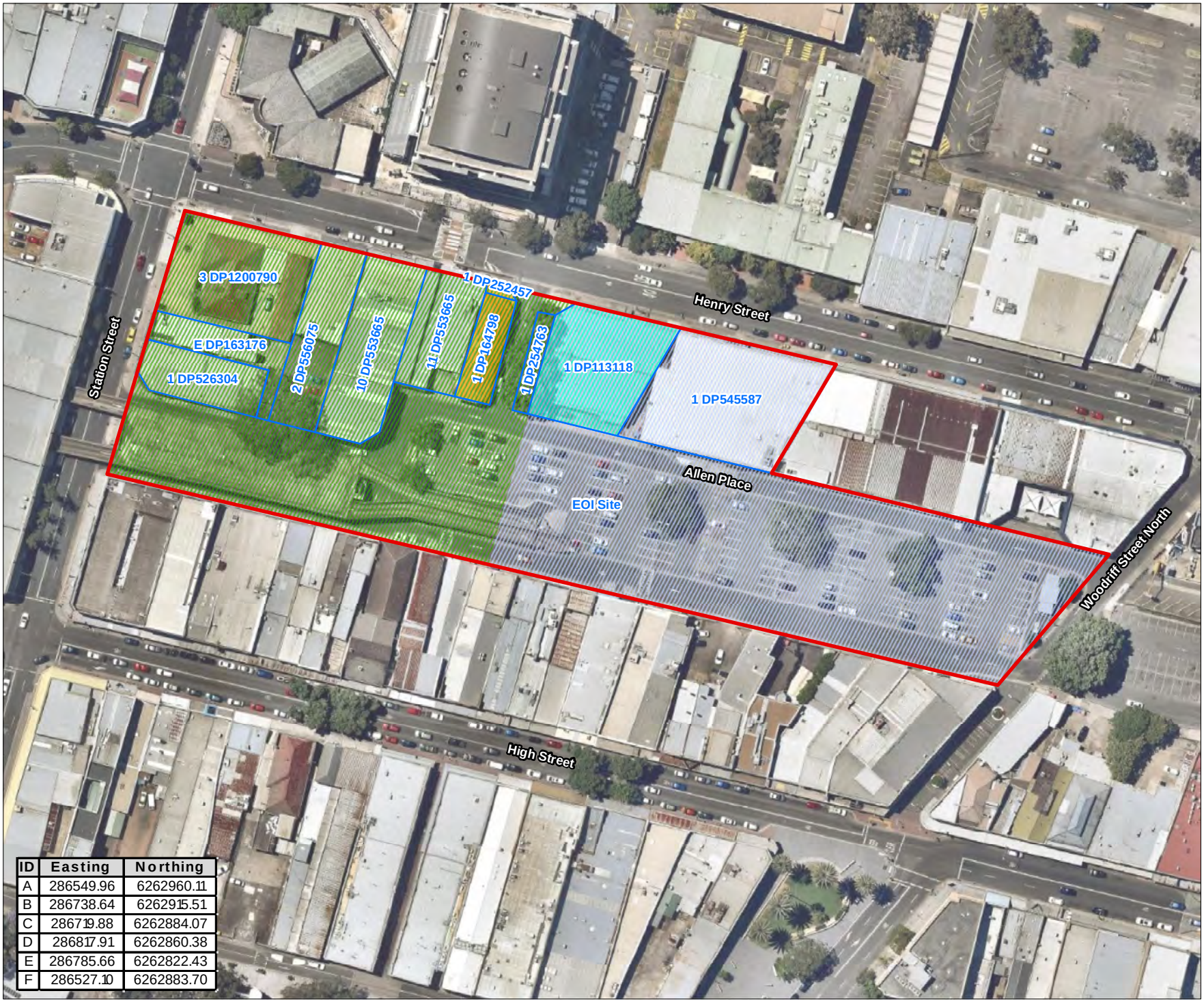

ID	Easting	Northing
A	286549.96	6262960.11
B	286738.64	6262915.51
C	286719.88	6262884.07
D	286817.91	6262860.38
E	286785.66	6262822.43
F	286527.10	6262883.70

Reference: Near Map www.nearmap.com, imagery date 06-11-2016, accessed 17-11-2016

Legend:

- Approximate Site Boundary
- Approximate Lot Boundary
- Dry Cleaners Location
- Former Service Station Location
- Proposed Building Development Site
- Proposed Green Space

JBS&G

Job No: 52372

Client: Penrith City Council

Version: R01 Rev A	Date: 04-Jul-2017
Drawn By: BC	Checked By: KY

Scale 1:1,500

0 10 20
metres

Coor. Sys. GDA 1994 MGA Zone 56

114 - 146 Henry Street and Allen Place Carpark, Penrith, NSW

SITE LAYOUT CADASTRAL BOUNDARIES AND AECS

FIGURE 2

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Version: 1, Version Date: 29/01/2021

Legend:

- Approximate Site Boundary
- Approximate Lot Boundary

Sample Location

- JBS&G Borehole
- JBS&G Hand Auger

JBS&G

Job No: 52372

Client: Penrith City Council

Version: R01 Rev A	Date: 04-Jul-2017
Drawn By: BC	Checked By: RH

Scale 1:1,485

0 10 20

metres

Coor. Sys. GDA 1994 MGA Zone 56

114 - 146 Henry Street and Allen Place Carpark, Penrith, NSW

SOIL NVESTIGATION LOCATIONS & SOIL CRITERIA EXCEEDANCES

FIGURE 3A

Reference: Near Map www.nearmap.com, imagery date 06-11-2016, accessed 17-11-2016

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Legend:

- Approximate Site Boundary
- Approximate Lot Boundary

Sample Location

- PSM Well
- Inferred Groundwater Flow Direction

JBS&G

Job No: 52372

Client: Penrith City Council

Version: R01 Rev A	Date: 04-Jul-2017
Drawn By: BC	Checked By: RH

Scale 1:1,485

0 10 20

metres

Coor. Sys. GDA 1994 MGA Zone 56

114 - 146 Henry Street and Allen Place Carpark, Penrith, NSW

GROUNDWATER MONITORING WELLS

FIGURE 3B

Reference: Near Map www.nearmap.com, imagery date 06-11-2016, accessed 17-11-2016

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Legend:

- Approximate Site Boundary
- Approximate Lot Boundary

Sample Location

- JBS&G Soil Vapour

JBS&G

Job No: 52372

Client: Penrith City Council

Version: R01 Rev A | Date: 04-Jul-2017

Drawn By: BC | Checked By: RH

Scale 1:1,485

0 10 20

metres

Coor. Sys. GDA 1994 MGA Zone 56

114 - 146 Henry Street and Allen Place Carpark, Penrith, NSW

SOIL VAPOUR PROBES & GAS CRITERIA EXCEEDANCES

FIGURE 3C

Reference: Near Map www.nearmap.com, imagery date 06-11-2016, accessed 17-11-2016

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Table A(I): Soil Analytical Results (Health Criteria)

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Table A(1) - Soil Analytical Data (Health Criteria)
Project Number: 52372
Project Name: Penrith Central Car Park

| | Metals & Metalloids | | | | | | | | Chlorinated Alkanes | | | | | | | |

Table A(1) - Soil Analytical Data (Health Criteria)
Project Number: 52372
Project Name: Penrith Central Car Park

	Polycyclic Aromatic Hydrocarbons																				Monocyclic Aromatic Hydrocarbons					Miscellaneous Hydrocarbons						Chlorinated Benzenes					Solvents	Polychlorinated Biphenyls								Phenols	Organic Sulfur Compounds
	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Carcinogenic PAHs as B(a)P TEQ	Phenanthrene	Pyrene	PAHs (Total)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	Bromobenzene	Isopropylbenzene	Styrene	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Dibromomethane	Iodomethane	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	2-Propanone (Acetone)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	Phenols (Total)	Carbon disulfide
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.05	0.50	0.50	0.10	0.50	0.50	0.50	0.50	0.50	0.10	0.50
Natural Soils																																															
Background Concentrations Henry Olzworthy Et Al. 1995																																															
Proposed Green Spaces																																															
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																															
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Recreational - HSL C																																															
NEPM 2013 Soil HIL C																		3			300																10								1			
NEPM 2013 Soil HSL C for Vapour Intrusion - Clay 0 to <1m																	NL																														
Proposed Building Development and Green Spaces																																															
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL B																																															
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Recreational - HSL C																																															
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																															
NEPM 2013 Soil HIL B																		4			400																15								1			
NEPM 2013 Soil HIL C																		3			300																10								1			
NEPM 2013 Soil HIL D																		40			4000																80								7			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																	5																														
NEPM 2013 Soil HSL C for Vapour Intrusion - Clay 0 to <1m																	NL																														
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																	NL																														

Proposed Green Spaces																																																
Sample ID	**Location**	**Sample Depth**	**Sample Date**	**Lithological Type**	**Lab Report**																																											
JB01_0.05-0.3	JB01	0.05-0.3	5/7/2017	Fill	545235	<0.5	<0.5	<0.5	0.6	0.7	0.9	1.2	1.5	0.8	0.7	0.5	0.7	<0.5	1.7	<0.5	<0.5	<0.5	1.179#2	0.6	1.7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JB01_1.1-1.2	JB01	1.1-1.2	5/7/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB02_0.05-0.25	JB02	0.05-0.25	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB03_0.05-0.2	JB03	0.05-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB04_0.4-0.5	JB04	0.4-0.5	5/7/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	<0.1	<0.5
JB05_0.1-0.2	JB05	0.1-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB06_0.1-0.2	JB06	0.1-0.2	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	<0.1	<0.5
JB12_0.1-0.25	JB12	0.1-0.25	5/7/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	<0.1	<0.5
JB12_1.1-1.2	JB12	1.1-1.2	5/7/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB13_0.1-0.2	JB13	0.1-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB14_0.1-0.3	JB14	0.1-0.3	5/7/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JB15-0.1-0.2	JB15	0.1-0.2	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB16_0.05-0.15	JB16	0.05-0.15	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-	<0.5
JHA02_0.1-0.3	JHA02	0.1-0.3	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA02_0.3-0.5	JHA02	0.3-0.5	5/26/2017	Fill	548083	<0.5	<0.5	<0.5	0.8	0.9	1.2	1.5	1.7	0.7	0.7	0.8	1.1	<0.5	2.3	<0.5	0.6	<0.5	1.458#2	0.8	2.1	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JHA04_0.2-0.4	JHA04	0.2-0.4	5/26/2017	Fill	548083	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	<0.1	<0.5
JHA04_0.6-0.8	JHA04	0.6-0.8	5/26/2017	Natural	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-	<0.5
JHA05_0-0.2	JHA05	0-0.2	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA07_0.4-0.6	JHA07	0.4-0.6	5/26/2017	Fill	548083	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5
JHA07_1.3-1.5	JHA07	1.3-1.5	5/26/2017	Natural	548083	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	<0.1	<0.5
QC20170526-1	JHA07	1.3-1.5	5/26/2017	Natural	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-	<0.5
Qc20170526-1A	JHA07	1.3-1.5	5/26/2017	Natural	168063	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA08_0.2-0.4	JHA08	0.2-0.4	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
JHA08_0.4-0.6	JHA08	0.4-0.6	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Proposed Building Development and Green Spaces																																																
Sample ID	**Location**	**Sample Depth**	**Sample Date**	**Lithological Type**	**Lab Report**																																											
JB07_0.1-0.2	JB07	0.1-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-	<0.5
JB08_0.1-0.2	JB08	0.1-0.2	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JB09_0.15-0.20	JB09	0.15-0.2	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20160506_2	JB09	0.15-0.2	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA20170506_2	JB09	0.15-0.2	5/6/2017	Fill	166525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB10_0.1-0.2	JB10	0.1-0.2	5/7/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JB11_0.05-0.15	JB11	0.05-0.15	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5
JB11_0.35-0.45	JB11	0.35-0.45	5/6/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB17_0.1-0.25	JB17	0.1-0.25	5/7/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JB18_0.1-0.2	JB18	0.1-0.2	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5
QC20160506_1	JB18	0.1-0.2	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5
QA20170506_1	JB18	0.1-0.2	5/6/2017	Fill	166525	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.05	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	
JB19_0.3-0.4	JB19	0.3-0.4	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-	<0.5
JB19_1.6-1.7	JB19	1.6-1.7	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5
JB20_0.5-0.6	JB20	0.5-0.6	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JB20_1.25-1.35	JB20	1.25-1.35	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB20_1.7-1.8	JB20	1.7-1.8	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	<1.21#6	<0.5	1	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5
JB20_1.9-2.0	JB20	1.9-2	5/6/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA01_0.25-0.4	JHA01	0.25-0.4	5/26/2017	Fill	548083	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<1.21#6	<0.5	0.8	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JHA06_0.2-0.4	JHA06	0.2-0.4	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA06_0.4-0.6	JHA06	0.4-0.6	5/26/2017	Fill	548083	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JHA06_1.0-1.2	JHA06	1-1.2	5/26/2017	Fill	548083	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5

Data Comments

#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#3 Synthetic mineral fibres detected.
#4 No respirable fibres detected
#5 Organic fibres detected.
#6 ESDAT Combined.
#7 Nil
#8 AF:

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Table A(1) - Soil Analytical Data (Health Criteria)
Project Number: 52372
Project Name: Penrith Central Car Park

	Organochlorine Pesticides																						Asbestos										Asbestos - Trace Analysis					
	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	beta-BHC	Dieldrin	DDD	DDT	DDT+DDE+DDD (Sum of Total)	Chlordane	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene	Approx. Sample Mass	Asbestos from ACM in Soil	Asbestos from FA & AF in Soil	Mass ACM	Mass Asbestos in ACM	Mass FA	Mass Asbestos in FA	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment	Synthetic Fibres - Comment
	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	g	%w/w	%w/w	g	g	g	g	g	g	g	Comment	Comment	Comment	Comment	Comment	Comment
EQL	0.05	0.05		0.05	0.05	0.05	0.05	0.05		0.10	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.20	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Natural Soils																																						
Background Concentrations Henry Olzworthy Et Al. 1995																																						
Proposed Green Spaces																																						
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																									0.001													
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Recreational - HSL C																								0.02														
NEPM 2013 Soil HIL C			10						400	70					20			10			400	30																
NEPM 2013 Soil HSL C for Vapour Intrusion - Clay 0 to <1m																																						
Proposed Building Development and Green Spaces																																						
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL B																								0.04														
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Recreational - HSL C																								0.02														
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																								0.05														
NEPM 2013 Soil HIL B			10						600	90					20			10			500	30																
NEPM 2013 Soil HIL C			10						400	70					20			10			400	30																
NEPM 2013 Soil HIL D			45						3600	530					100			50			2500	160																
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																																						
NEPM 2013 Soil HSL C for Vapour Intrusion - Clay 0 to <1m																																						
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																																						

Proposed Green Spaces																																						
Sample ID	**Location**	**Sample Depth**	**Sample Date**	**Lithological Type**	**Lab Report**																																		
JB01_0.05-0.3	JB01	0.05-0.3	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	496	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JB01_1.1-1.2	JB01	1.1-1.2	5/7/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB02_0.05-0.25	JB02	0.05-0.25	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB03_0.05-0.2	JB03	0.05-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB04_0.4-0.5	JB04	0.4-0.5	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	818	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JB05_0.1-0.2	JB05	0.1-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB06_0.1-0.2	JB06	0.1-0.2	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	555	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JB12_0.1-0.25	JB12	0.1-0.25	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	827	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JB12_1.1-1.2	JB12	1.1-1.2	5/7/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB13_0.1-0.2	JB13	0.1-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB14_0.1-0.3	JB14	0.1-0.3	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	956	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JB15-0.1-0.2	JB15	0.1-0.2	5/6/2017	Fill	545235	<0.05	<0.05	<0.1#6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB16_0.05-0.15	JB16	0.05-0.15	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA02_0.1-0.3	JHA02	0.1-0.3	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA02_0.3-0.5	JHA02	0.3-0.5	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	577	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JHA04_0.2-0.4	JHA04	0.2-0.4	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	653	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JHA04_0.6-0.8	JHA04	0.6-0.8	5/26/2017	Natural	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA05_0-0.2	JHA05	0-0.2	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA07_0.4-0.6	JHA07	0.4-0.6	5/26/2017	Fill	548083	<0.05	<0.05	<0.1#6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	764	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JHA07_1.3-1.5	JHA07	1.3-1.5	5/26/2017	Natural	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20170526-1	JHA07	1.3-1.5	5/26/2017	Natural	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Qc20170526-1A	JHA07	1.3-1.5	5/26/2017	Natural	168063	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA08_0.2-0.4	JHA08	0.2-0.4	5/26/2017	Fill	548083	<0.05	<0.05	<0.1#6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	635	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JHA08_0.4-0.6	JHA08	0.4-0.6	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Proposed Building Development and Green Spaces																																						
Sample ID	**Location**	**Sample Depth**	**Sample Date**	**Lithological Type**	**Lab Report**																																		
JB07_0.1-0.2	JB07	0.1-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB08_0.1-0.2	JB08	0.1-0.2	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	606	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JB09_0.15-0.20	JB09	0.15-0.2	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20160506_2	JB09	0.15-0.2	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA20170506_2	JB09	0.15-0.2	5/6/2017	Fill	166525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB10_0.1-0.2	JB10	0.1-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	754	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JB11_0.05-0.15	JB11	0.05-0.15	5/6/2017	Fill	545235	<0.05	<0.05	<0.1#6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	641	0	0.0006	0	0	0	0	0	0.0332	0.004	0.004	1#7	1#8	1#7	1#5	1#4	1#3
JB11_0.35-0.45	JB11	0.35-0.45	5/6/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB17_0.1-0.25	JB17	0.1-0.25	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	806	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JB18_0.1-0.2	JB18	0.1-0.2	5/6/2017	Fill	545235	<0.05	<0.05	<0.1#6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	506	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
QC20160506_1	JB18	0.1-0.2	5/6/2017	Fill	545235	<0.05	<0.05	<0.1#6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	752	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
QA20170506_1	JB18	0.1-0.2	5/6/2017	Fill	166525	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	528	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JB19_0.3-0.4	JB19	0.3-0.4	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB19_1.6-1.7	JB19	1.6-1.7	5/6/2017	Fill	545235	<0.05	<0.05	<0.1#6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	400	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JB20_0.5-0.6	JB20	0.5-0.6	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	707	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JB20_1.25-1.35	JB20	1.25-1.35	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB20_1.7-1.8	JB20	1.7-1.8	5/6/2017	Fill	545235	<0.05	<0.05	<0.1#6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	208	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JB20_1.9-2.0	JB20	1.9-2	5/6/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA01_0.25-0.4	JHA01	0.25-0.4	5/26/2017	Fill	548083	<0.05	<0.05	<0.1#6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	756	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JHA06_0.2-0.4	JHA06	0.2-0.4	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA06_0.4-0.6	JHA06	0.4-0.6	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	617	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7
JHA06_1.0-1.2	JHA06	1-1.2	5/26/2017	Fill	548083	<0.05	<0.05	<0.1#6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	605	0	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7

Data Comments

#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#3 Synthetic mineral fibres detected.
#4 No respirable fibres detected
#5 Organic fibres detected.
#6 ESDAT Combined.
#7 Nil
#8 AF:

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Table A(II): Soil Analytical Results (Ecological Criteria)

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Table A(2) - Soil Analytical Results (Ecological Criteria)
Project Number: 52372
Project Name: Penrith Central Car Park

	Metals & Metalloids								Chlorinated Alkanes																Chlorinated Alkenes										Trihalomethanes				TPHs (NEPC 1999)				TRHs (NEPC 2013)						BTEX					
	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane	1,1-dichloroethene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C16 less Naphthalene (F2)	C6-C10 Fraction	C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2.00	0.40	5.00	5.00	5.00	0.10	5.00	5.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	20.00	20.00	50.00	50.00	50.00	50.00	100.00	100.00	50.00	20.00	20.00	0.10	0.10	0.10	0.10	0.20	0.30
Proposed Green Spaces																																																						
NEPC 2013 EIL, EILs Aged Sediment (Residential, Parkland and Public Open Space)	100			179	1403		176	412																																													
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																																												120	1300	5600	120	180	180	65	125	105			45
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																											1000	3500	10000		800							
Proposed Building Development and Green Spaces																																																				
NEPC 2013 EIL, EILs Aged Sediment (Residential, Parkland and Public Open Space)	100			179	1403		176	412																																												
NEPC 2013 EIL, EILs Aged Sediment (Commercial and Industrial)	160			239	2103		296	562																																												
NEPM 2013 ESL Commercial and Industrial, Fine Soil																																											170	2500	6600	170	215	215	95	185	135			95
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																											1000	3500	10000		800							
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																																											1000	5000	10000		800							
Proposed Green Spaces																																																				
Sample ID	**Location**	**Sample Depth**	**Sample Date**	**Lithological Type**	**Lab Report**																																																
JB01_0.05-0.3	JB01	0.05-0.3	5/7/2017	Fill	545235	12	<0.4	14	17	110	0.2	7.3	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JB01_1.1-1.2	JB01	1.1-1.2	5/7/2017	Natural	545235	3.4	<0.4	9.9	17	6.2	<0.1	<5	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB02_0.05-0.25	JB02	0.05-0.25	5/7/2017	Fill	545235	12	<0.4	7.3	13	87	0.1	5.2	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB03_0.05-0.2	JB03	0.05-0.2	5/7/2017	Fill	545235	2.9	<0.4	7.7	7.3	120	<0.1	<5	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB04_0.4-0.5	JB04	0.4-0.5	5/7/2017	Fill	545235	3.8	<0.4	9.7	24	110	<0.1	7.2	110	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JB05_0.1-0.2	JB05	0.1-0.2	5/7/2017	Fill	545235	9	<0.4	21	42	120	0.2	27	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB06_0.1-0.2	JB06	0.1-0.2	5/6/2017	Fill	545235	8.9	<0.4	69	<5	13	<0.1	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JB12_0.1-0.25	JB12	0.1-0.25	5/7/2017	Fill	545235	<2	<0.4	91	24	<5	<0.1	75	48	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	120	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JB12_1.1-1.2	JB12	1.1-1.2	5/7/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB13_0.1-0.2	JB13	0.1-0.2	5/7/2017	Fill	545235	5.6	<0.4	13	12	25	<0.1	6.4	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB14_0.1-0.3	JB14	0.1-0.3	5/7/2017	Fill	545235	5	0.8	18	61	57	0.3	14	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JB15-0.1-0.2	JB15	0.1-0.2	5/6/2017	Fill	545235	13	<0.4	110	5.9	16	<0.1	<5	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB16_0.05-0.15	JB16	0.05-0.15	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JHA02_0.1-0.3	JHA02	0.1-0.3	5/26/2017	Fill	548083	50	0.5	11	230	430	0.3	8.8	290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA02_0.3-0.5	JHA02	0.3-0.5	5/26/2017	Fill	548083	49	0.5	12	200	910	0.4	8.7	340	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	23	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JHA04_0.2-0.4	JHA04	0.2-0.4	5/26/2017	Fill	548083	2.7	<0.4	53	19	7	<0.1	58	38	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JHA04_0.6-0.8	JHA04	0.6-0.8	5/26/2017	Natural	548083	8.4	<0.4	16	21	27	<0.1	14	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JHA05_0-0.2	JHA05	0-0.2	5/26/2017	Fill	548083	4.4	<0.4	24	15	39	<0.1	22	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA07_0.4-0.6	JHA07	0.4-0.6	5/26/2017	Fill	548083	<2	<0.4	<5	<5	<5	<0.1	<5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JHA07_1.3-1.5	JHA07	1.3-1.5	5/26/2017	Natural	548083	7	<0.4	11	19	12	<0.1	<5	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
QC20170526-1	JHA07	1.3-1.5	5/26/2017	Natural	548083	2.9	<0.4	8	9.8	8.3	<0.1	<5	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
Qc20170526-1A	JHA07	1.3-1.5	5/26/2017	Natural	168063	<4	<0.4	12	16	9	<0.1	5	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA08_0.2-0.4	JHA08	0.2-0.4	5/26/2017	Fill	548083	5.1	<0.4	13	15	28	<0.1	13	310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA08_0.4-0.6	JHA08	0.4-0.6	5/26/2017	Fill	548083	2.6	<0.4	5.9	8.4	8.2	<0.1	<5	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proposed Building Development and Green Spaces																																																				
Sample ID	**Location**	**Sample Depth**	**Sample Date**	**Lithological Type**	**Lab Report**																																															
JB07_0.1-0.2	JB07	0.1-0.2	5/7/2017	Fill	545235	7.8	<0.4	64	17	29	0.4	34	57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JB08_0.1-0.2	JB08	0.1-0.2	5/6/2017	Fill	545235	3.9	<0.4	17	<5	6.5	<0.1	<5	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JB09_0.15-0.20	JB09	0.15-0.2	5/6/2017	Fill	545235	10	<0.4	46	28	15	<0.1	<5	7.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20160506_2	JB09	0.15-0.2	5/6/2017	Fill	545235	8.1	<0.4	42	16	20	<0.1	<5	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA20170506_2	JB09	0.15-0.2	5/6/2017	Fill	166525	6	<0.4	32	15	14	<0.1	4	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB10_0.1-0.2	JB10	0.1-0.2	5/7/2017	Fill	545235	8.8	<0.4	44	6.9	10	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JB11_0.05-0.15	JB11	0.05-0.15	5/6/2017	Fill	545235	2.7	<0.4	6.3	23	31	<0.1	<5	93	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	39	480	350	869	51	710	140	51	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JB11_0.35-0.45	JB11	0.35-0.45	5/6/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB17_0.1-0.25	JB17	0.1-0.25	5/7/2017	Fill	545235	10	<0.4	64	<5	13	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	58	58	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JB18_0.1-0.2	JB18	0.1-0.2	5/6/2017	Fill	545235	7.5	<0.4	39	6.2	12	<0.1	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
QC20160506_1	JB13	0.1-0.2	5/6/2017	Fill	545235	8.6	<0.4	50	<5	12	<0.1	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
QA20170506_1	JB13	0.1-0.2	5/6/2017	Fill	166525	4	<0.4	38	5	8	<0.1	2	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<25	<50	<100	<100	<25	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<1
JB19_0.3-0.4	JB19	0.3-0.4	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JB19_1.6-1.7	JB19	1.6-1.7	5/6/2017	Fill	545235	5	<0.4	10	5.3	5.5	<0.1	5.4	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JB20_0.5-0.6	JB20	0.5-0.6	5/6/2017	Fill	545235	2.7	<0.4	10	<5	8	<0.1	<5	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JB20_1.25-1.35	JB20	1.25-1.35	5/6/2017	Fill	545235	4.6	0.4	12	25	49	0.1	7.7	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB20_1.7-1.8	JB20	1.7-1.8	5/6/2017	Fill	545235	4.4	<0.4	9.2	31	110	0.3	5.8	190	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	69	58	127	<50	110	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JB20_1.9-2.0	JB20	1.9-2	5/6/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA01_0.25-0.4	JHA01	0.25-0.4	5/26/2017	Fill	548083	3.9	<0.4	21	11	6.8	<0.1	25	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JHA06_0.2-0.4	JHA06	0.2-0.4	5/26/2017	Fill	548083	2.2	<0.4	8	8.9	15	<0.1	6.8	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA06_0.4-0.6	JHA06	0.4-0.6	5/26/2017	Fill	548083	6.4	<0.4	14	20	37	<0.1	11	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	74	74	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
JHA06_1.0-1.2	JHA06	1-1.2	5/26/2017	Fill	548083	6.9	<0.4	11	17	27	<0.1	13	50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	55	55	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3

#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#3 Synthetic mineral fibres detected.
#4 No respirable fibres detected
#5 Organic fibres detected.
#6 ESDAT Combined.
#7 Nil
#8 AF:

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Table A(2) - Soil Analytical Results (Ecological Criteria)
Project Number: 52372
Project Name: Penrith Central Car Park

	Polycyclic Aromatic Hydrocarbons																				Monocyclic Aromatic Hydrocarbons					Miscellaneous Hydrocarbons						Chlorinated Benzenes					Solvents	Polychlorinated Biphenyls								Phenols	Organic Sulfur Compounds
	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Carcinogenic PAHs as B(a)P TEQ	Phenanthrene	Pyrene	PAHs (Total)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	Bromobenzene	Isopropylbenzene	Styrene	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Dibromomethane	Iodomethane	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	2-Propanone (Acetone)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	Phenols (Total)	Carbon disulfide
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.05	0.50	0.50	0.10	0.50	0.50	0.50	0.50	0.50	0.50	0.10	0.50
Proposed Green Spaces																																															
NEPC 2013 EIL, EILs Aged Sediment (Residential, Parkland and Public Open Space)																	170																														
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil					0.7																																										
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																															
Proposed Building Development and Green Spaces																																															
NEPC 2013 EIL, EILs Aged Sediment (Residential, Parkland and Public Open Space)																	170																														
NEPC 2013 EIL, EILs Aged Sediment (Commercial and Industrial)																																															
NEPM 2013 ESL Commercial and Industrial, Fine Soil					1.4																																										
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																															
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																																															
Proposed Green Spaces																																															
Sample ID	**Location**	**Sample Depth**	**Sample Date**	**Lithological Type**	**Lab Report**																																										
JB01_0.05-0.3	JB01	0.05-0.3	5/7/2017	Fill	545235	<0.5	<0.5	<0.5	0.6	0.7	0.9	1.2	1.5	0.8	0.7	0.5	0.7	<0.5	1.7	<0.5	<0.5	<0.5	1.179[#2]	0.6	1.7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JB01_1.1-1.2	JB01	1.1-1.2	5/7/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB02_0.05-0.25	JB02	0.05-0.25	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB03_0.05-0.2	JB03	0.05-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB04_0.4-0.5	JB04	0.4-0.5	5/7/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	<0.1	<0.5
JB05_0.1-0.2	JB05	0.1-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB06_0.1-0.2	JB06	0.1-0.2	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	<0.1	<0.5
JB12_0.1-0.25	JB12	0.1-0.25	5/7/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	<0.1	<0.5
JB12_1.1-1.2	JB12	1.1-1.2	5/7/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB13_0.1-0.2	JB13	0.1-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB14_0.1-0.3	JB14	0.1-0.3	5/7/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JB15-0.1-0.2	JB15	0.1-0.2	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
JB16_0.05-0.15	JB16	0.05-0.15	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-	<0.5
JHA02_0.1-0.3	JHA02	0.1-0.3	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA02_0.3-0.5	JHA02	0.3-0.5	5/26/2017	Fill	548083	<0.5	<0.5	<0.5	0.8	0.9	1.2	1.5	1.7	0.7	0.7	0.8	1.1	<0.5	2.3	<0.5	0.6	<0.5	1.458[#2]	0.8	2.1	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JHA04_0.2-0.4	JHA04	0.2-0.4	5/26/2017	Fill	548083	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	<0.1	<0.5
JHA04_0.6-0.8	JHA04	0.6-0.8	5/26/2017	Natural	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-	<0.5
JHA05_0-0.2	JHA05	0-0.2	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA07_0.4-0.6	JHA07	0.4-0.6	5/26/2017	Fill	548083	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5
JHA07_1.3-1.5	JHA07	1.3-1.5	5/26/2017	Natural	548083	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	<0.1	<0.5
QC20170526-1	JHA07	1.3-1.5	5/26/2017	Natural	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-	<0.5
Qc20170526-1A	JHA07	1.3-1.5	5/26/2017	Natural	168063	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA08_0.2-0.4	JHA08	0.2-0.4	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
JHA08_0.4-0.6	JHA08	0.4-0.6	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proposed Building Development and Green Spaces																																															
Sample ID	**Location**	**Sample Depth**	**Sample Date**	**Lithological Type**	**Lab Report**																																										
JB07_0.1-0.2	JB07	0.1-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-	<0.5
JB08_0.1-0.2	JB08	0.1-0.2	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JB09_0.15-0.20	JB09	0.15-0.2	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20160506_2	JB09	0.15-0.2	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA20170506_2	JB09	0.15-0.2	5/6/2017	Fill	166525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB10_0.1-0.2	JB10	0.1-0.2	5/7/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JB11_0.05-0.15	JB11	0.05-0.15	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5
JB11_0.35-0.45	JB11	0.35-0.45	5/6/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB17_0.1-0.25	JB17	0.1-0.25	5/7/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JB18_0.1-0.2	JB18	0.1-0.2	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5
QC20160506_1	JB13	0.1-0.2	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5
QA20170506_1	JB13	0.1-0.2	5/6/2017	Fill	166525	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.21[#5]	<0.1	<0.1	<0.05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
JB19_0.3-0.4	JB19	0.3-0.4	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-	<0.5
JB19_1.6-1.7	JB19	1.6-1.7	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5
JB20_0.5-0.6	JB20	0.5-0.6	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JB20_1.25-1.35	JB20	1.25-1.35	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB20_1.7-1.8	JB20	1.7-1.8	5/6/2017	Fill	545235	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	1	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5
JB20_1.9-2.0	JB20	1.9-2	5/6/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA01_0.25-0.4	JHA01	0.25-0.4	5/26/2017	Fill	548083	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	0.8	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JHA06_0.2-0.4	JHA06	0.2-0.4	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA06_0.4-0.6	JHA06	0.4-0.6	5/26/2017	Fill	548083	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
JHA06_1.0-1.2	JHA06	1-1.2	5/26/2017	Fill	548083	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5

#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#3 Synthetic mineral fibres detected.
#4 No respirable fibres detected
#5 Organic fibres detected.
#6 ESDAT Combined.
#7 Nil
#8 AF:

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Table A(2) - Soil Analytical Results (Ecological Criteria)
Project Number: 52372
Project Name: Penrith Central Car Park

	Organochlorine Pesticides																						Ionic Balance			Asbestos										Asbestos - Trace Analysis						Other
	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	beta-BHC	Dieldrin	DDD	DDT	DDT+DDE+DDD (Sum of Total)	Chlordane	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene	Cation Exchange Capacity	EC 1:5 soil:water	pH 1:5 soil:water	Approx. Sample Mass	Asbestos from ACM in Soil	Asbestos from FA & AF in Soil	Mass ACM	Mass Asbestos in ACM	Mass FA	Mass Asbestos in FA	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment	Synthetic Fibres - Comment	% Clay
	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	g	%w/w	%w/w	g	g	g	g	g	g	g	Comment	Comment	Comment	Comment	Comment	Comment	%
EQL	0.05	0.05		0.05	0.05	0.05	0.05	0.05		0.10	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.20	1.00	0.05	10.00	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00
Proposed Green Spaces																																										
NEPC 2013 EIL, EILs Aged Sediment (Residential, Parkland and Public Open Space)								180																																		
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																																										
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																										
Proposed Building Development and Green Spaces																																										
NEPC 2013 EIL, EILs Aged Sediment (Residential, Parkland and Public Open Space)								180																																		
NEPC 2013 EIL, EILs Aged Sediment (Commercial and Industrial)																																										
NEPM 2013 ESL Commercial and Industrial, Fine Soil																																										
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																										
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																																										
Proposed Green Spaces																																										
Sample ID	**Location**	**Sample Depth**	**Sample Date**	**Lithological Type**	**Lab Report**																																						
JB01_0.05-0.3	JB01	0.05-0.3	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	496	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JB01_1.1-1.2	JB01	1.1-1.2	5/7/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	460	5.6	-	-	-	-	-	-	-	-	-	-	-	-	-	43
JB02_0.05-0.25	JB02	0.05-0.25	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB03_0.05-0.2	JB03	0.05-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB04_0.4-0.5	JB04	0.4-0.5	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	818	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JB05_0.1-0.2	JB05	0.1-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB06_0.1-0.2	JB06	0.1-0.2	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	555	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JB12_0.1-0.25	JB12	0.1-0.25	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	827	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JB12_1.1-1.2	JB12	1.1-1.2	5/7/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	130	7.7	-	-	-	-	-	-	-	-	-	-	-	-	-	39
JB13_0.1-0.2	JB13	0.1-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB14_0.1-0.3	JB14	0.1-0.3	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	956	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JB15-0.1-0.2	JB15	0.1-0.2	5/6/2017	Fill	545235	<0.05	<0.05	<0.1#1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB16_0.05-0.15	JB16	0.05-0.15	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA02_0.1-0.3	JHA02	0.1-0.3	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA02_0.3-0.5	JHA02	0.3-0.5	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	577	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JHA04_0.2-0.4	JHA04	0.2-0.4	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	653	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JHA04_0.6-0.8	JHA04	0.6-0.8	5/26/2017	Natural	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA05_0-0.2	JHA05	0-0.2	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA07_0.4-0.6	JHA07	0.4-0.6	5/26/2017	Fill	548083	<0.05	<0.05	<0.1#1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA07_1.3-1.5	JHA07	1.3-1.5	5/26/2017	Natural	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20170526-1	JHA07	1.3-1.5	5/26/2017	Natural	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Qc20170526-1A	JHA07	1.3-1.5	5/26/2017	Natural	168063	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA08_0.2-0.4	JHA08	0.2-0.4	5/26/2017	Fill	548083	<0.05	<0.05	<0.1#1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	-	-	-	635	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JHA08_0.4-0.6	JHA08	0.4-0.6	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proposed Building Development and Green Spaces																																										
Sample ID	**Location**	**Sample Depth**	**Sample Date**	**Lithological Type**	**Lab Report**																																						
JB07_0.1-0.2	JB07	0.1-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB08_0.1-0.2	JB08	0.1-0.2	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	606	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JB09_0.15-0.20	JB09	0.15-0.2	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20160506_2	JB09	0.15-0.2	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA20170506_2	JB09	0.15-0.2	5/6/2017	Fill	166525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB10_0.1-0.2	JB10	0.1-0.2	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	754	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JB11_0.05-0.15	JB11	0.05-0.15	5/6/2017	Fill	545235	<0.05	<0.05	<0.1#1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	-	-	-	641	0	0.0006	0	0	0	0	0.0332	0.004	0.004	1#7	1#8	1#7	1#5	1#4	1#5	-
JB11_0.35-0.45	JB11	0.35-0.45	5/6/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	170	8.3	-	-	-	-	-	-	-	-	-	-	-	-	-	28
JB17_0.1-0.25	JB17	0.1-0.25	5/7/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	806	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JB18_0.1-0.2	JB18	0.1-0.2	5/6/2017	Fill	545235	<0.05	<0.05	<0.1#1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	-	-	-	506	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
QC20160506_1	JB13	0.1-0.2	5/6/2017	Fill	545235	<0.05	<0.05	<0.1#6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	-	-	-	752	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
QA20170506_1	JB13	0.1-0.2	5/6/2017	Fill	166525	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	528	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JB19_0.3-0.4	JB19	0.3-0.4	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB19_1.6-1.7	JB19	1.6-1.7	5/6/2017	Fill	545235	<0.05	<0.05	<0.1#1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	-	-	-	400	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JB20_0.5-0.6	JB20	0.5-0.6	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	707	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JB20_1.25-1.35	JB20	1.25-1.35	5/6/2017	Fill	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB20_1.7-1.8	JB20	1.7-1.8	5/6/2017	Fill	545235	<0.05	<0.05	<0.1#1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	-	-	-	208	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JB20_1.9-2.0	JB20	1.9-2	5/6/2017	Natural	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	110	7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	30
JHA01_0.25-0.4	JHA01	0.25-0.4	5/26/2017	Fill	548083	<0.05	<0.05	<0.1#1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	-	-	-	756	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JHA06_0.2-0.4	JHA06	0.2-0.4	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA06_0.4-0.6	JHA06	0.4-0.6	5/26/2017	Fill	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	617	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-
JHA06_1.0-1.2	JHA06	1-1.2	5/26/2017	Fill	548083	<0.05	<0.05	<0.1#1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15#1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	-	-	-	605	0	0	0	0	0	0	0	0	1#7	1#7	1#7	1#5	1#4	1#7	-

#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#3 Synthetic mineral fibres detected.
#4 No respirable fibres detected
#5 Organic fibres detected.
#6 ESDAT Combined.
#7 Nil
#8 AF:

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Version: 1, Version Date: 29/01/2021

Table B(I): Groundwater Analytical Results

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Version: 1, Version Date: 29/01/2021

Table B(1) - Groundwater Analytical Results
Project Number: 52372
Project Name: Penrith Central Car Park

	Metals & Metalloids								Chlorinated Alkanes																Chlorinated Alkenes										Trihalomethanes				TPHs (NEPC 1999)					TRHs (NEPC 2013)						BTEX					
	Arsenic (Total) (Filtered)	Cadmium (Filtered)	Chromium (Total) (Filtered)	Copper (Filtered)	Lead (Filtered)	Mercury (Inorganic) (Filtered)	Nickel (Filtered)	Zinc (Filtered)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane	1,1-dichloroethene	β-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C16 less Naphthalene (F2)	C6-C10 Fraction	C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.10	0.10	0.10	0.05	0.10	0.10	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
ANZECC 2000 Fresh Water 95 %	0.013	0.0002	0.001	0.0014	0.0034	0.0006	0.011	0.008				6.5																																					0.95			0.35		0.55
NWQMS 2011 (November 2016) - Aesthetic				1				3																																									0.003	0.025				0.02
NWQMS 2011 (November 2016) - Health	0.01	0.002		2	0.01	0.001	0.02								0.003				0.003				0.004		0.03				0.05			0.02	0.0003	0.25	0.25	0.25	0.25										0.001	0.3	0.8			0.6
NWQMS 2011 (as Amended November 2016) (Factor 10) Aesthetics				10				30																																										0.03	0.25				0.2
NWQMS 2011 (as Amended November 2016) (Factor 10) Health	0.1	0.02		20	0.1	0.01	0.2								0.03				0.03				0.04		0.3				0.5			0.2	0.003	2.5	2.5	2.5	2.5										0.01	3	8			6
NEPM Groundwater HSL (A&B) for Vapour Intrusion 4 m to 8 m (Clay)																																																	5	NL	NL			NL
NEPM Groundwater HSL (C) for Vapour Intrusion 4 m to 8 m (Clay)																																																	NL	NL	NL			NL
NEPM Groundwater HSL (D) for Vapour Intrusion 4 m to 8 m (Clay)																																																	30	NL	NL			NL

| Sample Name | Sampled Date | Depth | Lab Report Number | | | | | | | | | | | | | | | | | | |

Table B(1) - Groundwater Analytical Results
Project Number: 52372
Project Name: Penrith Central Car Park

	Polycyclic Aromatic Hydrocarbons																Monocyclic Aromatic Hydrocarbons					Miscellaneous Hydrocarbons						Chlorinated Benzenes				Solvents	Organic Sulfur Compounds	Miscellaneous Industrial Chemicals
	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Total)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	Bromobenzene	Isopropylbenzene	Styrene	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Dibromomethane	Iodomethane	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	2-Propanone (Acetone)	Carbon disulfide	Hexachlorobutadiene
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	mg/L	mg/L
EQL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	
ANZECC 2000 Fresh Water 95 %														0.016															0.16	0.26	0.06				
NWQMS 2011 (November 2016) - Aesthetic																						0.004							0.001	0.02	0.003	0.01			
NWQMS 2011 (November 2016) - Health					0.00001																	0.03	0.001			0.001			1.5		0.04	0.3			0.0007
NWQMS 2011 (as Amended November 2016) (Factor 10) Aesthetics																						0.04							0.01	0.2	0.03	0.1			
NWQMS 2011 (as Amended November 2016) (Factor 10) Health					0.0001																	0.3	0.01			0.01			15		0.4	3			0.007
NEPM Groundwater HSL (A&B) for Vapour Intrusion 4 m to 8 m (Clay)														NL																					
NEPM Groundwater HSL (C) for Vapour Intrusion 4 m to 8 m (Clay)														NL																					
NEPM Groundwater HSL (D) for Vapour Intrusion 4 m to 8 m (Clay)														NL																					

Sample Name	Sampled Date	Depth	Lab Report Number																																
PSM01	5/26/2017	6.96	548083	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00014	0.00008	<0.00005	0.00022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	21	<0.001	-
QC01_W	5/26/2017	6.96	548083	<0.00005	<0.00005	<0.00005	<0.00005	0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0002	0.00005	<0.00005	0.00026	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	21	<0.001	-
QC01-W/A	5/26/2017	6.96	168063	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	g[1]	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.01	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	-	<0.001
PSM02	5/26/2017	6.95	548083	<0.00005	<0.00005	<0.00005	<0.00005	0.00001	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00014	0.00007	<0.00005	0.00027	0.003	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1	<0.001	-
PSM03	5/26/2017	8.01	548083	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00009	<0.00005	<0.00005	0.00009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1	<0.001	-

Data Comments

#1 NIL (+)VE

Document Set ID: 9456504
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Table C(I): Soil Vapour Analytical results

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Table C(1) - Soil Vapour
Project Number: 52372
Project Name: Penrith Central Car Park

	Organic Alcohols	Chlorinated Alkanes														Chlorinated Alkenes										Trihalomethanes				TRHs (NEPC 2013)				BTEX			
	Isopropyl alcohol	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Trichlorofluoromethane	1,1-dichloroethene	1,1-dichloropropene	2-chlorotoluene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	>C10-C16 Fraction	>C6-C10 Fraction	F1 (C6-C10 - BTEX)	F2 (C6-C10 - Naphthalene)	Benzene	Ethylbenzene	Toluene	Xylene (Total)
	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3
EQL	1.67	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	1.67	1.67	1.67	1.67	0.08	0.08	0.08	0.25
NEPM 2013 HIL Recreational C Soil Vapour			1200																	2		40		0.4	0.5												
NEPM 2013 HIL Commercial/industrial D Soil Vapour			230																	0.3		8		0.08	0.1												
NEPM 2013 Soil Vapour HSL A & HSL B - Clay 0 to <1m																																230	180	1	420	1600	280
NEPM 2013 Soil Vapour HSL C - Clay 0 to <1m																																NL	NL	3000	NL	NL	NL
NEPM 2013 Soil Vapour HSL D - Clay 0 to <1m																																NL	NL	5	1800	6500	1200

Sample ID	Location	Lab Report	Sample Date																																			
QC01_SV	SV01_FRONT	545643	5/5/2017	<1.667	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<1.667	<1.667	<1.667	<1.667	<0.083	<0.083	<0.083	<0.25
SV01_FRONT	SV01	545643	5/5/2017	<1.667	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<1.667	<1.667	<1.667	<1.667	<0.083	<0.083	<0.083	<0.25
SV02_FRONT	SV02	545643	5/5/2017	<1.667	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<1.667	<1.667	<1.667	<1.667	<0.083	<0.083	<0.083	<0.25
SV03_FRONT	SV03	545643	5/5/2017	<1.667	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	-	-	-	-	<0.083	<0.083	<0.083	<0.25
SV04_FRONT	SV04	545643	5/5/2017	<1.667	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	1.667	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<1.667	<1.667	<1.667	1.833	<0.083	<0.083	<0.083	<0.25
SV05_FRONT	SV05	545643	5/5/2017	<1.667	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	56.67	<0.083	9.333	<0.083	<0.083	<0.083	<0.083	<0.083	-	-	-	-	<0.083	<0.083	<0.083	<0.25
SV06_FRONT	SV06	545643	5/5/2017	<1.667	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	-	-	-	-	<0.083	<0.083	<0.083	<0.25
SV07_FRONT	SV07	545643	5/5/2017	<1.667	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	-	-	-	-	<0.083	<0.083	<0.083	<0.25
SV08_FRONT	SV08	545643	5/5/2017	<1.667	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	-	-	-	-	<0.083	<0.083	<0.083	<0.25
SV09_FRONT	SV09	545643	5/5/2017	<1.667	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	-	-	-	-	<0.083	<0.083	<0.083	<0.25
SV10_FRONT	SV10	545643	5/5/2017	<1.667	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	14.5	<0.083	3.5	<0.083	<0.083	<0.083	<0.083	<0.083	-	-	-	-	<0.083	<0.083	<0.083	<0.25

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Table C(1) - Soil Vapour
Project Number: 52372
Project Name: Penrith Central Car Park

	Polycyclic Aromatic Hydrocarbons	Monocyclic Aromatic Hydrocarbons									Miscellaneous Hydrocarbons		Chlorinated Benzenes						Miscellaneous Industrial Chemicals
	Naphthalene	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	Tert-butyl benzene	1,2-dibromoethane	Dibromomethane	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobutadiene
	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3
EQL	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.83	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
NEPM 2013 HIL Recreational C Soil Vapour																			
NEPM 2013 HIL Commercial/Industrial D Soil Vapour																			
NEPM 2013 Soil Vapour HSL A & HSL B - Clay 0 to <1m	1																		
NEPM 2013 Soil Vapour HSL C - Clay 0 to <1m	NL																		
NEPM 2013 Soil Vapour HSL D - Clay 0 to <1m	4																		
Sample ID	Location	Lab Report	Sample Date																
QC01_SV	SV01_FRONT	545643	5/5/2017	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083
SV01_FRONT	SV01	545643	5/5/2017	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083
SV02_FRONT	SV02	545643	5/5/2017	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083
SV03_FRONT	SV03	545643	5/5/2017	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083
SV04_FRONT	SV04	545643	5/5/2017	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083
SV05_FRONT	SV05	545643	5/5/2017	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083
SV06_FRONT	SV06	545643	5/5/2017	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083
SV07_FRONT	SV07	545643	5/5/2017	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083
SV08_FRONT	SV08	545643	5/5/2017	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083
SV09_FRONT	SV09	545643	5/5/2017	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083
SV10_FRONT	SV10	545643	5/5/2017	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083

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Table D(I): Waste Classification Criteria

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Table D(1) - Soil Analytical Data (Waste Classification Criteria)
Project Number: 52372
Project Name: Penrith Central Car Park

	Metals & Metalloids									Chlorinated Alkanes															Chlorinated Alkenes										Trihalomethanes				TPHs (NEPC 1999)				TRHs (NEPC 2013)					
	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Lead (TCLP)	Mercury (Inorganic)	Nickel	Zinc	1,1,1,2-tetrachloroethane	1,1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,1,2-trichloroethane	1,1,1-dichloroethane	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane	1,1-dichloroethene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C16 less Naphthalene (F2)	C6-C10 Fraction	C6-C10 less BTEX (F1)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2.00	0.40	5.00	5.00	5.00	0.001	0.10	5.00	5.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	20.00	20.00	50.00	50.00	50.00	50.00	100.00	100.00	50.00	20.00	20.00
NSW EPA 2014 General Solid Waste (No Leaching)	100	20			100		4	40		200	600	26	24			10				10				172		14				14			10	4		120			650				10000					
NSW EPA 2014 General Solid Waste (with leached)	500	100			1500	5	50	1050		360	1080	46.8	43.2			18				18				310		25				25.2			18	7.2		216			650				10000					
NSW EPA 2014 Restricted Solid Waste (No Leaching)	400	80			400		16	160		800	2400	104	96			40				40				688		56				56			40	16		480			2600				40000					
NSW EPA 2014 Restricted Solid Waste (with leached)	2000	400			6000	25	200	4200		1440	4320	187.2	172.8			72				72				1240		100				100.8			72	28.8		864			2600				40000					

Sample ID	Location	Sample Depth	Sample Date	Lithological Type	Preliminary Waste Classification	Lab Report																																													
JB01_0.05-0.3	JB01	0.05-0.3	5/7/2017	Fill	Restricted Solid Waste (Non-putrescible	545235	12	<0.4	14	17	110	-	0.2	7.3	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
JB01_1.1-1.2	JB01	1.1-1.2	5/7/2017	Natural	General Solid Waste (Non-putrescible)	545235	3.4	<0.4	9.9	17	6.2	-	<0.1	<5	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB02_0.05-0.25	JB02	0.05-0.25	5/7/2017	Fill	General Solid Waste (Non-putrescible)	545235	12	<0.4	7.3	13	87	-	0.1	5.2	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB03_0.05-0.2	JB03	0.05-0.2	5/7/2017	Fill	Restricted Solid Waste (Non-putrescible	545235	2.9	<0.4	7.7	7.3	120	-	<0.1	<5	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB04_0.4-0.5	JB04	0.4-0.5	5/7/2017	Fill	Restricted Solid Waste (Non-putrescible	545235	3.8	<0.4	9.7	24	110	-	<0.1	7.2	110	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
JB05_0.1-0.2	JB05	0.1-0.2	5/7/2017	Fill	Restricted Solid Waste (Non-putrescible	545235	9	<0.4	21	42	120	-	0.2	27	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB06_0.1-0.2	JB06	0.1-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	8.9	<0.4	69	<5	13	-	<0.1	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
JB07_0.1-0.2	JB07	0.1-0.2	5/7/2017	Fill	General Solid Waste (Non-putrescible)	545235	7.8	<0.4	64	17	29	-	0.4	34	57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
JB08_0.1-0.2	JB08	0.1-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	3.9	<0.4	17	<5	6.5	-	<0.1	<5	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
JB09_0.15-0.20	JB09	0.15-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	10	<0.4	46	28	15	-	<0.1	<5	7.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20160506_2	JB09	0.15-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	8.1	<0.4	42	16	20	-	<0.1	<5	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA20170506_2	JB09	0.15-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	166525	6	<0.4	32	15	14	-	<0.1	4	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB10_0.1-0.2	JB10	0.1-0.2	5/7/2017	Fill	General Solid Waste (Non-putrescible)	545235	8.8	<0.4	44	6.9	10	-	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
JB11_0.05-0.15	JB11	0.05-0.15	5/6/2017	Fill	General Solid Waste (Non-putrescible) (Special - Asbestos)	545235	2.7	<0.4	6.3	23	31	-	<0.1	<5	93	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	39	480	350	869	51	710	140	51	<20	<20
JB11_0.35-0.45	JB11	0.35-0.45	5/6/2017	Natural	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB12_0.1-0.25	JB12	0.1-0.25	5/7/2017	Fill	Restricted Solid Waste (Non-putrescible	545235	<2	<0.4	91	24	<5	-	<0.1	75	48	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	87	69	156	<50	120	<100	<50	<20	<20
JB12_1.1-1.2	JB12	1.1-1.2	5/7/2017	Natural	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB13_0.1-0.2	JB13	0.1-0.2	5/7/2017	Fill	General Solid Waste (Non-putrescible)	545235	5.6	<0.4	13	12	25	-	<0.1	6.4	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB14_0.1-0.3	JB14	0.1-0.3	5/7/2017	Fill	General Solid Waste (Non-putrescible)	545235	5	0.8	18	61	57	-	0.3	14	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
JB15-0.1-0.2	JB15	0.1-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	13	<0.4	110	5.9	16	-	<0.1	<5	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB16_0.05-0.15	JB16	0.05-0.15	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
JB17_0.1-0.25	JB17	0.1-0.25	5/7/2017	Fill	General Solid Waste (Non-putrescible)	545235	10	<0.4	64	<5	13	-	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	58	58	<50	<100	<100	<50	<20	<20
JB18_0.1-0.2	JB18	0.1-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	7.5	<0.4	39	6.2	12	-	<0.1	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
QC20160506_1	JB13	0.1-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	8.6	<0.4	50	<5	12	-	<0.1	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
QA20170506_1	JB13	0.1-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	166525	4	<0.4	38	5	8	-	<0.1	2	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<25	<50	<100	<100	<25	<50	<100	<100	<50	<25	<25
JB19_0.3-0.4	JB19	0.3-0.4	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
JB19_1.6-1.7	JB19	1.6-1.7	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	5	<0.4	10	5.3	5.5	-	<0.1	5.4	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
JB20_0.5-0.6	JB20	0.5-0.6	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	2.7	<0.4	10	<5	8	-	<0.1	<5	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
JB20_1.25-1.35	JB20	1.25-1.35	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	4.6	0.4	12	25	49	-	0.1	7.7	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB20_1.7-1.8	JB20	1.7-1.8	5/6/2017	Fill	Restricted Solid Waste (Non-putrescible	545235	4.4	<0.4	9.2	31	110	-	0.3	5.8	190	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	69	58	127	<50	110	<100	<50	<20	<20
JB20_1.9-2.0	JB20	1.9-2	5/6/2017	Natural	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA01_0.25-0.4	JHA01	0.25-0.4	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	3.9	<0.4	21	11	6.8	-	<0.1	25	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
JHA02_0.1-0.3	JHA02	0.1-0.3	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	50	0.5	11	230	430	0.03[#8]	0.3	8.8	290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA02_0.3-0.5	JHA02	0.3-0.5	5/26/2017	Fill	Restricted Solid Waste (Non-putrescible	548083	49	0.5	12	200	910	0.49[#8]	0.4	8.7	340	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	23	<50	<50	<50	<50	<100	<100	<50	<20	<20
JHA04_0.2-0.4	JHA04	0.2-0.4	5/26/2017	Fill	Restricted Solid Waste (Non-putrescible	548083	2.7	<0.4	53	19	7	-	<0.1	58	38	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
JHA04_0.6-0.8	JHA04	0.6-0.8	5/26/2017	Natural	General Solid Waste (Non-putrescible)	548083	8.4	<0.4	16	21	27	-	<0.1	14	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
JHA05_0-0.2	JHA05	0-0.2	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	4.4	<0.4	24	15	39	-	<0.1	22	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA06_0.2-0.4	JHA06	0.2-0.4	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	2.2	<0.4	8	8.9	15	-	<0.1	6.8	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA06_0.4-0.6	JHA06	0.4-0.6	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	6.4	<0.4	14	20	37	-	<0.1	11	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	74	74	<50	<100	<100	<50	<20	<20
JHA06_1.0-1.2	JHA06	1-1.2	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	6.9	<0.4	11	17	27	-	<0.1	13	50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	55	55	<50	<100	<100	<50	<20	<20
JHA07_0.4-0.6	JHA07	0.4-0.6	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	<2	<0.4	<5	<5	<5	-	<0.1	<5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
JHA07_1.3-1.5	JHA07	1.3-1.5	5/26/2017	Natural	General Solid Waste (Non-putrescible)	548083	7	<0.4	11	19	12	-	<0.1	<5	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
QC20170526-1	JHA07	1.3-1.5	5/26/2017	Natural	General Solid Waste (Non-putrescible)	548083	2.9	<0.4	8	9.8	8.3	-	<0.1	<5	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
Qc20170526-1A	JHA07	1.3-1.5	5/26/2017	Natural	General Solid Waste (Non-putrescible)	168063	<4	<0.4	12	16	9	-	<0.1	5	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA08_0.2-0.4	JHA08	0.2-0.4	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	5.1	<0.4	13	15	28	-	<0.1	13	310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA08_0.4-0.6	JHA08	0.4-0.6	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	2.6	<0.4	5.9	8.4	8.2	-	<0.1	<5	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments

#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#3 Synthetic mineral fibres detected.
#4 No respirable fibres detected
#5 Organic fibres detected.
#6 ESDAT Combined.
#7 Nil
#8 AF:
#9 Assessed against Specific Contaminant Thresholds due to availability of TCLP Data

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Table D(1) - Soil Analytical Data (Waste Classification Criteria)
Project Number: 52372
Project Name: Penrith Central Car Park

	BTEX						Polycyclic Aromatic Hydrocarbons																						Monocyclic Aromatic Hydrocarbons					Miscellaneous Hydrocarbons						Chlorinated Benzenes					Solvents	Polychlorinated Biphenyls								
	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Carcinogenic PAHs as B(a)P TEQ	Phenanthrene	Pyrene	PAHs (Total)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	Bromobenzene	Isopropylbenzene	Styrene	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Dibromomethane	Iodomethane	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	2-Propanone (Acetone)	Arcolor 1016	Arcolor 1221	Arcolor 1232	Arcolor 1242	Arcolor 1248	Arcolor 1254	Arcolor 1260	PCBs (Total)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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
EQL	0.10	0.10	0.10	0.10	0.20	0.30	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
NSW EPA 2014 General Solid Waste (No Leaching)	10	600	288			1000					0.8																			60		4000							86		150	2000										50-0
NSW EPA 2014 General Solid Waste (with leached)	18	1080	518			1800					10																			108		7200							155		270	3600										50-0
NSW EPA 2014 Restricted Solid Waste (No Leaching)	40	2400	1152			4000					3.2																			240		16000							344		600	8000										50-0
NSW EPA 2014 Restricted Solid Waste (with leached)	72	4320	2073			7200					23																			432		28800							620		1080	14400										50-0
Sample ID	**Location**	**Sample Depth**	**Sample Date**	**Lithological Type**	**Preliminary Waste Classification**	**Lab Report**																																															
JB01_0.05-0.3	JB01	0.05-0.3	5/7/2017	Fill	Restricted Solid Waste (Non-putrescible	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	0.6	0.7	0.9	1.2	1.5	0.8	0.7	0.5	0.7	<0.5	1.7	<0.5	<0.5	<0.5	1.179[#2]	0.6	1.7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB01_1.1-1.2	JB01	1.1-1.2	5/7/2017	Natural	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB02_0.05-0.25	JB02	0.05-0.25	5/7/2017	Fill	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB03_0.05-0.2	JB03	0.05-0.2	5/7/2017	Fill	Restricted Solid Waste (Non-putrescible	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB04_0.4-0.5	JB04	0.4-0.5	5/7/2017	Fill	Restricted Solid Waste (Non-putrescible	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-
JB05_0.1-0.2	JB05	0.1-0.2	5/7/2017	Fill	Restricted Solid Waste (Non-putrescible	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB06_0.1-0.2	JB06	0.1-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-
JB07_0.1-0.2	JB07	0.1-0.2	5/7/2017	Fill	General Solid Waste (Non-putrescible)	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-
JB08_0.1-0.2	JB08	0.1-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB09_0.15-0.20	JB09	0.15-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20160506_2	JB09	0.15-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA20170506_2	JB09	0.15-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	166525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB10_0.1-0.2	JB10	0.1-0.2	5/7/2017	Fill	General Solid Waste (Non-putrescible)	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB11_0.05-0.15	JB11	0.05-0.15	5/6/2017	Fill	General Solid Waste (Non-putrescible) (Special - Asbestos)	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5
JB11_0.35-0.45	JB11	0.35-0.45	5/6/2017	Natural	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB12_0.1-0.25	JB12	0.1-0.25	5/7/2017	Fill	Restricted Solid Waste (Non-putrescible	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-
JB12_1.1-1.2	JB12	1.1-1.2	5/7/2017	Natural	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB13_0.1-0.2	JB13	0.1-0.2	5/7/2017	Fill	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB14_0.1-0.3	JB14	0.1-0.3	5/7/2017	Fill	General Solid Waste (Non-putrescible)	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB15-0.1-0.2	JB15	0.1-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB16_0.05-0.15	JB16	0.05-0.15	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-
JB17_0.1-0.25	JB17	0.1-0.25	5/7/2017	Fill	General Solid Waste (Non-putrescible)	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB18_0.1-0.2	JB18	0.1-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5
QC20160506_1	JB13	0.1-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.2146	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5
QA20170506_1	JB13	0.1-0.2	5/6/2017	Fill	General Solid Waste (Non-putrescible)	166525	<0.2	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.21[#1]	<0.1	<0.1	<0.05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
JB19_0.3-0.4	JB19	0.3-0.4	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-
JB19_1.6-1.7	JB19	1.6-1.7	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5
JB20_0.5-0.6	JB20	0.5-0.6	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB20_1.25-1.35	JB20	1.25-1.35	5/6/2017	Fill	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JB20_1.7-1.8	JB20	1.7-1.8	5/6/2017	Fill	Restricted Solid Waste (Non-putrescible	545235	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	1	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JB20_1.9-2.0	JB20	1.9-2	5/6/2017	Natural	General Solid Waste (Non-putrescible)	545235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA01_0.25-0.4	JHA01	0.25-0.4	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	0.8	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA02_0.1-0.3	JHA02	0.1-0.3	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA02_0.3-0.5	JHA02	0.3-0.5	5/26/2017	Fill	Restricted Solid Waste (Non-putrescible	548083	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	0.8	0.9	1.2	1.5	1.7	0.7	0.7	0.8	1.1	<0.5	2.3	<0.5	0.6	<0.5	1.458[#2]	0.8	2.1	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA04_0.2-0.4	JHA04	0.2-0.4	5/26/2017	Fill	Restricted Solid Waste (Non-putrescible	548083	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JHA04_0.6-0.8	JHA04	0.6-0.8	5/26/2017	Natural	General Solid Waste (Non-putrescible)	548083	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-
JHA05_0-0.2	JHA05	0-0.2	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA06_0.2-0.4	JHA06	0.2-0.4	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA06_0.4-0.6	JHA06	0.4-0.6	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA06_1.0-1.2	JHA06	1-1.2	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5
JHA07_0.4-0.6	JHA07	0.4-0.6	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5
JHA07_1.3-1.5	JHA07	1.3-1.5	5/26/2017	Natural	General Solid Waste (Non-putrescible)	548083	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-
QC20170526-1	JHA07	1.3-1.5	5/26/2017	Natural	General Solid Waste (Non-putrescible)	548083	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	-	-	-
Qc20170526-1A	JHA07	1.3-1.5	5/26/2017	Natural	General Solid Waste (Non-putrescible)	168063	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA08_0.2-0.4	JHA08	0.2-0.4	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JHA08_0.4-0.6	JHA08	0.4-0.6	5/26/2017	Fill	General Solid Waste (Non-putrescible)	548083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments

#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#3 Synthetic mineral fibres detected.
#4 No respirable fibres detected
#5 Organic fibres detected.
#6 ESDAT Combined.
#7 Nil
#8 AF:
#9 Assessed against Specific Contaminant Thresholds due to availability of TCLP Data

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Table D(1) - Soil Analytical Data (Waste Classification Criteria)
Project Number: 52372
Project Name: Penrith Central Car Park

| | | |

Appendix A Geotechnical Investigation

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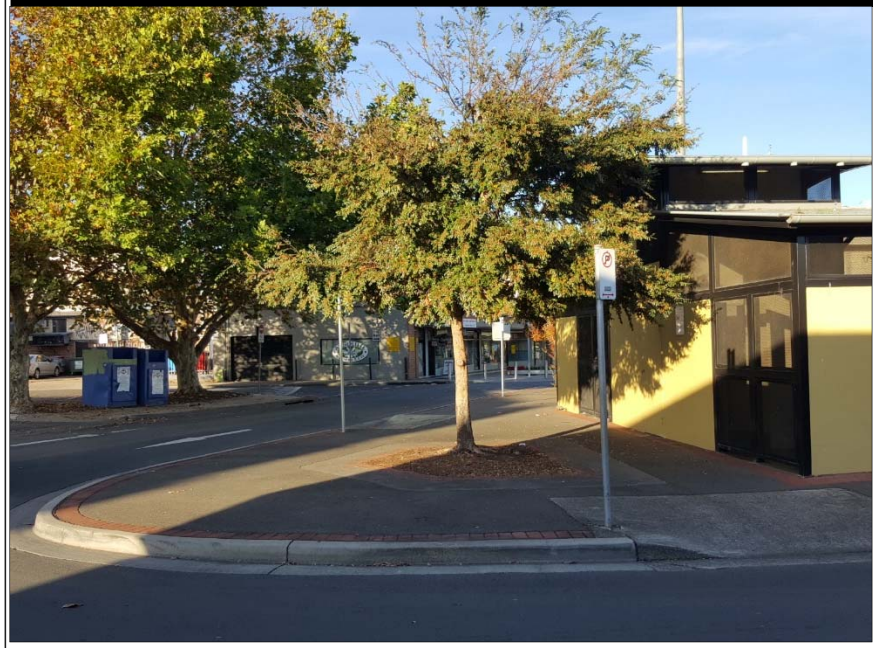
Appendix B Photographic Log

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

1 – EASTERN CORNER LOOKING SOUTH



2 – EASTERN CORNER LOOKING WEST

3 – EASTERN CORNER LOOKING SOUTH (2)

4 – EASTERN CORNER LOOKING SOUTHWEST

JBS&G

Job No: 52372

Client: Penrith City Council

Version: R01 Rev 0	Date: 6-May-2017
Drawn By: RH	Checked By: GD

Not to Scale

Coord. Sys n/a

114-146 Henry Street & Allen Place Car Park, Penrith, NSW

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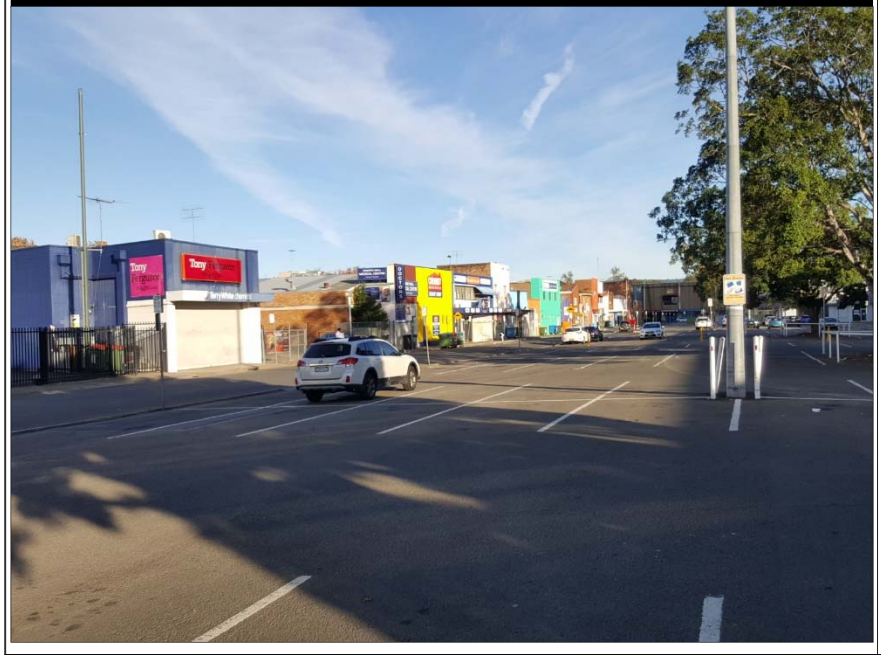
5 – EASTERN PORTION LOOKING NORTHWEST

6 – EASTERN PORTION LOOKING WEST

7 – EASTERN PORTION LOOKING WEST-SOUTHWEST



8 – EASTERN PORTION LOOKING WEST-SOUTHWEST

JBS&G

Job No: 52372

Client: Penrith City Council

Version: R01 Rev 0	Date: 6-May-2017
Drawn By: RH	Checked By: GD

Not to Scale

Coord. Sys n/a

114-146 Henry Street & Allen Place Car Park, Penrith, NSW

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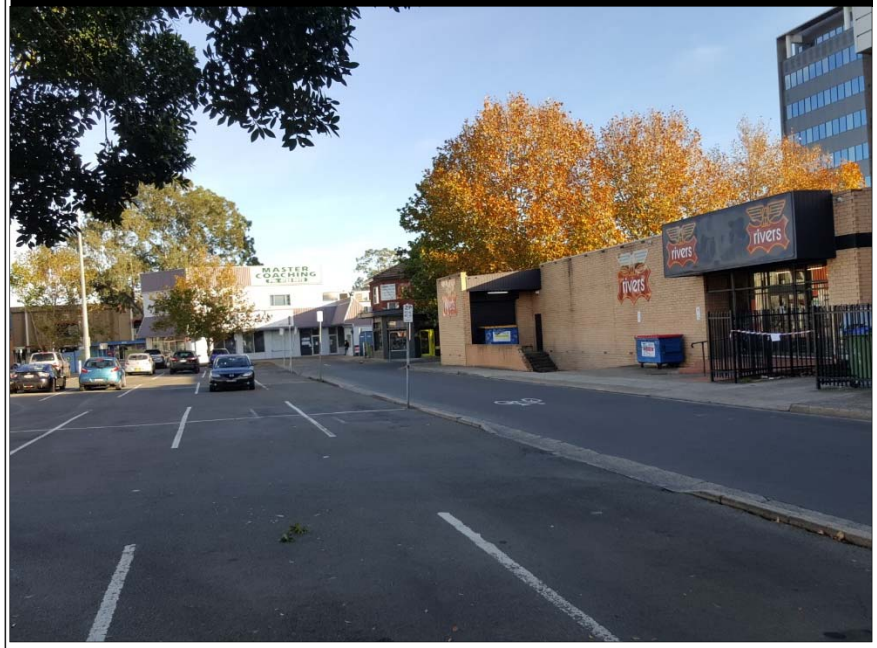
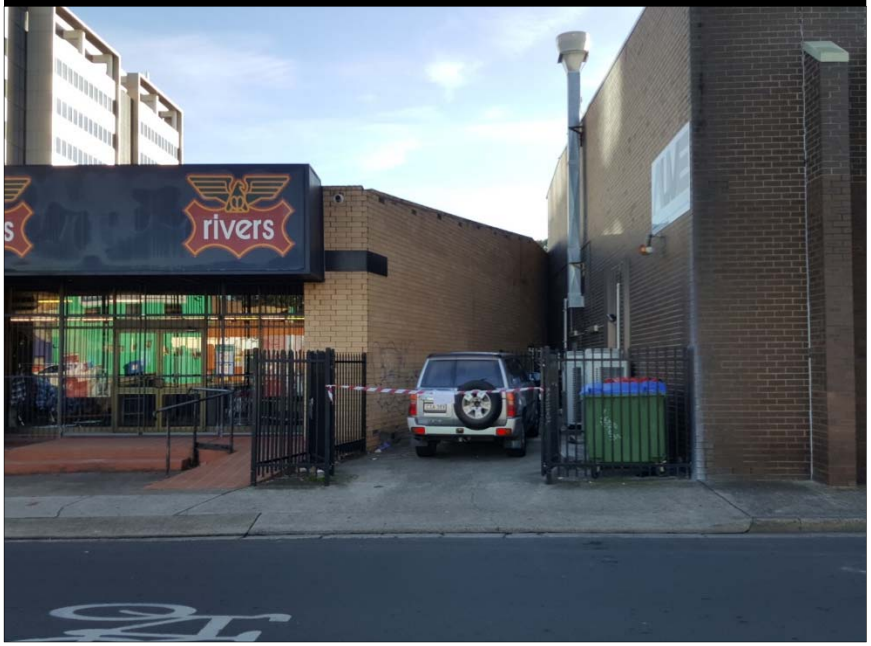
9 – CENTRAL PORTION LOOKING TO FORMER SERVICE STATION (RIVERS)



10 – CENTRAL PORTION LOOKING TO FORMER SERVICE STATION (RIVERS)



11 – CENTRAL PORTION LOOKING NORTH

12 – CENTRAL PORTION LOOKING TO CURRENT DRYCLEANERS

JBS&G

Job No: 52372	
Client: Penrith City Council	
Version: R01 Rev 0	Date: 6-May-2017
Drawn By: RH	Checked By: GD
Not to Scale	
Coord. Sys n/a	

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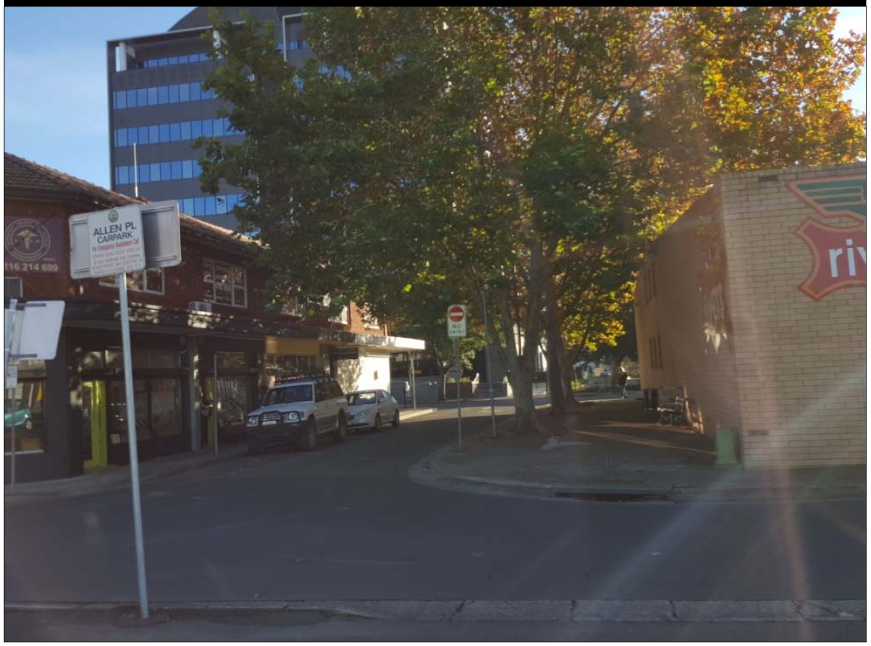
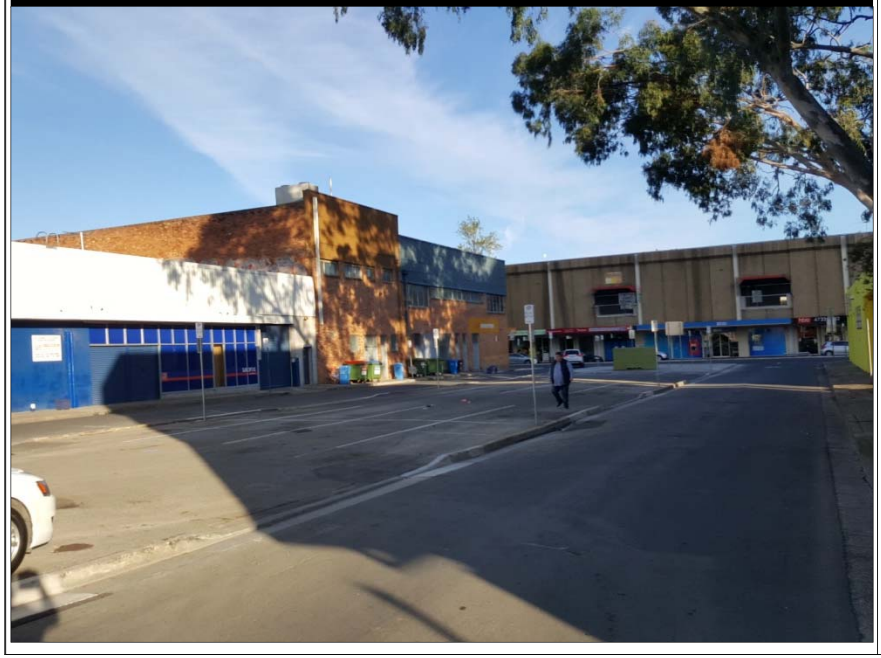
13 – CENTRAL PORTION LOOKING NORTH (DRY CLEANER & GAYMARK LANE)

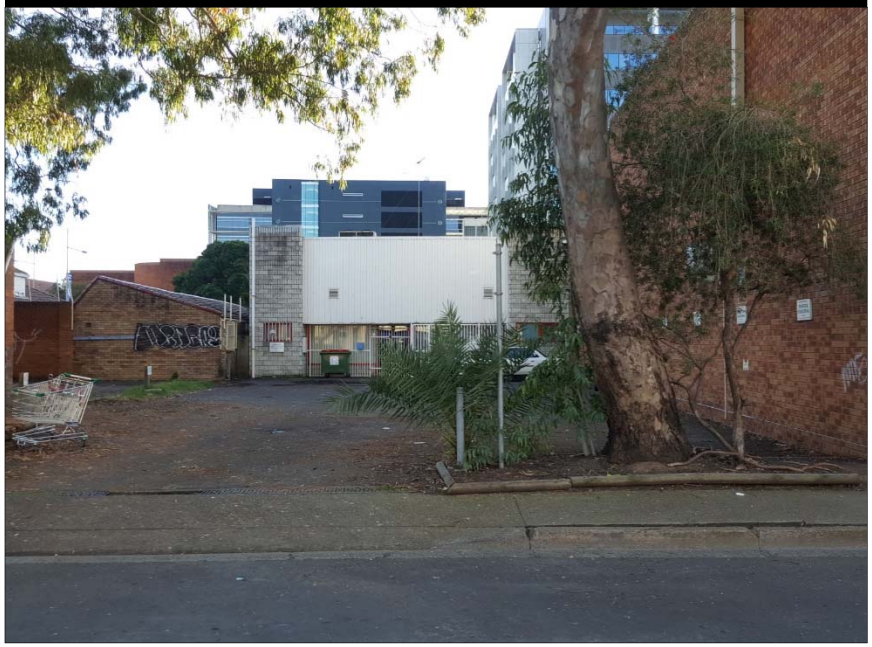
14 - CENTRAL PORTION LOOKING NORTH (DRY CLEANER & GAYMARK LANE)



15 – WESTERN PORTION LOOKING WEST



16 – WESTERN PORTION LOOKING NORTH



JBS&G

Job No: 52372	
Client: Penrith City Council	
Version: R01 Rev 0	Date: 6-May-2017
Drawn By: RH	Checked By: GD
Not to Scale	
Coord. Sys n/a	

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17 – WESTERN PORTION LOOKING WEST

18 – NORTH WESTERN CORNER LOOKING EAST (44 STATION ST)

19 – NORTHWEST CORNER (44 STATION ST)

20 – NORTHWEST CORNER (44 STATION ST)

JBS&G

Job No: 52372	
Client: Penrith City Council	
Version: R01 Rev 0	Date: 6-May-2017
Drawn By: RH	Checked By: GD
Not to Scale	
Coord. Sys n/a	

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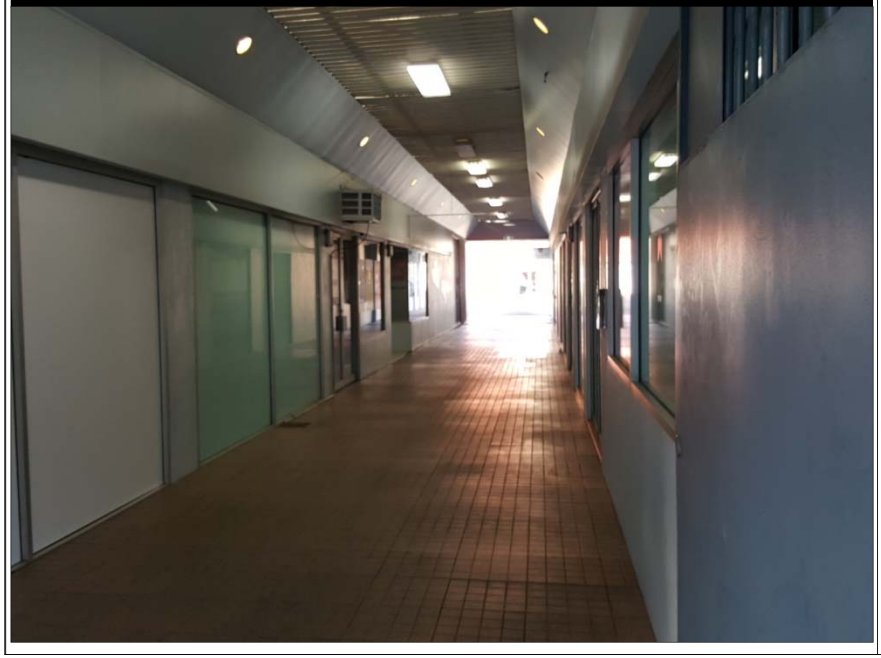
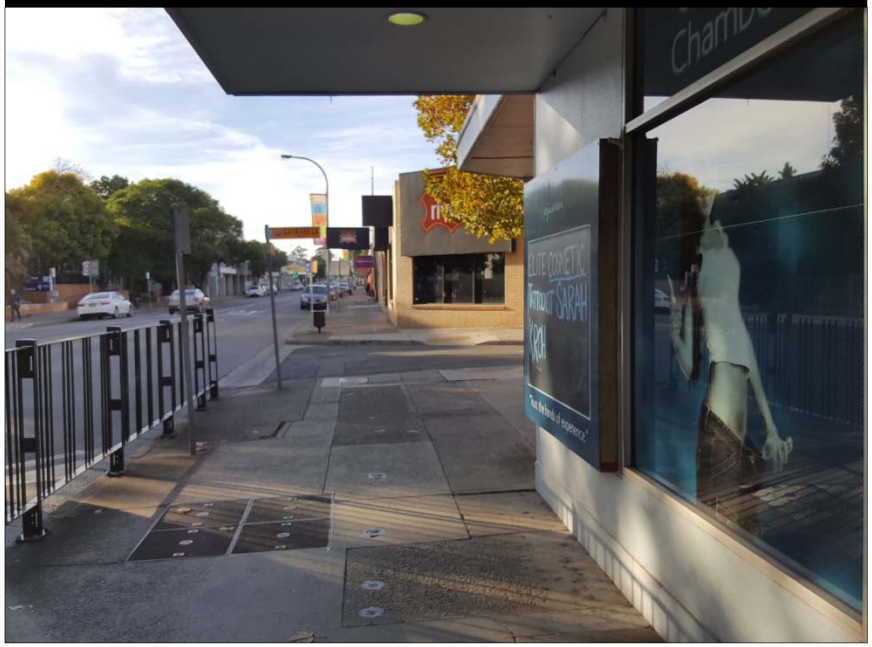
21 – NORTHWEST CORNER (44 STATION ST)

22 – NORTHERN BOUNDARY LOOKING EAST

23 – NORTHERN BOUNDARY LOOKING SOUTH



24 – NORTHERN BOUNDARY LOOKING EAST



JBS&G

Job No: 52372

Client: Penrith City Council

Version: R01 Rev 0	Date: 6-May-2017
Drawn By: RH	Checked By: GD

Not to Scale

Coord. Sys n/a

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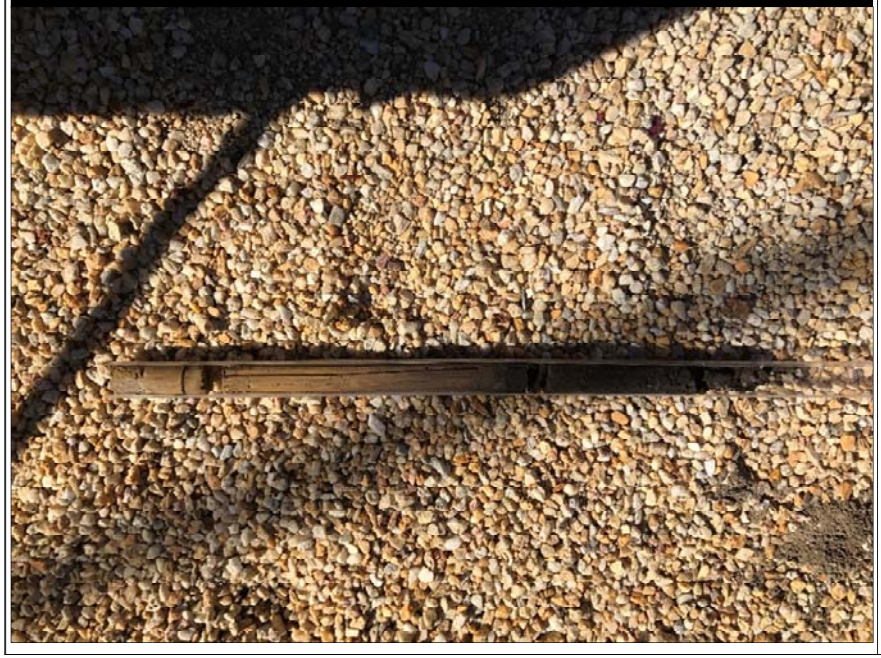
25 – NORTHERN BOUNDARY CNR OF GAYMARK LANE LOOKING EAST

26 – NORTHERN BOUNDARY CNR OF GAYMARK LANE LOOKING SOUTH

27 – JB01



28 – JB02

JBS&G

Job No: 52372

Client: Penrith City Council

Version: R01 Rev 0	Date: 6-May-2017
Drawn By: RH	Checked By: GD

Not to Scale

Coord. Sys n/a

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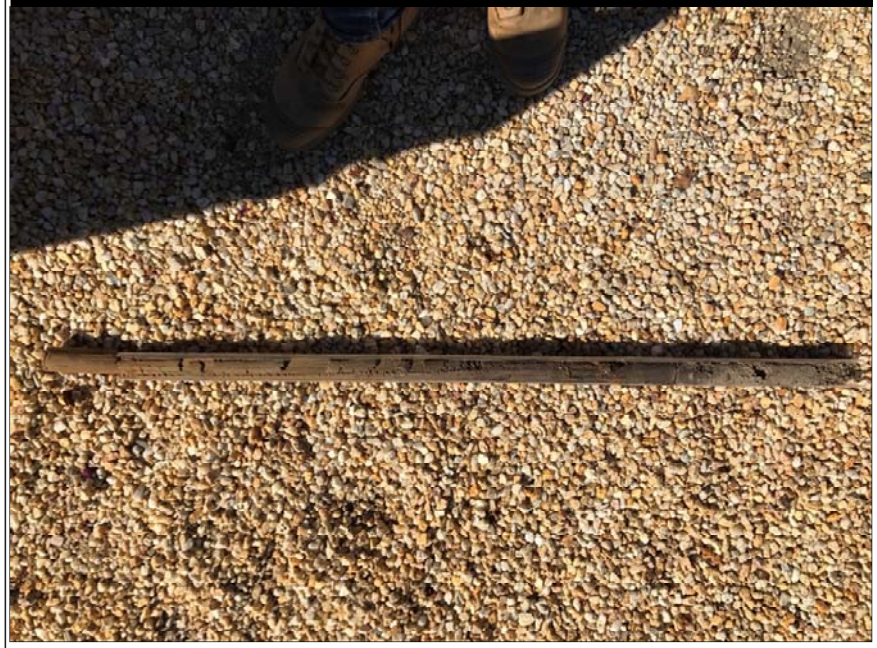
29 – JB03



30 – JB04

31 – JB05

32 – JB08 (1)

JBS&G

Job No: 52372

Client: Penrith City Council

Version: R01 Rev 0	Date: 6-May-2017
Drawn By: RH	Checked By: GD

Not to Scale

Coord. Sys n/a

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33 – JB08 (2)

34 – JB10

35 – JB10 REINSTATEMENT

36 – JB13

JBS&G

Job No: 52372	
Client: Penrith City Council	
Version: R01 Rev 0	Date: 6-May-2017
Drawn By: RH	Checked By: GD
Not to Scale	
Coord. Sys n/a	

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37 – JB14

38 – JB16 (1)

39 – JB16 (2)

40 – JB17

JBS&G

Job No: 52372	
Client: Penrith City Council	
Version: R01 Rev 0	Date: 6-May-2017
Drawn By: RH	Checked By: GD
Not to Scale	
Coord. Sys n/a	

114-146 Henry Street & Allen Place Car Park, Penrith, NSW

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Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

41 – JB18

42 – JB19

43 – JB19 REINSTATEMENT

44 – JB20

JBS&G

Job No: 52372

Client: Penrith City Council

Version: R01 Rev 0	Date: 6-May-2017
Drawn By: RH	Checked By: GD

Not to Scale

Coord. Sys n/a

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45 – JHA01 (1)

46 – JHA01 (2)

47 – JHA01 (3)

48 – JHA02

JBS&G

Job No: 52372

Client: Penrith City Council

Version: R01 Rev 0	Date: 6-May-2017
Drawn By: RH	Checked By: GD

Not to Scale

Coord. Sys n/a

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49 – JHA02 (2) [INCORRECTLY LABELLED ON SITE]

50 – JHA03

51 – JHA04

52 – JHA05

JBS&G

Job No: 52372

Client: Penrith City Council

Version: R01 Rev 0	Date: 6-May-2017
Drawn By: RH	Checked By: GD

Not to Scale

Coord. Sys n/a

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Document Set ID: 9456504
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53 – JHA06

54 – JHA07

55 – JHA08

Job No: 52372	
Client: Penrith City Council	
Version: R01 Rev 0	Date: 6-May-2017
Drawn By: RH	Checked By: GD
Not to Scale	
Coord. Sys n/a	

114-146 Henry Street & Allen Place Car Park, Penrith, NSW

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Appendix C Groundwater Well Installation Logs

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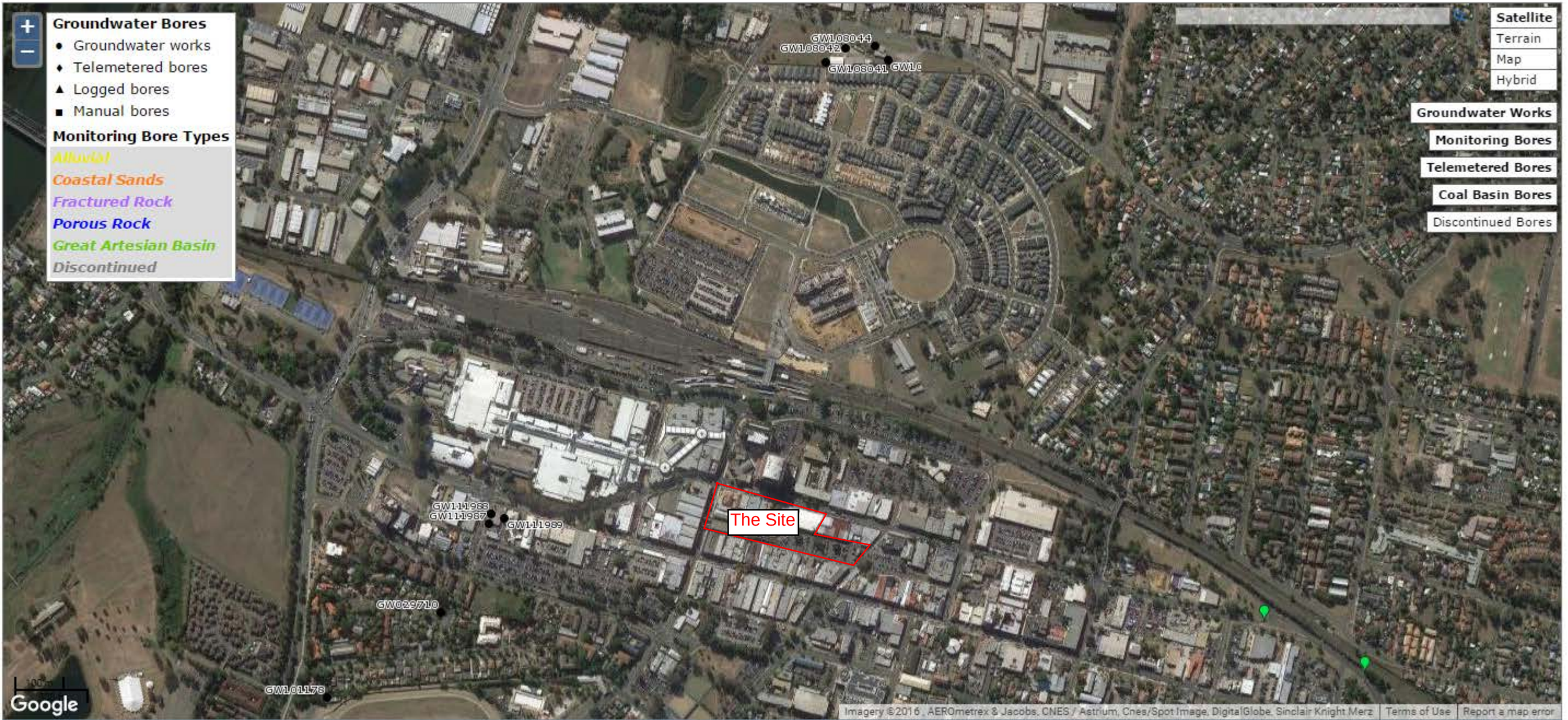
All Groundwater Map

All data times are Eastern Standard Time

Map | Info



Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

NSW Office of Water
Work Summary

GW026231

Licence: 10BL019074 **Licence Status:** CANCELLED

Authorised Purpose(s): PUBLIC/MUNICIPL,RECREATION (GROUNDWATER)
Intended Purpose(s): IRRIGATION

Work Type: Well
Work Status:
Construct.Method:
Owner Type: Local Govt

Commenced Date:
Completion Date: 01/01/1966
Final Depth: 8.50 m
Drilled Depth: 8.50 m

Contractor Name:
Driller:
Assistant Driller:

Property: N/A
GWMA: 603 - SYDNEY BASIN
GW Zone: -
Standing Water Level (m):
Salinity Description: 1001-3000 ppm
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.34	90 752044
Licensed:	CUMBERLAND	MULGOA	Whole Lot //

Region: 10 - Sydney South Coast
River Basin: 212 - HAWKESBURY RIVER
Area/District:
CMA Map: 9030-3N
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: (Unknown)
Northing: 6262162.0
Easting: 285724.0
Latitude: 33°45'32.3"S
Longitude: 150°41'11.2"E

GS Map: -
MGA Zone: 0
Coordinate Source: GD.,ACC.MAP

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing	Concrete Cylnder	0.00	7.30	1828			
1	1	Casing	Concrete Cylnder	7.30	8.50	1524			Seated on Bottom

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
6.00	8.40	2.40	Unconsolidated	6.00		2.53			

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	4.26	4.26	Silt	Silt	
4.26	8.53	4.27	Gravel Alluvial Water Supply	Gravel	
0.00	4.26	4.26	Loam Clay	Loam	

Remarks

19/02/1975: SITED PENRITH PARK

***** End of GW026231 *****

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

NSW Office of Water
Work Summary

GW029710

Licence: 10BL018657
Licence Status: CONVERTED

Authorised Purpose(s): DOMESTIC
Intended Purpose(s): GENERAL USE

Work Type: Well
Work Status:
Construct.Method: Hand Dug
Owner Type: Private

Commenced Date:
Completion Date: 01/04/1969
Final Depth: 7.90 m
Drilled Depth: 7.90 m

Contractor Name:
Driller:
Assistant Driller:

Property: N/A
GWMA: 603 - SYDNEY BASIN
GW Zone: -
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.034	90
Licensed:	CUMBERLAND	MULGOA	Whole Lot 25//752044

Region: 10 - Sydney South Coast
River Basin: 212 - HAWKESBURY RIVER
Area/District:
CMA Map: 9030-3N
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: (Unknown)
Northing: 6262724.0
Easting: 286046.0
Latitude: 33°45'14.3"S
Longitude: 150°41'24.2"E

GS Map: -
MGA Zone: 0
Coordinate Source: GD.,ACC.MAP

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing	Concrete Cylnder	-0.40	-0.40	1219			

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
6.00	7.80	1.80	Unconsolidated	6.00		1.89			

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	2.74	2.74	Loam Red	Loam	
2.74	7.92	5.18	Sand Gravel Water Supply	Sand	

Remarks

10/03/1981: 9 WORTH ST PENRITH (LOT 25)

***** End of GW029710 *****

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

NSW Office of Water
Work Summary

GW101178

Licence: 10BL158273
Licence Status: CANCELLED

Authorised Purpose(s): TEST BORE
Intended Purpose(s): INDUSTRIAL, RECREATION (GROUNDWATER)

Work Type: Bore
Work Status: Supply Obtained
Construct.Method: Rotary Air
Owner Type: Private

Commenced Date:
Completion Date: 15/01/1998
Final Depth: 11.20 m
Drilled Depth: 11.20 m

Contractor Name: INTERTEC DRILLING SERVICES
Driller: Colin Leslie Barden
Assistant Driller:

Property: N/A
GWMA: -
GW Zone: -
Standing Water Level: 8.000
Salinity:
Yield: 0.600

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.34	1 998482
Licensed:	CUMBERLAND	MULGOA	Whole Lot 90//752044

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6262566.0
Easting: 285844.0
Latitude: 33°45'19.3"S
Longitude: 150°41'16.2"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	6.00	200			Rotary Air
1		Hole	Hole	6.00	11.20	168			Other
1		Annulus	Waterworn/Rounded	-0.80	11.20				Graded, Q:0.100m3
1	1	Casing	Pvc Class 12	-0.80	11.20	114			Seated on Bottom, Glued
1	1	Casing	Steel	-0.80	11.20	168	158		Seated on Bottom, Welded
1	1	Opening	Slots - Vertical	6.20	10.20	168		1	Oxy-Acetylene Slotted, Steel, SL: 100.0mm, A: 2.00mm
1	1	Opening	Screen	7.70	10.70	114		1	PVC Class 12, Glued, A: 0.40mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
6.00	10.50	4.50	Unknown	8.00		0.60	11.20	01:00:00	180.00

Geologists Log

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments

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0.00	2.00	2.00	Sandy clay	Sandy Clay	
2.00	6.00	4.00	Grey sand	Sand	
6.00	10.50	4.50	Coarse gravel and cobbles (water bearing)	Gravel	
10.50	11.20	0.70	Dark grey shale and clay	Shale	

Remarks

15/01/1998: Form A Remarks:
Chlorine added on completion.
19/04/2001: PREVIOUS LIC NO: 10BL158273
22/01/2013: Nat Carling, 22-Jan-2013; Added rock type codes to driller's log & added missing information (based on existing data).

***** End of GW101178 *****

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

NSW Office of Water
Work Summary

GW103048

Licence: 10BL141316 **Licence Status:** CONVERTED

Authorised Purpose(s): RECREATION (GROUNDWATER),INDUSTRIAL
Intended Purpose(s): RECREATION (GROUNDWATER)

Work Type: Bore
Work Status:
Construct.Method:
Owner Type:

Commenced Date:
Completion Date: 01/01/1990
Final Depth: 8.00 m
Drilled Depth: 8.00 m

Contractor Name:
Driller:
Assistant Driller:

Property: PENRITH SHOWGROUND 127 - 141 STATION ST PENRITH 2750 NSW
GWMA: -
GW Zone: -
Standing Water Level: 6.000
Salinity:
Yield: 1.000

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.34	1//998482
Licensed:	CUMBERLAND	MULGOA	Whole Lot 1//998482

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6262406.0
Easting: 286110.0
Latitude: 33°45'24.7"S
Longitude: 150°41'26.4"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	8.00	0			Unknown
1	1	Casing	Concrete	0.00	0.00	1200			

Water Bearing Zones

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

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments

Remarks

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***** End of GW103048 *****

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NSW Office of Water
Work Summary

GW108041

Licence: 10BL600263 **Licence Status:** ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status:
Construct.Method:
Owner Type:

Commenced Date: **Final Depth:** 7.50 m
Completion Date: 12/04/2006 **Drilled Depth:** 7.50 m

Contractor Name:
Driller: Christopher David Kiernan
Assistant Driller:

Property: MOBIL 174 COREEN AVE PENRITH 2750 NSW **Standing Water Level:** 6.700
GWMA: - **Salinity:**
GW Zone: - **Yield:**

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.34	81 810416
Licensed:	CUMBERLAND	MULGOA	Whole Lot 81//810416

Region: 10 - Sydney South Coast **CMA Map:**
River Basin: - Unknown **Grid Zone:** **Scale:**
Area/District:

Elevation: 0.00 m (A.H.D.) **Northing:** 6263735.0 **Latitude:** 33°44'42.0"S
Elevation Source: Unknown **Easting:** 286724.0 **Longitude:** 150°41'51.4"E

GS Map: - **MGA Zone:** 0 **Coordinate Source:** Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	7.50	100			Auger
1		Annulus	(Unknown)	0.00	0.00				Graded
1	1	Casing	Pvc Class 18	0.00	4.50	50	42		
1	1	Opening	Slots	4.50	7.50	50		1	Sawn, PVC Class 18

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
6.50	7.50	1.00	Unknown	6.70					

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.20	0.20	CONCRETE	Invalid Code	
0.20	0.40	0.20	CLAY L/BROWN	Invalid Code	
0.40	3.30	2.90	CLAY BECOMING ORANGE,BROWN	Clay	

3.30	7.50	4.20	GRAVEL,BROWN,WELL GRADED	Gravel	

Remarks

***** End of GW108041 *****

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NSW Office of Water
Work Summary

GW108042

Licence: 10BL600263 **Licence Status:** ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status:
Construct.Method:
Owner Type:

Commenced Date:
Completion Date: 22/04/2006
Final Depth: 8.00 m
Drilled Depth: 8.00 m

Contractor Name:
Driller: Christopher David Kiernan
Assistant Driller:

Property: MOBIL 174 COREEN AVE PENRITH 2750 NSW
GWMA: -
GW Zone: -
Standing Water Level: 6.400
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.34	81 810416
Licensed:	CUMBERLAND	MULGOA	Whole Lot 81//810416

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6263761.0
Easting: 286759.0
Latitude: 33°44'41.2"S
Longitude: 150°41'52.8"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	8.00	100			Auger
1		Annulus	(Unknown)	4.00	8.00				Graded
1	1	Casing	Pvc Class 18	0.00	5.00	50	42		
1	1	Opening	Slots	5.00	8.00	50		1	Sawn, PVC Class 18

Water Bearing Zones

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

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.20	0.20	CONCRETE	Invalid Code	
0.20	0.30	0.10	FILL,CLAY,GREY/BROWN	Fill	
0.30	2.50	2.20	CLAY,RED/BROWN	Clay	
2.50	7.50	5.00	GRAVELS,WELL GRADED	Gravel	

7.50	8.00	0.50	COARSE GRAINED SAND BANDS	Invalid Code	

Remarks

***** End of GW108042 *****

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NSW Office of Water
Work Summary

GW108043

Licence: 10BL600263 **Licence Status:** ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status:
Construct.Method:
Owner Type:

Commenced Date: **Final Depth:** 9.00 m
Completion Date: 22/04/2006 **Drilled Depth:** 9.00 m

Contractor Name:
Driller: Christopher David Kiernan
Assistant Driller:

Property: MOBIL 174 COREEN AVE PENRITH 2750 NSW **Standing Water Level:** 6.800
GWMA: - **Salinity:**
GW Zone: - **Yield:**

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.34	81 810416
Licensed:	CUMBERLAND	MULGOA	Whole Lot 81//810416

Region: 10 - Sydney South Coast **CMA Map:**
River Basin: - Unknown **Grid Zone:** **Scale:**
Area/District:

Elevation: 0.00 m (A.H.D.) **Northing:** 6263742.0 **Latitude:** 33°44'41.9"S
Elevation Source: Unknown **Easting:** 286836.0 **Longitude:** 150°41'55.8"E

GS Map: - **MGA Zone:** 0 **Coordinate Source:** Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	9.00	100			Auger
1		Annulus	(Unknown)	5.00	9.00				Graded
1	1	Casing	Pvc Class 18	0.00	6.00	50	42		
1	1	Opening	Slots	6.00	9.00	50		1	Sawn, PVC Class 18

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
7.00	9.00	2.00	Unknown	6.80					

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	4.80	4.80	CLAYEY SAND	Invalid Code	
4.80	5.40	0.60	SAND,BROWN, LOOSE,DDRY	Sand	
5.40	9.00	3.60	GRAVEL	Gravel	

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Remarks

***** End of GW108043 *****

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NSW Office of Water
Work Summary

GW108044

Licence: 10BL600263 **Licence Status:** ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status:
Construct.Method:
Owner Type:

Commenced Date:
Completion Date: 22/04/2006
Final Depth: 9.50 m
Drilled Depth: 9.50 m

Contractor Name:
Driller: Christopher David Kiernan
Assistant Driller:

Property: MOBIL 174 COREEN AVE PENRITH 2750 NSW
GWMA: -
GW Zone: -
Standing Water Level: 6.600
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.34	81 810416
Licensed:	CUMBERLAND	MULGOA	Whole Lot 81//810416

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6263767.0
Easting: 286812.0
Latitude: 33°44'41.1"S
Longitude: 150°41'54.8"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	9.50	100			Auger
1		Annulus	(Unknown)	6.00	9.50				Graded
1	1	Casing	Pvc Class 18	0.00	6.50	50	42		
1	1	Opening	Slots	6.50	9.50	50		1	Sawn, PVC Class 18

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
8.20	9.50	1.30	Unknown	6.60					

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.20	0.20	CONCRETE	Invalid Code	
0.20	0.30	0.10	FILL,CLAY,GREY	Fill	
0.30	6.40	6.10	SILTY CLAYEY SAND,ORANGE,BROWN	Invalid Code	

6.40	9.50	3.10	GRAVELS,WET,MODERATE	Gravel	

Remarks

***** End of GW108044 *****

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NSW Office of Water
Work Summary

GW108484

Licence: 10BL163999 **Licence Status:** CONVERTED

Authorised Purpose(s): RECREATION (GROUNDWATER),INDUSTRIAL
Intended Purpose(s): RECREATION (GROUNDWATER)

Work Type: Well
Work Status:
Construct.Method: Rotary Air
Owner Type: Private

Commenced Date:
Completion Date: 06/09/2006
Final Depth: 11.00 m
Drilled Depth: 11.00 m

Contractor Name: Ultra Drilling
Driller: Peter Edward Davidson
Assistant Driller:

Property: PENRITH HARNESS TRACK 119 STATION ST PENRITH 2750 NSW
GWMA:
GW Zone:
Standing Water Level:
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.34	1//998482
Licensed:			

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6262409.0
Easting: 285738.0
Latitude: 33°45'24.3"S
Longitude: 150°41'12.0"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	11.00	171			Rotary Air
1	1	Casing	Steel	0.30	8.00	168	158		Driven into Hole, Welded
1	1	Opening	Screen	8.00	11.00	125		1	Steel, Packer, A: 0.50mm

Water Bearing Zones

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

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	6.00	6.00	CLAY	Clay	
6.00	8.50	2.50	SAND	Sand	
8.50	11.00	2.50	GRAVEL	Gravel	

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Remarks

***** End of GW108484 *****

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NSW Office of Water
Work Summary

GW111987

Licence: 10BL603225 **Licence Status:** ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Well
Work Status: Equipped
Construct.Method: Auger - Solid Flight
Owner Type: Private

Commenced Date:
Completion Date: 24/03/2010
Final Depth: 9.00 m
Drilled Depth: 9.00 m

Contractor Name: NUMAC
Driller: Christopher Mcmullen
Assistant Driller:

Property: WOOLWORTHS PETROL DIVISION CORNER WORTH AND HIGH STREET PENRITH 2750 NSW
Standing Water Level:
GWMA:
GW Zone:
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.34	3//541045
Licensed:			

Region: 10 - Sydney South Coast
CMA Map:
River Basin: - Unknown
Area/District:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6262887.0
Easting: 286130.0
Latitude: 33°45'09.1"S
Longitude: 150°41'27.6"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	9.00	125			Auger - Solid Flight
1		Annulus	Waterworn/Rounded	0.00	0.00				Graded
1	1	Casing	Pvc Class 18	0.00	6.00	60	50		Seated on Bottom, Other
1	1	Opening	Slots - Horizontal	6.00	9.00	60		1	Casing - Machine Slotted, PVC Class 18, Other, SL: 40.0mm, A: 3.80mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
7.50	9.00	1.50	Unknown						

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	3.00	3.00	CLAY MINOR SAND RED BROWN	Clay	

3.00	9.00	6.00	GRAVEL WITH MINOR SAND	Gravel	

Remarks

17/07/2014: Nat Carling, 17-July-2014; Updated status & fixed drillers log errors.

***** End of GW111987 *****

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

NSW Office of Water
Work Summary

GW111988

Licence: 10BL603225 **Licence Status:** ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Well
Work Status: Equipped
Construct.Method: Auger - Solid Flight
Owner Type: Private

Commenced Date:
Completion Date: 24/03/2010
Final Depth: 9.00 m
Drilled Depth: 9.00 m

Contractor Name: Numac Drilling Services
Driller: Christopher Mcmullen
Assistant Driller:

Property: WOOLWORTHS PETROL DIVISION CORNER WORTH AND HIGH STREET PENRITH 2750 NSW
Standing Water Level:
GWMA:
GW Zone:
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.34	3//541045
Licensed:			

Region: 10 - Sydney South Coast
CMA Map:
River Basin: - Unknown
Area/District:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6262904.0
Easting: 286134.0
Latitude: 33°45'08.6"S
Longitude: 150°41'27.7"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	9.00	125			Auger - Solid Flight
1		Annulus	Waterworn/Rounded	0.00	0.00				Graded
1	1	Casing	Pvc Class 18	0.00	6.00	60	50		Seated on Bottom
1	1	Opening	Slots - Horizontal	6.00	9.00	60		1	Casing - Machine Slotted, PVC Class 18, Other, SL: 40.0mm, A: 3.80mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
7.50	9.00	1.50	Unknown						

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	3.00	3.00	CLAY MINOR SAND RED BROWN	Clay	

3.00	9.00	6.00	GRAVEL WITH MINOR SAND	Gravel	

Remarks

17/07/2014: Nat Carling, 17-July-2014; Updated status & fixed drillers log errors.

***** End of GW111988 *****

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NSW Office of Water
Work Summary

GW111989

Licence: 10BL603225 **Licence Status:** ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Well
Work Status: Equipped
Construct.Method: Auger - Solid Flight
Owner Type: Private

Commenced Date:
Completion Date: 24/03/2010
Final Depth: 9.00 m
Drilled Depth: 9.00 m

Contractor Name: Numac Drilling Services
Driller: Christopher Mcmullen
Assistant Driller:

Property: WOOLWORTHS PETROL DIVISION CORNER WORTH AND HIGH STREET PENRITH 2750 NSW
Standing Water Level:
GWMA:
GW Zone:
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.34	3//541045
Licensed:			

Region: 10 - Sydney South Coast
CMA Map:
River Basin: - Unknown
Area/District:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6262897.0
Easting: 286157.0
Latitude: 33°45'08.8"S
Longitude: 150°41'28.7"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	9.00	125			Auger - Solid Flight
1		Annulus	Waterworn/Rounded	0.00	0.00				Graded
1	1	Casing	Pvc Class 18	0.00	6.00	60	50		Seated on Bottom, Other
1	1	Opening	Slots - Horizontal	6.00	9.00	60		1	Casing - Machine Slotted, PVC Class 18, Other, SL: 40.0mm, A: 3.80mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
7.50	9.00	1.50	Unknown						

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	3.00	3.00	CLAY MINOR SAND RED BROWN	Clay	

3.00	9.00	6.00	GRAVEL WITH MINOR SAND	Gravel	

Remarks

17/07/2014: Nat Carling, 17-July-2014; Updated status & fixed drillers log errors.

***** End of GW111989 *****

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

Appendix D Aerial Photographs

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Legend:

Approximate Site Boundary

JBS&G

Job No: 52372

Client: Penrith City Council

Version: Aerials	Date: 14-Jun-2017
Drawn By: SE	Checked By: KY

Scale 1:2,000

0 20 40

metres

Coor. Sys. GDA 1994 MGA Zone 56

114 - 146 Henry Street and Allen Place Carpark, Penrith, NSW

AERIAL PHOTOGRAPH 1943

AERIAL PHOTOGRAPH 1943

Reference: SIX Maps www.maps.six.nsw.gov.au

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Legend:

Approximate Site Boundary

JBS&G

Job No: 52372

Client: Penrith City Council

Version: Aerials	Date: 14-Jun-2017
Drawn By: SE	Checked By: KY

Scale 1:2,000

0 20 40

metres

Coor. Sys. GDA 1994 MGA Zone 56

114 - 146 Henry Street and Allen Place Carpark, Penrith, NSW

AERIAL PHOTOGRAPH 1956

AERIAL PHOTOGRAPH 1956

Reference: LPI
Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Legend:

Approximate Site Boundary

JBS&G

Job No: 52372

Client: Penrith City Council

Version: Aerials	Date: 14-Jun-2017
Drawn By: SE	Checked By: KY

Scale 1:2,000

0 20 40

metres

Coor. Sys. GDA 1994 MGA Zone 56

114 - 146 Henry Street and Allen Place Carpark, Penrith, NSW

AERIAL PHOTOGRAPH 1965

AERIAL PHOTOGRAPH 1965

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Legend:

Approximate Site Boundary

JBS&G

Job No: 52372

Client: Penrith City Council

Version: Aerials	Date: 14-Jun-2017
Drawn By: SE	Checked By: KY

Scale 1:2,000

0 20 40

metres

Coor. Sys. GDA 1994 MGA Zone 56

114 - 146 Henry Street and Allen Place Carpark, Penrith, NSW

AERIAL PHOTOGRAPH 1978

AERIAL PHOTOGRAPH 1978

Reference: LPI
Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Legend:

Approximate Site Boundary

JBS&G

Job No: 52372

Client: Penrith City Council

Version: Aerials	Date: 14-Jun-2017
Drawn By: SE	Checked By: KY

Scale 1:2,000

0 20 40

metres

Coor. Sys. GDA 1994 MGA Zone 56

114 - 146 Henry Street and Allen Place Carpark, Penrith, NSW

AERIAL PHOTOGRAPH 1986

AERIAL PHOTOGRAPH 1986

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Legend:

Approximate Site Boundary

JBS&G

Job No: 52372

Client: Penrith City Council

Version: Aerials	Date: 14-Jun-2017
Drawn By: SE	Checked By: KY

Scale 1:2,000

0 20 40

metres

Coor. Sys. GDA 1994 MGA Zone 56

114 - 146 Henry Street and Allen Place Carpark, Penrith, NSW

AERIAL PHOTOGRAPH 1994

AERIAL PHOTOGRAPH 1994

Reference: LPI
Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Legend:

Approximate Site Boundary

JBS&G

Job No: 52372

Client: Penrith City Council

Version: Aerials	Date: 14-Jun-2017
Drawn By: SE	Checked By: KY

Scale 1:2,000

0 20 40

metres

Coor. Sys. GDA 1994 MGA Zone 56

114 - 146 Henry Street and Allen Place Carpark, Penrith, NSW

AERIAL PHOTOGRAPH 2005

AERIAL PHOTOGRAPH 2005

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Reference: Near Map www.nearmap.com, imagery date 06-11-2016, accessed 17-11-2016

Legend:

Approximate Site Boundary

JBS&G

Job No: 52372

Client: Penrith City Council

Version: Aerials	Date: 14-Jun-2017
Drawn By: SE	Checked By: KY

Scale 1:2,000

0 20 40

metres

Coor. Sys. GDA 1994 MGA Zone 56

114 - 146 Henry Street and Allen Place Carpark, Penrith, NSW

AERIAL PHOTOGRAPH 2016

AERIAL PHOTOGRAPH 2016

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Appendix E EPA Records

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Search results

Your search for: **General Search** with the following criteria

Suburb - PENRITH

returned 73 results

Export to excel

1 of 4 Pages

Search Again

Number	Name	Location	Type	Status	Issued date
6357	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	POEO licence	Issued	07 Jun 2000
1007008	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	05 Jul 2002
1020003	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	09 Sep 2002
1072516	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	20 Aug 2007
1085783	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	21 Oct 2008
1104746	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	06 Aug 2009
1109805	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	26 Feb 2010
1512576	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	12 Aug 2014
247	BORAL RESOURCES (NSW) PTY LTD	PEACHTREE ROAD, PENRITH, NSW 2750	POEO licence	No longer in force	22 Aug 2000
12405	CAPRAL LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	POEO licence	Issued	09 Mar 2006
1070974	CAPRAL LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	30 Jul 2007
1077652	CAPRAL LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	31 Aug 2007
1109988	CAPRAL LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	19 Apr 2010
1525967	CAPRAL LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	31 Oct 2014
1526072	CAPRAL LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	11 Nov 2014
1098	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	POEO licence	Issued	26 Jun 2000
1017498	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	24 Nov 2003
1072470	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	20 Sep 2007
1104995	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	04 Nov 2009
1512789	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW	Compliance Audit	Complete	13 Mar 2013

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Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

08 November 2016

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Search results

Your search for: **General Search** with the following criteria

Suburb - PENRITH

returned 73 results

Export to excel

Search Again

Number	Name	Location	Type	Status	Issued date
1512775	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	19 Mar 2013
1515690	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	26 Jul 2013
1525217	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	26 Sep 2014
10945	CUMMINS SOUTH PACIFIC PTY. LTD.	7 Andrews Road, PENRITH, NSW 2750	POEO licence	Surrendered	19 Jun 2000
1035208	CUMMINS SOUTH PACIFIC PTY. LTD.	7 Andrews Road, PENRITH, NSW 2750	s.58 Licence Variation	Issued	08 Mar 2004
308	DORF CLARK INDUSTRIES LIMITED	2101 CASTLEREAGH ROAD, PENRITH, NSW 2750	POEO licence	Surrendered	17 Jan 2000
1024084	DORF CLARK INDUSTRIES LIMITED	2101 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	06 Jan 2003
1044228	DORF CLARK INDUSTRIES LIMITED	2101 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	08 Feb 2005
11290	ENDEAVOUR ENERGY	96-120 Blaikie Road, PENRITH, NSW 2750	POEO licence	No longer in force	08 Jan 2001
1035197	ENDEAVOUR ENERGY	96-120 Blaikie Road, PENRITH, NSW 2750	s.58 Licence Variation	Issued	08 Mar 2004
20381	Glass Recovery Services Pty Ltd	126 Andrews Road, PENRITH, NSW 2740	POEO licence	Pending	
12132	GULF WESTERN PREMIUM QUALITY LUBRICATING OILS (MANUFACTURING) PTY LIMITED	1 COOMBES DRIVE, PENRITH, NSW 2750	POEO licence	Surrendered	01 Oct 2004
1097227	GULF WESTERN PREMIUM QUALITY LUBRICATING OILS (MANUFACTURING) PTY LIMITED	1 COOMBES DRIVE, PENRITH, NSW 2750	s.58 Licence Variation	Issued	02 Feb 2009
1104874	GULF WESTERN PREMIUM QUALITY LUBRICATING OILS (MANUFACTURING) PTY LIMITED	1 COOMBES DRIVE, PENRITH, NSW 2750	s.58 Licence Variation	Issued	17 Aug 2009
6472	JAMES KEITH COSGROVE	8 HOYLE PLACE, PENRITH, NSW 2750	POEO licence	Surrendered	21 Jun 2000
1044521	JAMES KEITH COSGROVE	8 HOYLE PLACE, PENRITH, NSW 2750	s.58 Licence Variation	Issued	16 Feb 2005
7019	JAMISON PRIVATE HOSPITAL PROPERTY PTY LTD	366 JAMISON ROAD, PENRITH, NSW 2750	POEO licence	Surrendered	20 Mar 2001
2869	LD&D MILK PTY LTD	2257 - 2265 CASTLEREAGH ROAD, PENRITH, NSW 2750	POEO licence	Issued	05 Jun 2000
1012903	LD&D MILK PTY LTD	2257 - 2265 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	18 Feb 2002
1525246	LD&D MILK PTY LTD	2257 - 2265 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	02 Oct 2014

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Version: 1, Version Date: 29/01/2021

Search results

Your search for: **General Search** with the following criteria

Suburb - PENRITH

returned 73 results

Export to excel

3 of 4 Pages

Search Again

Number	Name	Location	Type	Status	Issued date
3741	NAREX AUSTRALIA PTY LTD	LOT D FROGMORE ROAD, PENRITH, NSW 2750	POEO licence	Surrendered	31 Jan 2001
1007235	NAREX AUSTRALIA PTY LTD	LOT D FROGMORE ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	10 May 2001
1008444	NAREX AUSTRALIA PTY LTD	LOT D FROGMORE ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	20 Aug 2001
2818	PANASONIC AVC NETWORKS AUSTRALIA PTY LTD	164 STATION STREET, PENRITH, NSW 2750	POEO licence	Surrendered	24 Mar 2000
1048338	PANASONIC AVC NETWORKS AUSTRALIA PTY LTD	164 STATION STREET, PENRITH, NSW 2750	s.58 Licence Variation	Issued	31 May 2005
10349	SYDNEY OLYMPIC PARK AUTHORITY	CASTLEREAGH ROAD, PENRITH, NSW 2750	POEO licence	Surrendered	06 Jan 2000
1409	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	POEO licence	Issued	25 May 2000
1005313	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	22 Oct 2001
1017898	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	26 Jun 2002
1018895	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	23 Dec 2002
1028330	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	08 Jul 2003
1032690	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	25 Nov 2003
1032982	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	19 Mar 2004
1047700	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	30 Jun 2005
1061410	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	29 Jun 2006
1074754	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	27 Jun 2007
1116048	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	02 Jul 2010
1129012	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	27 Jun 2011
1504851	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	28 Jun 2012
1528922	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	23 Mar 2015

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Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Search results

Your search for: **General Search** with the following criteria

Suburb - PENRITH

returned 73 results

Export to excel

4 of 4 Pages

Search Again

Number	Name	Location	Type	Status	Issued date
1538189	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	19 Feb 2016
11461	TOTAL CONCRETE SOLUTIONS PTY LIMITED	261 COOMBES DRIVE, PENRITH, NSW 2750	POEO licence	No longer in force	19 Oct 2001
1294	VICARY CORPORATION PTY LIMITED	60-62 REGENTVILLE ROAD, PENRITH, NSW 2750	POEO licence	Surrendered	22 Aug 2000
12106	VIP STEEL PACKAGING PTY LTD	182-184 Andrews Road, PENRITH, NSW 2750	POEO licence	Surrendered	28 Apr 2004
1042219	VIP STEEL PACKAGING PTY LTD	182-184 Andrews Road, PENRITH, NSW 2750	s.58 Licence Variation	Issued	10 Nov 2004
1065654	VIP STEEL PACKAGING PTY LTD	182-184 Andrews Road, PENRITH, NSW 2750	s.58 Licence Variation	Issued	25 Oct 2006
1093267	VIP STEEL PACKAGING PTY LTD	182-184 Andrews Road, PENRITH, NSW 2750	s.58 Licence Variation	Issued	10 Nov 2008
1127751	VIP STEEL PACKAGING PTY LTD	182-184 Andrews Road, PENRITH, NSW 2750	s.58 Licence Variation	Issued	03 Jun 2011
5269	VIRBAC (AUSTRALIA) PTY LTD	2152 CASTLEREAGH ROAD, PENRITH, NSW 2750	POEO licence	Issued	10 Aug 2000
1066270	VIRBAC (AUSTRALIA) PTY LTD	2152 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	15 Dec 2006
1072508	VIRBAC (AUSTRALIA) PTY LTD	2152 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	23 Jul 2007
1100623	VIRBAC (AUSTRALIA) PTY LTD	2152 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	07 Oct 2009
1526064	VIRBAC (AUSTRALIA) PTY LTD	2152 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	11 Nov 2014

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08 November 2016

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Search results

Your search for:LGA: Penrith City Council

Matched 23 notices relating to 7 sites.

Search Again

Refine Search

Suburb	Address	Site Name	Notices related to this site
BERKSHIRE PARK	(Northern end of Compartment 5) The Northern ROAD	Castlereagh State Forest	6 former
COLYTON	88 Great Western HIGHWAY	Ampol Service Station	1 current
JAMISONTOWN	92 Mulgoa ROAD	7-Eleven Service Station	2 current
LUDDENHAM	Lot 4 The Northern ROAD	Elura Liquid Waste Disposal Site	1 current
MULGOA	Mulgoa ROAD	Penrith Waste Services	2 former
PENRITH	Castlereagh ROAD	Crane Enfield Metals	3 current and 3 former
ST MARYS	Vallance STREET	Drum Recycler	5 former

8 November 2016

Document Set ID: 9456504
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List of NSW Contaminated Sites Notified to EPA as of 30 August 2016

Background

A strategy to systematically assess, prioritise and respond to notifications under Section 60 of the *Contaminated Land Management Act 1997* (CLM Act) has been developed by the EPA. This strategy acknowledges the EPA's obligations to make information available to the public under *Government Information (Public Access) Act 2009*.

When a site is notified to the EPA, it may be accompanied by detailed site reports where the owner has been proactive in addressing the contamination and its source. However, often there is minimal information on the nature or extent of the contamination.

For some notifications, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any offsite consequences to the community or environment. Such sites would still need to be cleaned up, but this could be done in conjunction with any subsequent building or redevelopment of the land. These sites may not require intervention under the CLM Act, but could be dealt with through the planning and development consent process.

Where indications are that the nominated site is causing actual harm to the environment or an unacceptable offsite impact (i.e. it is a "significantly contaminated site"), the EPA would apply the regulatory provisions of the CLM Act to have the responsible polluter and/or landowner investigate and remediate the site.

As such, the sites notified to the EPA and presented in the following table are at various stages of the assessment and/or remediation process. Understanding the nature of the underlying contamination, its implications and implementing a remediation program where required, can take a considerable period of time. The tables provide an indication, in relation to each nominated site, as to the management status of that particular site. Further detailed information may be available from the EPA or the responsible landowner.

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

Frequently asked questions

What is the difference between the "List of NSW Contaminated Sites Notified to the EPA" and the "Contaminated Land: Record of Notices"?

A site will be on the Contaminated Land: Record of Notices only if the EPA has issued a regulatory notice in relation to the site under the *Contaminated Land Management Act 1997*.

The sites appearing on this "List of NSW contaminated sites notified to the EPA" indicate that the notifiers consider that the sites are contaminated and warrant reporting to the EPA. However, the contamination may or may not be significant enough to warrant regulation by the EPA. The EPA needs to review and, if necessary, obtain more information before it can make a determination as to whether the site warrants regulation.

Why my site appears on the list?

Your site appears on the list because of one or more of the following reasons:

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- The site owner and/or the person partly or fully responsible for causing the contamination notified to the EPA about the contamination under Section 60 of the *Contaminated Land Management Act 1997*. In other words, the site owner or the "polluter" believes the site is contaminated.
- The EPA has been notified via other means and is satisfied that the site is or was contaminated.

Does the list contain all contaminated sites in NSW?

No. The list only contains contaminated sites that the EPA is aware of, with regard to its regulatory role under the CLM Act. An absence of a site from the list does not necessarily imply the site is not contaminated.

The EPA relies upon responsible parties to notify contaminated sites.

How are these notified contaminated sites managed by the EPA?

There are different ways that the EPA manages these notified contaminated sites. First, an initial assessment is carried out by the EPA. At the completion of the initial assessment, the EPA may take one or more than one of the following management approaches:

- The contamination warrants the EPA's direct regulatory intervention either under the *Contaminated Land Management Act 1997* or the *Protection of the Environment Operations Act 1997* (POEO Act), or both. Information about current or past regulatory action on this site can be found on EPA website.
- The contamination with respect to the current use or approved use of the site, as defined under the *Contaminated Land Management Act 1997,* is not significant enough that it warrants EPA regulation.
- The contamination does not require EPA regulation and can be managed by a planning approval process.
- The contamination is related to an operational Underground Petroleum Storage System, such as a service station or fuel depot. The contamination may be managed under the POEO Act and the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2008.
- The contamination is being managed under a specifically tailored program operated by another agency (for example the Department of Industry and Investment's *Derelict Mines Program*).

I am the owner of a site that appears on the list. What should I do?

First of all, you should ensure the current use of the site is compatible with the site contamination. Secondly, if the site is the subject of EPA regulation, make sure you comply with the regulatory requirements, and you have considered your obligations to notify other parties who may be affected.

If you have any concerns, contact us and we may be able to offer you general advice, or direct you to accredited professionals who can assist with specific issues.

I am a prospective buyer of a site that appears on the list. What should I do?

You should seek advice from the vendor to put the contamination issue into perspective. You may need to seek independent expert advice.

The information provided in the list is meant to be indicative only, and a starting point for your own assessment. Site contamination as a legacy of past site uses is not uncommon,

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particularly in an urbanised environment. If the contamination on a site is properly remediated or managed, it may not materially impact upon the intended future use of the site. However, each site needs to be considered in context.

List of NSW Contaminated Sites Notified to the EPA

Disclaimer

The EPA has taken all reasonable care to ensure that the information in the list of contaminated sites notified to the EPA (the list) is complete and correct. The EPA does not, however, warrant or represent that the list is free from errors or omissions or that it is exhaustive.

The EPA may, without notice, change any or all of the information in the list at any time.

You should obtain independent advice before you make any decision based on the information in the list.

The list is made available on the understanding that the EPA, its servants and agents, to the extent permitted by law, accept no responsibility for any damage, cost, loss or expense incurred by you as a result of:

1. any information in the list; or
2. any error, omission or misrepresentation in the list; or
3. any malfunction or failure to function of the list;
4. without limiting (2) or (3) above, any delay, failure or error in recording, displaying or updating information.

Site Status	Explanation
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or *Protection of the Environment Operations Act 1997*. Alternatively, the EPA may require information via a notice issued under s77 of the *Contaminated Land Management Act 1997* or issue a Preliminary Investigation Order.
Regulation under CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the *Contaminated Land Management Act 1997* is not required.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997*. A regulatory approach is being finalised.

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Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the *Protection of the Environment Operations Act 1997* (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the *Environmental Planning and Assessment Act 1979* (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the *Protection of the Environment Operations Act 1997* (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the *Environmental Planning and Assessment Act 1979* (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the *Contaminated Land Management Act 1997* (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record.

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Suburb	Site Name	Site Address	Contamination Activity Type	Management Class	Latitude	Longitude
PENNANT HILLS	Shell Coles Express Pennant Hills West	386 Pennant Hills ROAD	Service Station	Contamination currently regulated under CLM Act	-33.73936462	151.0680237
PENRITH	Caltex Penrith Service Station	153 Coreen AVENUE	Service Station	Under assessment	-33.74287244	150.6927071
PENRITH	Former Mobil Depot	174 Coreen AVENUE	Other Petroleum	Under assessment	-33.74484268	150.6980504
PENRITH	Mirvac Industrial Site	2101 Castlereagh ROAD	Other Industry	Regulation under CLM Act not required	-33.73497514	150.6954097
PENRITH	7-Eleven (former Mobil) Service Station	212-222 Andrews ROAD	Service Station	Under assessment	-33.73059678	150.6952571
PENRITH	7-Eleven Service Station	30 Henry ROAD	Service Station	Under assessment	-33.75408799	150.7045594
PENRITH	Caltex Service Station	Castlereagh Rd Cnr Lugard STREET	Service Station	Under assessment	-33.73426843	150.6933382
PENRITH	Crane Enfield Metals	Castlereagh ROAD	Metal Industry	Contamination currently regulated under CLM Act	-33.73734959	150.696442
PENRITH	BP Express Service Station	Corner Coreen Avenue and Castlereagh ROAD	Service Station	Under assessment	-33.74385498	150.6925743
PENSHURST	7-Eleven Service Station	612 Forest ROAD	Service Station	Under assessment	-33.96153533	151.0793525
PENSHURST	Caltex Service Station	641 King Georges ROAD	Service Station	Under assessment	-33.95985335	151.0891118
PERISHER VALLEY	Perisher Centre Loading Dock	Kosciuszko ROAD	Other Petroleum	Regulation under CLM Act not required	-36.40392862	148.4111593
PERISHER VALLEY	Perisher Ski Resort	Kosciuszko ROAD	Other Petroleum	Regulation under CLM Act not required	-36.41106374	148.4005469
PETERSHAM	Fanny Durack Aquatic Centre	Station STREET	Unclassified	Regulation under CLM Act not required	-33.89194583	151.151824
PHEASANTS NEST	7-Eleven (former Mobil) Service Station	(Northbound) Hume HIGHWAY	Service Station	Under assessment	-34.28274509	150.6394175
PHEASANTS NEST	7-Eleven Service Station	(Southbound) Hume HIGHWAY	Service Station	Under assessment	-34.28318211	150.6362986
PICTON	McDonalds	69 -71 Argyle STREET	Service Station	Regulation under CLM Act not required	-34.16711877	150.6121524
PICTON	Coles Express Picton	93-99 Argyle STREET	Service Station	Under assessment	-34.16844337	150.6114236
PLUMPTON	Woolworths Service Station	Jersey ROAD	Service Station	Under assessment	-33.74478874	150.8369408
PORT BOTANY	Caltex Banksmeadow	1 -3 Penrhyn ROAD	Chemical Industry	Contamination currently regulated under POEO Act	-33.96335328	151.2171062
PORT BOTANY	Port Botany Bus Depot	1 Bumborah Point ROAD	Other Petroleum	Under assessment	-33.96880413	151.2255889
PORT BOTANY	Vopak B	20 Friendship ROAD	Chemical Industry	Under assessment	-33.97946548	151.2121752
PORT BOTANY	Smith Bros	4 Bumborah Point ROAD	Other Petroleum	Regulation under CLM Act not required	-33.9681757	151.2239505
PORT BOTANY	Terminals	45 Friendship ROAD	Chemical Industry	Under assessment	-33.97609287	151.2174402
PORT BOTANY	Vopak A	49 Friendship ROAD	Chemical Industry	Regulation under CLM Act not required	-33.97426175	151.2206228
PORT BOTANY	Bunnerong Canal	Between Brotherson Dock and Bumborah Point ROAD	Unclassified	Regulation under CLM Act not required	-33.96800557	151.2227633
PORT BOTANY	Sydney Ports Bulk Liquids Berth	Charlotte ROAD	Other Petroleum	Contamination currently regulated under POEO Act	-33.97418047	151.2123791
PORT BOTANY	Port Botany Railway Corridors	Friendship ROAD	Unclassified	Under assessment	-33.95467008	151.2178012
PORT BOTANY	Sydney Ports Marine Services	Interterminal Access ROAD	Other Petroleum	Under assessment	-33.97214594	151.2173122
PORT KEMBLA	Coates Hire	1 Flinders STREET	Other Industry	Under assessment	-34.47104817	150.89162
PORT KEMBLA	Caltex Service Station	16 Flinders STREET	Service Station	Under assessment	-34.47058088	150.8945864
PORT KEMBLA	Former Shell Depot	87-89 Flinders STREET	Other Petroleum	Under assessment	-34.46964995	150.8953859
PORT KEMBLA	Darcy Road Rail Sidings	Darcy ROAD	Other Industry	Under assessment	-34.47792834	150.9105503
PORT KEMBLA	No 2 Steelworks	Five Islands ROAD	Metal Industry	Contamination currently regulated under CLM Act	-34.45965024	150.8844432
PORT KEMBLA	Port Kembla Steelworks - No.1 Works Site	Five Islands ROAD	Metal Industry	Under assessment	-34.47386606	150.8794912

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Appendix F Council Section 149 (2&5) Certificates

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Appendix G Australian and NSW Heritage Data Base Searches

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Search Results

9 results found.

Blacktown Native Institution Site Richmond Rd	Oakhurst, NSW, Australia	(Nominated place) National Heritage List
Combewood, Outbuildings and Garden 306 RMB Castlereagh Rd	Penrith, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Museum of Fire Castlereagh Rd	Penrith, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Penrith Courthouse (former) High St	Penrith, NSW, Australia	(Destroyed) Register of the National Estate (Non-statutory archive)
St Stephens Anglican Church & Graveyard 252 High St	Penrith, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Thornton Hall & Surrounds 11 Mountain View Cr	Penrith, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Thornton Hall & Surrounds 11 Mountain View Cr	Penrith, NSW, Australia	(Place removed from CHL) Commonwealth Heritage List
Thornton Hall and Surrounds (former Defence land) 11 Mountain View Cr	Penrith, NSW, Australia	(Place removed from CHL) Commonwealth Heritage List
Victoria Bridge Great Western Hwy	Penrith, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Report Produced: Tue Nov 8 09:36:57 2016

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Search for NSW heritage

Return to search page where you can refine/broaden your search.

Statutory listed items

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

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

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

Your search did not return any matching results.

Section 2. Items listed under the NSW Heritage Act.

Your search returned 14 records.

Item name	Address	Suburb	LGA	SHR
Ahrens Fox PS2 Fire Engine (1929)	1 Museum Drive	Penrith	Penrith	01717
Craithes House	34-40 Borec Road	Penrith	Penrith	00378
Dennis Big 6 Fire Engine (1939)	1 Museum Drive	Penrith	Penrith	01718
Edward Smith Headquarters Switchboard (1909)	1 Museum Drive	Penrith	Penrith	01901
Emu Plains (Nepean River) Underbridge	Off Bruce Neale Dr, Steel Trusses 1.3 Km Past Station	Penrith	Penrith	01830
Fire and Rescue NSW Heritage Fleet	Museum Drive	Penrith	Penrith	01902
Ford 21W Fire Brigade Mobile Canteen (1942)	Museum Drive	Penrith	Penrith	01900
NSW Fire Brigades No 10 Vehicle Number Plates	Castlereagh Road	Penrith	Penrith	01519
Penrith Railway Station group	Great Western Railway	Penrith	Penrith	01222
Shand Mason 7 inch Manual Fire Engine (1869)	1 Museum Drive	Penrith	Penrith	01898

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Shand Mason Curricle Ladders (1898)	1 Museum Drive	Penrith	Penrith	01899
Shand Mason Fire Engine (1891)	Museum Drive	Penrith	Penrith	01716
Torin Building	26 Coombes Drive	Penrith	Penrith	01796
Victoria Bridge	Nepean River, Great Western Highway	Penrith	Penrith	01950

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

Your search returned 67 records.

Item name	Address	Suburb	LGA	Information source
1841 Tilley 5 inch Manual Fire Engine	1 Museum Drive	Penrith	Penrith	SGOV
1869 Shand Mason 7" Manual Fire Engine	1 Museum Drive	Penrith	Penrith	SGOV
1891 Shand Mason Steamer Fire Engine	1 Museum Drive	Penrith	Penrith	SGOV
1898 Shand Mason Curricle Ladders - Fire Engine	1 Museum Drive	Penrith	Penrith	SGOV
1916 Garford Type 64 Chain Drive Fire Engine	1 Museum Drive	Penrith	Penrith	SGOV
1929 Ahrens Fox PS2 Fire Engine	1 Museum Drive	Penrith	Penrith	SGOV
1939 Dennis Big 6 Fire Engine	1 Museum Drive	Penrith	Penrith	SGOV
1942 Ford 21W Fire Brigade Mobile Canteen	1 Museum Drive	Penrith	Penrith	SGOV
1949 Dennis F1 Fire Engine (Scout Car)	1 Museum Drive	Penrith	Penrith	SGOV
Avenue and Garden Planting	Lemko Place	Penrith	Penrith	LGOV
Broadville Victorian House	98 Station Street	Penrith	Penrith	LGOV
Combewood House, garden and original entrance	Coreen Avenue	Penrith	Penrith	LGOV
Combewood Trees	Coreen Avenue	Penrith	Penrith	LGOV
Commissioner's Uniform (NSWFire Brigades) - Ian Mac Dougall	1 Museum Drive	Penrith	Penrith	SGOV
Craithes House	Borec Road	Penrith	Penrith	LGOV
Cram Place - Cast Iron Fence	338-340 High Street	Penrith	Penrith	LGOV

Cram Place - Well and Pump	338-340 High Street	Penrith	Penrith	LGOV
Cram Place (Former CBC Bank)	338-340 High Street	Penrith	Penrith	LGOV
Cram Place (Former Coach House)	338-340 High Street	Penrith	Penrith	LGOV
Derby Street P33b Conservation Area Cottages	Castlereagh Street	Penrith	Penrith	LGOV
Derby Street P33c Conservation Area Cottages	Derby Street	Penrith	Penrith	LGOV
Dunheved Fire Station	50 Christie Street	Penrith	Penrith	SGOV
Edward Smith Headquarters Switchboard - 1909	1 Museum Drive	Penrith	Penrith	SGOV
Edwardian Cottage	323 Castlereagh Road	Penrith	Penrith	LGOV
Emu Plains (Nepean River) Underbridge	Off Bruce Neale Dr, Steel Trusses 1.3 Km Past Station	Penrith	Penrith	SGOV
Explorers Memorial	Memorial Avenue	Penrith	Penrith	LGOV
Governor Phillip Special Hospital Original Building	Glebe Place	Penrith	Penrith	LGOV
Kentucky	146 Station Street	Penrith	Penrith	LGOV
Memorial Park	Woodriff Street	Penrith	Penrith	LGOV
Methodist Church (Former)	Henry Street	Penrith	Penrith	LGOV
Museum of Fire Penrith (Former Penrith Power Station)	Castlereagh Road	Penrith	Penrith	LGOV
Nepean River		Penrith	Penrith	LGOV
NSW Fire Brigades Heritage Fleet	1 Museum Drive	Penrith	Penrith	SGOV
NSWFB 'No. 10' Vehicle Number Plates	1 Museum Drive	Penrith	Penrith	SGOV
Original building	Glebe Place	Penrith	Penrith	SGOV
Peach Tree Creek Bridge	Great Western Highway	Penrith	Penrith	SGOV
Penrith Ambulance Station	High Street	Penrith	Penrith	LGOV
Penrith Council Chambers	Henry Street	Penrith	Penrith	LGOV
Penrith Infants Department	Henry Street	Penrith	Pen	LGOV

			rith	
Penrith Public School Building	High Street	Penrith	Penrith	LGOV
Penrith Public School Palm Trees	High Street	Penrith	Penrith	LGOV
Penrith Railway Station	Jane Street	Penrith	Penrith	LGOV
Penrith Railway Station Group and Residence	Station Street	Penrith	Penrith	SGOV
Penrith Weir	Nepean River	Penrith	Penrith	SGOV
Rectory (Former)	95 Glebe Place	Penrith	Penrith	LGOV
St Aubin's Terrace	255-265 High Street	Penrith	Penrith	LGOV
St. Stehens Cemetery	252 High Street	Penrith	Penrith	LGOV
St. Stephens Church Hall	252 High Street	Penrith	Penrith	LGOV
St. Stephens Church of England	252 High Street	Penrith	Penrith	LGOV
Station Masters House (Former)	57 Belmore Street	Penrith	Penrith	LGOV
The Cottage	39 Warwick Street	Penrith	Penrith	LGOV
The Lodge	54 Camden Road	Penrith	Penrith	LGOV
Thornton Hall	Mountain View Crescent	Penrith	Penrith	LGOV
Timber Cottage	71 Parker Street	Penrith	Penrith	LGOV
Tree - The Cottage	39 Warwick Street	Penrith	Penrith	LGOV
Tree to Victorian House	48 Warwick Street	Penrith	Penrith	LGOV
Two Storey Brick Cottage (Destroyed)	7 Lawson Street	Penrith	Penrith	LGOV
Victoria Bridge	Great Western Highway	Penrith	Penrith	LGOV
Victoria Bridge	Great Western Highway	Penrith	Penrith	GAZ
Victoria Bridge over Nepean River	Great Western Highway	Penrith	Penrith	SGOV
Victorian House	48 Warwick Street	Penrith	Penrith	LGOV

Victorian House	6 Rawson Avenue	Penrith	Penrith	LGOV
Victorian House	148 Station Street	Penrith	Penrith	LGOV
Victorian House	322 Castlereagh Road	Penrith	Penrith	LGOV
Victorian Terrace	219-221 High Street	Penrith	Penrith	LGOV
Victorian Villa	150 Lethbridge Street	Penrith	Penrith	LGOV
Weir and Former Pumping Station	Memorial Avenue	Penrith	Penrith	LGOV

There was a total of 81 records matching your search criteria.

Key:
LGA = Local Government Area
GAZ= NSW Government Gazette (statutory listings prior to 1997), HGA = Heritage Grant Application, HS = Heritage Study, LGOV = Local Government, SGOV = State Government Agency.
Note: While the Heritage Division seeks to keep the Inventory up to date, it is reliant on State agencies and local councils to provide their data. Always check with the relevant State agency or local council for the most up-to-date information.

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Appendix H SafeWork NSW Records

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SafeWork NSW
92-100 Donnison Street, Gosford, NSW, 2250
Locked Bag 2906, Lisarow, NSW, 2252 |
Customer Service Centre 13 10 50
licensing@safework.nsw.gov.au | www.safework.nsw.gov.au

Our Ref: D16707982
Your Ref: Kiu Yeung

23 November 2016

Attention: Kiu Yeung
Level 1, 50
Margaret Street
SYDNEY NSW 2000

Dear Mr Yeung

RE SITE: 114-146 Henry Street and Allen Place, Penrith NSW 2750

I refer to your site search request received by SafeWork NSW on 10 November 2016 requesting information on Storage of Hazardous Chemicals for the above site.

Enclosed are copies of the documents that SafeWork NSW holds on record number 35/010880 relating to the storage of Hazardous Chemicals at the above-mentioned premises.

For further information or if you have any questions, please call our Customer Service Centre on 13 10 50 or email licensing@safework.nsw.gov.au

Yours sincerely,

[redacted]

Sally Anderson obo Brent Jones
Customer Service Officer
Customer Service Centre - Operations
SafeWork NSW

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INSPECTION RECORD

Licence No. 10880

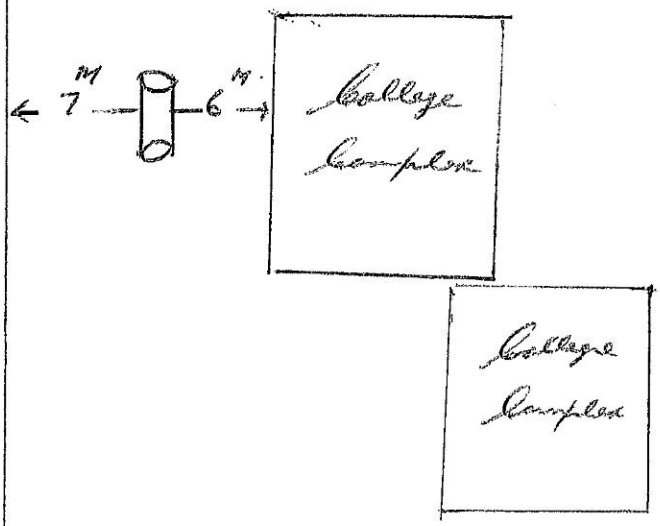
Licensee: Education Dept
Penrith Tech. College

Address: Henry St. Penrith

Storage licensed: 1 × 2. 22. K.L. Tank

Sketch of Premises (Dimensions of depot and distance of same from adjoining "protected works" to be shown).

Henry St



High St

Inspected	Initials	Requisitions made or state of depot
25. 7. 77.	[redacted]	Satisfactory

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RTMENT OF LABOUR AND INL

INFLAMMABLE LIQUID ACT, 1915

LICENCE No. 10880

APPLICATION FOR: REGISTRATION OF PREMISES / STORE LICENCE / AMENDMENT TO REGISTRATION OR LICENCE } FOR THE KEEPING OF INFLAMMABLE LIQUID AND/OR DANGEROUS GOODS. 8

-5 MAR 1976

Name of Occupier: EDUCATION DEPT.
(Surname) (First Names)

Trading Name (if any): PENRITH TECH. COLLEGE

Postal Address: HENRY ST. PENRITH Postcode 2750

Address of the premises in which the depot or depots are situated: AS ABOVE Postcode

Occupation:

Nature of Premises: SCHOOL BUILDINGS

Particulars of construction of depots and maximum quantities of inflammable liquid and/or dangerous goods to be kept at any one time.

PLEASE SKETCH SITE ON BACK OR ATTACH PLAN

Depot No.	Construction of depots *			Inflammable Liquid		Dangerous Goods						
	Walls	Roof	Floor	Mineral spirit litres	Mineral oil litres	Class 1 litres	Class 2 litres	Class 3 kg	Class 4 m^3	Class 5A# litres	Class 5B# litres	Class 9 litres
1	ABOVE	GROUND	TANK							2·22KL		
2												
3												
4												
5												
6												
7												
8												
9												
10							*					
		TOTAL										

PUBLIC REVENUE A/c
19.3.76 (Date) $ No Fee
Receipt No. 5204

* If kept in tanks describe depots as underground or aboveground tanks.

\# Insert water capacity of tanks or cylinders.

Name of Company supplying inflammable liquid: GAS SUPPLY CO

Have premises previously been licensed? NO

If known, state name of previous occupier:

Signature of applicant [redacted] Date 2.3.76

CERTIFICATE OF INSPECTION

I, Sgt Charles Jones being an Inspector under th Inflammable Liquid Act, 1915, do hereby certify that the premises or store described above does comply with th requirements of that Act and regulations with regard to its situation and construction for the keeping of inflammabl liquid and/or dangerous goods in quantity and nature specified.

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Form DG1

DEPARTMENT OF INDUSTRIAL RELATIONS

LICENCE No. 35010880.7
P/A

DANGEROUS GOODS ACT, 1975

APPLICATION FOR LICENCE (or AMENDMENT or TRANSFER of LICENCE) FOR THE KEEPING OF DANGEROUS GOODS

Application is hereby made for— *a licence (or amendment of the licence) *the transfer of the licence for the keeping of dangerous goods in or on the premises described below.

(*delete whichever is not required)

FEE: $10.00 per Depot for new licence.
$10.00 for amendment or transfer.

Name of Applicant in full (see over)	DEPT. OF PUBLIC WORKS
Trading name or occupier's name (if any)	LIGHT HEAT & POWER COMMITEE
Postal address	STATE OFFICE BLOCK PHILLIP ST SYDNEY Postcode 2000
Address of the premises including street number (if any)	PENRITH TECHNICAL COLLEGE 281 HENRY ST, PENRITH Postcode 2750
Nature of premises (see over)	SCHOOL
Telephone number of applicant	STD Code 047 Number 31-5244

Particulars of type of depots and maximum quantities of dangerous goods to be kept at any one time.

Depot number	Type of depot (see over)	Storage capacity	Dangerous goods: Product being stored	C & C Office use only
1	ABOVEGROUND TANK	2200 L	PROPANE	
2	CYLINDER STORE	70 m^3	ACETYLENE	
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Has site plan been approved? Yes ~~No~~ If yes, no plans required. If ~~no, please attach site plan~~.

Have premises previously been licensed? Yes ~~No~~ If yes, state name of previous occupier.

Name of company supplying flammable liquid (if any) C.I.G.

Signature of applicant X ..... Date 18/6/81.

For external explosives magazine(s), please fill in side 2.

FOR OFFICE USE ONLY

CERTIFICATE OF INSPECTION

I RAYMOND CHARLES MCGRATH being an Inspector under the Dangerous Goods Act, 1975, do hereby certify that the premises described above do comply with the requirements of the Dangerous Goods Act, 1975, and the

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PART C – Dangerous Goods Storage *Complete one section per depot.*

If you have more depots than the space provided, photocopy sufficient sheets first.

Depot Number	Type of depot	Depot Class	Maximum storage capacity
1.	8 x 45 kg. Cylinders. (CYLINDER STORE)	2.1	360 Kg.

UN Number	Correct Shipping Name	Class	PG (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³
1075.	Petroleum Gases, Liquified.	2.1	-	L.P. GAS	360	kg.

Depot Number	Type of depot	Depot Class	Maximum storage capacity
2	1 x 2.5 KL. VAPOUR TANK (ABOVE GROUND TANK)	2.1	2.5 KL.

UN Number	Correct Shipping Name	Class	PG (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³
1075	Petroleum Gases, Liquified	2.1	-	L.P. GAS	2.5	KL.

Depot Number	Type of depot	Depot Class	Maximum storage capacity

UN Number	Correct Shipping Name	Class	PG (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³

Depot Number	Type of depot	Depot Class	Maximum storage capacity

UN Number	Correct Shipping Name	Class	PG (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³

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Application for Licence to Keep Dangerous Goods

WorkCover NEW SOUTH WALES

Application for ☐ new licence ☐ amendment ☐ transfer ☑ renewal of expired licence

PART A – Applicant and site information

1 Name of applicant | ACN

WESTERN SYDNEY INSTITUTE OF TAFE, PENRITH COLLEGE.
DENNIS BURKE, College Director.

2 Postal address of applicant | Suburb/Town | Postcode

117 HENRY ST., | PENRITH | 2750.

3 Trading name or site occupier's name

PENRITH COLLEGE OF T.A.F.E.

4 Contact for licence inquiries

Phone	Fax	Name
02.830.1219	02.830.1299	John BUCKMAN.

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-8 FEB 1996
SCIENTIFIC BRANCH

5 Previous licence number (if known) 35/ 010880.7

6 Previous occupier (if known) -

7 Site to be licensed

No	Street
117	HENRY STREET

Suburb / Town | Postcode

PENRITH | 2750

8 Main business of site: Technical & Further Education.

DATA
24 FEB 1996
ENTERED

9 Site staffing: Hours per day 13 Days per week 5

10 Emergency contact

Phone	Name
02.534.6850 (H) 047.24.1713 (B)	Dennis BURKE.

11 Major supplier of dangerous goods: ELGAS.

12 If a new site or for amendments to depots
Plan stamped by: Name of Accredited Consultant | Date stamped

Donald ALLEN (ELGAS). | 31.1.96.

I certify that the details in this application (including any accompanying computer disk) are correct and cover all licensable quantities of dangerous goods kept on the premises.

13 Signature of applicant [redacted] Date

for Dennis Burke, College Director. | 31st. Jan., 1996.

Please send your application, marked *CONFIDENTIAL*, to:
Dangerous Goods Licensing, Level 3, Locked Bag 10, Clarence Street, SYDNEY NSW 2000

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

WorkCover New South Wales, 400 Kent Street. Sydney 2000. Tel: (02) 9370 5000 ALL MAIL TO LOCKED BAG 10. CLARENCE STREET, SYDNEY 2000

DX 13067, MARKET ST. SYDNEY

Reference

APPLICATION FOR RENEWAL
OF LICENCE TO KEEP DANGEROUS GOODS

ISSUED UNDER AND SUBJECT TO THE PROVISIONS OF THE DANGEROUS GOODS ACT, 1975 AND REGULATION THEREUNDER

DECLARATION: *Please renew licence number 35/010880 to 1999. I confirm that all the licence details shown below are correct (amend if necessary).*

[redacted] ROBERT KIDDLE 14/1/98

(Signature) *(Please print name)* *(Date signed)*

for: TECHNICAL & FURTHER EDUCATION COMMISSION

*THIS **SIGNED** DECLARATION SHOULD BE **RETURNED TO:***

WorkCover New South Wales
Dangerous Goods Licensing Section (Level 3)
Locked Bag 10
P O CLARENCE STREET 2000

Enquiries: ph (02) 9370 5187
fax (02) 9370 6105

Details of licence on 5 January 1998

DATA ENTERED 27 JAN 1998

Licence Number 35/010880 **Expiry Date** 08/02/98

Licensee TECHNICAL & FURTHER EDUCATION COMMISSION
WESTERN SYDNEY INSTITUTE OF TAFE

Postal Address 117 HENRY ST, PENRITH 2750

Licensee Contact ~~John Buckman~~ BOB KIDDLE Ph. 9830 1219 Fax. 9830 ~~1299~~ 1557

Premises Licensed to Keep Dangerous Goods
117 HENRY ST Penrith College
PENRITH 2750

Nature of Site Technical & Further Education **Major Supplier of Dangerous Goods** ELGAS

Emergency Contact for this Site ~~Dennis Burke (ah 02 5346850)~~ ph. ~~047 24 1713~~ JOHN CLARK 018472574 or KEVIN DOWSE 047365526

Site staffing 13hrs 5days

Details of Depots

Depot No.	Depot Type	Goods Stored in Depot	Qty
1	CYLINDER STORE	Class 2.1	360 kg
		UN 1075 PETROLEUM GASES, LIQUE	360 kg
2	ABOVE-GROUND TANK	Class 2.1	2500 L
		UN 1075 PETROLEUM GASES, LIQUE	2125 L

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BLOCK	SCAN No	REVISIONS	PLOT DATE	REMARKS

Depot 1

Spot 2

This is to certify that this drawing complies with current NSW regulations

DRAWING NUMBER CPP3-5

APPLICATION No. 96076B

INSTALLATION DETAILS Depot 1 8x45kW cyl.
Depot 2 - 1x25HL VAPOUR FANS

CONTRACTORS AUTHORITY [redacted]

DATE 31/1/96

SIGNED [redacted]

ELGAS

This plan conforms with the Dangerous Goods Act NSW 1975 and Austr Standard AS 1596

signed for Elgas Limited.

[redacted] Date 31-1-96

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35/010880

This is to certify that this drawing complies with current NSW regulations

DRAWING NUMBER CPP-3

REGISTER NUMBER 96-076 A

INSTALLATION DETAILS DEPOT 1 - 8 X 45 KG cyls
DEPOT 2 = 1 X 2.5 TE VAPOUR TANK

CONTRACTORS AUTHORITY NO. A2243

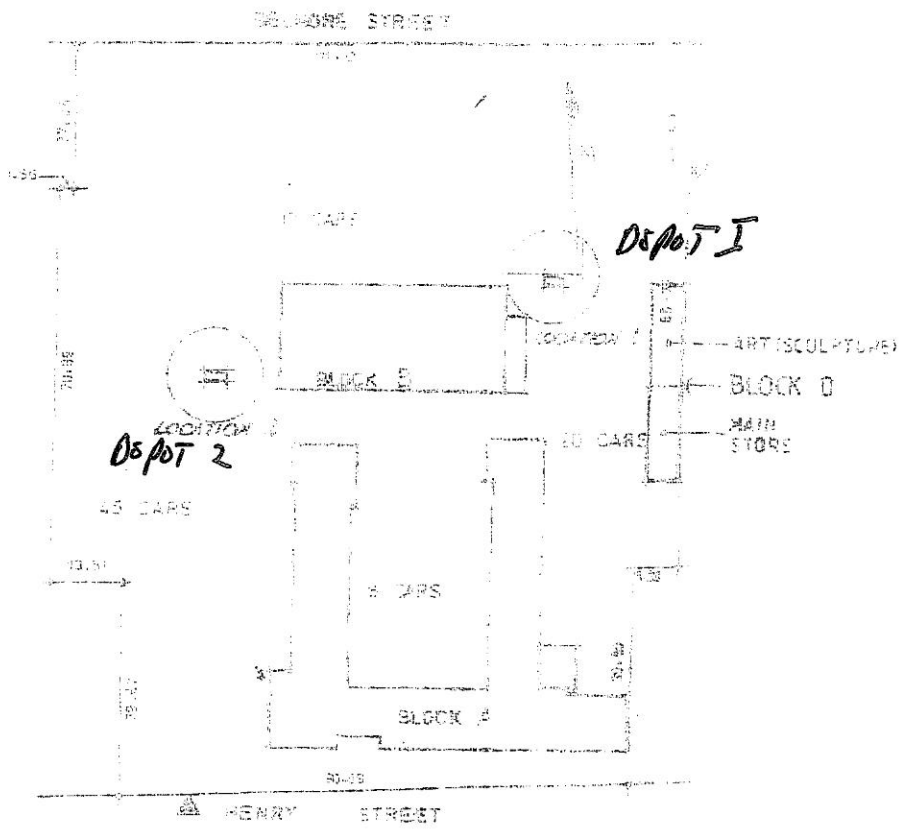
DATE 31/1/96

SIGNED [redacted]

ELGAS

This plan conforms with the Dangerous Goods Act NSW 1975 and Austr Standard AS 1596 signed for Elgas Limited.

[redacted] ..Date 31-1-96



TOTAL PARKING - 220 CARS

SCALE N.T.S.		PENRITH COLLEGE	ISSUE
APPROVED BY	DRAWN D.M.	SITE PLAN	CPP-3
DATE	TRACED D.M.	L.P.G. STORAGE LOCATIONS.	

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PENRITH CAMPUS

A block

Room	Floor	Area
A-G-13	Ground	5 Conference
A-G-17	Ground	5 Audio
A-G-19	Ground	7 Lecture
A-G-20	Ground	7 Lecture
A-G-51	Ground	4 Lecture
A-G-52	Ground	4 Lecture
A-G-58	Ground	3 Lecture
A-G-59	Ground	3 Lecture
A-1-05	1st	3 Lecture
A-1-07	1st	3 Lecture
A-1-09	1st	3 Lecture
A-1-10	1st	4 Lecture
A-1-11	1st	5 Lecture
A-1-22	1st	5 Dining 1
A-1-23	1st	5 Dining 2
A-1-25	1st	5 Kitchen 1
A-1-28	1st	5 Kitchen 2
* A-1-33	1st	5 Lecture
* A-1-34	1st	5 Lecture

* Access by stairwell in area 5 only.

B block

Room	Floor	Area
B-G-04	Ground	1 Computer
B-G-05	Ground	2 Computer
B-G-18	Ground	2 Ceramics
B-G-22	Ground	2 Computer
B-G-25	Ground	1 Computer
B-1-05	1st	1 Lecture
B-1-06	1st	1 Lecture
B-1-10	1st	2 Lecture
B-1-12	1st	2 A.B.E Centre
B-1-13	1st	2 Lecture
B-2-01	2nd	2 Computer
B-2-03	2nd	2 Reception
B-2-07	2nd	2 Lecture
B-2-08	2nd	2 Lecture
B-2-10	2nd	2 Computer
B-2-13	2nd	2 Computer
B-2-14	2nd	1 Computer
B-2-19	2nd	1 Computer

C block

Room	Floor	Area
C-G-01	Ground	8 Ceramics

Toilets

A Block	Ground	4	Disabled
A Block	1st	5	Ladies & Men
A Block	1st	4	Ladies only
B Block	Ground	1	Ladies & Men
B Block	1st	1	Ladies only
B Block	2nd	1	Mens only

General - A block

Library	6	Ground
Admin.Office	4	Ground
Cashier	4	Ground
Canteen	3	Ground
Counsellor	4	Ground
Course Info.	4	Ground

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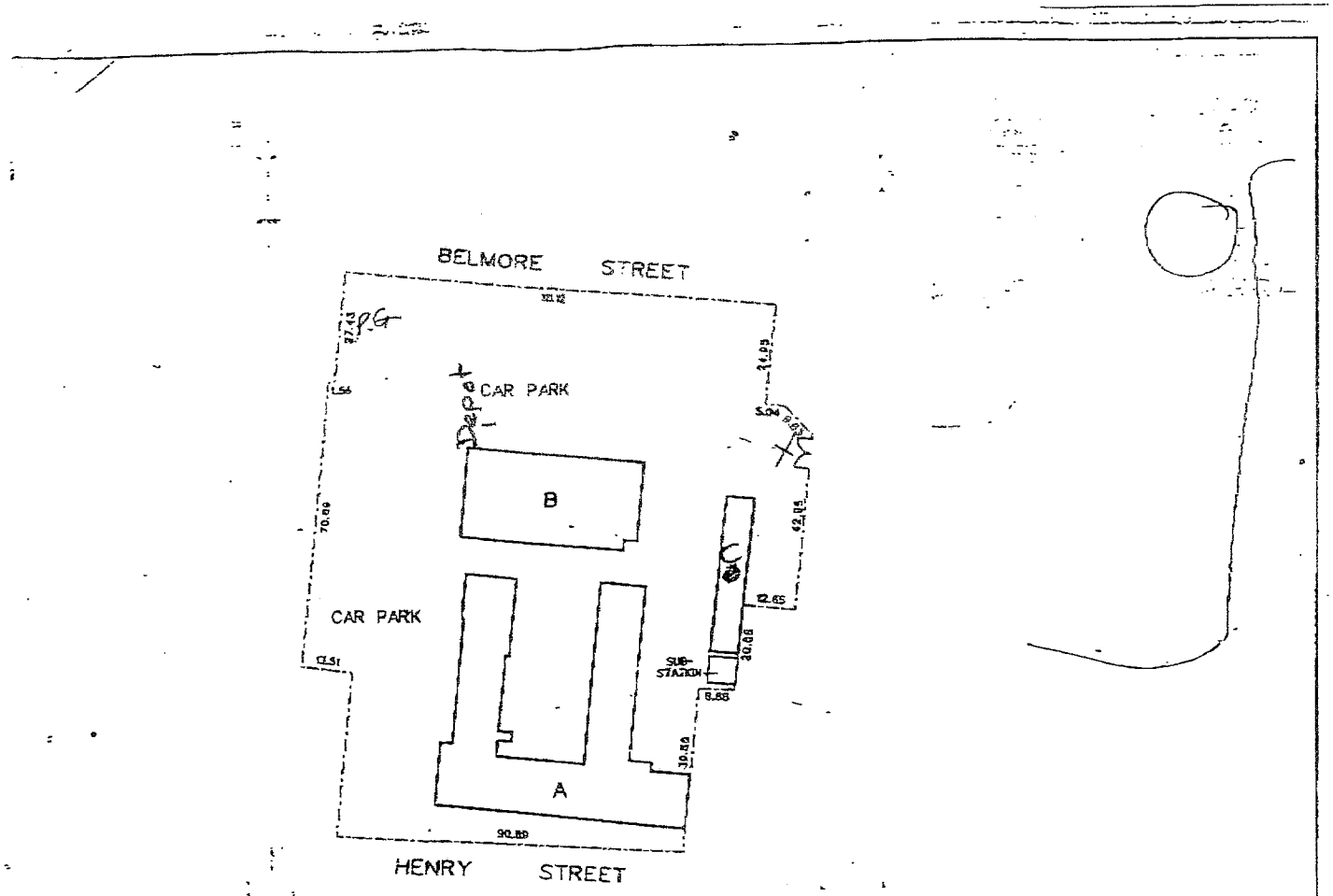
92089315 PENRITH PANTHERS 29/07/2009 10:03:04 PENRITH



SCALE 1:1000	SHEET 1 OF 7
APPROVED TO ISSUE	ISSUE 1
	DATE JULY 15

PENRITH COLLEGE

SITE PLAN

92089315

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WorkCover New South Wales, 400 Kent Street. Sydney 2000. Tel: (02) 9370 5000 ALL MAIL TO LOCKED BAG 10. CLARENCE STREET, SYDNEY 2000
DX 13067, MARKET ST. SYDNEY

WORKCOVER NEW SOUTH WALES

Reference

APPLICATION FOR RENEWAL
OF LICENCE TO KEEP DANGEROUS GOODS

ISSUED UNDER AND SUBJECT TO THE PROVISIONS OF THE DANGEROUS GOODS ACT, 1975 AND REGULATION THEREUNDER

DECLARATION: *Please renew licence number 35/010880 to 1999. I confirm that all the licence details shown below are correct (amend if necessary).*

[redacted] ROBERT KIDDLE 14/1/98

(Signature) *(Please print name)* *(Date signed)*

for: TECHNICAL & FURTHER EDUCATION COMMISSION

*THIS **SIGNED** DECLARATION SHOULD BE **RETURNED TO:***

WorkCover New South Wales
Dangerous Goods Licensing Section (Level 3)
Locked Bag 10
P O CLARENCE STREET 2000

Enquiries: ph (02) 9370 5187
fax (02) 9370 6105

DATA ENTERED 27 JAN 1998

Details of licence on 5 January 1998

Licence Number 35/010880 **Expiry Date** 08/02/98

Licensee TECHNICAL & FURTHER EDUCATION COMMISSION
WESTERN SYDNEY INSTITUTE OF TAFE

Postal Address 117 HENRY ST, PENRITH 2750

Licensee Contact ~~John Buckman~~ BOB KIDDLE Ph ~~9830 1219~~ 1557 Fax ~~9830 1299~~

Premises Licensed to Keep Dangerous Goods
117 HENRY ST Penrith College
PENRITH 2750

Nature of Site Technical & Further Education **Major Supplier of Dangerous Goods** ELGAS

Emergency Contact for this Site ~~Dennis Burke (ah 02 5346850) ph. 047 24 1713~~
JOHN CLARK 018472574
or KEVIN DOWSE 047365526

Site staffing 13hrs 5days

Details of Depots

Depot No.	Depot Type	Goods Stored in Depot	Qty
1	CYLINDER STORE	Class 2.1 UN 1075 PETROLEUM GASES, LIQUE	360 kg 360 kg
2	ABOVE-GROUND TANK	Class 2.1 UN 1075 PETROLEUM GASES, LIQUE	2500 L 2125 L

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What is a depot? See page 5 of the Guidance Notes.

PART C – Dangerous Goods Storage *Complete one section per depot.*

If you have more depots than the space provided, photocopy sufficient sheets first.

Depot Number	Type of depot (see page 5)	Depot Class	Maximum storage capacity
1	Above-Ground Tank	2.1	190 kg

UN Number	Proper Shipping Name	Class (I, II, III)	PG	Product or common name	Typical quantity	Unit, e.g. L, kg, m³
1075	Petroleum Gases	2.1		LPG	190	kg

Depot Number	Type of depot (see page 5)	Depot Class	Maximum storage capacity

UN Number	Proper Shipping Name	Class (I, II, III)	PG	Product or common name	Typical quantity	Unit, e.g. L, kg, m³

Depot Number	Type of depot (see page 5)	Depot Class	Maximum storage capacity

UN Number	Proper Shipping Name	Class (I, II, III)	PG	Product or common name	Typical quantity	Unit, e.g. L, kg, m³

Depot Number	Type of depot (see page 5)	Depot Class	Maximum storage capacity

UN Number	Proper Shipping Name	Class (I, II, III)	PG	Product or common name	Typical quantity	Unit, e.g. L, kg, m³

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Application for Licence to Keep Dangerous Goods

WorkCover NEW SOUTH WALES

Application for ☐ new licence ☑ amendment ☐ transfer ☐ renewal of expired licence

PART A – Applicant and site information See page 2 of Guidance Notes.

1 Name of applicant | ACN

Technical & Further Education Commission |

2 Postal address of applicant | Suburb/Town | Postcode

O'Connell St | Kingswood | 2747

3 Trading name or site occupier's name

Nepean College of TAFE - Penrith

4 Contact for licence inquiries

Phone [redacted] | Fax | Name

K Handley

5 Previous licence number (if known) 35/010880

6 Previous occupier (if known) Western Sydney Institute of TAFE-Penrith

7 Site to be licensed

No | Street

117 | Henry St

Suburb / Town | Postcode

Penrith | 2750

8 Main business of site Educational

9 Site staffing: Hours per day 15 Days per week 5

10 Site emergency contact

Phone [redacted] Home / mobile | Name

Kevin Dowse

11 Major supplier of dangerous goods Kleenheat Gas

12 If a new site or for amendments to depots – see page 4 of Guidance Notes.

Plan stamped by: | Name of Accredited Consultant | Date stamped

I certify that the details in this application (including any accompanying computer disk) are correct and cover all licensable quantities of dangerous goods kept on the premises.

13 Signature of applicant [redacted] | Printed name | Date

11.4.00

Please send your application, marked *CONFIDENTIAL*, to: **Dangerous Goods Licensing, WorkCover NSW, Level 3, GPO Box 5364, SYDNEY NSW 2001**

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92089315

WorkCover New South Wales, 200 Kent Street, Sydney 2000. Tel: 9370 5000 Fax: 9370 5999 ALL MAIL TO G.P.O. BOX 5364 SYDNEY 2001

WORKCOVER
NEW SOUTH WALES

** REMINDER NOTICE **

APPLICATION FOR RENEWAL

OF LICENCE TO KEEP DANGEROUS GOODS

ISSUED UNDER AND SUBJECT TO THE PROVISIONS OF THE DANGEROUS GOODS ACT, 1975 AND REGULATION THEREUNDER

DECLARATION: Please renew licence number 35/010880 to 2000/2001 . I confirm that all the licence details shown below are correct (amend if necessary).

[redacted] ..... 11.4.99.....

(Signature) *(Please print name)* *(Date signed)*

for: TECHNICAL & FURTHER EDUCATION COMMISSION

THIS SIGNED DECLARATION SHOULD BE RETURNED TO:

WorkCover New South Wales
Dangerous Goods Licensing Section
GPO BOX 5364
SYDNEY 2001

Enquiries: **ph (02) 9370 5187**
fax (02) 9370 6104

Details of licence on 30 March 2000

Licence Number 35/010880 **Expiry Date** 8/02/1999 **No. of Depots** **2**

Licensee TECHNICAL & FURTHER EDUCATION COMMISSION
WESTERN SYDNEY INSTITUTE OF TAFE

Postal Address: WESTERN SYDNEY INSTITUTE OF TAFE 117 HENRY ST PENRITH NSW 2750

Licensee Contact ~~BOB KIDDLE~~ Ph. ~~9830 1219~~ Fax. ~~9830 1557~~

Premises Licensed to Keep Dangerous Goods PENRITH COLLEGE
TECHNICAL & FURTHER EDUCATION COMMISSION WESTERN SYDNEY INSTITUTE OF TAFE
117 HENRY ST PENRITH 2750

Nature of Site TECHNICAL AND FURTHER EDUCATION

Major Supplier of Dangerous Goods ELGAS

Emergency Contact for this Site ~~JOHN CLARK~~ (K DOWSE 047365526) ~~Ph. 018 472 574~~

Site staffing 13HRS 5DAYS

Details of Depots

Depot No.	Depot Type	Goods Stored in Depot	Qty
1	**CYLINDER STORE**	**Class 2.1**	**360 KG**
	UN 1075 PETROLEUM GASES, LIQUEFIED		360 KG
2	**ABOVE-GROUND TANK**	**Class 2.1**	**2500 L**
	UN 1075 PETROLEUM GASES, LIQUEFIED		2125 L

FORM DG10

DX 13067, MARKET ST SYDNEY

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Guidance Notes for Part B – Site sketch

Please read these notes before you draw the site sketch. For more information, please phone (02) 9370 5187 and ask for the leaflet about site sketches.

A site sketch, drawn in black on A4 size paper, is required as part of the application. This sketch will be scanned by computer so that it can be made available to emergency services in the case of an incident. The site sketch must be drawn:

- with thick lines in black ink. DO NOT USE COLOUR. Keep it simple and clear.
- on A4 size paper.
- with all lettering at least 3 mm high (THIS SIZE OR LARGER).

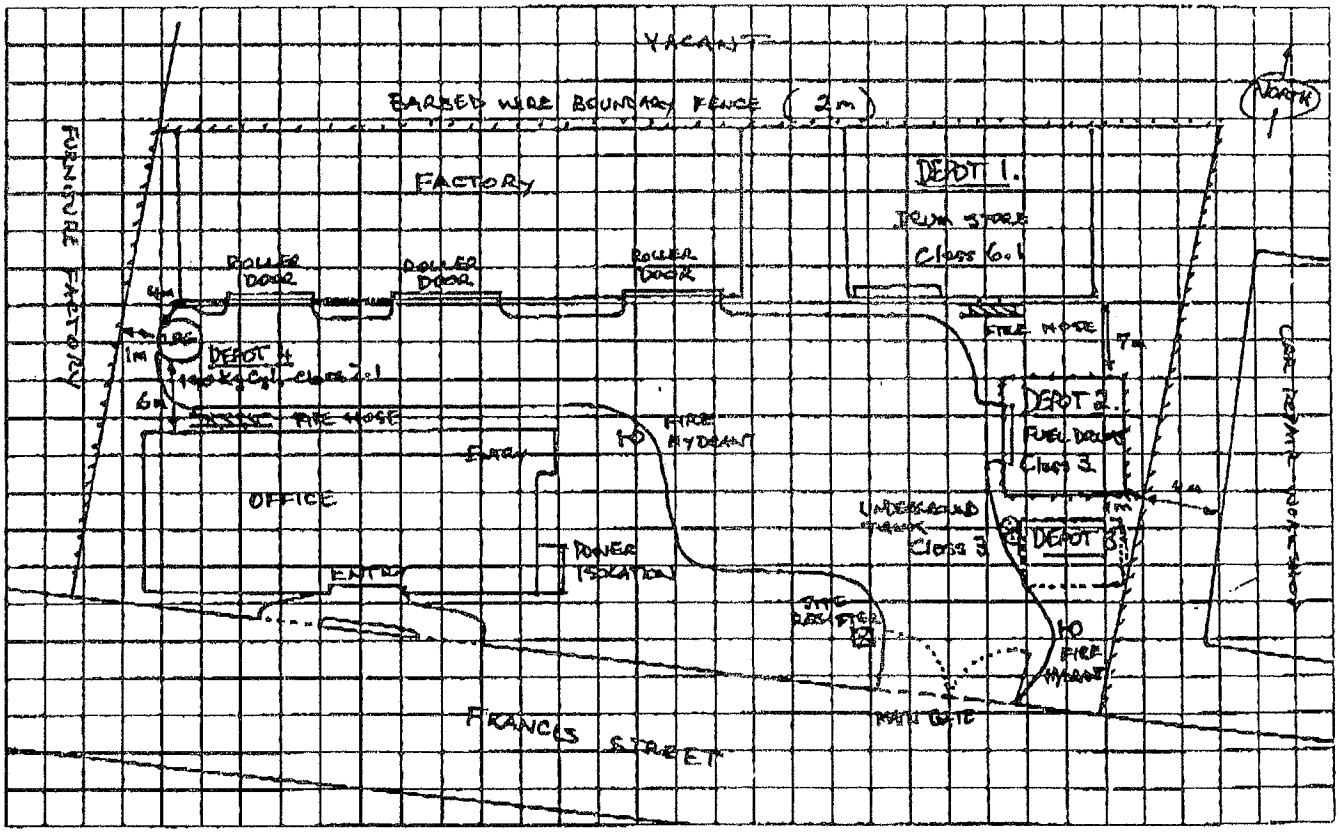
The site sketch must show the following if they exist:

1 public roads (with names)
2 internal road layout
3 site main entrance
4 other entry points
5 each dangerous goods depot, Class of goods & depot number
6 emergency equipment including hydrants, hoses, extinguishers
7 approximate location of underground tanks
8 nature of adjoining sites
9 manufacturing/ processing areas
10 location of site register (if any) and site map
11 distances between dangerous goods depots and public places
12 distances between dangerous goods depots and protected places
13 distances between dangerous goods depots
14 emergency isolation points for power, fuel, etc

and other information which could assist emergency services. For example, include the location of large stores of combustible materials, process vessels or cylinders containing dangerous goods.

If the site is too large to include all this information on one A4 sheet, please provide a key map showing the location of sub-areas and a separate A4 sheet for each sub-area.

Site sketch example (reduced in size)



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35/010880

WESTERN SYDNEY INSTITUTE TAFE

Workcover New South Wales
Dangerous Goods Licensing Section
GPO Box 5364
SYDNEY NSW 2001

Attention: Joanne Pasfield

4.5.00

Dear Ms Pasfield

RE: APPLICATION NO. 10880 FOR LICENCE TO KEEP DANGEROUS GOODS
PREMISES: 117 HENRY ST, PENRITH 2750

In response to your letter of 29.4.00, I wish to clarify that two cylinders have been removed from Penrith TAFE, no additional cylinders have been added. This leaves only one (1) cylinder which was originally included in the Dangerous Goods Licence.

Please advise me if I need to do anything further.

Yours faithfully

[redacted]
K Handley
Team Coordinator
Class Support

Cc Gayle Cole
Julia Kirwan

DEPARTMENT OF EDUCATION
Document Set ID: 9405504
Version: 1, Version Date: 29/01/2021

WorkCover NSW, 92-100 Kent Street, Sydney 2000 Tel (02) 9370 5000 Fax (02) 9370 5555 DX 1066 Sydney 2001

WORKCOVER
NEW SOUTH WALES

** REMINDER NOTICE **

APPLICATION FOR RENEWAL

OF LICENCE TO KEEP DANGEROUS GOODS

ISSUED UNDER AND SUBJECT TO THE PROVISIONS OF THE DANGEROUS GOODS ACT, 1975 AND REGULATION THEREUNDER

DECLARATION: Please renew licence number 35/010880 to 2000/2001 . I confirm that all the licence details shown below are correct (amend if necessary).

[redacted] 11.4.00
(Signature) *(Please print name)* *(Date signed)*

for: TECHNICAL & FURTHER EDUCATION COMMISSION

THIS SIGNED DECLARATION SHOULD BE RETURNED TO:

WorkCover New South Wales
Dangerous Goods Licensing Section
GPO BOX 5364
SYDNEY 2001

Enquiries: ph (02) 9370 5187
fax (02) 9370 6104

Details of licence on 30 March 2000

Licence Number 35/010880 **Expiry Date** 8/02/1999 **No. of Depots** 2

Licensee TECHNICAL & FURTHER EDUCATION COMMISSION
WESTERN SYDNEY INSTITUTE OF TAFE

Postal Address: WESTERN SYDNEY INSTITUTE OF TAFE 117 HENRY ST PENRITH NSW 2750

Licensee Contact ~~BOB KIDDLE~~ **Ph.** ~~9830 1213~~ **Fax.** ~~9830 1557~~

Premises Licensed to Keep Dangerous Goods PENRITH COLLEGE
TECHNICAL & FURTHER EDUCATION COMMISSION WESTERN SYDNEY INSTITUTE OF TAFE
117 HENRY ST PENRITH 2750

Nature of Site TECHNICAL AND FURTHER EDUCATION

Major Supplier of Dangerous Goods ELGAS

Emergency Contact for this Site ~~JOHN CLARK~~ (K DOWSE 047365526) ~~Ph. 010 472 574~~

Site staffing 13HRS 5DAYS

Details of Depots

Depot No.	Depot Type	Goods Stored in Depot	Qty
1	CYLINDER STORE	Class 2.1	360 KG
		UN 1075 PETROLEUM GASES, LIQUEFIED	360 KG
2	ABOVE-GROUND TANK	Class 2.1	2500 L
		UN 1075 PETROLEUM GASES, LIQUEFIED	2125 L

FORM DG10

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NEW SOUTH WALES
DEPARTMENT
OF EDUCATION
AND TRAINING

TAFE NSW

WESTERN SYDNEY
INSTITUTE

NEPEAN COLLEGE

Kingswood Campus
12-44 O'Connell Street
Kingswood NSW 2747

Penrith Campus (all enquiries)
117 Henry Street
Penrith NSW 2750

Phone 131 870
Fax (02) 4724 8288
nepean.wsi@tafensw.edu.au
wsi.tafensw.edu.au

Workcover New South Wales
Dangerous Goods Licensing Section
Locked Bag 2906
LISAROW NSW 2252

6 January 2006

L Notifiable Quantities. 23/2/06

Dear Sir/Madam

The attached letter was sent to me regarding our Penrith's Site Dangerous Goods Licence No. 35/010880, please note that the Kleenheat Gas Cylinder is under the Manifest Quantity of 5,000 L therefore, we do not need to renew this Licence which expires on 6.2.2006. I would appreciate it if you can confirm in writing that this is correct.

Licence No.35/030992, I have not been issued with a renewal notice, which expired on 13.11.05, but going by the letter I received above for Penrith Site, I have updated our Kingswood Site information as attached. I would appreciate it if you can confirm that we do not need to notify you of Petrol which is under the Manifest Quantity of 500 L in writing that this is correct also.

Yours faithfully

[redacted]

K Handley
Team Co-ordinator Facilities/
Class Support

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Appendix I Current & Historical Land Title Records

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

scottASHWOOD PTY.LTD
An InfoTrack Company

ABN: 42 166 543 255
Ph: 02 9099 7400
Fax: 02 9232 7141
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Summary of Owners Report

LPI **Sydney**

Address: 142 Henry Street, Penrith

Description: - Lot 10 D.P. 553665

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
1.6.1881 (1881 to 1925)	Francis Henry Woodriff (Gentleman)	Book 222 No. 132
5.8.1925 (1925 to 1935)	John Jurry Allen (Farmer)	Book 1396 No. 195
23.2.1935 (1935 to 1948)	Alfred Charles Kemp (Orchardist)	Book 1711 No. 475
14.12.1948 (1948 to 1971)	Roy William Handley (Radio and Electrical Distributor)	Book 2075 No. 355
24.5.1971 (1971 to 1977)	Peter Shaw and Associates Pty Limited	Book 3011 No. 751 Now Vol 12193 Fol 76
1.9.1977 (1977 to 1981)	A.F.Q. Pty Limited	Vol 12193 Fol 76
September 1981 (1981 to 1985)	Gwynvill Properties Pty Limited	Vol 12193 Fol 76
29.4.1985 (1985 to Date)	# Penrith City Council	Vol 12193 Fol 76 Now 10/553665

# Denotes Current Registered Proprietors

Easements: -NIL

Leases excluding building premises: -

- Numerous Leases found from 20.6.1989 to 13.3.2012 that have since expired or have been surrendered – not investigated

[redacted]

Yours Sincerely
James McDonnell
9 October 2016

Email: james.mcdonnell@scottashwood.com

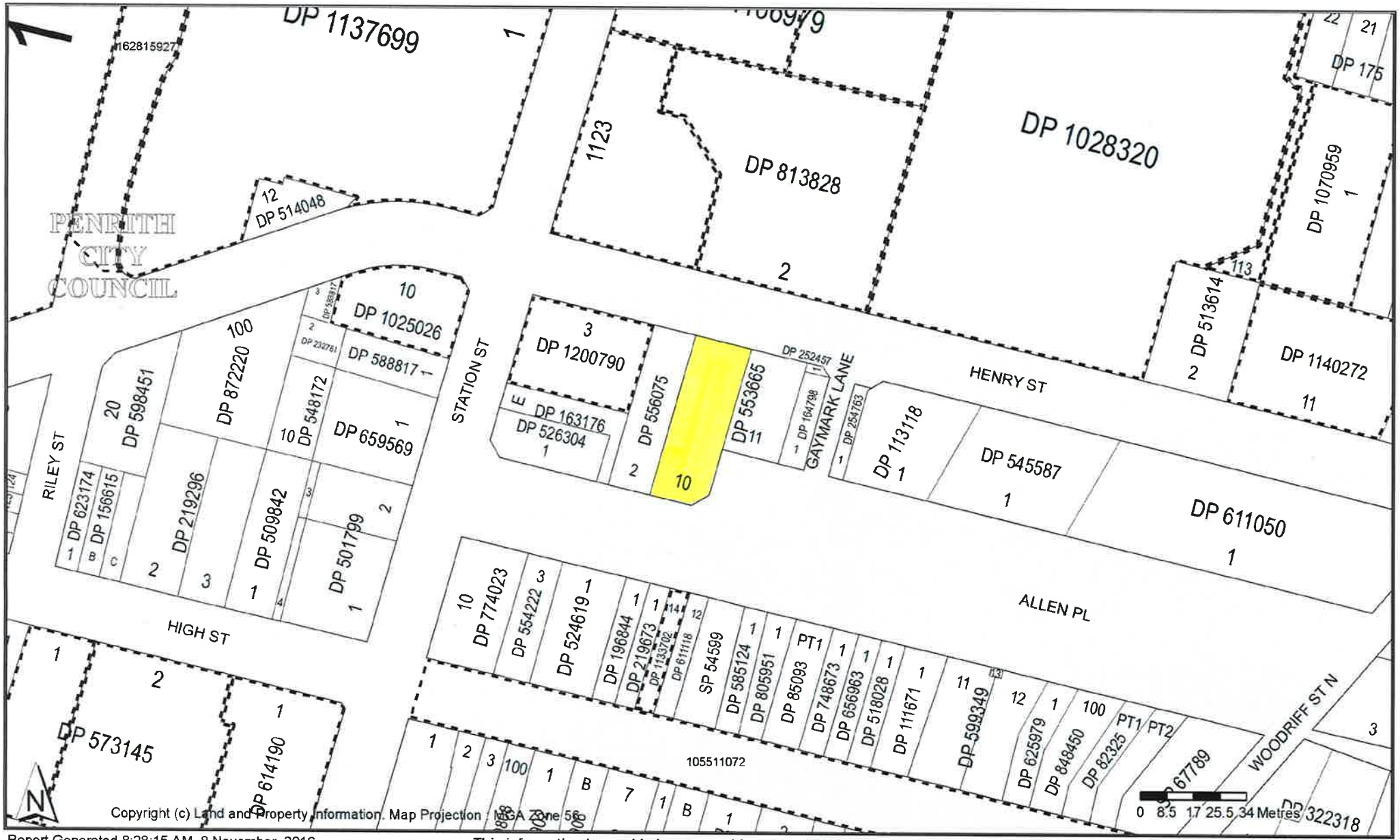
Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Land & Property Information

Cadastral Records Enquiry Report

Requested Parcel : Lot 10 DP 553665 **Identified Parcel :** Lot 10 DP 553665

Locality : PENRITH **LGA :** PENRITH **Parish :** CASTLEREAGH **County :** CUMBERLAND



Copyright (c) Land and Property Information. Map Projection : MGA Zone 56

Report Generated 8:28:15 AM, 8 November, 2016

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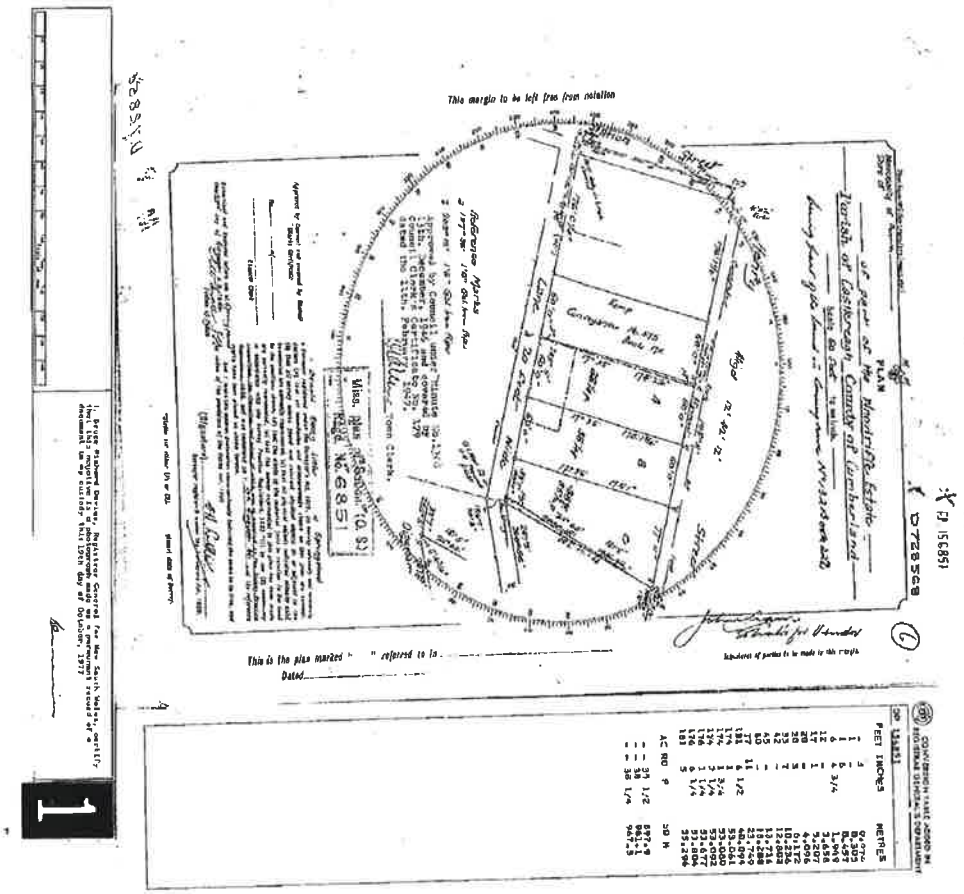
This information is provided as a searching aid only. While every endeavour is made to ensure the current cadastral pattern is accurately reflected, the Registrar General cannot guarantee the information provided. For all ACTIVITY PRIOR to SEPT 2002 you must refer to the RGs Charting and Reference Maps.

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R731217 /Doc:DP 0156851 P /Rev:06-Jan-1993 /Sts:OK.OK /Pgs:ALL /Prt:08-Nov-2016 15:10 /Seq:1 of 1
Ref:penrith /Src:M

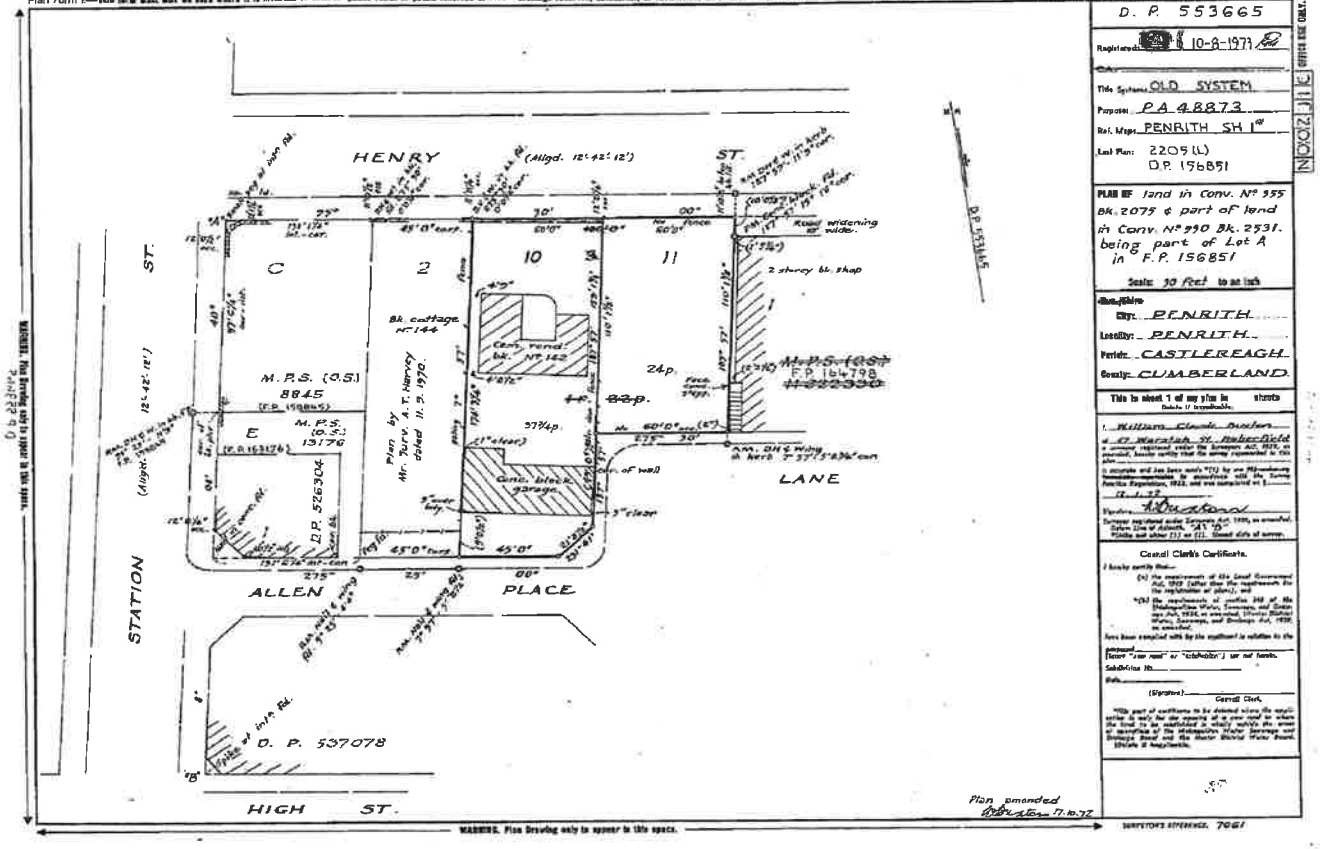


Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R725388 /Doc:DP 0553665 P /Rev:03-Sep-1992 /Sts:OK.OK /Pgs:ALL /Prt:08-Nov-2016 09:06 /Seq:1 of 1
Ref:penrith /Src:M

Plan Form 2—This form must NOT be used where it is intended to dedicate public roads or public reserves or create drainage reserves, easements, or restrictions as to user—See Form 3.

WARNING. CREASING OR FOLDING WILL LEAD TO REJECTION.



D. P. 553665

Registered: 10-8-1971

Title System: OLD SYSTEM

Purpose: P.A. 48873

Ref. Maps: PENRITH SH 1

Last Plan: 2205 (L) D.P. 156851

PLAN OF: land in Conv. No 355 Bk. 2075 & part of land in Conv. No 990 Bk. 2531. being part of Lot A in F.P. 156851

Scale: 30 Feet to an inch

City: PENRITH

Locality: PENRITH

Parish: CASTLEREAGH

County: CUMBERLAND

This is sheet 1 of my plan in sheets

I, William Claude Bucher of 17 Waratah St. Nelson Bay a person registered under the Surveyors Act, 1929, as amended, hereby certify that the survey represented in this plan is accurate and has been made *(1) by me *(2) by me or under my supervision in accordance with the Survey Practice Regulation, 1933, and was completed on 12.11.77

Signature: W Bucher

*(1) Surveyor registered under Surveyors Act, 1929, as amended. *(2) Licensed Surveyor. *Delete one of (1) or (2). Insert date of survey.

Council Clerk's Certificate.

I hereby certify that—

(a) the requirements of the Local Government Act, 1919 (other than the requirement for the registration of plans), and

*(b) the requirements of section 342 of the Metropolitan Water, Sewerage, and Drainage Act, 1924, as amended, Hunter District Water, Sewerage, and Drainage Act, 1938, as amended,

have been complied with by the applicant in relation to the proposed [Insert "new road" or "subdivision"] are not known.

Subdivision No.

Date

(Signature) Council Clerk.

*This part of certificate to be deleted where the application is only for the opening of a new road or where the land is to be subdivided in wholly suburban area or townships of the Metropolitan Water Sewerage and Drainage Board and the Hunter District Water Board. *Delete if inapplicable.

SURVEYOR'S REFERENCE: 7061

CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT

DP 553665

FEET	INCHES	METRES
-	0 1/2	0.015
-	1	0.025
-	2	0.05
-	3	0.075
-	5 1/8	0.185
1	0 3/4	0.45
1	6	0.455
1	9	0.535
2	2 1/2	0.679
4	6	1.32
4	6 1/2	1.435
4	9	1.45
5	2 1/2	1.585
5	8 3/4	1.748
8	8 3/4	2.66
9	0 1/2	2.755
10	-	3.05
10	0 1/8	3.05
11	9	3.58
11	10 1/2	3.62
11	11 1/4	3.64
12	-	3.66
12	0 1/2	3.67
12	1 1/8	3.695
12	2 1/4	3.715
12	6 1/4	3.815
21	8 1/2	6.615
42	-	12.8
55	-	13.715
49	-	14.935
50	-	15.29
97	6 1/4	29.725
110	1 3/8	33.565
132	1 1/4	39.96
133	1 1/4	40.085
159	1 3/8	48.5
174	3 1/4	53.12

AC	RD	P	SQ M
-	-	24	607
-	-	37 3/4	934.8

I, Jack Hayward Watson, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 30th day of November, 1976.

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R725372 /Doc:PA 048873 PA /Rev:22-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:04 /Seq:1 of 4
Ref:penrith /Src:M

No. 48873 48873

R.P. 2

NEW SOUTH WALES $ =0300 STAMP DUTY

Fees:—
Lodgment 12.00
about 5.00
Total $17.00
28/1/72

New South Wales.

APPLICATION TO BRING LANDS UNDER THE PROVISIONS OF THE REAL PROPERTY ACT, 1900

FEE SIMPLE(a)

CAUTION.—Severe penalties are provided by the Crimes Act, 1900, and the Real Property Act, 1900, for procuring a certificate of title through fraud.

(a) If a less estate, strike out "fee simple" and substitute the appropriate estate.

(b) Here state full name, postal address and occupation of declarant.

I/WE(b) ROBIN ROY SPEED of 2 O'Connell Street, Sydney, Solicitor, having been duly appointed in writing as Attorney for Peter Shaw and Associates Pty. Limited for the purposes of this application

do solemnly and sincerely declare, that

(c) Here state full name and postal address of person or corporation entitled. Where a person is entitled, the occupation (if such person is male) or social status (if female) should be stated.

(c) PETER SHAW AND ASSOCIATES PTY. LIMITED, a Company duly incorporated in the State of New South Wales and having its registered office there at 716 New South Head Road, Rose Bay.

I/we seised for an Estate in fee simple(a) of all that piece of land situated at Penrith in the County of Cumberland and Parish of Castlereagh being(d)

(d) The application should be accompanied by a plan of survey unless the Registrar General has previously dispensed therewith.

Give full description of the land, e.g., "Lot ... in Deposited Plan No. ... (or as the case may be) ... plan No. ...", or "Lot ... in plan lodged herewith"; or "The whole ... (or specified part) ... of the land described in deed registered Book ... No. ...".

If any appurtenant easement is claimed, it must be specified in this description and in the plan.

If there be any rights of way or other rights or easements affecting the premises the particulars should be stated.

the whole of the land described in Conveyance registered number 751 Book 3001 together with right of way as shown edged red on plan endorsed on Conveyance Registered Number 195 Book 1396.

3011

124a. Lot 3 DP 180 9/2/72

which land is(e) part of(f) 1000 acres originally granted to(g) DANIEL WOODRIFF by Crown grant, under the hand of the Governor of the Colony, dated the 18th day of December, 1805

(e) State whether "the whole" or "part".

(f) Insert allotment with reference to number and section on plan, if any, or if not, number of acres granted.

(g) Name of Grantee.

And I/We hereby apply to have the land described in the above declaration brought under the provisions of the Real Property Act, and request you to issue the Certificate of Title in the name of

(h) As in marginal note (c) above. If two or more are entitled, state whether as joint tenants or tenants in common; if as tenants in common, state shares.

(h) PETER SHAW AND ASSOCIATES PTY. LIMITED of 716 New South Head Road, Rose Bay.

and I/We further declare that the owners and occupiers of adjacent lands are as follows

State whether on North, South, East or West	Name and postal address of owner	Name and postal address of occupier
NORTH	Penrith City Council	–
SOUTH	Penrith City Council	–
EAST		
WEST		

2+3+4 Doc Doc 19.

12193 76 to 77

28 AUG 1973

No alterations should be made by erasure. The words rejected should be scored through with the pen, and those substituted written over them, the alteration being verified by signature or initials in the margin, or noticed in the attestation.

073646

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

I/We further declare, that:—

(1) There is no person in possession or occupation of the said land or any part thereof adversely to my/our interest therein, and that the land is now[1] in the occupation of Peter Shaw and Associates Pty. Limited

(2) There does not exist any lease or agreement for lease of the said land for any term exceeding a tenancy for one year, or from year to year,[j]

(3) There does not exist any mortgage, lien, writ of execution, charge or encumbrance, will or settlement, or any deed or writing, contract, or dealing (other than such lease or tenancy as aforesaid), giving any right, claim, or interest in or to the said land, or any part thereof, to any other person than myself/ourselves,[k]

[redacted] the Schedule hereon* to which my/our signature is/are affixed, and which is to be taken as part of this Declaration contains a full and correct list[l] commencing with Conveyance dated 5th August 1925 and 4th November 1954 registered No. 195 Book 1396 and Registered No 39 Book 2323 respectively of all settlements, deeds, documents, or instruments, maps, plans and papers relating to the land comprised in this application, so far as I/we have any means of ascertaining the same, distinguishing such as being in my/our possession or under my/our control, are herewith lodged and indicating where or with whom, so far as known to me/us, any others thereof are deposited. Also, that there does not exist any fact or circumstance whatever material to the title, which is not hereby fully and fairly disclosed to the utmost extent of my/our knowledge, information, and belief; and that there is not, to my/our knowledge and belief, any action or suit pending affecting the said land, nor any person who has or claims any estate, right, title or interest therein, or in any part thereof, otherwise than by virtue and to the extent of some lease or tenancy hereby fully disclosed,[m]

[redacted] I/We make this solemn Declaration, conscientiously believing the same to be true and by virtue of the Oaths Act, 1900.[o]

[redacted] I/We certify that the within application is correct for the purposes of the Real Property Act, 1900.[o]

(RULE UP ALL BLANKS BEFORE SIGNING)

Made and subscribed by the abovenamed ROBIN ROY SPEED

this 27th day of January 1972

in the presence of[p] T. A. Stewart J.P.

[redacted] *Signature of Applicant*

SCHEDULE REFERRED TO*

(TO BE SIGNED BY APPLICANT IMMEDIATELY BELOW THE LAST DOCUMENT SCHEDULED)

To include not only Title Deeds, Probates, Letters of Administration, Statutory Declarations, etc., but also the Surveyor's Plan or Statement in lieu thereof

---

TO BE COMPLETED BY APPLICANT:—

(A) Documents Nos. 1 – 17 hereunder LODGED HEREWITH.

(B) Documents Nos. hereunder WHEREABOUTS UNKNOWN.

(C) Documents Nos. hereunder PERMANENTLY LODGED. Receipt Nos.

(D) Documents Nos. hereunder TO BE LODGED BY:—

Should any transaction affecting the land in this application be entered into or any alterations in the buildings or fences be made subsequent to the date of the application, but prior to the issue of the Certificate of Title, the Registrar General should be informed immediately, and all documents evidencing such transaction should be lodged.

(i) Insert "unoccupied" or "in the occupation of" adding names and addresses of tenants in full. State also nature of tenancy.

(j) If there be any Lease, add the words "except as follows" and insert particulars thereof.

(k) If there be any mortgage, lien, etc., add the words "except as follows" and insert particulars thereof.

(l) The declaration may be qualified to the extent to which Applicant's title has been previously passed by the Registrar General by inserting the words "Commencing with Conveyance dated ..... registered ....." or as the case may be. Otherwise all documents from the Crown Grant onwards must be entered in the Schedule.

(m) If there be any exception add the words "except as ..." and insert necessary ...

(n) If made outside N.S.W. strike out Oaths Act, 1900, and ... relations to Impel Act.

(o) Section 117 requires that th... Certificate be signed by Applicant or his Solicitor an... render liable any person fals... or negligently certifying, to a ... penalty ... also, to damages recoverable by parties injured.

(p) If made in N.S.W., this declaration must be attested by a Notary Public, Justice of the Peace or Commissioner for Affidavits. If made outside N.S.W., the declaration should be made according to the law of the State in which it is made and before a person authorised by that law to take declarations.

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Req:R725372 /Doc:PA 048873 PA /Rev:22-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:04 /Seq:3 of 4
Ref:penrith /Src:M

SCHEDULE REFERRED TO—(*continued*)*

(TO BE SIGNED BY APPLICANT, IF UTILISED, IMMEDIATELY BELOW THE LAST DOCUMENT SCHEDULED)

No.	Date	Nature of Instrument	Parties	Registration Book	Registration No.	For Office use only By whom Produced
1	5.8.25	Conveyance	F.H. WOODRIFF to J.C. ALLEN	1396	195	✓
2	27.4.31	Mortgage	J.C. ALLEN to A.C. KEMP	1624	337	✓
3	23.2.35	Conveyance of Equity of Red'mn	J.C. ALLEN to A.C. KEMP	1711	475	✓
4	14.12.48	Conveyance	A.C. KEMP to R.W. HANDLEY	2075	355	✓
5	26.7.50	Probate	F.H. WOODRIFF No. 365748			
6	4.11.54	Conveyance	H.O. WOODRIFF & P.M. WOODRIFF to HANDLEYS PTY. LIMITED	2323	39	✓
7	22.7.54	Mortgage	HANDLEYS PTY. LIMITED to BANK OF NEW SOUTH WALES	2323	349	✓
8	6.4.60	Discharge of Mortgage	BANK OF NEW SOUTH WALES to HANDLEYS PTY. LIMITED	2531	989	✓
9	28.3.60	Conveyance	HANDLEYS PTY. LIMITED to ROY WILLIAM HANDLEY	2531	990	✓
10	22.7.54	Mortgage	R.W. HANDLEY to BANK OF NEW SOUTH WALES	2313	526	✓
11	21.4.60	Discharge of Mortgage	BANK OF NEW SOUTH WALES to R.W. HANDLEY	2526	865	✓
12	30.4.62	Mortgage	R.W. HANDLEY to BAK OF NEW SOUTH WALES	2608	882	✓
13		Discharge of Mortgage	BANK OF NEW SOUTH WALES to R.W. HANDLEY	3008	513	✓
14	24.5.71	Conveyance	R.W. HANDLEY to PETER SHAW AND ASSOCIATES PTY. LIMITED	3011	751	✓
15	30.6.71	Gov't Gazette	R.W. HANDLEY to PENRITH CITY COUNCIL (N.S.W. GOV'T GAZETTE NO. 69)			
16	20.9.63	Gov't Gazette	R.W. HANDLEY to PENRITH CITY COUNCIL (N.S.W. GOV'T GAZETTE NO. 91)			
17	5.11.63	Deposited Plan	No. 217346 showing resumptions of Land referred to in above two Gazette Notices			

Recd docs 1-17 28/11/72

18	14-12-72	Letter from	ERIC ANDERSON RADIO - TELEVISION P/L	} Shut 8. 28/12/72.
19	20.2.73	Copy of letter	from Bartier, Perry & Purcell	} Sheet 11 MB 5/3/73
20	16-5-73	Power of Attorney	POWER OF ATTORNEY. - F. GULSON : BARTIER PERRY & PURCELL.	
20	23-5-73	Mem. of Non-Revoc.	Robin R. Speed, Peter Shaw + Assoc.	} Sheet 16 RC 28/8/73.
21	19-8-71	Power of Attorney		
22	3-8-73	Stat Dec	PETER VICTOR SHAW	} CR 8/8/73 Sheet 18.

Docs 5-9, 12-13 to return to Bartier Perry & Purcell the rest to remain.

Received above documents 5/11/73 Bartier Perry Purcell [redacted]

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R725372 /Doc:PA 048873 PA /Rev:22-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:04 /Seq:4 of 4
Ref:penrith /Src:M

DP553665

1v. 22p.

No. 48873 28/1/71

Lodged by: Barden Cunningham

Address: 2 O'Connell Street

Phone No.: Sydney

SCHEDULE REFERRED TO—(*continued*)*

(TO BE SIGNED BY APPLICANT, IF UTILISED, IMMEDIATELY BELOW THE LAST DOCUMENT SCHEDULED)

No.	Date	Nature of Instrument	Parties	Registration Book	Registration No.	For Office use only By whom Produced

27251 9.65 V. C. N. BLIGHT, GOVERNMENT PRINTER

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R725353 /Doc:CT 12193-076 CT /Rev:03-Feb-2011 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:02 /Seq:1 of 6
Ref:penrith /Src:M

[redacted]FICATE OF TITLE

NEW SOUTH WALES

[redacted]L PROPERTY ACT, 1900

12193076

Vol. 12193 Fol. 76

Appln. No.48873

Edition issued 24-8-1973

12193 Fol. 76 (Page 1) Vol.

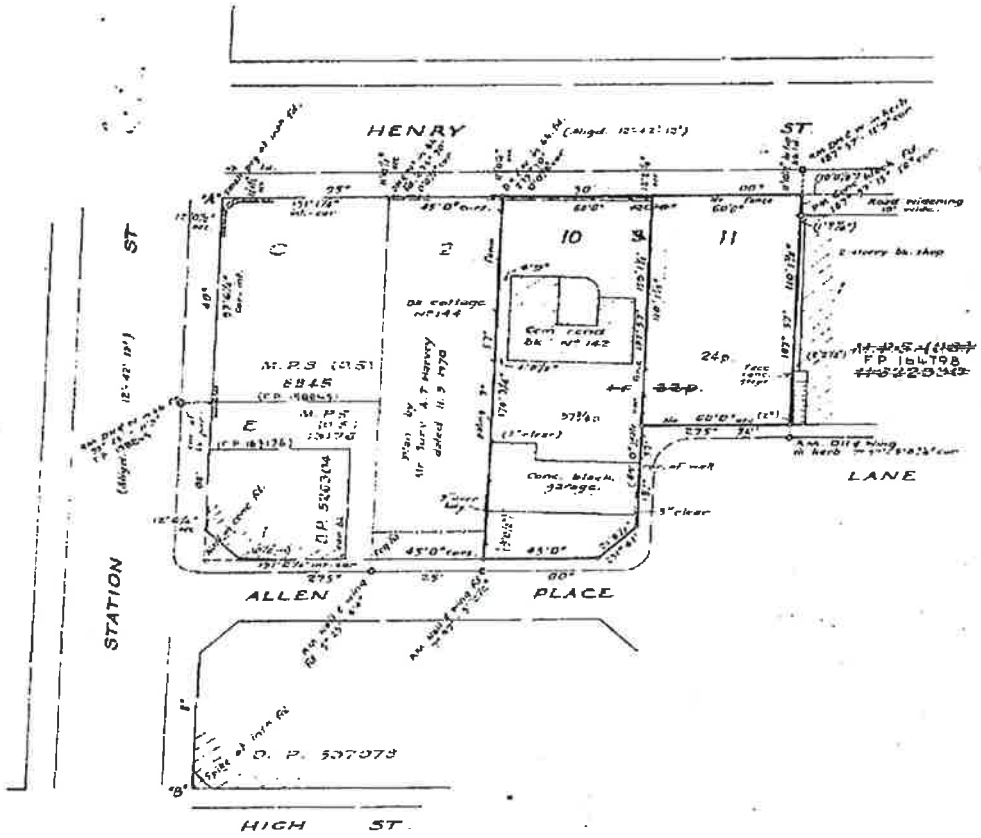
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

CANCELLED

Registrar General.

PLAN SHOWING LOCATION OF LAND

SEE AUTO FOLIO



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 10 in Deposited Plan 553665 in the City of Penrith Parish of Castlereagh and County of Cumberland being part of Portion 90 granted to Daniel Woodriff on 1-2-1804 and regranted on 18-12-1805.

FIRST SCHEDULE

~~PETER SHAW AND ASSOCIATES PTY. LIMITED.~~

SECOND SCHEDULE

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

Registrar General

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

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

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

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

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FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
~~A.F.G. Pty. Limited~~	~~Transfer~~	~~Q156576~~		~~1-9-1977~~	
~~Gwynvill Properties Pty. Limited by Application S638904. Registered 9-9-1981~~					
Penrith City Council by Transfer V656082. Registered 29-4-1985					

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
~~Lease~~	~~P396521~~	~~——~~	~~of premises known as Shop No. 6 in the "Centre" to Chris George of Richmond, Shop Keeper and Joyce George his~~	~~9-10-1975~~		~~Surrendered~~	~~Q136760~~	
~~Lease~~	~~P396522~~	~~——~~	~~of premises known as Shop No. 4 in the "Centre" to Elizabeth Katherine Vickers of Randwick, Shopkeeper.~~	~~9-10-1975~~		~~Surrendered~~	~~Q136758~~	
~~Lease~~	~~P414643~~	~~——~~	~~of premises known as Shop No. 5 in the "Centre" to Kenneth Ernest Skinner of Springwood, Shopkeeper and Kibu Ruby Rose Skinner his wife.~~	~~9-10-1975~~		~~Surrendered~~	~~Q136759~~	
~~Lease Mortgage~~	~~P497977~~	~~——~~	~~of premises known as Shops 2 and 3 in the "Centre" to June Margaret Rowe, of Cambridge Park, Married Woman, and T. & J. Wadland (Pivedock) Pty. Limited.~~	~~14-11-1975~~				
~~LEASE~~	~~P497977~~	——	~~of premises known as Shops 2 and 3 in the "Centre" to June Margaret Rowe, of Cambridge Park, Married Woman, and T.&J. Wadland (Pivedock) Pty. Limited~~	~~14-11-1975~~		Expired	17-3-1987	
Lease	Q136761	——	Chris George of Richmond Shopkeeper, Joyce George his wife of premises known as Shop No. 6 in the Shopping Arcade the Centre	1-9-1977		Surrendered	T889293	
Lease	Q136762	——	Kenneth Ernest Skinner of Springwood Shopkeeper, Kibu Ruby Rose Skinner his wife of premises known as Shop No. 4 in the Shopping Arcade the Centre Expires 28-5-1980	1-9-1977		Expired	29-4-1985	

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

(Page 2 of 2 pages)

Req:R725353 /Doc:CT 12193-076 CT /Rev:03-Feb-2011 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:02 /Seq:2 of 6
Ref:penrith /Src:M
Document Set ID: 9456504
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Req:R725353 /Doc:CT 12193-076 CT /Rev:03-Feb-2011 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:02 /Seq:3 of 6
Ref:penrith /Src:M

SECOND SCHEDULE (continued)

OF PART OF THE PREMISES KNOWN AS 140-142 HENRY STREET, PENRITH

INSTRUMENT NATURE	INSTRUMENT NUMBER	Shop	LESSEES	DATE OF EXPIRY	REGISTERED	Signature of Registrar General	CANCELLATION
Lease	R231819	4	to Ronald Raymond Rowe of Cambridge Park, Shop Proprietor and June Margaret Rowe his wife as joint tenants, together with option of renewal	28-2-1982	8-2-1980		30-7-1982
Lease	Q136761		AFFECTED BY AA93483 TRANSFER OF LEASE TO NICHOLAS TSELEPIS OF WERRINGTON SHOPKEEPER AND CHRISTINA TSELEPIS HIS WIFE AS JOINT TENANTS	22-3-1990			T889293
R231819	Lease		Lessees: John Arthur Freeburn in ½ share and Wendy Margaret Freeburn in ½ share as tenants in common by Transfer S406634 Registered 13-1-1981.				
Lease	R231819		to Helge Schmidt and Janice Schmidt as tenants in common by Transfer S798420.		25-11-1981.		30-7-1982 T165246 30-7-1982
T165846	Lease	4	to Helge Schmidt and Janyce Schmidt as tenants in common, together with option of renewal.	28-2-1987	30-7-1982		
T165846	Lease.	LESSEE:	Patora Pty. Limited by Transfer T556651.		30-5-1983.		
~~Lease~~	~~T950827~~	5 and 6	to Peter Camilleri, Maria Ann Camilleri, Charles Camilleri and Leina Camilleri - for tenancy see Dealing - together with an option of renewal.	31-7-1988	14-2-1984		Surrendered V656081
T165846 W606576 P	Lease. P W738170 Request: Shop No. 4 has been renumbered as Shop No. 2. Registered 17-3-1987						
	Lease to Steadfast Enterprises Limited of premises being Shops 4 and 5 in the building known as The Allen Arcade as shown in the plan with W606576. Expires 28-2-1989. Option of renewal 3 years. Registered 17-3-1987						
W749127 P	Lease to Leonardo Gulisano and Connie Nella Gulisano as joint tenants of premises being Shop 6 in the building known as The Allen Arcade as shown hatched black in plan with W749127. Expires 28-2-1989. Option of renewal 3 years. Registered 17-3-1987						
~~Lease~~	~~X54963~~	3	~~to George Toutounji and Georgette Toutounji~~				
X54963 P	Lease to George Toutounji and Georgette Toutounji as joint tenants of Shop 3 in premises known as The Allen Arcade as shown hatched black in plan with X54963. Expires 13.11.1989. Option of renewal 3 years Registered 4.11.1987						
X54963 P	Lease. X65179 Lessee now Hafele Pty. Limited. Registered 4.11.1987.						

CANCELLED

SEE AUTO FOLIO

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

(Page)

R723428 T/L (Q136761) (R)
SH086PLT/L (R231819 L
S636404 CN
S795420 T/L
T165846 L/R
T556651 T/L lep
T889293 L/R
J950827 R/S (affects 5 & 6)
V656081 S/L R 2TE
W606576 Lse
W738170 Req
W749127 Lse (shop 6)
X54963 L/R
X65179 T/L R

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R725353 /Doc:CT 12193-076 CT /Rev:03-Feb-2011 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:02 /Seq:4 of 6
Ref:penrith /Src:M

SECOND SCHEDULE (continued)

OF PART OF THE PREMISES KNOWN AS 140-142 HENRY STREET, PENRITH .

INSTRUMENT		SHOP	LESSEES	DATE OF EXPIRY	REGISTERED	Signature of Registrar General	CANCELLATION
NATURE	NUMBER						

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

VOL. FOL.

4 (Page)

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R725353 /Doc:CT 12193-076 CT /Rev:03-Feb-2011 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:02 /Seq:5 of 6
Ref:penrith /Src:M

Document Set ID: 9456504
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Req:R725353 /Doc:CT 12193-076 CT /Rev:03-Feb-2011 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:02 /Seq:6 of 6
Ref:penrith /Src:M

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

InfoTrack
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Information Broker

Historical Title

Information Provided Through
John McLaren & Co (NSW)
Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
8/11/2016 9:00AM

FOLIO: 10/553665

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 12193 FOL 76

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
30/8/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
20/6/1989	Y404325	LEASE	EDITION 1
24/9/1992	E783655	DEPARTMENTAL DEALING	
12/10/1992	E766866	LEASE	EDITION 2
7/10/1993		AMENDMENT: LOCAL GOVT AREA	
9/6/1994	U339011	LEASE	EDITION 3
15/4/1997	2977154	LEASE	EDITION 4
24/6/1997	3170479	LEASE	EDITION 5
3/12/1997	3636638	LEASE	EDITION 6
15/1/1998	3733152	LEASE	EDITION 7
6/11/2000	6575982	REQUEST	
6/11/2000	6575983	LEASE	EDITION 8
13/6/2002	8682054	LEASE	EDITION 9
22/10/2004	AB40251	SURRENDER OF LEASE	
22/10/2004	AB40252	LEASE	EDITION 10
21/3/2005	AB360901	LEASE	EDITION 11
5/8/2005	AB678272	LEASE	EDITION 12
20/10/2005	AB852063	LEASE	EDITION 13
2/12/2005	AB958646	LEASE	EDITION 14

END OF PAGE 1 - CONTINUED OVER

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
8/11/2016 9:00AM

FOLIO: 10/553665 PAGE 2

Recorded	Number	Type of Instrument	C.T. Issue
20/8/2007	AD352780	LEASE	EDITION 15
14/12/2007	AD638015	LEASE	
14/12/2007	AD638016	LEASE	EDITION 16
6/8/2008	AD885705	SURRENDER OF LEASE	
6/8/2008	AD885706	LEASE	
6/8/2008	AE71200	LEASE	EDITION 17
14/5/2010	AF492235	LEASE	EDITION 18
16/9/2010	AF761963	LEASE	EDITION 19
13/3/2012	AG865542	LEASE	EDITION 20
12/4/2013	AH662235	LEASE	EDITION 21
28/1/2014	AI331195	LEASE	EDITION 22
9/7/2014	AI722676	LEASE	
9/7/2014	AI722677	LEASE	EDITION 23
25/7/2014	AI761352	LEASE	EDITION 24
28/1/2015	AI898777	LEASE	EDITION 25
4/9/2015	AJ787670	LEASE	EDITION 26

*** END OF SEARCH ***

penrith PRINTED ON 8/11/2016

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Information Broker

Title Search

Information Provided Through
John McLaren & Co (NSW)
Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 10/553665

SEARCH DATE	TIME	EDITION NO	DATE
8/11/2016	9:05 AM	26	4/9/2015

LAND

LOT 10 IN DEPOSITED PLAN 553665
LOCAL GOVERNMENT AREA PENRITH
PARISH OF CASTLEREAGH COUNTY OF CUMBERLAND
TITLE DIAGRAM DP553665

FIRST SCHEDULE

PENRITH CITY COUNCIL (T V656082)

SECOND SCHEDULE (9 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 AF761963 LEASE TO AUSTRALIAN HEARING SERVICES OF SHOP 7, ALLEN ARCADE, 140-142 HENRY STREET, PENRITH & CAR SPACES NO: 6 & 7. EXPIRES: 31/5/2013. OPTION OF RENEWAL: THREE YEARS.
3 AH662235 LEASE TO NEPEAN INDEPENDENT LIVING COMMITTE INCORPORATED OF SHOP 6 ALLEN ARCADE 140-142 HENRY STREET PENRITH INCLUDING CAR SPACE NO. 5. EXPIRES: 31/3/2016.
4 AI331195 LEASE TO TARA MARIE BATTISHILL OF SHOP 3, ALLEN ARCADE, 140-142 HENRY STREET, PENRITH. EXPIRES: 31/8/2016. OPTION OF RENEWAL: 3 YEARS.
5 AI722676 LEASE TO ACADEMIES AUSTRALASIA PTY LTD OF SHOP 8, ALLEN ARCADE, 140-142 HENRY STREET, PENRITH AND CAR SPACE NO. 8. EXPIRES: 28/2/2017. OPTION OF RENEWAL: 3 YEARS.
6 AI722677 LEASE TO REJUVEN8 BODY STUDIO AUSTRALIA PTY LIMITED OF SHOP 1, ALLEN ARCADE, 140-142 HENRY STREET, PENRITH AND CAR SPACES NO. 1 AND 2. EXPIRES: 28/2/2017. OPTION OF RENEWAL: 3 YEARS.
7 AI761352 LEASE TO ACADEMIES AUSTRALASIA PTY LTD OF SHOP 10, ALLEN ARCADE, 140-142 HENRY STREET, PENRITH & CAR SPACE NUMBERED 9. EXPIRES: 28/2/2017. OPTION OF RENEWAL: 3 YEARS.
8 AI898777 LEASE TO CLB PROPERTY GROUP PTY LTD BEING SHOPS 4 AND 5, ALLEN ARCADE, 140-142 HENRY STREET PENRITH. EXPIRES: 14/8/2017. OPTION OF RENEWAL: THREE (3) YEARS.
9 AJ787670 LEASE TO MC TUITION PTY LTD OF ALLEN ARCADE, SUITE 9, 140-142 HENRY STREET, PENRITH INCLUDING CAR PARKING

END OF PAGE 1 - CONTINUED OVER

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

FOLIO: 10/553665 PAGE 2

SECOND SCHEDULE (9 NOTIFICATIONS) (CONTINUED)

SPACES NUMBERED 1 & 2. EXPIRES: 28/2/2018.

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

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Version: 1, Version Date: 29/01/2021

scottASHWOOD PTY.LTD
An InfoTrack Company

ABN: 42 166 543 255
Ph: 02 9099 7400
Fax: 02 9232 7141
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Summary of Owners Report

LPI **Sydney**

Address: 118 – 120 Henry Street, Penrith

Description: - Lot 1 D.P. 113118

As regards the parts tinted yellow and numbered 1 & 1A on the attached Cadastral

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
21.6.1881 (1881 to 1936)	Francis Henry Woodriff (Gentleman)	Book 222 No. 132
18.4.1936 (1936 to 1939)	Emily Doolan (Married Woman)	Book 1747 No. 31
20.5.1939 (1939 to 1949)	Mabel Sarah Victoria Kemp (Married Woman)	Book 1846 No. 686
10.9.1940 (1949 to 1967)	Geoffrey Howard Upton (Sports Store Proprietor)	Book 2098 No. 958
1959	The part that we have numbered 1A on the attached cadastral became Council Public Road upon the approval of D.P. 164798, circa 1959 This road was subsequently closed The first title to issue after the road closure is Volume 13759 Folio 102 dated 20.12.1978, issuing in the name of Allen Holdings (Australia) Pty Limited	
6.3.1967 (1967 to 1973)	George Alwyn Power (Garage Proprietor)	Book 2839 No. 396
28.2.1973 (1973 to 1977)	Galvina Pty Limited	Book 3084 No. 905
21.7.1977 (1977 to 1980)	Altco Holdings Pty Limited Then Allen Holdings Pty Limited Now Allen Holdings (Australia) Pty Limited	Book 3284 No. 90 Now Vol 13820 Fol 105

As regards the parts tinted yellow and numbered 2 & 2A on the attached Cadastral

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
21.6.1881 (1881 to 1947)	Francis Henry Woodriff (Gentleman)	Book 222 No. 132
27.3.1947 (1947 to 1967)	Geoffrey Howard Upton (Boot Repairer)	Book 2025 No. 280
1959	The part that we have numbered 1A on the attached cadastral became Council Public Road upon the approval of D.P. 164798, circa 1959 This road was subsequently closed The first title to issue after the road closure is Volume 13759 Folio 102 dated 20.12.1978, issuing in the name of Allen Holdings (Australia) Pty Limited	
6.3.1967 (1967 to 1973)	George Alwyn Power (Garage Proprietor)	Book 2839 No. 396
28.2.1973 (1973 to 1977)	Galvina Pty Limited	Book 3084 No. 905
21.7.1977 (1977 to 1980)	Altco Holdings Pty Limited Then Allen Holdings Pty Limited Now Allen Holdings (Australia) Pty Limited	Book 3284 No. 90 Now Vol 13820 Fol 105

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

scottASHWOOD PTY.LTD
An InfoTrack Company

ABN: 42 166 543 255
Ph: 02 9099 7400
Fax: 02 9232 7141
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

As regards the parts tinted yellow and numbered 3 & 3A on the attached Cadastral

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
21.6.1881 (1881 to 1947)	Francis Henry Woodriff (Gentleman)	Book 222 No. 132
27.3.1947 (1947 to 1947	Charles William Owen Roberts (Electrician)	Book 2032 No. 575
9.10.1947 (1947 to 1967)	Geoffrey Howard Upton (Boot Repairer)	Book 2033 No. 174
1959	The part that we have numbered 1A on the attached cadastral became Council Public Road upon the approval of D.P. 164798, circa 1959 This road was subsequently closed The first title to issue after the road closure is Volume 13759 Folio 102 dated 20.12.1978, issuing in the name of Allen Holdings (Australia) Pty Limited	
6.3.1967 (1967 to 1973)	George Alwyn Power (Garage Proprietor)	Book 2839 No. 396
28.2.1973 (1973 to 1977)	Galvina Pty Limited	Book 3084 No. 905
21.7.1977 (1977 to 1980)	Altco Holdings Pty Limited Then Allen Holdings Pty Limited Now Allen Holdings (Australia) Pty Limited	Book 3284 No. 90 Now Vol 13820 Fol 105

Search continued as to the whole of the subject land

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
6.3.1980 (1980 to 1987)	OPF Nominees Pty Limited	Vol 13820 Fol 105
6.10.1987 (1987 to 2006)	Alfred Moss Investments Pty Limited	Vol 13820 Fol 105 Now 1/113118
18.10.2006 (2006 to Date)	# Penrith City Council	1/113118

# Denotes Current Registered Proprietors

Easements: -NIL

Leases: -

- 26.8.1959 Book 2561 No. 478 – Caltex Oil (Australia) Pty Limited – expired or surrendered – not investigated
- 30.3.1977 Book 2841 No. 438 – Caltex Oil (Australia) Pty Limited – surrendered 28.2.1973 Book 3090 No. 208
- 29.11.1977 Book 3303 No. 214 – Pauls (Merchants) Pty Limited – expired or surrendered – not investigated
- Numerous Leases dated from 21.6.1993 to 12.4.2013 – expired or surrendered – not investigated
- 28.5.2015 AJ526510 – Specialty Fashion Group Limited – expires 31.7.2019 – option of renewal 5 years

[redacted]

Yours Sincerely
James McDonnell
14 October 2016

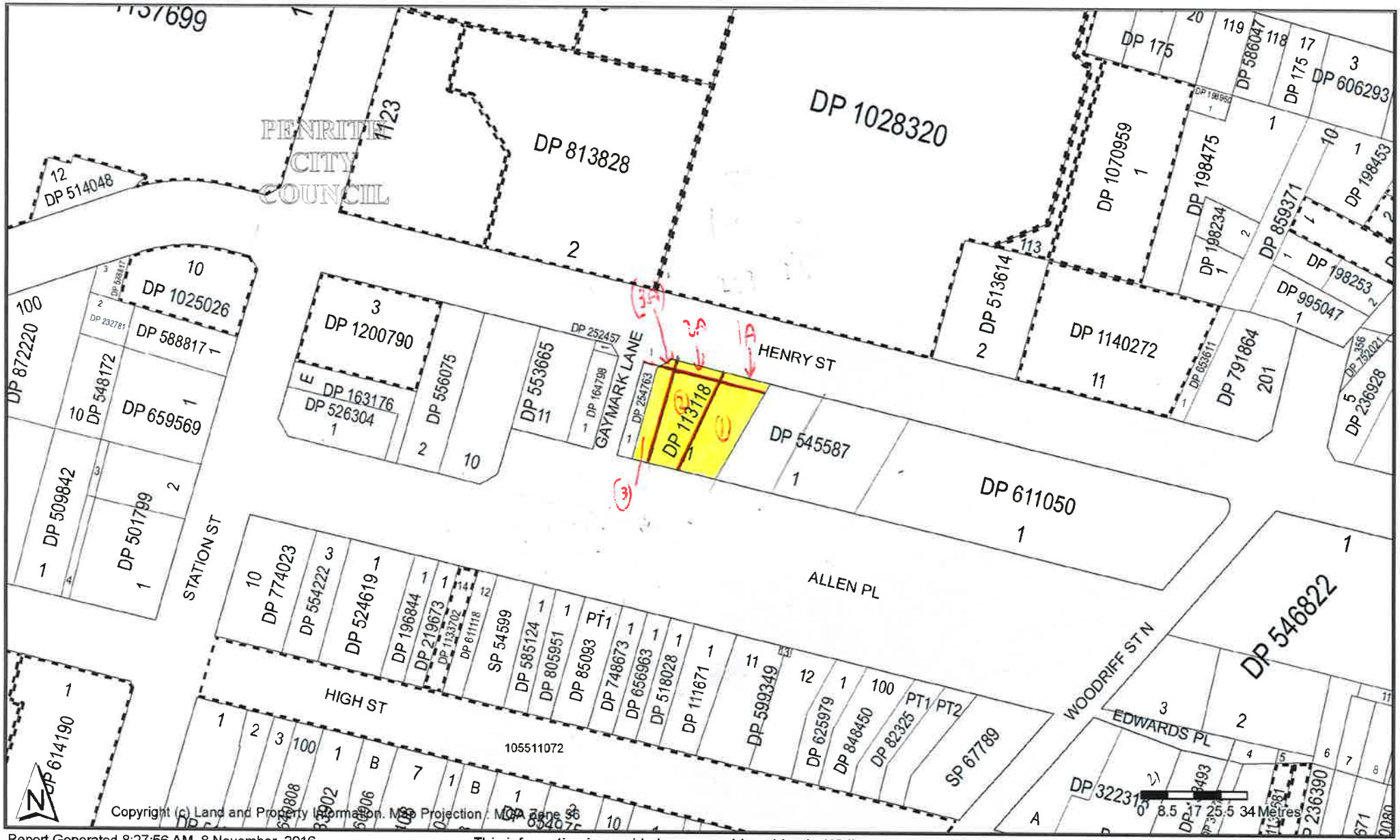
Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Land & Property Information

Cadastral Records Enquiry Report

Requested Parcel : Lot 1 DP 113118 **Identified Parcel** : Lot 1 DP 113118

Locality : PENRITH **LGA** : PENRITH **Parish** : CASTLEREAGH **County** : CUMBERLAND



Report Generated 8:27:56 AM, 8 November, 2016

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This information is provided as a searching aid only. While every endeavour is made to ensure the current cadastral pattern is accurately reflected, the Registrar General cannot guarantee the information provided. For all ACTIVITY PRIOR to SEPT 2002 you must refer to the RGs Charting and Reference Maps.

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R727778 /Doc:DP 0164798 P /Rev:22-Dec-1992 /Sts:OK.OK /Pgs:ALL /Prt:08-Nov-2016 11:28 /Seq:1 of 1
Ref:penrith /Src:M

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

FP. 164798

MPS (OS) HG22330

Municipality of Penrith
Shire

PLAN
of subdivison of Lots B and C MPS(OS)6851 and Lot E MPS(OS)7081
Parish of Castlereagh County of Cumberland
Scale : 50 feet to an Inch

Appn 28774

HENRY ST

STATION ST

LANE

Aligned 12° 42' 10"

Aligned 12° 42' 10"

ROAD WIDENING 10ft wide 6½ per

MPS (OS) 6815

MPS (OS) 7081

MPS (OS) 6851

MPS (OS) 7082

MPS (OS) 7082

MPS (OS) 7082

PUBLIC ROADS ACT, 1902.
PARISH CASTLEREAGH
LAND DISTRICT PENRITH
Width of Proposed Road, VARIABLE

PLAN OF PROPOSED ROAD
COUNTY CUMBERLAND
CITY OF PENRITH

PAPERS Roads 77/962

Lands proposed to be reserved for road are also delineated and lettered LOT 1 (DEPTH RESTRICTION 20.1 METRES)
Roads proposed to be closed are also similarly delineated and lettered LOT 2
Roads proposed to be declared to be public roads are shown by Red Broken outlines

D.P. 254763

Registered 14 MAR 1972

Purpose PUBLIC ROADS ACT 1902

Ref. Map LIB 940 62*

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 13th day of October, 1972

HENRY STREET

(PUBLIC ROAD 20.115 WIDE)
(ALIGNED 346 - 12.8 - 346)

FACE OF TILES
FACE OF BRICK
K.A.S.
RMDH&W FD
PT A
LOT 1
LOT 2
LOT 3
ALTCO HOLDINGS PTY. LIMITED
PT 3
F.P. 164798
OLD SYSTEM LAND
D.P. 545587
GAYMARK LANE 12.28 WIDE (AS WIDENED)
MPS (OS) 6951
ALLEN PLACE
FCE OF BK
FCE OF BRICK

ROAD WIDENING 3.05 WIDE
F.P. 164798

ACCEPTED PLAN NOT CHECKED
IN THE DEPT. OF LANDS.

REFERENCE MARKS

COR	BEARING	DIST	FROM
A	95° 29'	0.633	RMDH&W
B	163° 29'	4.31	RMDH&W
C	95° 29'	5.745	RMDH&W

VINCENT JOHN MORGAN
P.O. BOX 227 PENRITH

AZIMUTH TAKEN FROM X - Y
FIELD BOOK L.D. 78-19 PAGES 21 & 22 (RDS.)

REDUCTION RATIO 1:400 LENGTHS ARE IN METRES.

Req:R727725 /Doc:DP 0254763 P /Rev:26-Jun-1992 /Sts:OK.OK /Pgs:ALL /Prt:08-Nov-2016 11:26 /Seq:1 of 1
Ref:penrith /Src:M

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R725525 /Doc:DP 0113118 P /Rev:23-Dec-1992 /Sts:OK.OK /Pgs:ALL /Prt:08-Nov-2016 09:15 /Seq:1 of 1
Ref:penrith /Src:M

PLAN OF LOT 2 IN D.P 254763 & PART OF LOT 303 IN D.P 593084

Mun./Shire City : PENRITH

Locality: PENRITH

Parish: CASTLEREAGH

County: CUMBERLAND

Reduction Ratio 1:500

Lengths are in metres

D.P 113118

Registered: 19-1-1978

C.A:

Title System: TORRENS SYSTEM

Purpose: DEPARTMENTAL

Ref. Map: U6460 - 62

Last Plan: D.P 254763 D.P 593084

N O O I D I E

Prepared in Registrar General's Office

Examd:

M.RD.

HENRY ST

ALLEN PLACE

ROAD VAR. WIDTH

1058 m²

1

29.55

32.255

34.895

27.75

D. P. 545587

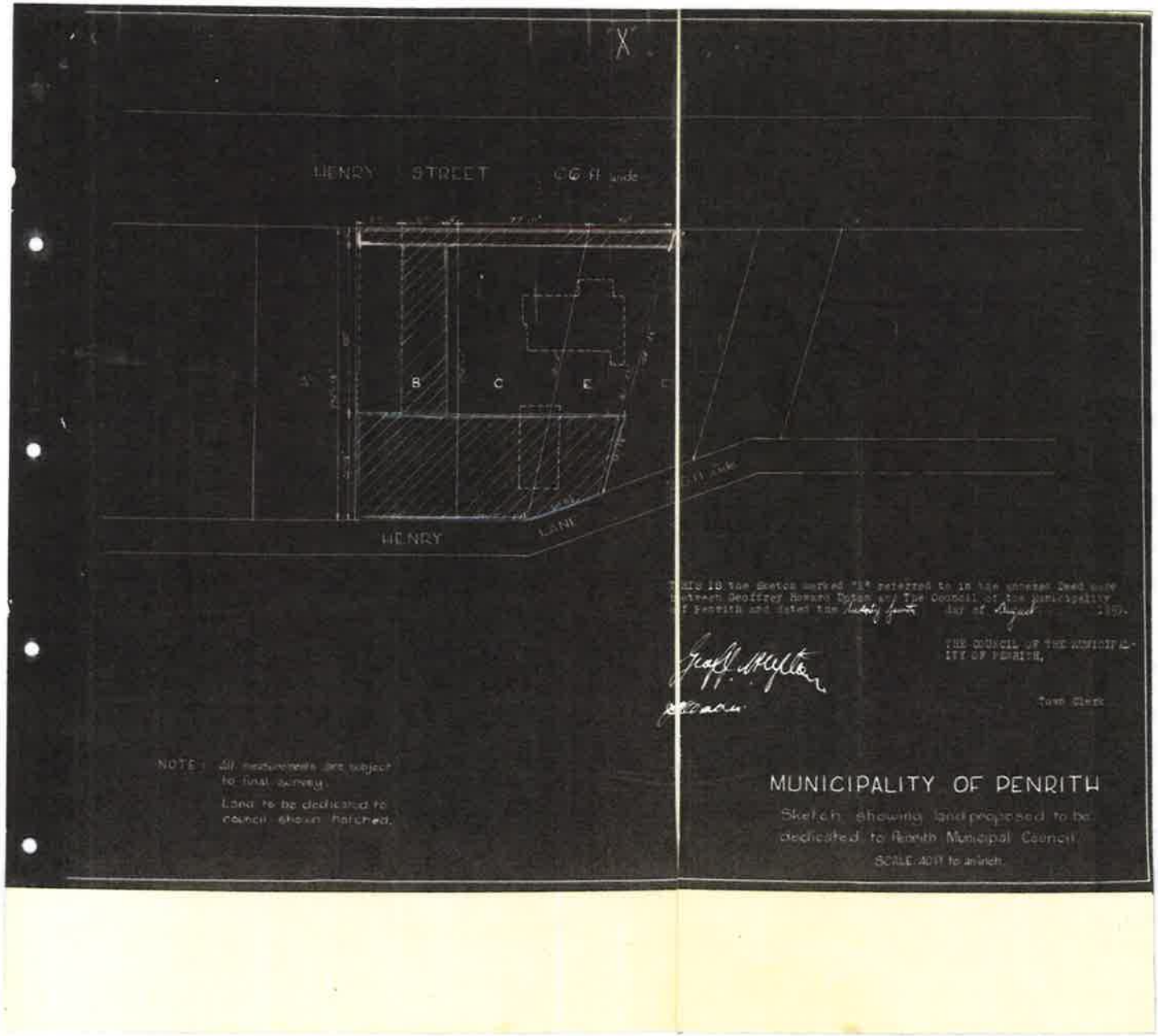
D.P 113118

(N) EXCEPTIONS BY CROWN GRANT

I, Bruce Richford Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 24th day of January, 1979

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Staff: Unknown /Doc: undefined (General Register of Deeds (Old System Deeds)-All Collections) /Rev: 12 Aug 2014 /Prt: 9 Nov 2016 10:38 /Seq: 7 of 8 /Src: Pixel
Warning: null



Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R725586 /Doc:PA 053286 PA /Rev:22-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:19 /Seq:1 of 5
Ref:penrith /Src:M

Appn. 32286.

$6-00

53286

NEW SOUTH WALES

PRIMARY APPLICATION

SECTION 14, REAL PROPERTY ACT, 1900

STAMP DUTY $

OFFICE USE ONLY

$ 20

Paid on B284569. 4/11/77

Typewriting and handwriting should be clear, legible and in permanent black non-copying ink. No alterations should be made by erasure; the words rejected must be ruled through and verified by signature or initials in the margin.

CAUTION.—Severe penalties are provided by the Crimes Act, 1900, and the Real Property Act, 1900, for procuring a certificate of title through fraud.

(a) Full name and postal address of person or corporation entitled to the land. If a person is entitled, the occupation should also be stated.

(a) * ALTCO HOLDINGS PTY. LIMITED of 40 Yeo Street, Neutral Bay.

hereinafter referred to as the APPLICANT

hereby applies to have the undermentioned land brought under the provisions of the Real Property Act, 1900

(b) Give an adequate description of the land, e.g. "Lot— in Deposited Plan —". If an appurtenant easement is claimed, the deed creating it should be disclosed and an adequate description of its location should be given; its location should also be shown on the plan.

The application should be accompanied by a plan of survey unless the Registrar General has previously dispensed therewith. A plan is not normally required where the application relates to land in a qualified certificate of title; in such case it will be sufficient to describe the land by reference to the volume and folio number of the qualified certificate of title.

(c) Delete whichever is inapplicable.

(d) Insert reference to portion or allotment, or if none, to number of acres granted.

(e) Name of grantee.

All that piece of land situated at Penrith in the County of Cumberland Parish of Castlereagh being(b) Lot 3 in Miscellaneous Plan of Subdivision (Old System) No. 14798 (now Filed Plan No. 164798)

and being ~~the whole~~(c) / part of(d) Daniel Woodriff's 1000 acre ~~granted to(e)~~

~~by Crown grant dated the~~ ~~day of~~

and requests that the certificate of title issue in the name of

(f) If the certificate of title is required to issue in favour of the applicant, insert "the applicant"; otherwise here insert the full name of the person or corporation in whose name the certificate of title is to issue. In the case of a person, the full postal address and occupation should also be stated.

If more than one nominee, state whether as joint tenants or tenants in common.

Unless otherwise stated, tenants in common will be presumed to hold in equal shares.

(f) the applicant

and in support of this application I/We(g) GLYN TERRINGTON THOMAS of 53 Acacia Avenue, Ryde, Company Secretary (Nov. date 39).

(g) Full name, address and occupation of declarant.

(h) If a lease estate, alter accordingly.

solemnly and sincerely declare that—

1. The applicant is seised for an estate in fee simple(h) of the abovedescribed land.
2. There is no person in possession or occupation of the said land or any part thereof adversely to the estate or interest therein of the applicant.
3. The said land is now (i) ~~occupied by the persons specified in the First Schedule as occupiers.~~ / unoccupied.
4. There does not exist any lease or agreement for lease of the said land for any term exceeding a tenancy for one year, or from year to year, except as set out in the First Schedule.
5. There does not exist any right of way, right of drainage or other easement or any restrictive covenant affecting the said land, except as disclosed in the First Schedule.
6. There does not exist any mortgage, lien, writ of execution, order, charge, encumbrance, will, settlement, deed, writing, contract, or dealing giving any right, claim or interest in the said land, or any part thereof, to any person other than the applicant except as set out in the First Schedule; nor, to the best of my knowledge and belief, is there any action, proceeding or suit pending which affects or could affect the said land, or any person other than the applicant who has or claims any estate, right, title or interest therein, except as disclosed in the First Schedule.(j)
7. There is no resumption or instrument whereby minerals or substrata have been excepted or reserved to any person, except as disclosed in the First Schedule.
8. The Second Schedule contains a full and correct list(k) commencing with Conveyance dated 18th April, 1936 registered Book 1747 No. 31.

(i) Delete whichever is inapplicable.

(j) Should any transaction affecting the land in this application be entered into or any alterations to the buildings or fences be made subsequent to the date of the application, but prior to the issue of the certificate of title, the Registrar General should be informed immediately, and all documents evidencing such transaction should be lodged.

(k) The declaration may be qualified, e.g. by inserting the words "commencing with conveyance dated ——— registered Book ——— No. ———" or as the case may be. See also notes on back page hereof.

of all settlements, deeds, documents, instruments, maps, plans and papers relating to the said land so far as I have any means of ascertaining them. All such documents as are in my possession or under my control are lodged herewith; the whereabouts of all other documents listed, so far as is known to me, is stated in such list.

9. The applicant has not become bankrupt or assigned his estate for the benefit of creditors.

Cert. of T., issued Vol 3820 Fol 105 Dated —5 MAR 1979

ST 4008 E 1977

* Now "ALLEN HOLDINGS PTY LIMITED" see Book 4144 No 776

Lot 4 DP 254763 as shown at Lot 1 DP 254763

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

10. The information shown in the Schedules hereto is to be taken as part of this declaration.

11. I have been authorised by power of attorney dated the TENTH day of OCTOBER, 19 77 to make this application on behalf of the applicant, and I have received no notice of revocation of such authority.(l)

(l) Delete this clause if inapplicable. The relevant power of attorney or other such authority should be lodged with the application.

I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths Act, 1900,(m) and certify this application to be correct for the purposes of the Real Property Act, 1900.(n)

(m) If made outside N.S.W., strike out Oaths Act, 1900 and insert reference to local Act.

(n) Any person falsely or negligently certifying is liable to the penalties provided by section 117 of the Real Property Act, 1900.

Made and subscribed at Sydney the TENTH day of OCTOBER, 1977,

in the presence of

Signature of witness

WALTER P. WARREN.
Name of witness (BLOCK LETTERS)

JUSTICE OF PEACE.
Qualification of witness

Applicant, or authorised agent of applicant(o)

(o) This application is a statutory declaration and must be made before a prescribed functionary. Attention is drawn to the penalties provided by law for any false statement therein.

CONSENT OF MORTGAGEE

MERCANTILE PACIFIC FINANCE LIMITED, being the mortgagee under mortgage registered Book 3292 Number 176, hereby join in and consent to this application subject to:—(p)

(p) Delete whichever is inapplicable.

(i) registration of a mortgage under the Real Property Act, 1900 in substitution for such mortgage, ~~OR entry on the certificate of title to issue of a notification relating to such mortgage~~, AND

(ii) delivery to me of the certificate of title.

The Common Seal of MERCANTILE PACIFIC FINANCE LIMITED was hereunto affixed in the presence of:-

Director Secretary

Witness

Mortgagee

FIRST SCHEDULE

PARTICULARS OF SUBSISTING INTERESTS (LEASES, EASEMENTS, MORTGAGES AND OTHER MATTERS REFERRED TO IN CLAUSES 3 TO 7 INCLUSIVE OF DECLARATION)

Full name and address (of occupier, lessee, mortgagee, etc.)	Nature of entitlement ("occupier", "lessee", "mortgagee", etc.)	Particulars of instrument (if any) by which entitlement created(q)
PAULS (MERCHANTS) PTY. LIMITED	Lessee	Agreement for Lease dated 19th July, 1977 (as amended by deed of variation dated 13th September, 1977) pursuant to which the Lessee will be entitled to occupy the land as tenant for a term of 15 years from the date of completion of the building to be erected thereon.
MERCANTILE PACIFIC FINANCE LIMITED	Mortgagee	Mortgage dated 23rd September, 1977 Registered Book 3292 No. 176.

(q) Where the whole or any part of the land is occupied by a tenant state also the nature and duration of the tenancy.

AT 4093 K 1977

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

SECOND SCHEDULE

(See notes on back page hereof)

LF 33377
33878

DOCUMENTS REFERRED TO IN CLAUSE 8 OF DECLARATION

To be completed by declarant

Documents Nos. hereunder LODGED HEREWITH

Documents Nos. 11 hereunder WHEREABOUTS UNKNOWN

Documents Nos. 1 & 2 hereunder PERMANENTLY LODGED

Receipt Nos. 19780.

Documents Nos. 3-9, 12-14, 17 & 18 hereunder TO BE LODGED BY: Messrs. McDonald, Baker & Gill, 16 Spring Street, Sydney. 38

Documents Nos. 10 (Certified copy) 15, 16 & 19-28 hereunder to be lodged by: Messrs. Gadens, 175 Pitt Street, Sydney. (Now McCulloch + Buggy)

DOCUMENTS TO BE LODGED—RECEIVED FOR ORDINARY REGISTRATION

No.	Date	Nature of document	Parties	Registration Book	Registration No.	FOR OFFICE USE ONLY By whom produced
1	18.4.1936	Conveyance	Francis Henry Woodriff and Emily Doolan			mn 175 p DD 19780
2	20.5.1939	Conveyance	Emily Doolan and Mabel Sarah Victoria Kemp	1747	31	
3	27.3.1947	Conveyance	Francis Henry Woodriff and Geoffrey Howard Upton	1846	686	" "
4	27.3.1947	Conveyance	Francis Henry Woodriff and Charles William Owen Roberts	2025	280	✓
5.	9.10.1947	Conveyance	Charles William Owen Roberts and Geoffrey Howard Upton	2032	575	✓
6	10.9.1949	Conveyance	Mabel Sarah Victoria Kemp and Geoffrey Howard Upton	2033	174	✓
7	24.3.1953	Mortgage	Geoffrey Howard Upton and The Mutual Life and Citizens' Assurance Company Limited	2098	958	✓
8.	19.10.1955	Mortgage	Geoffrey Howard Upton and Minnie Eveline East	2245	329	✓
9	10.5.1956	Discharge of Mortgage	Minnie Eveline East and Geoffrey Howard Upton (endorsed on Mortgage Book 2354 No. 633)	2354	633	✓
10	24.8.1959	Deed of Covenant	Geoffrey Howard Upton and The Council of the Municipality of Penrith	2368	971	✓
11	26.8.1959	Lease	Geoffrey Howard Upton and Caltex Oil (Australia) Pty. Limited	2526	155	Not Handed See Sheet 4 & 5.
12	27.8.1959	Mortgage	Geoffrey Howard Upton and Caltex Oil (Australia) Pty. Limited	2561	478	
13	30.5.1960	Mortgage	Geoffrey Howard Upton and Robert Norman Wylie	2510	402	✓
14	18.1.1962	Discharge of Mortgage	Robert Norman Wylie and Geoffrey Howard Upton (endorsed on Mortgage Book 2527 No. 52)	2527	52	✓
15	17.8.1964	Mortgage	Geoffrey Howard Upton and Edward Beach Andrews	2640	432	✓
16	22.9.1964	Office Copy Will	Edward Beach Andrews deceased. (Died 24th January, 1965: Probate No. 599053 granted to Lilian Rose Wright and Harry John Baker 23rd September, 1965)	2717	92	✓ See Sheet 4 & 5
17	1.10.1964	Discharge of Mortgage	Caltex Oil (Australia) Pty. Limited and Geoffrey Howard Upton (endorsed on Mortgage Book 2510 No. 402)	2717	91	✓
18	1.10.1964	Discharge of Mortgage	The Mutual Life and Citizens' Assurance Company Limited and Geoffrey Howard Upton (endorsed on Mortgage Book 2245 No. 329)	2717	90	✓
19	2-10-1964	Mortgage	Geoffrey Howard Upton and Edward Beach Andrews	2717	926	✓
20	18.11.1966	Re-conveyance	Lilian Rose Wright, Harry John Baker and Geoffrey Howard Upton (re Mortgage Book 2717 No. 926)	2839	395	✓ See Sheets 4 & 5

21-38 Annexure hereto

If space is insufficient, add annexure sheet(s)

Ref:penrith /Src:M

BT 4992 K 13

Req:R725586 /Doc:PA 053286 PA /Rev:22-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:19 /Seq:4 of 5

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Version: 1, Version Date: 29/01/2021

Req:R725586 /Doc:PA 053286 PA /Rev:22-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:19 /Seq:3 of 5
Ref:penrith /Src:M

SECOND SCHEDULE (Continued)

No.	Date	Nature of Document	Parties	Registration Book	Registration No.	OFFICE USE By whom Produced
21	6.3.1967	Conveyance	Geoffrey Howard Upton and George Alwyn Power	2839	396	
22	29.3.1967	Reconveyance	Lilian Rose Wright, Harry John Baker and Geoffrey Howard Upton (Re Mortgage Book 2717 No. 92)	2839	394	
23	29.3.1967	Mortgage	George Alwyn Power and Geoffrey Howard Upton	2839	397	See Sheet 4 & 5. 16/12
24	30.3.1967	Lease	George Alwyn Power and Caltex Oil (Australia) Pty. Limited	2841	438	
25	30.3.1967	Sub-lease	Caltex Oil (Australia) Pty. Limited and George Alwyn Power	2841	439	
26	30.3.1967	Deed of Consent	Geoffrey Howard Upton, George Alwyn Power and Caltex Oil (Australia) Pty. Limited	2842	565	
26A	3.8.1972	Option & Lease				
27	16.8.1972	Nomination and notice	Norrie Hennessy, Justin Jones and Galvina Pty. Limited	3069	302	
28	19.9.1972	Survey	Donald P. Rich			
29	15.12.1972	Survey	Donald P. Rich			
30	26.2.1973	Deed of Covenant	Geoffrey Howard Upton, Zenda Merle Upton, Mark Howard Upton and Galvina Pty. Limited	3284	370	
31	28.2.1973	Discharge of Mortgage	Geoffrey Howard Upton and George Alwyn Power (endorsed on Mortgage Book 2839 No. 397)	3084	904	
32	28.2.1973	Conveyance	George Alwyn Power and Galvina Pty. Limited	3084	905	
33	28.2.1973	Surrender of Lease	Caltex Oil (Australia) Pty. Limited and Galvina Pty. Limited (Re Lease Book 2841 No. 438)	3090	208	See Sheet 4 & 5 16/12
34	2.11.1973	Mortgage	Galvina Pty. Limited, James Wallace (Holdings) Limited and Patrick-Intermarine (Australia) Limited	3122	850	
35	19.7.1977	Statutory Declaration	Elizabeth Lamboo			
36	20.7.1977	Discharge of Mortgage	Intermarine Australia Limited and Galvina Pty. Limited (endorsed on Mortgage Book 3122 No. 850)	3284	92	
37	21.7.1977	Conveyance	Galvina Pty. Limited and Altco Holdings Pty. Limited	3284	90	
38	23.9.1977	Mortgage	Altco Holdings Pty. Limited and Mercantile Pacific Finance Limited	3292	176	
39.	10-10-77	Authority	Altco Holdings P/L to [redacted]			
40.	———	Official Search copy	Registrar General's [redacted]			
			Received Documents 39 & 40. See Sheet 2 7/11/16			

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R725586 /Doc:PA 053286 PA /Rev:22-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:19 /Seq:5 of 5
Ref:penrith /Src:M

53286

DEPARTMENTAL USE ONLY	TO BE COMPLETED BY LODGING PARTY
PRIMARY APPLICATION 53286. DP593084	Lodged by HUNT - HUNT Address: C.D.E. No. Phone No.:

Area 1102 m2.

DEPARTMENTAL USE ONLY

NOTES

Documents to be scheduled

Where an applicant claims an estate in fee simple by virtue of a documentary title the Second Schedule should commence with a good root of title at least thirty years old or with a later deed which has already been accepted by the Registrar General in an earlier application. Clause 8 of the declaration should be suitably amended.

Where the applicant claims title by possession the devolution of the documentary title of the person(s) against whom possession is asserted should be shown in the Second Schedule.

Where the applicant claims the benefit of an appurtenant easement the Second Schedule should contain a reference to:

* the deed by which the grantor of the easement acquired title to the servient tenement, and
* the deed by which the easement was created.

The applicant will be required to establish (e.g. by searches) that the easement has not been determined by surrender, union of tenements or otherwise.

Documents to be lodged

Upon lodgment the application should be accompanied by:

* all deeds and other documents evidencing the devolution of title from the abovementioned commencing point;

  Deeds and other documents which relate to the period prior to the selected commencing point should not be scheduled in or lodged with this application but should be retained in case the Examiner of Titles should require their subsequent production.
* any abstract(s) of title in the applicant's possession covering the relevant period; and
* searches showing the result of searches in the general register of deeds, the register of causes, writs and orders, the register of resumptions and the bankruptcy registers.

Searches

The searches obtained when the applicant or a predecessor in title acquired the land in the application will suffice provided that they commence with a good root of title at least thirty years old or with a later deed already accepted by the Registrar General in an earlier application and, in either case, have been brought up to date or to a recent date. In the case of an application based on possession the searches should show not only the devolution of the documentary title (which in most cases will need to be traced from the Crown grant) but also the result of searches against the applicant and his predecessors in possession.

Applications based upon possession

There is available upon request at the Examiners Branch a departmental circular containing directions for the guidance of applicants who claim title by possession.

Destruction of documents lodged with the application

Upon the issue of the certificate of title the Registrar General will as a general rule destroy those documents which exclusively affect the land in the application (and which accordingly will be totally cancelled pursuant to Section 29 (2), Real Property Act, 1900). However, documents which would otherwise be destroyed may be returned upon request to interested persons. The request (in writing) should specify the documents to be returned and should be made before the processing of the application has been completed.

ST 4892 K 1877 D. WEST, GOVERNMENT PRINTER

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R725588 /Doc:CT 13759-102 CT /Rev:10-Jan-2011 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:19 /Seq:1 of 2
Ref:penrith /Src:MTE OF

STATE OF NEW SOUTH WALES

CROWN GRANT

13759/102

No. 61127

FREE

Vol 13759 Fol 102
Registered 20-12-1978

CANCELLED

Registrar General

(Page 1) Vol. 13759 Fol. 102

We, Elizabeth the Second, by the Grace of God Queen of Australia and Her other Realms and Territories, Head of the Commonwealth, do hereby grant to the person described in the First Schedule an Estate in Fee Simple in the land within described, subject nevertheless to such reservations, conditions and other provisions as are shown in the Second Schedule. In testimony whereof We have caused this Our Grant to be sealed with the seal of Our said State

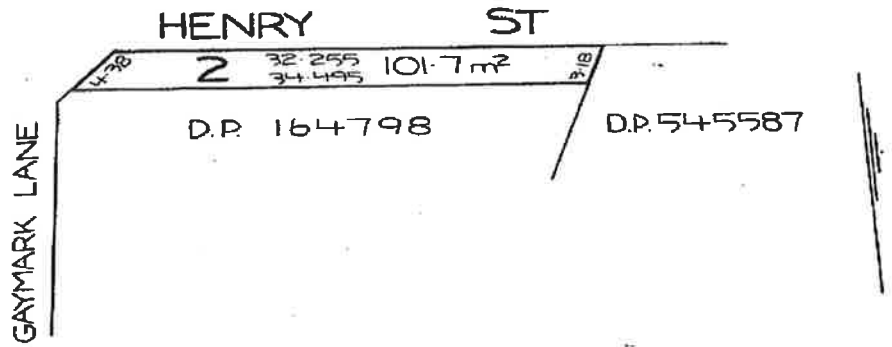
Witness Our Governor of Our State of New South Wales and its Dependencies in the Commonwealth of Australia, at Sydney in Our said State, this eleventh day of December in the twenty seventh year of Our Reign and in the year of Our Lord one thousand nine hundred and seventy eight.

A. R. Cutler

Governor

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



REDUCTION RATIO 1:400

LAND REFERRED TO

Lot 2 in Deposited Plan 254763 in the City of Penrith Parish of Castlereagh and County of Cumberland. EXCEPTING THEREOUT the land below a depth of 20 metres from the surface.

FIRST SCHEDULE

ALLEN HOLDINGS (AUSTRALIA) PTY. LTD.

SECOND SCHEDULE

1. We do hereby reserve and except unto Us Our Heirs and Successors all minerals which the land hereby granted contains with full power and authority for Us Our Heirs and Successors and such person or persons as shall from time to time be authorised by Us or Them to enter upon the land hereby granted and to search for mine dig and remove the said minerals and also all such parts and so much of the land hereby granted as may hereafter be required for public ways in over and through the same to be set out by Our Governor for the time being of Our said State or some person by him authorised in that respect with full power for Us Our Heirs and Successors and for Our Governor as aforesaid by such person or persons as shall be by Us Them or him authorised in that behalf to make and conduct all such public ways And the right of full and free ingress egress and regress into out of and upon the land hereby granted for the several purposes aforesaid or any of them Provided Further and it is expressly declared that mining operations may have been and may be carried on upon and in the land below the land hereby granted and the lands adjoining the land hereby granted and the land below the same and metals and minerals may have been and may be removed therefrom and that these presents are made upon and subject to the condition that neither the Grantee or Grantees nor his her their or its sequels in title shall be entitled to make or prosecute any claim for damages or take any proceedings either by way of injunction or otherwise against Us Our Heirs and Successors or the Government of Our said State or any lessee or lessees under any Mining Act or Acts of Our said State or his or their executors administrators or assigns for or in respect of any damage or loss occasioned by the letting down subsidence or lateral movement of the land hereby granted or otherwise howsoever by reason of the following acts and matters that is to say by reason of Us Our Heirs or Successors or the Government of Our said State or any person on Our Their or its behalf or any lessee or lessees as aforesaid or his or their executors administrators or assigns having worked or now or hereafter working any mines or having carried on or now or hereafter carrying on mining operations or having searched for worked won or removed or now or hereafter searching for working winning or removing any metals or minerals under in or from the land below the land hereby granted or on in under or from any other lands situated laterally to the land hereby granted and the land below the same and whether on or below the surface of such other lands Provided Lastly and we do hereby expressly reserve unto Us Our Heirs and Successors the liberty and authority by reason of the acts and matters aforesaid or in the course thereof for Us Our Heirs and Successors and the Government of Our said State and any person on Our Their or its behalf and any lessee or lessees as aforesaid and his or their executors administrators and assigns to from time to time let down without payment of any compensation whatsoever any part of the land hereby granted and/or of the surface thereof.

~~2. Restrictions as to dealings — see section~~

RG 2/124

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

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

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE REGISTRAR GENERAL'S OFFICE

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

R 59835 Lot 2 DP 113118

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	REGISTERED	Signature of Registrar General

NEW CERTIFICATE(S) OF TITLE ISSUING ON DP113118
NO DEALING TO BE REGISTERED WITHOUT REFERENCE TO SURVEY DRAFTING BRANCH.

This deed is cancelled as to the whole.
New Certificates of Title have issued on 12-3-1979
for lots in Deposited Plan No. 113118 as follows:-
Lots 1 Vol 13820 Fol 105 respectively.
Consolidation Vide RPA 53286.

REGISTRAR GENERAL

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	PARTICULARS	REGISTERED	Signature of Registrar General	CANCELLATION	

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

(Page 2 of 2 pages)

Vol. 13759 Fol. 102

Req:R725588 /Doc:CT 13759-102 CT /Rev:10-Jan-2011 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:19 /Seq:2 of 2
Ref:penrith /Src:M

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R725537 /Doc:CT 13820-105 CT /Rev:13-Jan-2011 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:16 /Seq:1 of 2
Ref:penrith /Src:M

[redacted]

ICATE OF TITLE

NEW SOUTH WALES

L PROPERTY ACT, 1900

Vol. 13820 Fol. 105

Appln. No.53286 (part)

Prior Title Vol.13759 Fol.102 (part)

EDITION ISSUED

5 3 1979

(Page 1) Vol. 13820 Fol. 105

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

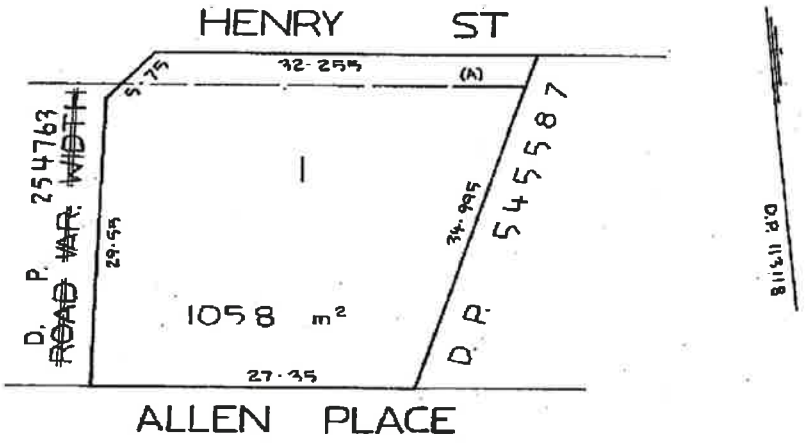
CANCELLED

SEE AUTO FOLIO

Registrar General.

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



1979M7
Reg. Gen.
14-12-1979

(A) EXCEPTIONS BY CROWN GRANT

P.A. 53286

REDUCTION RATIO 1:500

1979M7
Reg. Gen.
23-7-1979

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 1 in Deposited Plan 113118 in the City of ~~Parramatta~~ Penrith Parish of Castlereagh and County of Cumberland being part of Portion 90 granted to Daniel Woodriff on 1-2-1804 and lot 2 in Deposited Plan 254763 granted by Crown Grant Volume 13759 Folio 102. EXCEPTING THEREOUT all minerals and land below a depth of 20 metres from the surface as regards the part shown so burdened in the plan hereon reserved by the Crown Grant.

FIRST SCHEDULE

~~ALLEN HOLDINGS (AUSTRALIA) PTY. LIMITED.~~

GRY

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.
2. Book 3303 No.214 Lease dated 29-11-1977 for a term of 15 years from 1-12-1977 of part of the land above described.

RG 2/62

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

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

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE REGISTRAR GENERAL'S OFFICE.

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Vol. 13820 Fol. 105

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	REGISTERED	Signature of Registrar General
~~OPF Nominees Pty. Limited~~	~~Transfer~~	~~R59855~~	~~6-3-1980~~	
Alfred Moss Investments Pty. Limited by Transfers X106782 AND X106783. Registered 6-10-1987.				

CANCELLED

SEE AUTO FOLIO

0503446 P
Q847295 P
R44702
R59855

~~RESEN 3SB~~
~~4970417 (169)~~
W347327 7/L

X89393 R

X106782 7/L

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	PARTICULARS	REGISTERED	Signature of Registrar General	CANCELLATION	
~~Mortgage~~	~~0503446~~	~~to The Mercantile Mutual Insurance Company Limited as regards the part of the land within described comprised in Primary Application No. 53286~~	~~5-3-1979~~		Discharged	R44703
~~Mortgage~~	~~Q847295~~	~~to Mercantile Pacific Finance Limited as regards the part of the land within described comprised in Primary Application No. 53286~~	~~5-3-1979~~		Discharged	R44702
(AA) Bk 3303 No. 214 Lease W347327 Transfer Lessee now Rympaek Pty Limited. Registered 23-6-1986.						
X89393 Caveat by Tanjil Court Pty Limited Registered 11.9.1987					Lapsed	X106783

(Page 2 of 2 pages)

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

Req:R725537 /Doc:CT 13820-105 CT /Rev:13-Jan-2011 /Sts:OK.SC /Pgs:ALL /Prt:08-Nov-2016 09:16 /Seq:2 of 2
Ref:penrith /Src:M
Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

InfoTrack
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Information Broker

Historical Title

Information Provided Through
John McLaren & Co (NSW)
Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
8/11/2016 9:16AM

FOLIO: 1/113118

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 13820 FOL 105

Recorded	Number	Type of Instrument	C.T. Issue
21/8/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
7/3/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
21/6/1993	I379062	LEASE	EDITION 1
21/11/1995	O679591	REQUEST	
21/11/1995	O679592	LEASE	EDITION 2
5/8/1999	6070407	TRANSFER OF LEASE	
18/1/2000	6496147	TRANSFER OF LEASE	
8/8/2000	7007242	DEPARTMENTAL DEALING	EDITION 3
10/12/2001	7961765	SURRENDER OF LEASE	
10/12/2001	7961766	LEASE	EDITION 4
4/3/2003	9421724	TRANSFER OF LEASE	EDITION 5
11/11/2004	AB89213	LEASE	EDITION 6
18/10/2006	AC675587	TRANSFER	EDITION 7
8/4/2010	AF417639	LEASE	EDITION 8
12/4/2013	AH662213	LEASE	EDITION 9
28/5/2015	AJ526509	SURRENDER OF LEASE	
28/5/2015	AJ526510	LEASE	EDITION 10

*** END OF SEARCH ***

penrith PRINTED ON 8/11/2016

InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

Document Set ID: 9456504
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InfoTrack
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Information Broker

Title Search

Information Provided Through
John McLaren & Co (NSW)
Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/113118

SEARCH DATE	TIME	EDITION NO	DATE
8/11/2016	9:15 AM	10	28/5/2015

LAND

LOT 1 IN DEPOSITED PLAN 113118
LOCAL GOVERNMENT AREA PENRITH
PARISH OF CASTLEREAGH COUNTY OF CUMBERLAND
TITLE DIAGRAM DP113118

FIRST SCHEDULE

PENRITH CITY COUNCIL (T AC675587)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 LAND EXCLUDES MINERALS & LAND BELOW A DEPTH FROM THE SURFACE OF 20 METRES AS REGARDS THE LAND DESIGNATED (A) IN THE TITLE DIAGRAM RESERVED BY THE CROWN GRANT
3 AJ526510 LEASE TO SPECIALTY FASHION GROUP LIMITED OF 118 HENRY STREET, PENRITH. EXPIRES: 31/7/2019. OPTION OF RENEWAL: 5 YEARS.

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

scottASHWOOD PTY.LTD
An InfoTrack Company

ABN: 42 166 543 255
Ph: 02 9099 7400
Fax: 02 9232 7141
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Summary of Owners Report

LPI **Sydney**

Address: 42 – 44 Station Street, Penrith

Description: - Lot 3 D.P. 1200790

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
1.6.1881 (1881 to 1927)	Francis Henry Woodriff (Gentleman)	Book 222 No. 132
23.6.1927 & 22.12.1927 (1927 to 1949)	Nelson Price (Undertaker)	Book 1476 No. 306 & Book 1498 No. 679
15.9.1949 (1949 to 1950)	Rural Bank of New South Wales	Book 2098 No. 394
11.5.1950 (1950 to 1973)	William Frederick Smith (Hire Car Proprietor)	Book 2125 No. 665
7.2.1973 (1973 to 2013)	G.B. & H. Lynch Pty Limited Now G.B. & J.A. Lynch Pty Limited	Book 3084 No. 154 Now C/158845
23.9.2013 (2013 to Date)	# Penrith City Council	C/158845 Now 3/1200790

# Denotes Current Registered Proprietors

Easements: -NIL

Leases: -
3.6.2015 AI898783 – Donna Hildon & Belinda Jain Erich

[redacted]

Yours Sincerely
James McDonnell
8 October 2016

Email: james.mcdonnell@scottashwood.com

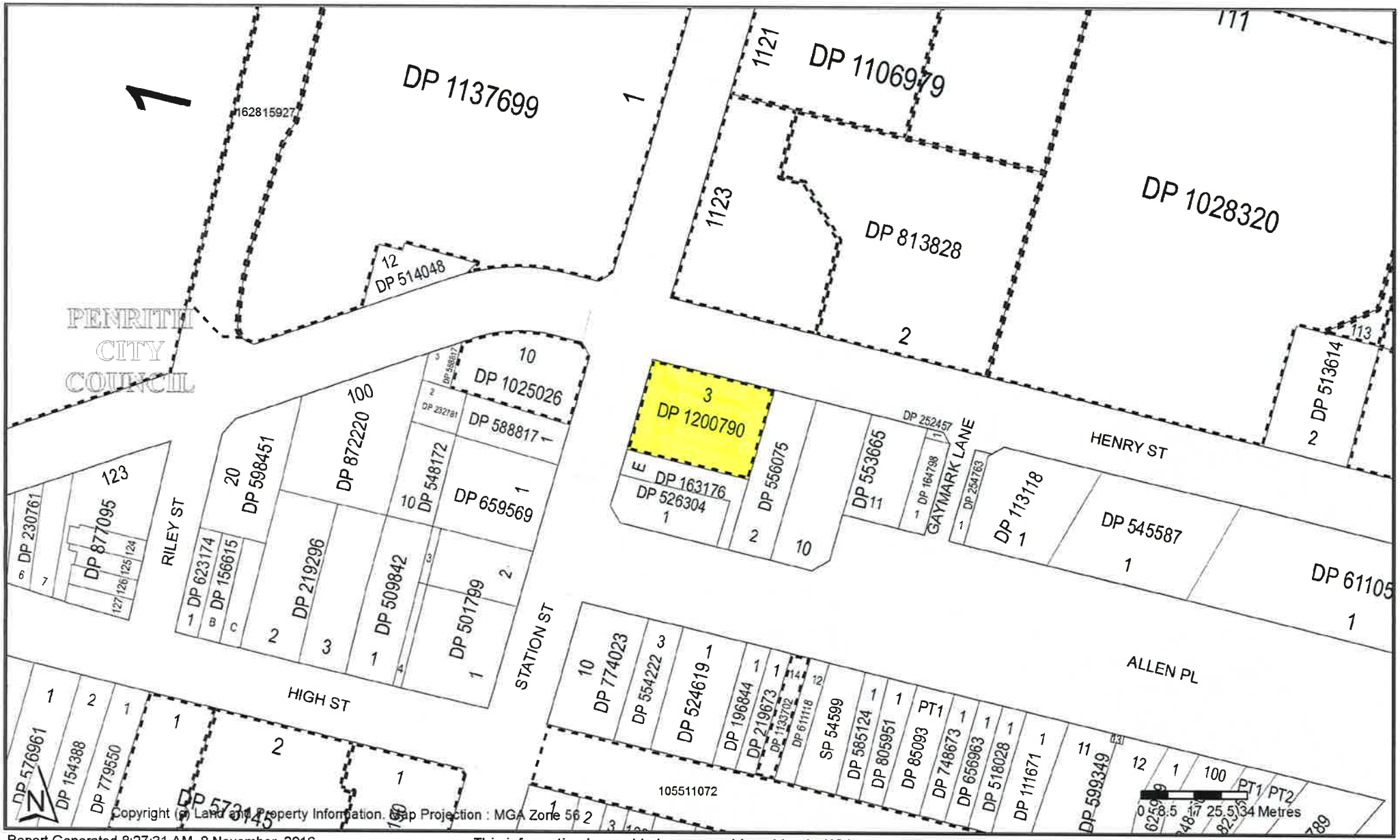
Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Land & Property Information

Cadastral Records Enquiry Report

Requested Parcel : Lot 3 DP 1200790 **Identified Parcel** : Lot 3 DP 1200790

Locality : PENRITH **LGA** : PENRITH **Parish** : CASTLEREAGH **County** : CUMBERLAND



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Report Generated 8:27:31 AM, 8 November, 2016

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This information is provided as a searching aid only. While every endeavour is made to ensure the current cadastral pattern is accurately reflected, the Registrar General cannot guarantee the information provided. For all ACTIVITY PRIOR to SEPT 2002 you must refer to the RGs Charting and Reference Maps.

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

	Status	Surv/Comp	Purpose
DP1200790			
Lot(s): 3			
DP158845	HISTORICAL	SURVEY	UNRESEARCHED

Road
Polygon Id(s): 105511072
EX-SUR 59/14 DP980943
Polygon Id(s): 162815927
NSW GAZ. 21-10-2005 Folio : 8879
CLOSED ROAD
LOTS 34-37 IN DP1085231 - STRATUM LOTS
CA94915 - LOTS 34-37 DP1085231

Copyright © Land and Property Information ABN: 84 104 377 806

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R725221 /Doc:DP 1200790 P /Rev:01-May-2015 /Sts:SC.OK /Pgs:ALL /Prt:08-Nov-2016 08:52 /Seq:1 of 3
Ref:penrith /Src:M

PLAN FORM 2 (A2)

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

ePlan

Sheet 1 of 1 sheets

SURVEYING & SPATIAL INFORMATION REGULATION 2012 CLAUSE 81(2)

MARK	EASTING	NORTHING	CLASS	ORDER	METHOD
	M.G.A. CO-ORDINATES (ZONE 56)				
M12650	286 133 783	6 252 923 854	B	2	SCIMS
M12654	286 309 844	6 252 916 351	B	2	SCIMS
M41511	286 232 256	6 252 895 886	B	2	SCIMS

COMBINED SEA LEVEL AND SCALE FACTOR 1.000195
SOURCE M.G.A. CO-ORDINATES ACCEPTED FOR ESTABLISHED MARKS FROM SCIMS JANUARY 2014

PLAN OF DELIMITATION OF LOT C D.P.158845

LGA: PENRITH
Locality: PENRITH
Subdivision No.: ——
Lengths are in metres. Reduction Ratio 1:400

Registered: 1.5.2015

D.P.1200790

Surveyor: Peter Robert Warnock
Vince Morgan Surveyors
Ph 47211233 email: peterwarnock@msurvey.com.au
Date of Survey: 3rd June, 2014.
Surveyor's Reference: 15536-C

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

PLAN FORM 6(2012) WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Registered: 1.5.2015 Office Use Only

Title System: TORRENS

Purpose: DELIMITATION

Office Use Only

DP1200790

PLAN OF DELIMITATION OF
LOT C D.P.158845

L G A: PENRITH

Locality: PENRITH

Parish: CASTLEREAGH

County: CUMBERLAND

Crown Lands NSW/Western Lands Office Approval

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

Signature .....

Date:.....

File No: .....

Office:.....

Subdivision Certificate

I .....

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

Signature: .....

Accreditation No. .....

Consent Authority .....

Date of endorsement .....

Subdivision Certificate No. .....

File No. .....

* strike through if inapplicable

Survey Certificate

I, PETER ROBERT WARWICK
of VINCE MORGAN SURVEYORS PTY.LTD.
Ph.47215293. email: pwarwick@vmsurvey.com.au
a surveyor registered under the Surveying & Spatial Information Act, 2002 certify that:

(a) The land shown in the plan was surveyed in accordance with the Surveying and Spatial Information Regulation, 2012, is accurate and the survey was completed on 3rd June, 2014.

~~*(b) The part of the land shown in the plan being.....*~~
~~.....~~
was surveyed in accordance with the Surveying and Spatial Information Regulation, 2012, is accurate and the survey was completed on ..... the part not surveyed was compiled in accordance with that Regulation.

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

Signature: PR Dated: 3rd June, 2014.

Surveyor ID: 2207

Datum Line: ('X'-'Y') PM12654 TO PM41911

Type: URBAN

The terrain is level–undulating

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

Plans used:–
D.P.158845
D.P.163176
D.P.526304
D.P.545587
D.P.553665
D.P.556075
D.P.1106979

Signatures, Seals and Section 88B Statements should appear on PLAN FORM 6A

SURVEYOR'S REFERENCE: 18538-C

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 2 of 2 sheets

Office Use Only

Registered: 1.5.2015

Office Use Only

DP1200790

PLAN OF DELIMITATION OF
LOT C D.P.158845

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses – See 60(c) SSI Regulation 2012
- Statements of intention to create and release affecting interests in accordance with section 88B Conveyancing Act, 1919.
- Signatures and seals – See 195D Conveyancing Act, 1919.
- Any information which cannot fit in the appropriate panel of sheet 1 of the Administration sheets.

Subdivision Certificate No.: ———

Date of Endorsement: ———

[redacted]

Signed by the General Manager, Alan Stoneham

For and on behalf of Penrith City Council

SCHEDULE OF STREET ADDRESSES

LOT No.	STREET No.	STREET NAME	STREET TYPE	LOCALITY
3	42-44	STATION	STREET	PENRITH

SURVEYOR'S REFERENCE: 18538-C

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

InfoTrack
An Approved LPI NSW
Information Broker

Historical Title

Information Provided Through
John McLaren & Co (NSW)
Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
8/11/2016 8:33AM

FOLIO: C/158845

First Title(s): OLD SYSTEM
Prior Title(s): CA71725

Recorded	Number	Type of Instrument	C.T. Issue
4/6/1997	CA71725	CONVERSION ACTION	FOLIO CREATED EDITION 1
9/3/1999	5664435	DEPARTMENTAL DEALING	
1/3/2004	AA459458	DISCHARGE OF MORTGAGE	
1/3/2004	AA459459	DISCHARGE OF MORTGAGE	
1/3/2004	AA459460	MORTGAGE	EDITION 2
7/4/2006	AC229883	DISCHARGE OF MORTGAGE	
7/4/2006	AC229884	MORTGAGE	EDITION 3
24/6/2008	AE41025	DISCHARGE OF MORTGAGE	
24/6/2008	AE41026	MORTGAGE	EDITION 4
10/9/2013	AI5417	CAVEAT	
23/9/2013	AI37302	DISCHARGE OF MORTGAGE	
23/9/2013	AI37303	WITHDRAWAL OF CAVEAT	
23/9/2013	AI37304	TRANSFER	EDITION 5
1/5/2015	DP1200790	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

penrith PRINTED ON 8/11/2016

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Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Req:R730905 /Doc:DL AI037304 /Rev:26-Sep-2013 /Sts:NO.OK /Pgs:ALL /Prt:08-Nov-2016 14:53 /Seq:1 of 1
Ref:penrith /Src:M

Form: 01T
Release: 6·1

TRANSFER

New South Wales
Real Property Act 1900

AI37304U

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

STAMP DUTY Office of State Revenue use only

Office of State Revenue
NSW Treasury
Client No: 100390537 2360
Duty: Exempt Trans No: S277
Asst details: 7240128

(A) **TORRENS TITLE** Folio Identifer C/158845

(B) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODES
1W	Penrith City Council. ~~DX 8017~~ 601 High Street Penrith 2750 Reference: S. Britten 4732 7659	T TW

(C) **TRANSFEROR** G.B. & J.A. Lynch Pty. Limited ACN 001 029 778

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 1,980,000.00 and as regards

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

(F) **SHARE TRANSFERRED**

(G) Encumbrances (if applicable):

(H) **TRANSFEREE** Penrith City Council

(I) **TENANCY:**

DATE 18 ~~Nov~~ September 2013

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

Complete * Company: G.B. & J.A. LYNCH PTY LTD T/A JOHN PRICE & SON
* Authority: JOHN [illegible] DIANE LYNCH

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

Signature of authorised person: * [redacted]
Name of authorised person: *
Office held: * DIANE LYNCH DIRECTOR

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

Signatur [redacted]

Signatory's name: Stephen Britten
Signatory's capacity: solicitor

LEN GEE

(K) The transferee certifies that the eNOS data relevant to this dealing has been

eNOS ID No. 476320 Full name: ~~Sharon Monstagnaur~~ ANDREW AVERY Signatur [redacted]

* *s117 RP Act requires that you must have known the signatory for more than 12 months or have sighte*

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

1303

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

InfoTrack
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Information Broker

Historical Title

Information Provided Through
John McLaren & Co (NSW)
Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
8/11/2016 8:33AM

FOLIO: 3/1200790

First Title(s): OLD SYSTEM
Prior Title(s): C/158845

Recorded	Number	Type of Instrument	C.T. Issue
1/5/2015	DP1200790	DEPOSITED PLAN	FOLIO CREATED CT NOT ISSUED
3/6/2015	AI898783	LEASE	EDITION 1

*** END OF SEARCH ***

penrith PRINTED ON 8/11/2016

InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

InfoTrack
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Information Broker

Title Search

Information Provided Through
John McLaren & Co (NSW)
Ph. 02 9231 4872 Fax. 02 9233 6557

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 3/1200790

SEARCH DATE	TIME	EDITION NO	DATE
8/11/2016	8:51 AM	1	3/6/2015

LAND

LOT 3 IN DEPOSITED PLAN 1200790
AT PENRITH
LOCAL GOVERNMENT AREA PENRITH
PARISH OF CASTLEREAGH COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1200790

FIRST SCHEDULE

PENRITH CITY COUNCIL

SECOND SCHEDULE (2 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 AI898783 LEASE TO DONNA HILDON & BELINDA JAIN ERICH EXPIRES: 31/7/2016.

NOTATIONS

UNREGISTERED DEALINGS: NIL

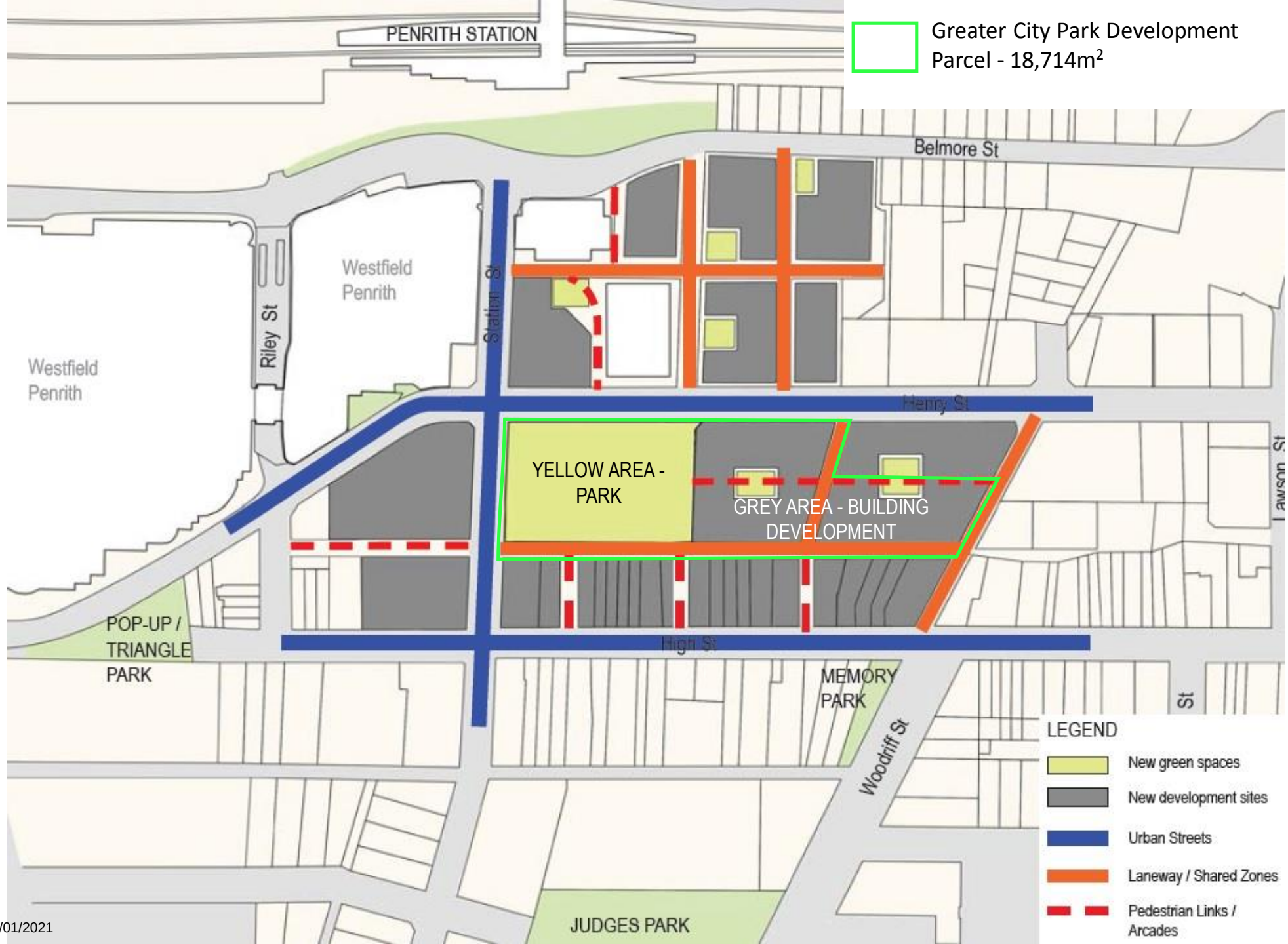
*** END OF SEARCH ***

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Appendix J Proposed General Development Scheme

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021



Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Appendix K Calibration and Decontamination Records

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Gas Calibration Certificate

Instrument MX6
Serial No. 13061JT-014
Sensors O2, LEL, CO2

Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation					
	Filter					
	Flow					
	Valves, Diaphragm					
PCB	Condition	✓				
Connectors	Condition	✓				
			Low	**High**	**TWA**	**STEL**
Sensor	O2	✓	19.5%	23.5%	N/A	N/A
	PID	✓	50ppm	100ppm	10ppm	25ppm
	CO2	✓	0.5%	1.0%	0.5%	3.0%
Alarms	Beeper	✓				
	Settings	✓				
Software	Version	✓				
Datalogger	Operation	✓				
Download	Operation	✓				
Other tests:						

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
O2		20.9% Vol O2		Fresh Air	20.9% O2
PID		98ppm Isobutylene	NATA	SY137	98.6ppm
CO2		0.25%CO2	NATA	SY53	0.28% CO2

Calibrated by: **Sophie Boler**

Calibration date: **1/05/2017**

Next calibration due: **28/10/2017**

Field Equipment Calibration and Decontamination

JBS&G

PROJECT NAME: Penrith	PROJECT NO: 52372
FIELD DATES: 06/05/17 / 07/05/17	FIELD STAFF: SG

CALIBRATION SUMMARY	
EQUIPMENT:	PID
CALIBRATION STANDARD:	Isobutylene 100PPM

DATE	TIME	READING (ppm_v)	COMMENTS
6/7/17	7:00am	0PPM	Cal successful
		100 PPM	Cal successful
7/7/17	7:00am	0PPM	Cal successful
		99 PPM	Cal successful

DECONTAMINATION SUMMARY

EQUIPMENT: soil collected from disposable push tubes.

1. Was the equipment decontaminated appropriately prior to sampling at each location?	Y	N	(NA)
2. Was excess soil removed by scraping, brushing or wiping with disposable towels?	Y	N	(NA)
3. Was the equipment contaminated with grease, tar or similar material?	Y	(N)	NA
If so, was the equipment steam cleaned or rinsed with pesticide-grade acetone:hexane?	Y	N	
4. Was phosphate-free detergent used to wash the equipment?	Y	N	(NA)
5. Was the equipment rinsed with clean water?	Y	N	(NA)
6. Was the equipment then rinsed with deionised water?	Y	N	(NA)
7. Were all sample containers cleaned and acid or solvent washed prior to sample collection?	Y	N	(NA)

WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS.

fresh nitrile gloves were used for each sample collection

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Field Equipment Calibration and Decontamination

PROJECT NAME: PCC	**PROJECT NO:** 52372
FIELD DATES: 26.5.17	**FIELD STAFF:** NH / AH

CALIBRATION SUMMARY	
EQUIPMENT:	WQM / PID
CALIBRATION STANDARD:	Airmet calibration / Isobutylene 100

DATE	TIME	READING (ppm_v)	COMMENTS
26.5.17	7:26	100.1	Calibration OK

DECONTAMINATION SUMMARY

EQUIPMENT: IP & HA

1. Was the equipment decontaminated appropriately prior to sampling at each location?	(Y)	N	NA
2. Was excess soil removed by scraping, brushing or wiping with disposable towels?	(Y)	N	NA
3. Was the equipment contaminated with grease, tar or similar material? If so, was the equipment steam cleaned or rinsed with pesticide-grade acetone:hexane?	Y Y	N N	(NA)
4. Was phosphate-free detergent used to wash the equipment?	(Y)	N	NA
5. Was the equipment rinsed with clean water?	(Y)	N	NA
6. Was the equipment then rinsed with deionised water?	(Y)	N	NA
7. Were all sample containers cleaned and acid or solvent washed prior to sample collection?	(Y)	N	NA

WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS.

Fresh pair of nitrile gloves used to handle each sample

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Multi Parameter Water Meter

Instrument YSI Quatro Pro Plus
Serial No. 11C100764

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper	✓	
	Settings	✓	
Software	Version	✓	
Data logger	Operation	✓	
Download	Operation	✓	
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 10.00		pH 10.00		291176	pH 9.20
2. pH 7.00		pH 7.00		290453	pH 6.91
3. pH 4.00		pH 4.00		288994	pH 4.03
4. mV		229.6mV		OB1388/OB1390	230.8mV
5. EC		2.76mS		292380	2.76mS
6. D.O		0.00 ppm		4347	0.00ppm
7. Temp		22.5°C		MultiTherm	22.2°C

Calibrated by: [redacted] **Joanna Wong**

Calibration date: **23/05/2017**

Next calibration due: **19/11/2017**

Appendix L Detailed Laboratory Reports and Chain of Custody Documentation

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

04437

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: S2372
PROJECT NAME: PENRITH
SEND REPORT TO: RHammond@jbsg.com.au SEND INVOICE TO:
DATE NEEDED BY:

LABORATORY BATCH NO.:
SAMPLERS: JL
PHONE: SYDNEY 02 8245 0300 – PERTH 08 9488 0100 EMAIL:
QC LEVEL: NEPM (2013)

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

TESTING TBA

545235

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	NOTES:
JB10 0.1-0.2	Soil	7-5-17		Jar + Bag		
JB10 0.3-0.4				Jar + Bag		
JB10 0.4-0.5				Jar		
JB10 1.0-1.2				Jar		
JB17 0.1-0.25				Jar + Bag		
JB17 0.25-0.35				Jar		
JB17 1.1-1.2				Jar		
JB07 0.1-0.2				Jar + Bag		
JB07 0.2-0.3				Jar		
JB07 1.1-1.2				Jar		
JB14 0.1-0.3				Jar + Bag		
JB14 0.3-0.4				Jar		
JB14 1.1-1.2				Jar		
JB13 0.1-0.2				Jar + Bag		
JB13 0.2-0.3				Jar		
JB13 1.1-1.2				Jar		
QA20170507-1				Jar + Bag		
JB12 0.1-0.25				Jar + Bag		
JB12 0.25-0.35				Jar		

RELINQUISHED BY:	METHOD OF SHIPMENT:		FOR RECEIVING LAB USE ONLY:
NAME: JL DATE: 8-5-17	CONSIGNMENT NOTE NO.	NAME: [redacted] DATE: 12:00	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF:	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE: 08/05	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

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

IMSO FormsO13 – Chain of Custody - Generic

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

04438

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: S2372	LABORATORY BATCH NO.:
PROJECT NAME: PERTH	SAMPLERS: JL
SEND REPORT TO: [redacted] SEND INVOICE TO:	PHONE: SYDNEY 02 8245 0300 – PERTH 08 9488 0100 EMAIL:
DATE NEEDED BY:	QC LEVEL: NEPM (2013)
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL: TESTING TBA	

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	NOTES:
JB12 1.1-1.2	Soil	7.5.17		Jar		
JB04 0.1-0.2	↓	↓		Jar + Bag		
JB04 0.4-0.5				Jar + Bag		
JB04 0.5-0.6				Jar		
JB04 1.1-1.2				Jar		
JB05 0.1-0.2				Jar + Bag		
JB05 0.5-0.6				Jar + Bag		
JB05 0.6-0.7				Jar		
JB05 1.1-1.2				Jar		
JB03 0.05-0.2				Jar + Bag		
JB03 0.2-0.45				Jar + Bag		
JB03 0.45-0.65				Jar		
JB03 1.1-1.2				Jar		
JB01 0.05-0.3				Jar + Bag		
JB01 0.3-0.4				Jar		
JB01 1.1-1.2				Jar.		
QC20170507-2				Jar + Bag		
JB02 0.05-0.25				Jar + Bag		
JB02 0.25-0.35				Jar		

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: JL DATE: 8-5-17	CONSIGNMENT NOTE NO.	NAME: [redacted] DATE: 12.80	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF:	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE: 08/05	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

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

IMSO FormsO13 – Chain of Custody - Generic

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

04439

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 52392
PROJECT NAME: PENRITH
SEND REPORT TO: rhammer@jbsg.com.au SEND INVOICE TO:
DATE NEEDED BY:

LABORATORY BATCH NO.:
SAMPLERS: JC
PHONE: SYDNEY 02 8245 0300 – PERTH 08 9488 0100 EMAIL:
QC LEVEL: NEPM (2013)

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL

TESTING TBA

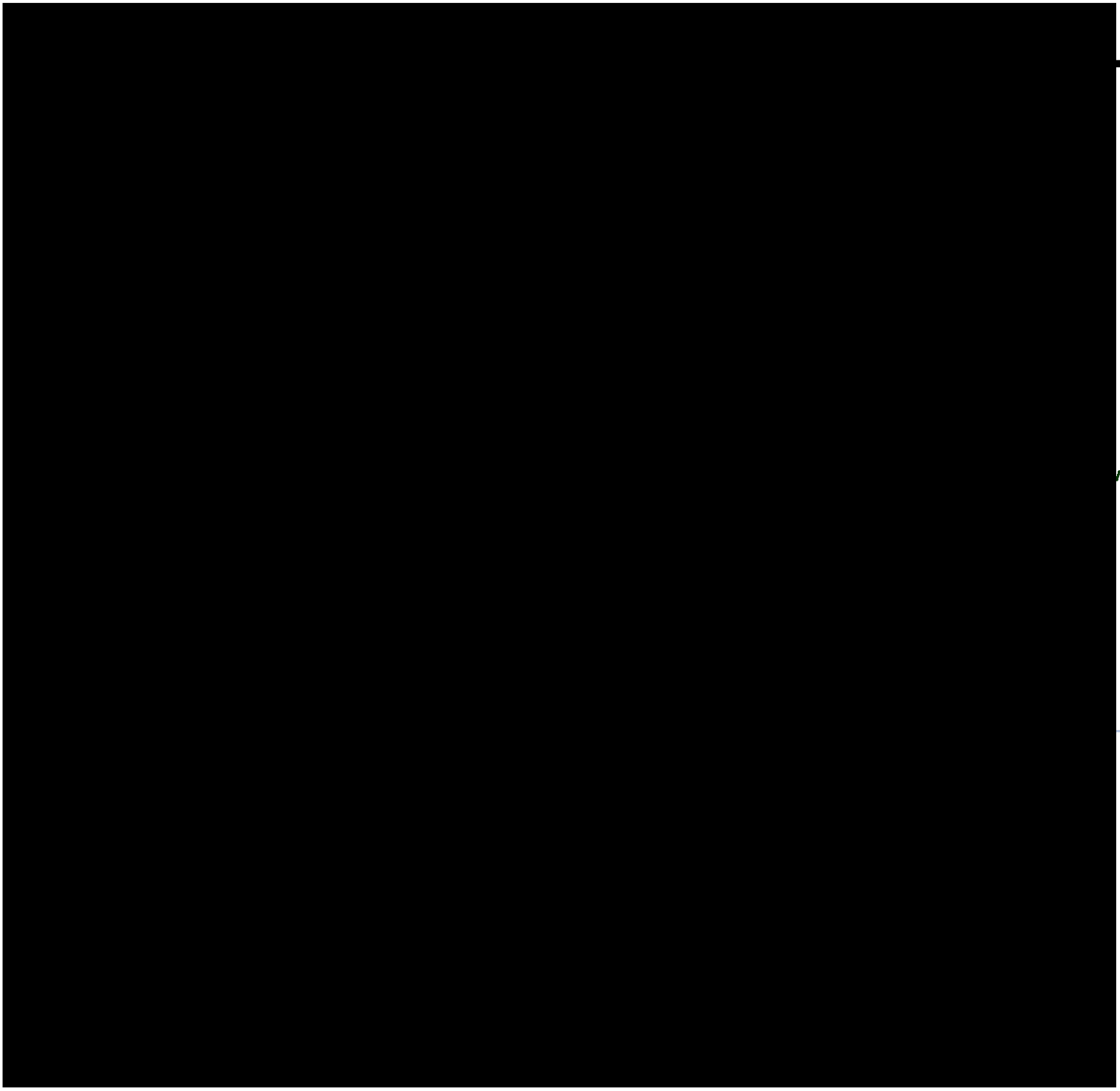
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	NOTES:
JB02 1.1-1.2	Soil	7.5.17		Jars.		
RIN 6-5	Water	6.5.17		Metals, Amber, Vials x3		
RIN 7-5	↓	7-5-17		" " "		
TS/SB	↓			x2 vials (each)		

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: JZ DATE: 8-5-17 OF: JBS&G	CONSIGNMENT NOTE NO. TRANSPORT CO.	NAME [redacted] DATE: 12/80 OF:	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C
NAME: DATE: OF:	CONSIGNMENT NOTE NO. TRANSPORT CO	NAME [redacted] DATE: 08/05 OF:	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C

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

IMSO FormsO13 – Chain of Custody - Generic

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021



Sample Name	JB1A	OCP/PCB	VOC	Heavy Metals	BTEX	pH, CEC & % Clay
JB01 0.05-0.3	x					
JB01 0.3-0.4						
JB01 1.1-1.2				x		x
JB02 0.05-0.25				x		
JB02 0.25-0.35						
JB02 1.1-1.2						
JB03 0.05-0.2				x		
JB03 0.2-0.45						
JB03 0.45-0.65						
JB03 1.1-1.2						
JB04 0.1-0.2						
JB04 0.4-0.5	x		x			
JB04 0.5-0.6						
JB04 1.1-1.2						
JB05 0.1-0.2				x		
JB05 0.5-0.6						
JB05 1.1-1.2						
JB06 0.1-0.2	x		x			
JB06 0.4-0.5						
JB07 0.1-0.2			x	x		
JB07 0.2-0.3						
JB07 1.1-1.2						
JB08 0.1-0.2	x					
JB08 0.2-0.3						
JB08 0.6-0.7						
JB09 0.15-0.2				x		
JB09 0.2-0.3						
JB09 0.45-0.55						
JB10 0.1-0.2	x					

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JB10 0.3-0.4						
JB10 0.4-0.5						
JB11 0-0.05						
JB11 0.05-0.15	x	x	x			
JB11 0.25-0.35						
JB11 0.35-0.45						x
JB12 0.1-0.25	x		x			
JB12 0.25-0.35						
JB12 1.1-1.2						x
JB13 0.1-0.2				x		
JB13 0.2-0.3						
JB13 1.1-1.2						
JB14 0.1-0.3	x					
JB14 0.2-0.3						
JB14 1.1-1.2						
JB15 0.1-0.2		x		x		
JB15 0.4-0.5						
JB15 0.5-0.6						
JB16 0.05-0.15			x			
JB16 0.35-0.45						
JB17 0.1-0.25	x					
JB17 0.25-0.35						
JB17 1.1-1.2						
JB18 0.1-0.2	x	x	x			
JB18 0.4-0.5						
JB18 0.6-0.7						
JB19 0.1-0.2						
JB19 0.3-0.4			x			
JB19 0.9-1						
JB19 1.6-1.7	x	x	x			
JB19 1.7-1.8				x		

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JB20 0.05-0.15						
JB20 0.5-0.6	x					
JB20 1.15-1.25						
JB20 1.25-1.35				x		
JB20 1.5-1.6						
JB20 1.7-1.8	x	x	x			
JB20 1.9-2						x
QC20170506-1	x	x	x			
QC20170506-2				x		
QC20170507-1						
QC20170507-2						
RIN 6-5	x	x	x			
RIN 7-5	x	x	x			
TS/TB					x	

From: Nibha Vaidya [redacted]
Sent: Tuesday, May [redacted]
To: Rohan Hammon [redacted]
Subject: RE: Awaiting [redacted]

Hi Rohan,

That's no problem, we will merge these two reports.

Thanks!

Kind Regards,

Nibha Vaidya
Phone : [redacted]
Mobile :
Email :

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Melbourne
3-5 Kingston Town Close
Oakleigh Vic 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 18217

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

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

Contact name: Rohan Hammond
Project name: HOLD: PENRITH
Project ID: 52372
COC number: Not provided
Turn around time: 5 Day
Date/Time received: May 8, 2017 12:00 PM
Eurofins | mgt reference: **545235**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 23.5 degrees Celsius.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☑ Sample containers for volatile analysis received with zero headspace.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

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

Nibha Vaidya on Phone : +61 (2) 9900 8400 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to Rohan Hammond - rhammond@jbsg.com.au.

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254 & 14271
Site# 12...

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	545235
		Phone:	02 8245 0300
		Fax:	
Project Name:	PENRITH		
Project ID:	52372		

Received:	May 10, 2017 12:00 PM
Due:	May 17, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail	% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271										X	X	X
ydney Laboratory - NATA Site # 18217		X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794	X											
erth Laboratory - NATA Site # 18217												
ternal Laboratory												

o	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID											
	JB09_0.15-0.20	May 06, 2017		Soil	S17-My07711							X			X		
	JB09_0.2-0.3	May 06, 2017		Soil	S17-My07712			X									
	JB09_0.45-0.55	May 06, 2017		Soil	S17-My07713			X									
	JB08_0.1-0.2	May 06, 2017		Soil	S17-My07714		X	X							X		X
	JB08_0.2-0.3	May 06, 2017		Soil	S17-My07715			X									
	JB08_0.6-0.7	May 06, 2017		Soil	S17-My07716			X									
	JB16_0.05-0.15	May 06, 2017		Soil	S17-My07717									X	X		

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 12

ABN– 50 005 085 521
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Project ID:	52372		

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Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

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elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB16_0.35-0.45	May 06, 2017		Soil	S17-My07718			X									
	JB06_0.1-0.2	May 06, 2017		Soil	S17-My07719		X							X	X		X
	JB06_0.4-0.5	May 06, 2017		Soil	S17-My07720			X									
	JB15-0.1-0.2	May 06, 2017		Soil	S17-My07721					X	X	X			X		
	JB15-0.4-0.5	May 06, 2017		Soil	S17-My07722			X									
	JB15-0.5-0.6	May 06, 2017		Soil	S17-My07723			X									
	JB18_0.1-0.2	May 06, 2017		Soil	S17-My07724		X			X	X			X	X		X
	JB18_0.4-0.5	May 06, 2017		Soil	S17-My07725			X									
	JB18_0.6-0.7	May 06, 2017		Soil	S17-My07726			X									
	JB19_0.1-0.2	May 06, 2017		Soil	S17-My07727			X									
	JB19_0.3-0.4	May 06, 2017		Soil	S17-My07728									X	X		

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254 &
Site# 1254

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**		**Received:**	May 10, 2017 12:00 PM
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:** **Phone:** **Fax:**	545235 02 8245 0300	**Due:** **Priority:** **Contact Name:**	May 17, 2017 5 Day Rohan Hammond
Project Name:	PENRITH				
Project ID:	52372				

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB19_0.9-1.0	May 06, 2017		Soil	S17-My07729			X									
	JB19_1.6-1.7	May 06, 2017		Soil	S17-My07730		X			X	X			X	X		X
	JB19_1.8-1.9	May 06, 2017		Soil	S17-My07731			X									
	JB20_0.05-0.15	May 06, 2017		Soil	S17-My07732			X									
	JB20_0.5-0.6	May 06, 2017		Soil	S17-My07733		X								X		X
	JB20_1.15-1.25	May 06, 2017		Soil	S17-My07734			X									
	JB20_1.25-1.35	May 06, 2017		Soil	S17-My07735							X			X		
	JB20_1.5-1.6	May 06, 2017		Soil	S17-My07736			X									
	JB20_1.7-1.8	May 06, 2017		Soil	S17-My07737		X			X	X			X	X		X
	JB20_1.9-2.0	May 06, 2017		Soil	S17-My07738	X			X						X	X	

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NATA # 1261 Site # 18217

Melbourne
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Oakleigh VIC 3166
Phone : +61 3 8564 5000
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Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB11_0.0-0.05	May 06, 2017		Soil	S17-My07739			X									
	JB11_0.05-0.15	May 06, 2017		Soil	S17-My07740		X	X		X	X			X	X		X
	JB11_0.25-0.35	May 06, 2017		Soil	S17-My07741			X									
	JB11_0.35-0.45	May 06, 2017		Soil	S17-My07742	X			X						X	X	
	QC20160506_	May 06, 2017		Soil	S17-My07743		X			X	X			X	X		X
	QC20160506_	May 06, 2017		Soil	S17-My07744							X			X		
	JB10_0.1-0.2	May 07, 2017		Soil	S17-My07847		X								X		X
	JB10_0.3-0.4	May 07, 2017		Soil	S17-My07848			X									
	JB10_0.4-0.5	May 07, 2017		Soil	S17-My07849			X									

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16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254 & 14271
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ABN– 50 005 085 521
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		Phone:	02 8245 0300	**Priority:**	5 Day
		Fax:		**Contact Name:**	Rohan Hammond
Project Name:	PENRITH				
Project ID:	52372				

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB10_1.0-1.2	May 07, 2017		Soil	S17-My07850			X									
	JB17_0.1-0.25	May 07, 2017		Soil	S17-My07851		X								X		X
	JB17_0.25-0.35	May 07, 2017		Soil	S17-My07852			X									
	JB17_1.1-1.2	May 07, 2017		Soil	S17-My07853			X									
	JB07_0.1-0.2	May 07, 2017		Soil	S17-My07854							X		X	X		
	JB07_0.2-0.3	May 07, 2017		Soil	S17-My07855			X									
	JB07_1.1-1.2	May 07, 2017		Soil	S17-My07856			X									
	JB14_0.1-0.3	May 07, 2017		Soil	S17-My07857		X								X		X
	JB14_0.3-0.4	May 07, 2017		Soil	S17-My07858			X									
	JB14_1.1-1.2	May 07, 2017		Soil	S17-My07859			X									
	JB13_0.1-0.2	May 07, 2017		Soil	S17-My07860							X			X		

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Project Name:	PENRITH		
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Received:	May 10, 2017 12:00 PM
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Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB13_0.2-0.3	May 07, 2017		Soil	S17-My07861			X									
	JB13_1.1-1.2	May 07, 2017		Soil	S17-My07862			X									
	QC201705070	May 07, 2017		Soil	S17-My07863			X									
	JB12_0.1-0.25	May 07, 2017		Soil	S17-My07864		X							X	X		X
	JB12_0.25-0.35	May 07, 2017		Soil	S17-My07865			X									
	JB12_1.1-1.2	May 07, 2017		Soil	S17-My07866	X			X						X	X	
	JB04_0.1-0.2	May 07, 2017		Soil	S17-My07867			X									
	JB04_0.4-0.5	May 07, 2017		Soil	S17-My07868		X							X	X		X
	JB04_0.5-0.6	May 07, 2017		Soil	S17-My07869			X									
	JB04_1.1-1.2	May 07, 2017		Soil	S17-My07870			X									
	JB05_0.1-0.2	May 07, 2017		Soil	S17-My07871							X			X		

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elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB05_0.5-0.6	May 07, 2017		Soil	S17-My07872			X									
	JB05_0.6-0.7	May 07, 2017		Soil	S17-My07873			X									
	JB05_1.1-1.2	May 07, 2017		Soil	S17-My07874			X									
	JB03_0.05-0.2	May 07, 2017		Soil	S17-My07875							X			X		
	JB03_0.2-0.45	May 07, 2017		Soil	S17-My07876			X									
	JB03_0.45-0.65	May 07, 2017		Soil	S17-My07877			X									
	JB03_1.1-1.2	May 07, 2017		Soil	S17-My07878			X									
	JB01_0.05-0.3	May 07, 2017		Soil	S17-My07879		X								X		X
	JB01_0.3-0.4	May 07, 2017		Soil	S17-My07880			X									
	JB01_1.1-1.2	May 07, 2017		Soil	S17-My07881	X			X			X			X	X	
	QC20170507_	May 07, 2017		Soil	S17-My07882			X									

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Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB02_0.05-0.25	May 07, 2017		Soil	S17-My07883							X			X		
	JB02_0.25-0.35	May 07, 2017		Soil	S17-My07884			X									
	JB02_1.1-1.2	May 07, 2017		Soil	S17-My07885			X									
	RIN6-5	May 06, 2017		Water	S17-My07886		X			X	X			X	X		X
	RIN7-5	May 07, 2017		Water	S17-My07887		X			X	X			X	X		X
	TB	May 07, 2017		Water	S17-My07888								X				
	TS	May 07, 2017		Water	S17-My07889								X				
est Counts						4	16	46	4	8	8	10	2	13	31	4	16

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Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

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

Attention:	Rohan Hammond
Report	545235-AID
Project Name	PENRITH
Project ID	52372
Received Date	May 08, 2017
Date Reported	May 17, 2017

Methodology:

Asbestos ID	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. Bulk samples include building materials, soils and ores.
Subsampling Soil Samples	The whole sample submitted is first dried and then sieved through a 10mm sieve followed by a 2mm sieve. All fibrous matter viz greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) Iron ores - Sampling and Sample preparation procedures is employed. Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis in accordance with AS 4964-2004.
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated and where required interfering organic fibres or matter may be removed by treating the sample for several hours at a temperature not exceeding 400 ± 30°C. The resultant material is then ground and examined in accordance with AS 4964-2004.
Limit of Reporting	The nominal detection limit of the AS4964 method is around 0.01%. The examination of large sample sizes (at least 500 ml is recommended) may improve the likelihood of identifying asbestos material in the greater than 2 mm fraction. The NEPM screening level of 0.001% w/w asbestos in soil for FA and AF (i.e. non-bonded/friable asbestos) only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. NOTE: NATA News, September 2011 – page 34, states, “Weighing of fibres is problematic and can lead to loss of fibres and potential exposure for laboratory analysts. To request laboratories to report information which is outside the scope of AS 4964-2004 and the scope of their accreditation is misleading and is most unwise” therefore such values reported are outside the scope of Eurofins | mgt NATA accreditation as designated by an asterisk.

Project Name PENRITH
Project ID 52372
Date Sampled May 06, 2017 to May 07, 2017
Report 545235-AID

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
JB08_0.1-0.2	17-My07714	May 06, 2017	Approximate Sample 606g Sample consisted of: Red-brown fine grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JB06_0.1-0.2	17-My07719	May 06, 2017	Approximate Sample 555g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JB18_0.1-0.2	17-My07724	May 06, 2017	Approximate Sample 506g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JB19_1.6-1.7	17-My07730	May 06, 2017	Approximate Sample 400g Sample consisted of: Light brown fine grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JB20_0.5-0.6	17-My07733	May 06, 2017	Approximate Sample 707g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JB20_1.7-1.8	17-My07737	May 06, 2017	Approximate Sample 208g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w.* Organic fibre detected. No respirable fibres detected.
JB11_0.05-0.15	17-My07740	May 06, 2017	Approximate Sample 641g Sample consisted of: Dark brown fine grain soil, rocks and organic debris	AF: Chrysotile, amosite and crocidolite asbestos detected in fibre cement fragments. Approximate raw weight of AF = 0.033g Estimated asbestos content in AF = 0.0040g* Total estimated asbestos concentration in AF = 0.00062% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Synthetic mineral fibre detected. Organic fibre detected.[M11]
QC20160506_1	17-My07743	May 06, 2017	Approximate Sample 752g Sample consisted of: Dark brown fine grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
JB10_0.1-0.2	17-My07847	May 07, 2017	Approximate Sample 754g Sample consisted of: Red-brown fine grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JB17_0.1-0.25	17-My07851	May 07, 2017	Approximate Sample 806g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JB14_0.1-0.3	17-My07857	May 07, 2017	Approximate Sample 956g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JB12_0.1-0.25	17-My07864	May 07, 2017	Approximate Sample 827g Sample consisted of: Grey fine grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JB04_0.4-0.5	17-My07868	May 07, 2017	Approximate Sample 818g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JB01_0.05-0.3	17-My07879	May 07, 2017	Approximate Sample 496g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]

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
Asbestos - LTM-ASB-8020	Sydney	May 17, 2017	Indefinite
Asbestos - LTM-ASB-8020	Sydney	May 17, 2017	Indefinite

ABN – 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

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

Project Name: PENRITH
Project ID: 52372

Order No.:
Report #: 545235
Phone: 02 8245 0300
Fax:

Received: May 10, 2017 12:00 PM
Due: May 17, 2017
Priority: 5 Day
Contact Name: Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - AS4964	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271																X	X		X
Sydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794						X													
Perth Laboratory - NATA Site # 18217																			
External Laboratory																			
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**														
1	JB09_0.15-0.20	May 06, 2017		Soil	S17-My07711								X			X			
2	JB09_0.2-0.3	May 06, 2017		Soil	S17-My07712				X										
3	JB09_0.45-0.55	May 06, 2017		Soil	S17-My07713				X										
4	JB08_0.1-0.2	May 06, 2017		Soil	S17-My07714			X	X							X			X
5	JB08_0.2-0.3	May 06, 2017		Soil	S17-My07715				X										
6	JB08_0.6-0.7	May 06, 2017		Soil	S17-My07716				X										
7	JB16_0.05-0.15	May 06, 2017		Soil	S17-My07717										X	X			

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Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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2/91 Leach Highway
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Melbourne Laboratory - NATA Site # 1254 & 14271																X	X		X
Sydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794						X													
Perth Laboratory - NATA Site # 18217																			
8	JB16_0.35-0.45	May 06, 2017		Soil	S17-My07718				X										
9	JB06_0.1-0.2	May 06, 2017		Soil	S17-My07719			X							X	X			X
10	JB06_0.4-0.5	May 06, 2017		Soil	S17-My07720				X										
11	JB15-0.1-0.2	May 06, 2017		Soil	S17-My07721						X	X	X			X			
12	JB15-0.4-0.5	May 06, 2017		Soil	S17-My07722				X										
13	JB15-0.5-0.6	May 06, 2017		Soil	S17-My07723				X										
14	JB18_0.1-0.2	May 06, 2017		Soil	S17-My07724			X			X	X			X	X			X
15	JB18_0.4-0.5	May 06, 2017		Soil	S17-My07725				X										
16	JB18_0.6-0.7	May 06, 2017		Soil	S17-My07726				X										
17	JB19_0.1-0.2	May 06, 2017		Soil	S17-My07727				X										
18	JB19_0.3-0.4	May 06, 2017		Soil	S17-My07728										X	X			

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ABN – 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
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Sydney
NSW 2000

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Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - AS4964	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271																X	X		X
Sydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794						X													
Perth Laboratory - NATA Site # 18217																			
19	JB19_0.9-1.0	May 06, 2017		Soil	S17-My07729				X										
20	JB19_1.6-1.7	May 06, 2017		Soil	S17-My07730			X			X	X			X	X			X
21	JB19_1.8-1.9	May 06, 2017		Soil	S17-My07731				X										
22	JB20_0.05-0.15	May 06, 2017		Soil	S17-My07732				X										
23	JB20_0.5-0.6	May 06, 2017		Soil	S17-My07733			X								X			X
24	JB20_1.15-1.25	May 06, 2017		Soil	S17-My07734				X										
25	JB20_1.25-1.35	May 06, 2017		Soil	S17-My07735								X			X			
26	JB20_1.5-1.6	May 06, 2017		Soil	S17-My07736				X										
27	JB20_1.7-1.8	May 06, 2017		Soil	S17-My07737		X				X	X			X	X			X
28	JB20_1.9-2.0	May 06, 2017		Soil	S17-My07738	X				X						X	X		

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
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Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - AS4964	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271																X	X		X
Sydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794						X													
Perth Laboratory - NATA Site # 18217																			
29	JB11_0.0-0.05	May 06, 2017		Soil	S17-My07739				X										
30	JB11_0.05-0.15	May 06, 2017		Soil	S17-My07740			X	X		X	X			X	X			X
31	JB11_0.25-0.35	May 06, 2017		Soil	S17-My07741				X										
32	JB11_0.35-0.45	May 06, 2017		Soil	S17-My07742	X				X						X	X		
33	QC20160506_1	May 06, 2017		Soil	S17-My07743			X			X	X			X	X			X
34	QC20160506_2	May 06, 2017		Soil	S17-My07744								X			X			
35	JB10_0.1-0.2	May 07, 2017		Soil	S17-My07847			X								X			X
36	JB10_0.3-0.4	May 07, 2017		Soil	S17-My07848				X										
37	JB10_0.4-0.5	May 07, 2017		Soil	S17-My07849				X										

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web : www.eurofins.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
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NATA # 1261
Site # 1254 & 14271

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Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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Sample Detail						% Clay	Asbestos - AS4964	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271																X	X		X
Sydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794						X													
Perth Laboratory - NATA Site # 18217																			
38	JB10_1.0-1.2	May 07, 2017		Soil	S17-My07850				X										
39	JB17_0.1-0.25	May 07, 2017		Soil	S17-My07851			X								X			X
40	JB17_0.25-0.35	May 07, 2017		Soil	S17-My07852				X										
41	JB17_1.1-1.2	May 07, 2017		Soil	S17-My07853				X										
42	JB07_0.1-0.2	May 07, 2017		Soil	S17-My07854								X		X	X			
43	JB07_0.2-0.3	May 07, 2017		Soil	S17-My07855				X										
44	JB07_1.1-1.2	May 07, 2017		Soil	S17-My07856				X										
45	JB14_0.1-0.3	May 07, 2017		Soil	S17-My07857			X								X			X
46	JB14_0.3-0.4	May 07, 2017		Soil	S17-My07858				X										
47	JB14_1.1-1.2	May 07, 2017		Soil	S17-My07859				X										
48	JB13_0.1-0.2	May 07, 2017		Soil	S17-My07860								X			X			

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Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
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Site # 1254 & 14271

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Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - AS4964	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271																X	X		X
Sydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794						X													
Perth Laboratory - NATA Site # 18217																			
49	JB13_0.2-0.3	May 07, 2017		Soil	S17-My07861				X										
50	JB13_1.1-1.2	May 07, 2017		Soil	S17-My07862				X										
51	QC2017050701	May 07, 2017		Soil	S17-My07863				X										
52	JB12_0.1-0.25	May 07, 2017		Soil	S17-My07864			X							X	X			X
53	JB12_0.25-0.35	May 07, 2017		Soil	S17-My07865				X										
54	JB12_1.1-1.2	May 07, 2017		Soil	S17-My07866	X				X						X	X		
55	JB04_0.1-0.2	May 07, 2017		Soil	S17-My07867				X										
56	JB04_0.4-0.5	May 07, 2017		Soil	S17-My07868			X							X	X			X
57	JB04_0.5-0.6	May 07, 2017		Soil	S17-My07869				X										
58	JB04_1.1-1.2	May 07, 2017		Soil	S17-My07870				X										
59	JB05_0.1-0.2	May 07, 2017		Soil	S17-My07871								X			X			

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Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

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

Project Name: PENRITH
Project ID: 52372

Order No.:
Report #: 545235
Phone: 02 8245 0300
Fax:

Received: May 10, 2017 12:00 PM
Due: May 17, 2017
Priority: 5 Day
Contact Name: Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - AS4964	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271																X	X		X
Sydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794						X													
Perth Laboratory - NATA Site # 18217																			
60	JB05_0.5-0.6	May 07, 2017		Soil	S17-My07872				X										
61	JB05_0.6-0.7	May 07, 2017		Soil	S17-My07873				X										
62	JB05_1.1-1.2	May 07, 2017		Soil	S17-My07874				X										
63	JB03_0.05-0.2	May 07, 2017		Soil	S17-My07875								X			X			
64	JB03_0.2-0.45	May 07, 2017		Soil	S17-My07876				X										
65	JB03_0.45-0.65	May 07, 2017		Soil	S17-My07877				X										
66	JB03_1.1-1.2	May 07, 2017		Soil	S17-My07878				X										
67	JB01_0.05-0.3	May 07, 2017		Soil	S17-My07879			X								X			X
68	JB01_0.3-0.4	May 07, 2017		Soil	S17-My07880				X										
69	JB01_1.1-1.2	May 07, 2017		Soil	S17-My07881	X				X			X			X	X		
70	QC20170507_2	May 07, 2017		Soil	S17-My07882				X										

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

ABN – 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: PENRITH
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Order No.:
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Contact Name: Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - AS4964	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271																X	X		X
Sydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794						X													
Perth Laboratory - NATA Site # 18217																			
71	JB02_0.05-0.25	May 07, 2017		Soil	S17-My07883								X			X			
72	JB02_0.25-0.35	May 07, 2017		Soil	S17-My07884				X										
73	JB02_1.1-1.2	May 07, 2017		Soil	S17-My07885				X										
74	RIN6-5	May 06, 2017		Water	S17-My07886			X			X	X			X			X	X
75	RIN7-5	May 07, 2017		Water	S17-My07887			X			X	X			X				X
76	TB	May 07, 2017		Water	S17-My07888									X					
77	TS	May 07, 2017		Water	S17-My07889									X					
Test Counts						4	1	15	46	4	8	8	10	2	13	29	4	1	16

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Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
COC	Chain of custody
SRA	Sample Receipt Advice
ISO	International Stardards Organisation
AS	Australian Standards
WA DOH	Western Australia Department of Health
NOHSC	National Occupational Health and Safety Commission
ACM	Bonded asbestos-containing material means any material containing more than 1% asbestos and comprises asbestos-containing-material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin. Common examples of ACM include but are not limited to: pipe and boiler insulation, sprayed-on fireproofing, troweled-on acoustical plaster, floor tile and mastic, floor linoleum, transite shingles, roofing materials, wall and ceiling plaster, ceiling tiles, and gasket materials. This term is restricted to material that cannot pass a 7 mm x 7 mm sieve. This sieve size is selected because it approximates the thickness of common asbestos cement sheeting and for fragments to be smaller than this would imply a high degree of damage and hence potential for fibre release.
FA	FA comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded (crumbling).
PACM	Presumed Asbestos-Containing Material means thermal system insulation and surfacing material found in buildings, vessels, and vessel sections constructed no later than 1980 that are assumed to contain greater than one percent asbestos but have not been sampled or analyzed to verify or negate the presence of asbestos.
AF	Asbestos fines (AF) are defined as free fibres, or fibre bundles, smaller than 7mm. It is the free fibres which present the greatest risk to human health, although very small fibres (< 5 microns in length) are not considered to be such a risk. AF also includes small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve. (Note that for bonded ACM fragments to pass through a 7 mm x 7 mm sieve implies a substatntial degree of damage which increases the potential for fibre release.)
AC	Asbestos cement means a mixture of cement and asbestos fibres (typically 90:10 ratios).

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Comments

My07730, My07879: Sample received was less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable
M11	NATA accreditation does not cover the performance of this service.

Authorised by:

Nibha Vaidya — Senior Analyst-Asbestos (NSW)

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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Version: 1, Version Date: 29/01/2021

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Certificate of Analysis

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

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Rohan Hammond**

Report **545235-S**
Project name PENRITH
Project ID 52372
Received Date May 08, 2017

Client Sample ID			**JB09_0.15-0.20**	**JB08_0.1-0.2**	**JB16_0.05-0.15**	**JB06_0.1-0.2**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S17-My07711**	**S17-My07714**	**S17-My07717**	**S17-My07719**
Date Sampled			**May 06, 2017**	**May 06, 2017**	**May 06, 2017**	**May 06, 2017**
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	-	< 50	-	< 50
TRH C29-C36	50	mg/kg	-	< 50	-	< 50
TRH C10-36 (Total)	50	mg/kg	-	< 50	-	< 50
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	90	-	88
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	-	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	-	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	-	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	-	-	< 0.5	< 0.5

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Client Sample ID			JB09_0.15-0.20	JB08_0.1-0.2	JB16_0.05-0.15	JB06_0.1-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07711	S17-My07714	S17-My07717	S17-My07719
Date Sampled			May 06, 2017	May 06, 2017	May 06, 2017	May 06, 2017
Test/Reference	LOR	Unit				
Volatile Organics						
Benzene	0.1	mg/kg	-	-	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Bromoform	0.5	mg/kg	-	-	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	-	-	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	-	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Chloroform	0.5	mg/kg	-	-	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	-	-	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	-	-	< 0.1	< 0.1
Styrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
Toluene	0.1	mg/kg	-	-	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	-	-	< 0.5	< 0.5
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	< 0.3
Fluorobenzene (surr.)	1	%	-	-	100	97
4-Bromofluorobenzene (surr.)	1	%	-	-	91	88
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	-	< 50
TRH C6-C10	20	mg/kg	-	< 20	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	-	1.2
Acenaphthene	0.5	mg/kg	-	< 0.5	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	-	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	-	< 0.5

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Client Sample ID			JB09_0.15-0.20	JB08_0.1-0.2	JB16_0.05-0.15	JB06_0.1-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07711	S17-My07714	S17-My07717	S17-My07719
Date Sampled			May 06, 2017	May 06, 2017	May 06, 2017	May 06, 2017
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	-	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	-	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	-	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	-	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Total PAH*	0.5	mg/kg	-	< 0.5	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	109	-	92
p-Terphenyl-d14 (surr.)	1	%	-	107	-	79
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	< 50	-	< 50
TRH >C16-C34	100	mg/kg	-	< 100	-	< 100
TRH >C34-C40	100	mg/kg	-	< 100	-	< 100
Phenolics (total)	0.1	mg/kg	-	< 0.1	-	< 0.1
% Moisture	1	%	8.9	8.2	8.6	7.1
Heavy Metals						
Arsenic	2	mg/kg	10	3.9	-	8.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	46	17	-	69
Copper	5	mg/kg	28	< 5	-	< 5
Lead	5	mg/kg	15	6.5	-	13
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Nickel	5	mg/kg	< 5	< 5	-	< 5
Zinc	5	mg/kg	7.2	12	-	< 5

Client Sample ID			JB15-0.1-0.2	JB18_0.1-0.2	JB19_0.3-0.4	JB19_1.6-1.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07721	S17-My07724	S17-My07728	S17-My07730
Date Sampled			May 06, 2017	May 06, 2017	May 06, 2017	May 06, 2017
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	-	< 50	-	< 50
TRH C29-C36	50	mg/kg	-	< 50	-	< 50
TRH C10-36 (Total)	50	mg/kg	-	< 50	-	< 50
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	96	-	92

Client Sample ID			JB15-0.1-0.2	JB18_0.1-0.2	JB19_0.3-0.4	JB19_1.6-1.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07721	S17-My07724	S17-My07728	S17-My07730
Date Sampled			May 06, 2017	May 06, 2017	May 06, 2017	May 06, 2017
Test/Reference	LOR	Unit				
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5

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Client Sample ID			JB15-0.1-0.2	JB18_0.1-0.2	JB19_0.3-0.4	JB19_1.6-1.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07721	S17-My07724	S17-My07728	S17-My07730
Date Sampled			May 06, 2017	May 06, 2017	May 06, 2017	May 06, 2017
Test/Reference	LOR	Unit				
Volatile Organics						
Trichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Xylenes - Total	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
Fluorobenzene (surr.)	1	%	-	105	100	101
4-Bromofluorobenzene (surr.)	1	%	-	96	91	92
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	-	< 50
TRH C6-C10	20	mg/kg	-	< 20	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	-	1.2
Acenaphthene	0.5	mg/kg	-	< 0.5	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	-	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	-	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	-	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	-	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	-	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Total PAH*	0.5	mg/kg	-	< 0.5	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	92	-	92
p-Terphenyl-d14 (surr.)	1	%	-	76	-	78
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05

Client Sample ID			JB15-0.1-0.2	JB18_0.1-0.2	JB19_0.3-0.4	JB19_1.6-1.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07721	S17-My07724	S17-My07728	S17-My07730
Date Sampled			May 06, 2017	May 06, 2017	May 06, 2017	May 06, 2017
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	-	< 1
Dibutylchlorendate (surr.)	1	%	75	79	-	71
Tetrachloro-m-xylene (surr.)	1	%	93	92	-	89
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibutylchlorendate (surr.)	1	%	75	79	-	71
Tetrachloro-m-xylene (surr.)	1	%	93	92	-	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	< 50	-	< 50
TRH >C16-C34	100	mg/kg	-	< 100	-	< 100
TRH >C34-C40	100	mg/kg	-	< 100	-	< 100
Phenolics (total)	0.1	mg/kg	-	< 0.1	-	< 0.1
% Moisture	1	%	7.6	8.1	4.6	7.2
Heavy Metals						
Arsenic	2	mg/kg	13	7.5	-	5.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	110	39	-	10
Copper	5	mg/kg	5.9	6.2	-	5.3
Lead	5	mg/kg	16	12	-	5.5
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Nickel	5	mg/kg	< 5	< 5	-	5.4
Zinc	5	mg/kg	12	< 5	-	29

Client Sample ID			JB20_0.5-0.6	JB20_1.25-1.35	JB20_1.7-1.8	JB20_1.9-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07733	S17-My07735	S17-My07737	S17-My07738
Date Sampled			May 06, 2017	May 06, 2017	May 06, 2017	May 06, 2017
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	< 50	-	69	-
TRH C29-C36	50	mg/kg	< 50	-	58	-
TRH C10-36 (Total)	50	mg/kg	< 50	-	127	-

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Client Sample ID			JB20_0.5-0.6	JB20_1.25-1.35	JB20_1.7-1.8	JB20_1.9-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07733	S17-My07735	S17-My07737	S17-My07738
Date Sampled			May 06, 2017	May 06, 2017	May 06, 2017	May 06, 2017
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	84	-	88	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	-	-	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	-	-	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	-	-	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	< 0.5	-
Allyl chloride	0.5	mg/kg	-	-	< 0.5	-
Benzene	0.1	mg/kg	-	-	< 0.1	-
Bromobenzene	0.5	mg/kg	-	-	< 0.5	-
Bromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromodichloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromoform	0.5	mg/kg	-	-	< 0.5	-
Bromomethane	0.5	mg/kg	-	-	< 0.5	-
Carbon disulfide	0.5	mg/kg	-	-	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	-	-	< 0.5	-
Chlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Chloroethane	0.5	mg/kg	-	-	< 0.5	-
Chloroform	0.5	mg/kg	-	-	< 0.5	-
Chloromethane	0.5	mg/kg	-	-	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Dibromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Dibromomethane	0.5	mg/kg	-	-	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	-	-	< 0.5	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
Iodomethane	0.5	mg/kg	-	-	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			JB20_0.5-0.6	JB20_1.25-1.35	JB20_1.7-1.8	JB20_1.9-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07733	S17-My07735	S17-My07737	S17-My07738
Date Sampled			May 06, 2017	May 06, 2017	May 06, 2017	May 06, 2017
Test/Reference	LOR	Unit				
Volatile Organics						
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
Methylene Chloride	0.5	mg/kg	-	-	< 0.5	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Styrene	0.5	mg/kg	-	-	< 0.5	-
Tetrachloroethene	0.5	mg/kg	-	-	< 0.5	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Trichloroethene	0.5	mg/kg	-	-	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	-	-	< 0.5	-
Vinyl chloride	0.5	mg/kg	-	-	< 0.5	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
Fluorobenzene (surr.)	1	%	-	-	96	-
4-Bromofluorobenzene (surr.)	1	%	-	-	88	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	< 50	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	-	1.2	-
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	-	1.0	-
Total PAH*	0.5	mg/kg	< 0.5	-	2.2	-
2-Fluorobiphenyl (surr.)	1	%	90	-	94	-
p-Terphenyl-d14 (surr.)	1	%	74	-	76	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-BHC	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-

Client Sample ID			JB20_0.5-0.6	JB20_1.25-1.35	JB20_1.7-1.8	JB20_1.9-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07733	S17-My07735	S17-My07737	S17-My07738
Date Sampled			May 06, 2017	May 06, 2017	May 06, 2017	May 06, 2017
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
b-BHC	0.05	mg/kg	-	-	< 0.05	-
d-BHC	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.2	mg/kg	-	-	< 0.2	-
Toxaphene	1	mg/kg	-	-	< 1	-
Dibutylchlorendate (surr.)	1	%	-	-	127	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	118	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1232	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	-
Total PCB*	0.5	mg/kg	-	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	-	-	127	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	118	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-	110	-
TRH >C34-C40	100	mg/kg	< 100	-	< 100	-
% Clay	1	%	-	-	-	30
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	-	-	-	110
pH (1:5 Aqueous extract)	0.1	pH Units	-	-	-	7.6
Phenolics (total)	0.1	mg/kg	< 0.1	-	< 0.1	-
% Moisture	1	%	16	14	23	13
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	-	-	-	20
Heavy Metals						
Arsenic	2	mg/kg	2.7	4.6	4.4	-
Cadmium	0.4	mg/kg	< 0.4	0.4	< 0.4	-
Chromium	5	mg/kg	10	12	9.2	-
Copper	5	mg/kg	< 5	25	31	-
Lead	5	mg/kg	8.0	49	110	-
Mercury	0.1	mg/kg	< 0.1	0.1	0.3	-
Nickel	5	mg/kg	< 5	7.7	5.8	-
Zinc	5	mg/kg	31	100	190	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	JB11_0.05-0.15 Soil S17-My07740 May 06, 2017	JB11_0.35-0.45 Soil S17-My07742 May 06, 2017	QC20160506_1 Soil S17-My07743 May 06, 2017	QC20160506_2 Soil S17-My07744 May 06, 2017
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	< 20	-
TRH C10-C14	20	mg/kg	39	-	< 20	-
TRH C15-C28	50	mg/kg	480	-	< 50	-
TRH C29-C36	50	mg/kg	350	-	< 50	-
TRH C10-36 (Total)	50	mg/kg	869	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	86	-	96	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	-	< 0.5	-
Allyl chloride	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Bromobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromochloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromodichloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromoform	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Carbon disulfide	0.5	mg/kg	< 0.5	-	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	-	< 0.5	-
Chlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Chloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Chloroform	0.5	mg/kg	< 0.5	-	< 0.5	-
Chloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	< 0.5	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	JB11_0.05-0.15 Soil S17-My07740 May 06, 2017	JB11_0.35-0.45 Soil S17-My07742 May 06, 2017	QC20160506_1 Soil S17-My07743 May 06, 2017	QC20160506_2 Soil S17-My07744 May 06, 2017
Volatile Organics						
Dibromochloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibromomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Iodomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	-	< 0.5	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	-
Methylene Chloride	0.5	mg/kg	< 0.5	-	< 0.5	-
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	-
Styrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Tetrachloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	< 0.5	-
Trichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Vinyl chloride	0.5	mg/kg	< 0.5	-	< 0.5	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	< 0.3	-
Fluorobenzene (surr.)	1	%	95	-	105	-
4-Bromofluorobenzene (surr.)	1	%	86	-	96	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	51	-	< 50	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	126	-	93	-
p-Terphenyl-d14 (surr.)	1	%	104	-	75	-

Client Sample ID			JB11_0.05-0.15	JB11_0.35-0.45	QC20160506_1	QC20160506_2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07740	S17-My07742	S17-My07743	S17-My07744
Date Sampled			May 06, 2017	May 06, 2017	May 06, 2017	May 06, 2017
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2	-
Toxaphene	1	mg/kg	< 1	-	< 1	-
Dibutylchlorendate (surr.)	1	%	134	-	77	-
Tetrachloro-m-xylene (surr.)	1	%	85	-	84	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	< 0.1	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PCB*	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	134	-	77	-
Tetrachloro-m-xylene (surr.)	1	%	85	-	84	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	51	-	< 50	-
TRH >C16-C34	100	mg/kg	710	-	< 100	-
TRH >C34-C40	100	mg/kg	140	-	< 100	-
% Clay	1	%	-	28	-	-
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	-	170	-	-
pH (1:5 Aqueous extract)	0.1	pH Units	-	8.3	-	-
Phenolics (total)	0.1	mg/kg	< 0.1	-	< 0.1	-
% Moisture	1	%	9.2	11	6.4	14
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	-	17	-	-

Client Sample ID			JB11_0.05-0.15	JB11_0.35-0.45	QC20160506_1	QC20160506_2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07740	S17-My07742	S17-My07743	S17-My07744
Date Sampled			May 06, 2017	May 06, 2017	May 06, 2017	May 06, 2017
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	2.7	-	8.6	8.1
Cadmium	0.4	mg/kg	< 0.4	-	< 0.4	< 0.4
Chromium	5	mg/kg	6.3	-	50	42
Copper	5	mg/kg	23	-	< 5	16
Lead	5	mg/kg	31	-	12	20
Mercury	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	-	< 5	< 5
Zinc	5	mg/kg	93	-	< 5	21

Client Sample ID			JB10_0.1-0.2	JB17_0.1-0.25	JB07_0.1-0.2	JB14_0.1-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07847	S17-My07851	S17-My07854	S17-My07857
Date Sampled			May 07, 2017	May 07, 2017	May 07, 2017	May 07, 2017
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	-	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	-	< 50
TRH C29-C36	50	mg/kg	< 50	58	-	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	58	-	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	92	141	-	149
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	-	-	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	-	-	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			JB10_0.1-0.2	JB17_0.1-0.25	JB07_0.1-0.2	JB14_0.1-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07847	S17-My07851	S17-My07854	S17-My07857
Date Sampled			May 07, 2017	May 07, 2017	May 07, 2017	May 07, 2017
Test/Reference	LOR	Unit				
Volatile Organics						
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	< 0.5	-
Allyl chloride	0.5	mg/kg	-	-	< 0.5	-
Benzene	0.1	mg/kg	-	-	< 0.1	-
Bromobenzene	0.5	mg/kg	-	-	< 0.5	-
Bromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromodichloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromoform	0.5	mg/kg	-	-	< 0.5	-
Bromomethane	0.5	mg/kg	-	-	< 0.5	-
Carbon disulfide	0.5	mg/kg	-	-	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	-	-	< 0.5	-
Chlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Chloroethane	0.5	mg/kg	-	-	< 0.5	-
Chloroform	0.5	mg/kg	-	-	< 0.5	-
Chloromethane	0.5	mg/kg	-	-	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Dibromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Dibromomethane	0.5	mg/kg	-	-	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	-	-	< 0.5	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
Iodomethane	0.5	mg/kg	-	-	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	< 0.5	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
Methylene Chloride	0.5	mg/kg	-	-	< 0.5	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Styrene	0.5	mg/kg	-	-	< 0.5	-
Tetrachloroethene	0.5	mg/kg	-	-	< 0.5	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Trichloroethene	0.5	mg/kg	-	-	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	-	-	< 0.5	-
Vinyl chloride	0.5	mg/kg	-	-	< 0.5	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
Fluorobenzene (surr.)	1	%	-	-	97	-
4-Bromofluorobenzene (surr.)	1	%	-	-	88	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	-	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5

Client Sample ID			JB10_0.1-0.2	JB17_0.1-0.25	JB07_0.1-0.2	JB14_0.1-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07847	S17-My07851	S17-My07854	S17-My07857
Date Sampled			May 07, 2017	May 07, 2017	May 07, 2017	May 07, 2017
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	100	INT	-	120
p-Terphenyl-d14 (surr.)	1	%	87	INT	-	101
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	-	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	-	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	-	< 100
Phenolics (total)	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
% Moisture	1	%	8.6	6.5	8.5	15
Heavy Metals						
Arsenic	2	mg/kg	8.8	10	7.8	5.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	0.8
Chromium	5	mg/kg	44	64	64	18
Copper	5	mg/kg	6.9	< 5	17	61
Lead	5	mg/kg	10	13	29	57
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.4	0.3
Nickel	5	mg/kg	< 5	< 5	34	14
Zinc	5	mg/kg	< 5	< 5	57	200

Client Sample ID			JB13_0.1-0.2	JB12_0.1-0.25	JB12_1.1-1.2	JB04_0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07860	S17-My07864	S17-My07866	S17-My07868
Date Sampled			May 07, 2017	May 07, 2017	May 07, 2017	May 07, 2017
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	-	87	-	< 50
TRH C29-C36	50	mg/kg	-	69	-	< 50
TRH C10-36 (Total)	50	mg/kg	-	156	-	< 50
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	< 0.2

Client Sample ID			JB13_0.1-0.2	JB12_0.1-0.25	JB12_1.1-1.2	JB04_0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07860	S17-My07864	S17-My07866	S17-My07868
Date Sampled			May 07, 2017	May 07, 2017	May 07, 2017	May 07, 2017
Test/Reference	LOR	Unit				
BTEX						
o-Xylene	0.1	mg/kg	-	< 0.1	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	92	-	98
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	-	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	-	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	-	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	-	< 0.5
Allyl chloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzene	0.1	mg/kg	-	< 0.1	-	< 0.1
Bromobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromochloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromodichloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromoform	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Carbon disulfide	0.5	mg/kg	-	< 0.5	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Chlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
Chloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Chloroform	0.5	mg/kg	-	< 0.5	-	< 0.5
Chloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibromochloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibromomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	< 0.1
Iodomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	-	< 0.5
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	< 0.2
Methylene Chloride	0.5	mg/kg	-	< 0.5	-	< 0.5
o-Xylene	0.1	mg/kg	-	< 0.1	-	< 0.1
Styrene	0.5	mg/kg	-	< 0.5	-	< 0.5

Client Sample ID			JB13_0.1-0.2	JB12_0.1-0.25	JB12_1.1-1.2	JB04_0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07860	S17-My07864	S17-My07866	S17-My07868
Date Sampled			May 07, 2017	May 07, 2017	May 07, 2017	May 07, 2017
Test/Reference	LOR	Unit				
Volatile Organics						
Tetrachloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
Toluene	0.1	mg/kg	-	< 0.1	-	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	< 0.5
Trichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Vinyl chloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	< 0.3
Fluorobenzene (surr.)	1	%	-	101	-	108
4-Bromofluorobenzene (surr.)	1	%	-	92	-	98
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	-	< 50
TRH C6-C10	20	mg/kg	-	< 20	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	-	1.2
Acenaphthene	0.5	mg/kg	-	< 0.5	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	-	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	-	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	-	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	-	0.5
Fluorene	0.5	mg/kg	-	< 0.5	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	-	< 0.5
Phenanthrene	0.5	mg/kg	-	0.5	-	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	-	0.5
Total PAH*	0.5	mg/kg	-	0.5	-	1
2-Fluorobiphenyl (surr.)	1	%	-	121	-	112
p-Terphenyl-d14 (surr.)	1	%	-	102	-	94
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	< 50	-	< 50
TRH >C16-C34	100	mg/kg	-	120	-	< 100
TRH >C34-C40	100	mg/kg	-	< 100	-	< 100
% Clay	1	%	-	-	39	-
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	-	-	130	-
pH (1:5 Aqueous extract)	0.1	pH Units	-	-	7.7	-
Phenolics (total)	0.1	mg/kg	-	< 0.1	-	< 0.1
% Moisture	1	%	13	6.8	12	19
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	-	-	13	-

Client Sample ID			JB13_0.1-0.2	JB12_0.1-0.25	JB12_1.1-1.2	JB04_0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07860	S17-My07864	S17-My07866	S17-My07868
Date Sampled			May 07, 2017	May 07, 2017	May 07, 2017	May 07, 2017
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	5.6	< 2	-	3.8
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	13	91	-	9.7
Copper	5	mg/kg	12	24	-	24
Lead	5	mg/kg	25	< 5	-	110
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Nickel	5	mg/kg	6.4	75	-	7.2
Zinc	5	mg/kg	170	48	-	110

Client Sample ID			JB05_0.1-0.2	JB03_0.05-0.2	JB01_0.05-0.3	JB01_1.1-1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My07871	S17-My07875	S17-My07879	S17-My07881
Date Sampled			May 07, 2017	May 07, 2017	May 07, 2017	May 07, 2017
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-36 (Total)	50	mg/kg	-	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	97	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	0.9	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	1.2	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.5	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene	0.5	mg/kg	-	-	0.7	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	0.8	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	0.7	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	0.5	-
Chrysene	0.5	mg/kg	-	-	0.7	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	1.7	-

Client Sample ID			JB05_0.1-0.2	JB03_0.05-0.2	JB01_0.05-0.3	JB01_1.1-1.2
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S17-My07871**	**S17-My07875**	**S17-My07879**	**S17-My07881**
Date Sampled			**May 07, 2017**	**May 07, 2017**	**May 07, 2017**	**May 07, 2017**
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	0.6	-
Pyrene	0.5	mg/kg	-	-	1.7	-
Total PAH*	0.5	mg/kg	-	-	8	-
2-Fluorobiphenyl (surr.)	1	%	-	-	INT	-
p-Terphenyl-d14 (surr.)	1	%	-	-	134	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
% Clay	1	%	-	-	-	43
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	-	-	-	460
pH (1:5 Aqueous extract)	0.1	pH Units	-	-	-	5.6
Phenolics (total)	0.1	mg/kg	-	-	< 0.1	-
% Moisture	1	%	12	13	11	14
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	-	-	-	13
Heavy Metals						
Arsenic	2	mg/kg	9.0	2.9	12	3.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	21	7.7	14	9.9
Copper	5	mg/kg	42	7.3	17	17
Lead	5	mg/kg	120	120	110	6.2
Mercury	0.1	mg/kg	0.2	< 0.1	0.2	< 0.1
Nickel	5	mg/kg	27	< 5	7.3	< 5
Zinc	5	mg/kg	170	53	62	16

Client Sample ID			JB02_0.05-0.25
Sample Matrix			**Soil**
Eurofins | mgt Sample No.			**S17-My07883**
Date Sampled			**May 07, 2017**
Test/Reference	LOR	Unit	
% Moisture	1	%	14
Heavy Metals			
Arsenic	2	mg/kg	12
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	7.3
Copper	5	mg/kg	13
Lead	5	mg/kg	87
Mercury	0.1	mg/kg	0.1
Nickel	5	mg/kg	5.2
Zinc	5	mg/kg	180

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	Sydney	May 16, 2017	14 Day
- Method: TRH C6-C36 - LTM-ORG-2010			
BTEX	Sydney	May 16, 2017	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 16, 2017	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Polycyclic Aromatic Hydrocarbons	Sydney	May 16, 2017	14 Day
- Method: E007 Polyaromatic Hydrocarbons (PAH)			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 16, 2017	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Phenolics (total)	Melbourne	May 17, 2017	14 Day
- Method: APHA 5530B & D Phenols			
Metals M8	Sydney	May 16, 2017	28 Day
- Method: LTM-MET-3040_R0 TOTAL AND DISSOLVED METALS AND MERCURY IN WATERS BY ICP-MS			
Volatile Organics	Sydney	May 16, 2017	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Organochlorine Pesticides	Sydney	May 16, 2017	14 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	May 16, 2017	28 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Clay	Brisbane	May 16, 2017	6 Day
- Method: LTM-GEN-7040			
pH (1:5 Aqueous extract)	Sydney	May 16, 2017	7 Day
- Method: LTM-GEN-7090 pH in soil by ISE			
Conductivity (1:5 aqueous extract at 25°C)	Melbourne	May 16, 2017	7 Day
- Method: LTM-INO-4030			
Ion Exchange Properties	Melbourne	May 17, 2017	
% Moisture	Sydney	May 10, 2017	14 Day
- Method: LTM-GEN-7080 Moisture			

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254 & 14271
Site# 12161

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	545235
		Phone:	02 8245 0300
		Fax:	
Project Name:	PENRITH		
Project ID:	52372		

Received:	May 10, 2017 12:00 PM
Due:	May 17, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Eurofins | mgt Unit F3, Building F, 16 Mars Road, Lane Cove West, NSW, Australia, 2066
Phone : +61 2 9900 8400
ABN : 50 005 085 521

Sample Detail	% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271										X	X	X
Sydney Laboratory - NATA Site # 18217		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794	X											
Perth Laboratory - NATA Site # 18217												
External Laboratory												

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID											
	JB09_0.15-0.20	May 06, 2017		Soil	S17-My07711							X			X		
	JB09_0.2-0.3	May 06, 2017		Soil	S17-My07712			X									
	JB09_0.45-0.55	May 06, 2017		Soil	S17-My07713			X									
	JB08_0.1-0.2	May 06, 2017		Soil	S17-My07714		X	X							X		X
	JB08_0.2-0.3	May 06, 2017		Soil	S17-My07715			X									
	JB08_0.6-0.7	May 06, 2017		Soil	S17-My07716			X									
	JB16_0.05-0.15	May 06, 2017		Soil	S17-My07717									X	X		

Date Reported May 17, 2017

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 12

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	545235
		Phone:	02 8245 0300
		Fax:	
Project Name:	PENRITH		
Project ID:	52372		

Received:	May 10, 2017 12:00 PM
Due:	May 17, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB16_0.35-0.45	May 06, 2017		Soil	S17-My07718			X									
	JB06_0.1-0.2	May 06, 2017		Soil	S17-My07719		X							X	X		X
	JB06_0.4-0.5	May 06, 2017		Soil	S17-My07720			X									
	JB15-0.1-0.2	May 06, 2017		Soil	S17-My07721					X	X	X			X		
	JB15-0.4-0.5	May 06, 2017		Soil	S17-My07722			X									
	JB15-0.5-0.6	May 06, 2017		Soil	S17-My07723			X									
	JB18_0.1-0.2	May 06, 2017		Soil	S17-My07724		X			X	X			X	X		X
	JB18_0.4-0.5	May 06, 2017		Soil	S17-My07725			X									
	JB18_0.6-0.7	May 06, 2017		Soil	S17-My07726			X									
	JB19_0.1-0.2	May 06, 2017		Soil	S17-My07727			X									
	JB19_0.3-0.4	May 06, 2017		Soil	S17-My07728									X	X		

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2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
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Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:** **Phone:** **Fax:**	545235 02 8245 0300	**Due:** **Priority:** **Contact Name:**	May 17, 2017 5 Day Rohan Hammond
Project Name:	PENRITH				
Project ID:	52372				

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB19_0.9-1.0	May 06, 2017		Soil	S17-My07729			X									
	JB19_1.6-1.7	May 06, 2017		Soil	S17-My07730		X			X	X			X	X		X
	JB19_1.8-1.9	May 06, 2017		Soil	S17-My07731			X									
	JB20_0.05-0.15	May 06, 2017		Soil	S17-My07732			X									
	JB20_0.5-0.6	May 06, 2017		Soil	S17-My07733		X								X		X
	JB20_1.15-1.25	May 06, 2017		Soil	S17-My07734			X									
	JB20_1.25-1.35	May 06, 2017		Soil	S17-My07735							X			X		
	JB20_1.5-1.6	May 06, 2017		Soil	S17-My07736			X									
	JB20_1.7-1.8	May 06, 2017		Soil	S17-My07737		X			X	X			X	X		X
	JB20_1.9-2.0	May 06, 2017		Soil	S17-My07738	X			X						X	X	

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elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB11_0.0-0.05	May 06, 2017		Soil	S17-My07739			X									
	JB11_0.05-0.15	May 06, 2017		Soil	S17-My07740		X	X		X	X			X	X		X
	JB11_0.25-0.35	May 06, 2017		Soil	S17-My07741			X									
	JB11_0.35-0.45	May 06, 2017		Soil	S17-My07742	X			X						X	X	
	QC20160506_	May 06, 2017		Soil	S17-My07743		X			X	X			X	X		X
	QC20160506_	May 06, 2017		Soil	S17-My07744							X			X		
	JB10_0.1-0.2	May 07, 2017		Soil	S17-My07847		X								X		X
	JB10_0.3-0.4	May 07, 2017		Soil	S17-My07848			X									
	JB10_0.4-0.5	May 07, 2017		Soil	S17-My07849			X									

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Project Name:	PENRITH				
Project ID:	52372				

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB10_1.0-1.2	May 07, 2017		Soil	S17-My07850			X									
	JB17_0.1-0.25	May 07, 2017		Soil	S17-My07851		X								X		X
	JB17_0.25-0.35	May 07, 2017		Soil	S17-My07852			X									
	JB17_1.1-1.2	May 07, 2017		Soil	S17-My07853			X									
	JB07_0.1-0.2	May 07, 2017		Soil	S17-My07854							X		X	X		
	JB07_0.2-0.3	May 07, 2017		Soil	S17-My07855			X									
	JB07_1.1-1.2	May 07, 2017		Soil	S17-My07856			X									
	JB14_0.1-0.3	May 07, 2017		Soil	S17-My07857		X								X		X
	JB14_0.3-0.4	May 07, 2017		Soil	S17-My07858			X									
	JB14_1.1-1.2	May 07, 2017		Soil	S17-My07859			X									
	JB13_0.1-0.2	May 07, 2017		Soil	S17-My07860							X			X		

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Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB13_0.2-0.3	May 07, 2017		Soil	S17-My07861			X									
	JB13_1.1-1.2	May 07, 2017		Soil	S17-My07862			X									
	QC201705070	May 07, 2017		Soil	S17-My07863			X									
	JB12_0.1-0.25	May 07, 2017		Soil	S17-My07864		X							X	X		X
	JB12_0.25-0.35	May 07, 2017		Soil	S17-My07865			X									
	JB12_1.1-1.2	May 07, 2017		Soil	S17-My07866	X			X						X	X	
	JB04_0.1-0.2	May 07, 2017		Soil	S17-My07867			X									
	JB04_0.4-0.5	May 07, 2017		Soil	S17-My07868		X							X	X		X
	JB04_0.5-0.6	May 07, 2017		Soil	S17-My07869			X									
	JB04_1.1-1.2	May 07, 2017		Soil	S17-My07870			X									
	JB05_0.1-0.2	May 07, 2017		Soil	S17-My07871							X			X		

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elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB05_0.5-0.6	May 07, 2017		Soil	S17-My07872			X									
	JB05_0.6-0.7	May 07, 2017		Soil	S17-My07873			X									
	JB05_1.1-1.2	May 07, 2017		Soil	S17-My07874			X									
	JB03_0.05-0.2	May 07, 2017		Soil	S17-My07875							X			X		
	JB03_0.2-0.45	May 07, 2017		Soil	S17-My07876			X									
	JB03_0.45-0.65	May 07, 2017		Soil	S17-My07877			X									
	JB03_1.1-1.2	May 07, 2017		Soil	S17-My07878			X									
	JB01_0.05-0.3	May 07, 2017		Soil	S17-My07879		X								X		X
	JB01_0.3-0.4	May 07, 2017		Soil	S17-My07880			X									
	JB01_1.1-1.2	May 07, 2017		Soil	S17-My07881	X			X			X			X	X	
	QC20170507_	May 07, 2017		Soil	S17-My07882			X									

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elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB02_0.05-0.25	May 07, 2017		Soil	S17-My07883							X			X		
	JB02_0.25-0.35	May 07, 2017		Soil	S17-My07884			X									
	JB02_1.1-1.2	May 07, 2017		Soil	S17-My07885			X									
	RIN6-5	May 06, 2017		Water	S17-My07886		X			X	X			X	X		X
	RIN7-5	May 07, 2017		Water	S17-My07887		X			X	X			X	X		X
	TB	May 07, 2017		Water	S17-My07888								X				
	TS	May 07, 2017		Water	S17-My07889								X				
est Counts						4	16	46	4	8	8	10	2	13	31	4	16

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Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (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 & PFASs 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.

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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							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Benzene	mg/kg	< 0.1			0.1	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	

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Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-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	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB*	mg/kg	< 0.5			0.5	Pass	
Method Blank							
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	
Phenolics (total)	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	76			70-130	Pass	
TRH C10-C14	%	98			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	114			70-130	Pass	
Toluene	%	129			70-130	Pass	
Ethylbenzene	%	106			70-130	Pass	
m&p-Xylenes	%	108			70-130	Pass	
o-Xylene	%	109			70-130	Pass	
Xylenes - Total	%	74			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethane	%	124			70-130	Pass	
1.1-Dichloroethene	%	81			70-130	Pass	
1.1.1-Trichloroethane	%	93			70-130	Pass	
1.1.1.2-Tetrachloroethane	%	95			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.1.2-Trichloroethane	%	112			70-130	Pass	
1.1.2.2-Tetrachloroethane	%	87			70-130	Pass	
1.2-Dibromoethane	%	110			70-130	Pass	
1.2-Dichlorobenzene	%	113			70-130	Pass	
1.2-Dichloroethane	%	115			70-130	Pass	
1.2-Dichloropropane	%	113			70-130	Pass	
1.2.3-Trichloropropane	%	119			70-130	Pass	
1.2.4-Trimethylbenzene	%	118			70-130	Pass	
1.3-Dichlorobenzene	%	114			70-130	Pass	
1.3-Dichloropropane	%	111			70-130	Pass	
1.3.5-Trimethylbenzene	%	118			70-130	Pass	
1.4-Dichlorobenzene	%	112			70-130	Pass	
2-Butanone (MEK)	%	80			70-130	Pass	
2-Propanone (Acetone)	%	89			70-130	Pass	
4-Chlorotoluene	%	114			70-130	Pass	
4-Methyl-2-pentanone (MIBK)	%	106			70-130	Pass	
Allyl chloride	%	73			70-130	Pass	
Bromobenzene	%	118			70-130	Pass	
Bromochloromethane	%	112			70-130	Pass	
Bromodichloromethane	%	112			70-130	Pass	
Bromoform	%	84			70-130	Pass	
Carbon disulfide	%	78			70-130	Pass	
Carbon Tetrachloride	%	92			70-130	Pass	
Chlorobenzene	%	90			70-130	Pass	
Chloroform	%	129			70-130	Pass	
Chloromethane	%	83			70-130	Pass	
cis-1.2-Dichloroethene	%	124			70-130	Pass	
cis-1.3-Dichloropropene	%	102			70-130	Pass	
Dibromochloromethane	%	105			70-130	Pass	
Dibromomethane	%	112			70-130	Pass	
Dichlorodifluoromethane	%	83			70-130	Pass	
Iodomethane	%	76			70-130	Pass	
Isopropyl benzene (Cumene)	%	88			70-130	Pass	
Methylene Chloride	%	81			70-130	Pass	
Styrene	%	84			70-130	Pass	
Tetrachloroethene	%	115			70-130	Pass	
trans-1.2-Dichloroethene	%	124			70-130	Pass	
trans-1.3-Dichloropropene	%	102			70-130	Pass	
Trichloroethene	%	112			70-130	Pass	
Trichlorofluoromethane	%	79			70-130	Pass	
Vinyl chloride	%	84			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	112			70-130	Pass	
TRH C6-C10	%	72			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	100			70-130	Pass	
Acenaphthylene	%	101			70-130	Pass	
Anthracene	%	102			70-130	Pass	
Benz(a)anthracene	%	100			70-130	Pass	
Benzo(a)pyrene	%	97			70-130	Pass	
Benzo(b&j)fluoranthene	%	104			70-130	Pass	
Benzo(g.h.i)perylene	%	90			70-130	Pass	

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Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(k)fluoranthene	%	106			70-130	Pass	
Chrysene	%	111			70-130	Pass	
Dibenz(a.h)anthracene	%	87			70-130	Pass	
Fluoranthene	%	105			70-130	Pass	
Fluorene	%	104			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	93			70-130	Pass	
Naphthalene	%	108			70-130	Pass	
Phenanthrene	%	100			70-130	Pass	
Pyrene	%	104			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	92			70-130	Pass	
4.4'-DDD	%	89			70-130	Pass	
4.4'-DDE	%	95			70-130	Pass	
4.4'-DDT	%	85			70-130	Pass	
a-BHC	%	92			70-130	Pass	
Aldrin	%	98			70-130	Pass	
b-BHC	%	88			70-130	Pass	
d-BHC	%	100			70-130	Pass	
Dieldrin	%	91			70-130	Pass	
Endosulfan I	%	90			70-130	Pass	
Endosulfan II	%	88			70-130	Pass	
Endosulfan sulphate	%	88			70-130	Pass	
Endrin	%	76			70-130	Pass	
Endrin aldehyde	%	75			70-130	Pass	
Endrin ketone	%	89			70-130	Pass	
g-BHC (Lindane)	%	91			70-130	Pass	
Heptachlor	%	85			70-130	Pass	
Hexachlorobenzene	%	100			70-130	Pass	
Methoxychlor	%	86			70-130	Pass	
Toxaphene	%	88			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	98			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	108			70-130	Pass	
LCS - % Recovery							
% Clay	%	100			70-130	Pass	
Phenolics (total)	%	87			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	85			70-130	Pass	
Cadmium	%	84			70-130	Pass	
Chromium	%	88			70-130	Pass	
Copper	%	90			70-130	Pass	
Lead	%	87			70-130	Pass	
Mercury	%	99			70-130	Pass	
Nickel	%	86			70-130	Pass	
Zinc	%	86			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S17-My08526	NCP	%	89			70-130	Pass	
TRH C10-C14	S17-My10441	NCP	%	102			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Xylenes - Total	S17-My08526	NCP	%	88			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
Xylenes - Total	S17-My08526	NCP	%	88			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH C6-C10	S17-My08526	NCP	%	85			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S17-My13064	NCP	%	99			70-130	Pass	
Acenaphthylene	S17-My13064	NCP	%	102			70-130	Pass	
Anthracene	S17-My13064	NCP	%	103			70-130	Pass	
Benz(a)anthracene	S17-My13064	NCP	%	107			70-130	Pass	
Benzo(a)pyrene	S17-My13064	NCP	%	102			70-130	Pass	
Benzo(b&j)fluoranthene	S17-My13064	NCP	%	110			70-130	Pass	
Benzo(g.h.i)perylene	S17-My13064	NCP	%	105			70-130	Pass	
Benzo(k)fluoranthene	S17-My13064	NCP	%	105			70-130	Pass	
Chrysene	S17-My13064	NCP	%	114			70-130	Pass	
Dibenz(a.h)anthracene	S17-My13064	NCP	%	100			70-130	Pass	
Fluoranthene	S17-My13064	NCP	%	111			70-130	Pass	
Fluorene	S17-My13064	NCP	%	103			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S17-My13064	NCP	%	105			70-130	Pass	
Naphthalene	S17-My13064	NCP	%	104			70-130	Pass	
Phenanthrene	S17-My13064	NCP	%	98			70-130	Pass	
Pyrene	S17-My13064	NCP	%	109			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S17-My10441	NCP	%	113			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethane	S17-My08505	NCP	%	111			70-130	Pass	
1.1-Dichloroethene	S17-My08505	NCP	%	128			70-130	Pass	
1.1.1-Trichloroethane	S17-My08505	NCP	%	125			70-130	Pass	
1.1.1.2-Tetrachloroethane	S17-My08505	NCP	%	119			70-130	Pass	
1.1.2-Trichloroethane	S17-My08505	NCP	%	116			70-130	Pass	
1.1.2.2-Tetrachloroethane	S17-My08505	NCP	%	114			70-130	Pass	
1.2-Dibromoethane	S17-My08505	NCP	%	106			70-130	Pass	
1.2-Dichlorobenzene	S17-My08505	NCP	%	113			70-130	Pass	
1.2-Dichloroethane	S17-My08505	NCP	%	109			70-130	Pass	
1.2-Dichloropropane	S17-My08505	NCP	%	109			70-130	Pass	
1.2.3-Trichloropropane	S17-My08505	NCP	%	127			70-130	Pass	
1.2.4-Trimethylbenzene	S17-My08505	NCP	%	114			70-130	Pass	
1.3-Dichlorobenzene	S17-My08505	NCP	%	114			70-130	Pass	
1.3-Dichloropropane	S17-My08505	NCP	%	112			70-130	Pass	
1.3.5-Trimethylbenzene	S17-My08505	NCP	%	112			70-130	Pass	
1.4-Dichlorobenzene	S17-My08505	NCP	%	113			70-130	Pass	
2-Butanone (MEK)	S17-My08505	NCP	%	124			70-130	Pass	
2-Propanone (Acetone)	S17-My08505	NCP	%	103			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4-Chlorotoluene	S17-My08505	NCP	%	114			70-130	Pass	
4-Methyl-2-pentanone (MIBK)	S17-My08505	NCP	%	111			70-130	Pass	
Allyl chloride	S17-My08505	NCP	%	121			70-130	Pass	
Bromobenzene	S17-My08505	NCP	%	116			70-130	Pass	
Bromochloromethane	S17-My08505	NCP	%	123			70-130	Pass	
Bromodichloromethane	S17-My08505	NCP	%	116			70-130	Pass	
Bromoform	S17-My08505	NCP	%	112			70-130	Pass	
Carbon Tetrachloride	S17-My08505	NCP	%	112			70-130	Pass	
Chlorobenzene	S17-My08505	NCP	%	101			70-130	Pass	
Chloroethane	S17-My08505	NCP	%	72			70-130	Pass	
Chloroform	S17-My08505	NCP	%	128			70-130	Pass	
Chloromethane	S17-My08505	NCP	%	71			70-130	Pass	
cis-1.2-Dichloroethene	S17-My08505	NCP	%	125			70-130	Pass	
cis-1.3-Dichloropropene	S17-My08505	NCP	%	98			70-130	Pass	
Dibromochloromethane	S17-My08505	NCP	%	112			70-130	Pass	
Dibromomethane	S17-My08505	NCP	%	106			70-130	Pass	
Dichlorodifluoromethane	S17-My08505	NCP	%	70			70-130	Pass	
Iodomethane	S17-My08505	NCP	%	118			70-130	Pass	
Isopropyl benzene (Cumene)	S17-My08505	NCP	%	101			70-130	Pass	
Methylene Chloride	S17-My08505	NCP	%	123			70-130	Pass	
Styrene	S17-My08505	NCP	%	98			70-130	Pass	
Tetrachloroethene	S17-My08505	NCP	%	90			70-130	Pass	
trans-1.2-Dichloroethene	S17-My08505	NCP	%	126			70-130	Pass	
trans-1.3-Dichloropropene	S17-My08505	NCP	%	96			70-130	Pass	
Trichloroethene	S17-My08505	NCP	%	93			70-130	Pass	
Trichlorofluoromethane	S17-My08505	NCP	%	87			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S17-My09443	NCP	%	85			70-130	Pass	
4.4'-DDD	S17-My09443	NCP	%	100			70-130	Pass	
4.4'-DDE	S17-My09443	NCP	%	87			70-130	Pass	
4.4'-DDT	S17-My09706	NCP	%	78			70-130	Pass	
a-BHC	S17-My09443	NCP	%	86			70-130	Pass	
Aldrin	S17-My09443	NCP	%	88			70-130	Pass	
b-BHC	S17-My09443	NCP	%	81			70-130	Pass	
d-BHC	S17-My09443	NCP	%	92			70-130	Pass	
Dieldrin	S17-My09443	NCP	%	84			70-130	Pass	
Endosulfan I	S17-My09443	NCP	%	85			70-130	Pass	
Endosulfan II	S17-My09443	NCP	%	77			70-130	Pass	
Endosulfan sulphate	S17-My10323	NCP	%	103			70-130	Pass	
Endrin	S17-My10323	NCP	%	92			70-130	Pass	
Endrin aldehyde	S17-My09443	NCP	%	79			70-130	Pass	
Endrin ketone	S17-My09443	NCP	%	76			70-130	Pass	
g-BHC (Lindane)	S17-My09443	NCP	%	77			70-130	Pass	
Heptachlor	S17-My10323	NCP	%	86			70-130	Pass	
Heptachlor epoxide	S17-My09443	NCP	%	82			70-130	Pass	
Hexachlorobenzene	S17-My10443	NCP	%	116			70-130	Pass	
Methoxychlor	S17-My09706	NCP	%	83			70-130	Pass	
Toxaphene	S17-My10443	NCP	%	89			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	S17-My09443	NCP	%	111			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Arsenic	S17-My07733	CP	%	80			70-130	Pass	
Cadmium	S17-My07733	CP	%	83			70-130	Pass	
Chromium	S17-My07733	CP	%	84			70-130	Pass	
Copper	S17-My07733	CP	%	81			70-130	Pass	
Lead	S17-My07733	CP	%	80			70-130	Pass	
Mercury	S17-My07733	CP	%	105			70-130	Pass	
Nickel	S17-My07733	CP	%	80			70-130	Pass	
Zinc	S17-My07733	CP	%	99			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S17-My07879	CP	%	119			70-130	Pass	
Toluene	S17-My07879	CP	%	117			70-130	Pass	
Ethylbenzene	S17-My07879	CP	%	122			70-130	Pass	
m&p-Xylenes	S17-My07879	CP	%	123			70-130	Pass	
o-Xylene	S17-My07879	CP	%	125			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S17-My07879	CP	%	113			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S17-My10440	NCP	mg/kg	3.5	3.1	15	30%	Pass	
Mercury	S17-My10440	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S17-My07717	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S17-My07717	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S17-My07717	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S17-My07717	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S17-My07717	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S17-My07717	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S17-My07717	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
4-Chlorotoluene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S17-My07717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S17-My07717	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S17-My07719	CP	%	7.1	7.0	3.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Cadmium	S17-My07730	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S17-My07730	CP	mg/kg	10	9.2	10	30%	Pass	
Copper	S17-My07730	CP	mg/kg	5.3	5.3	<1	30%	Pass	
Lead	S17-My07730	CP	mg/kg	5.5	5.8	5.0	30%	Pass	
Nickel	S17-My07730	CP	mg/kg	5.4	5.8	7.0	30%	Pass	
Zinc	S17-My07730	CP	mg/kg	29	28	3.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S17-My07737	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S17-My07737	CP	mg/kg	69	89	25	30%	Pass	
TRH C29-C36	S17-My07737	CP	mg/kg	58	85	38	30%	Fail	Q15

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S17-My07737	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S17-My07737	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S17-My07737	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S17-My07737	CP	mg/kg	< 0.5	0.6	28	30%	Pass	
Benzo(a)pyrene	S17-My07737	CP	mg/kg	< 0.5	0.6	32	30%	Fail	Q15
Benzo(b&j)fluoranthene	S17-My07737	CP	mg/kg	< 0.5	0.7	32	30%	Fail	Q15
Benzo(g.h.i)perylene	S17-My07737	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S17-My07737	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S17-My07737	CP	mg/kg	< 0.5	0.6	26	30%	Pass	
Dibenz(a.h)anthracene	S17-My07737	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S17-My07737	CP	mg/kg	1.2	1.5	25	30%	Pass	
Fluorene	S17-My07737	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S17-My07737	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S17-My07737	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S17-My07737	CP	mg/kg	< 0.5	0.6	25	30%	Pass	
Pyrene	S17-My07737	CP	mg/kg	1.0	1.3	29	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S17-My07737	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S17-My07737	CP	mg/kg	110	140	30	30%	Pass	
TRH >C34-C40	S17-My07737	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
pH (1:5 Aqueous extract)	S17-My09737	NCP	pH Units	9.6	9.6	pass	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S17-My07743	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S17-My07743	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S17-My07743	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Toxaphene	S17-My07743	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S17-My07743	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S17-My07743	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S17-My07743	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S17-My07743	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S17-My07743	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1254	S17-My07743	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S17-My07743	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Clay	S17-My07866	CP	%	39	39	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S17-My07868	CP	%	19	18	4.0	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.
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

Nibha Vaidya	Analytical Services Manager
Alex Petridis	Senior Analyst-Metal (VIC)
Huong Le	Senior Analyst-Inorganic (VIC)
Jonathon Angell	Senior Analyst-Inorganic (QLD)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Ryan Hamilton	Senior Analyst-Inorganic (NSW)
Ryan Hamilton	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)

Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

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

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Rohan Hammond**

Report **545235-W**
Project name PENRITH
Project ID 52372
Received Date May 08, 2017

Client Sample ID			**RIN6-5**	**RIN7-5**	**TB**	**TS**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins | mgt Sample No.			**S17-My07886**	**S17-My07887**	**S17-My07888**	**S17-My07889**
Date Sampled			**May 06, 2017**	**May 07, 2017**	**May 07, 2017**	**May 07, 2017**
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	-	-
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	105%
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	92%
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	92%
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	88%
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	85%
Xylenes - Total	0.003	mg/L	< 0.003	< 0.003	< 0.003	87%
4-Bromofluorobenzene (surr.)	1	%	97	95	93	96
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	-	-
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	-	-
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	-	-
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	-	-
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	-	-
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	-	-
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	-	-
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	-	-
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	-	-
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	-	-
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	-	-
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	-	-
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	-	-
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	-	-
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	-	-
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	-	-
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001	-	-
2-Propanone (Acetone)	0.001	mg/L	< 0.001	< 0.001	-	-
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	-	-
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001	-	-
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	-	-

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Client Sample ID			RIN6-5	RIN7-5	TB	TS
Sample Matrix			Water	Water	Water	Water
Eurofins | mgt Sample No.			S17-My07886	S17-My07887	S17-My07888	S17-My07889
Date Sampled			May 06, 2017	May 07, 2017	May 07, 2017	May 07, 2017
Test/Reference	LOR	Unit				
Volatile Organics						
Benzene	0.001	mg/L	< 0.001	< 0.001	-	-
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	-	-
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	-	-
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	-	-
Bromoform	0.001	mg/L	< 0.001	< 0.001	-	-
Bromomethane	0.001	mg/L	< 0.001	< 0.001	-	-
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	-	-
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	-	-
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	-	-
Chloroethane	0.001	mg/L	< 0.001	< 0.001	-	-
Chloroform	0.005	mg/L	< 0.005	< 0.005	-	-
Chloromethane	0.001	mg/L	< 0.001	< 0.001	-	-
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	-	-
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	-	-
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	-	-
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	-	-
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	-	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	-	-
Iodomethane	0.001	mg/L	< 0.001	< 0.001	-	-
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	-	-
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	-	-
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	-	-
o-Xylene	0.001	mg/L	< 0.001	< 0.001	-	-
Styrene	0.001	mg/L	< 0.001	< 0.001	-	-
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	-	-
Toluene	0.001	mg/L	< 0.001	< 0.001	-	-
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	-	-
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	-	-
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	-	-
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	-	-
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	-	-
Xylenes - Total	0.003	mg/L	< 0.003	< 0.003	-	-
Fluorobenzene (surr.)	1	%	89	107	-	-
4-Bromofluorobenzene (surr.)	1	%	97	95	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	0.05	< 0.05	-	-
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	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	< 0.001	-	-

Client Sample ID			RIN6-5	RIN7-5	TB	TS
Sample Matrix			Water	Water	Water	Water
Eurofins | mgt Sample No.			S17-My07886	S17-My07887	S17-My07888	S17-My07889
Date Sampled			May 06, 2017	May 07, 2017	May 07, 2017	May 07, 2017
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	-	-
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	< 0.001	-	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	-	-
Naphthalene	0.001	mg/L	< 0.001	< 0.001	-	-
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	-	-
Pyrene	0.001	mg/L	< 0.001	< 0.001	-	-
Total PAH*	0.001	mg/L	< 0.001	< 0.001	-	-
2-Fluorobiphenyl (surr.)	1	%	81	80	-	-
p-Terphenyl-d14 (surr.)	1	%	142	145	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.001	mg/L	< 0.001	< 0.001	-	-
4.4'-DDD	0.0001	mg/L	< 0.0001	< 0.0001	-	-
4.4'-DDE	0.0001	mg/L	< 0.0001	< 0.0001	-	-
4.4'-DDT	0.0001	mg/L	< 0.0001	< 0.0001	-	-
a-BHC	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Aldrin	0.0001	mg/L	< 0.0001	< 0.0001	-	-
b-BHC	0.0001	mg/L	< 0.0001	< 0.0001	-	-
d-BHC	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Dieldrin	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Endosulfan I	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Endosulfan II	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Endosulfan sulphate	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Endrin	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Endrin aldehyde	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Endrin ketone	0.0001	mg/L	< 0.0001	< 0.0001	-	-
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Heptachlor	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Heptachlor epoxide	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Hexachlorobenzene	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Methoxychlor	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Toxaphene	0.01	mg/L	< 0.01	< 0.01	-	-
Dibutylchlorendate (surr.)	1	%	75	109	-	-
Tetrachloro-m-xylene (surr.)	1	%	INT	INT	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.005	mg/L	< 0.005	< 0.005	-	-
Aroclor-1221	0.001	mg/L	< 0.001	< 0.001	-	-
Aroclor-1232	0.005	mg/L	< 0.005	< 0.005	-	-
Aroclor-1242	0.005	mg/L	< 0.005	< 0.005	-	-
Aroclor-1248	0.005	mg/L	< 0.005	< 0.005	-	-
Aroclor-1254	0.005	mg/L	< 0.005	< 0.005	-	-
Aroclor-1260	0.005	mg/L	< 0.005	< 0.005	-	-
Total PCB*	0.001	mg/L	< 0.001	< 0.001	-	-
Dibutylchlorendate (surr.)	1	%	75	109	-	-
Tetrachloro-m-xylene (surr.)	1	%	INT	INT	-	-
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	-	-

Client Sample ID			RIN6-5	RIN7-5	TB	TS
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins | mgt Sample No.			**S17-My07886**	**S17-My07887**	**S17-My07888**	**S17-My07889**
Date Sampled			**May 06, 2017**	**May 07, 2017**	**May 07, 2017**	**May 07, 2017**
Test/Reference	LOR	Unit				
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	0.005	mg/L	< 0.005	< 0.005	-	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (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	Sydney	May 10, 2017	7 Day
- Method: TRH C6-C36 - LTM-ORG-2010			
BTEX	Sydney	May 10, 2017	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 10, 2017	7 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Polycyclic Aromatic Hydrocarbons	Sydney	May 10, 2017	7 Day
- Method: E007 Polyaromatic Hydrocarbons (PAH)			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 10, 2017	7 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Metals M8	Sydney	May 10, 2017	28 Day
- Method: LTM-MET-3040 Metals in Waters by ICP-MS			
Volatile Organics	Sydney	May 10, 2017	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Organochlorine Pesticides	Sydney	May 10, 2017	7 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	May 10, 2017	7 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254 & 14271
Site# 12161

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	545235
		Phone:	02 8245 0300
		Fax:	
Project Name:	PENRITH		
Project ID:	52372		

Received:	May 10, 2017 12:00 PM
Due:	May 17, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Eurofins | mgt Unit F3, Building F, 16 Mars Road, Lane Cove West, NSW, Australia, 2066
Phone : +61 2 9900 8400
ABN : 50 005 085 521

Sample Detail	% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271										X	X	X
Sydney Laboratory - NATA Site # 18217		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794	X											
Perth Laboratory - NATA Site # 18217												
External Laboratory												

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID											
	JB09_0.15-0.20	May 06, 2017		Soil	S17-My07711							X			X		
	JB09_0.2-0.3	May 06, 2017		Soil	S17-My07712			X									
	JB09_0.45-0.55	May 06, 2017		Soil	S17-My07713			X									
	JB08_0.1-0.2	May 06, 2017		Soil	S17-My07714		X	X							X		X
	JB08_0.2-0.3	May 06, 2017		Soil	S17-My07715			X									
	JB08_0.6-0.7	May 06, 2017		Soil	S17-My07716			X									
	JB16_0.05-0.15	May 06, 2017		Soil	S17-My07717									X	X		

Date Reported May 17, 2017

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 12

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB16_0.35-0.45	May 06, 2017		Soil	S17-My07718			X									
	JB06_0.1-0.2	May 06, 2017		Soil	S17-My07719		X							X	X		X
	JB06_0.4-0.5	May 06, 2017		Soil	S17-My07720			X									
	JB15-0.1-0.2	May 06, 2017		Soil	S17-My07721					X	X	X			X		
	JB15-0.4-0.5	May 06, 2017		Soil	S17-My07722			X									
	JB15-0.5-0.6	May 06, 2017		Soil	S17-My07723			X									
	JB18_0.1-0.2	May 06, 2017		Soil	S17-My07724		X			X	X			X	X		X
	JB18_0.4-0.5	May 06, 2017		Soil	S17-My07725			X									
	JB18_0.6-0.7	May 06, 2017		Soil	S17-My07726			X									
	JB19_0.1-0.2	May 06, 2017		Soil	S17-My07727			X									
	JB19_0.3-0.4	May 06, 2017		Soil	S17-My07728									X	X		

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254 &
Site# 1254

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**		**Received:**	May 10, 2017 12:00 PM
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:** **Phone:** **Fax:**	545235 02 8245 0300	**Due:** **Priority:** **Contact Name:**	May 17, 2017 5 Day Rohan Hammond
Project Name:	PENRITH				
Project ID:	52372				

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB19_0.9-1.0	May 06, 2017		Soil	S17-My07729			X									
	JB19_1.6-1.7	May 06, 2017		Soil	S17-My07730		X			X	X			X	X		X
	JB19_1.8-1.9	May 06, 2017		Soil	S17-My07731			X									
	JB20_0.05-0.15	May 06, 2017		Soil	S17-My07732			X									
	JB20_0.5-0.6	May 06, 2017		Soil	S17-My07733		X								X		X
	JB20_1.15-1.25	May 06, 2017		Soil	S17-My07734			X									
	JB20_1.25-1.35	May 06, 2017		Soil	S17-My07735							X			X		
	JB20_1.5-1.6	May 06, 2017		Soil	S17-My07736			X									
	JB20_1.7-1.8	May 06, 2017		Soil	S17-My07737		X			X	X			X	X		X
	JB20_1.9-2.0	May 06, 2017		Soil	S17-My07738	X			X						X	X	

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Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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NATA # 1261 Site # 18217

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
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Received:	May 10, 2017 12:00 PM
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Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB11_0.0-0.05	May 06, 2017		Soil	S17-My07739			X									
	JB11_0.05-0.15	May 06, 2017		Soil	S17-My07740		X	X		X	X			X	X		X
	JB11_0.25-0.35	May 06, 2017		Soil	S17-My07741			X									
	JB11_0.35-0.45	May 06, 2017		Soil	S17-My07742	X			X						X	X	
	QC20160506_	May 06, 2017		Soil	S17-My07743		X			X	X			X	X		X
	QC20160506_	May 06, 2017		Soil	S17-My07744							X			X		
	JB10_0.1-0.2	May 07, 2017		Soil	S17-My07847		X								X		X
	JB10_0.3-0.4	May 07, 2017		Soil	S17-My07848			X									
	JB10_0.4-0.5	May 07, 2017		Soil	S17-My07849			X									

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Unit F3, Building F
16 Mars Road
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NATA # 1261 Site # 18217

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
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e.mail : EnviroSales@eurofins.com
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		Phone:	02 8245 0300	**Priority:**	5 Day
		Fax:		**Contact Name:**	Rohan Hammond
Project Name:	PENRITH				
Project ID:	52372				

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB10_1.0-1.2	May 07, 2017		Soil	S17-My07850			X									
	JB17_0.1-0.25	May 07, 2017		Soil	S17-My07851		X								X		X
	JB17_0.25-0.35	May 07, 2017		Soil	S17-My07852			X									
	JB17_1.1-1.2	May 07, 2017		Soil	S17-My07853			X									
	JB07_0.1-0.2	May 07, 2017		Soil	S17-My07854							X		X	X		
	JB07_0.2-0.3	May 07, 2017		Soil	S17-My07855			X									
	JB07_1.1-1.2	May 07, 2017		Soil	S17-My07856			X									
	JB14_0.1-0.3	May 07, 2017		Soil	S17-My07857		X								X		X
	JB14_0.3-0.4	May 07, 2017		Soil	S17-My07858			X									
	JB14_1.1-1.2	May 07, 2017		Soil	S17-My07859			X									
	JB13_0.1-0.2	May 07, 2017		Soil	S17-My07860							X			X		

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Melbourne
2-5 Kingston Town Close
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ABN– 50 005 085 521
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Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	545235
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Project Name:	PENRITH		
Project ID:	52372		

Received:	May 10, 2017 12:00 PM
Due:	May 17, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB13_0.2-0.3	May 07, 2017		Soil	S17-My07861			X									
	JB13_1.1-1.2	May 07, 2017		Soil	S17-My07862			X									
	QC201705070	May 07, 2017		Soil	S17-My07863			X									
	JB12_0.1-0.25	May 07, 2017		Soil	S17-My07864		X							X	X		X
	JB12_0.25-0.35	May 07, 2017		Soil	S17-My07865			X									
	JB12_1.1-1.2	May 07, 2017		Soil	S17-My07866	X			X						X	X	
	JB04_0.1-0.2	May 07, 2017		Soil	S17-My07867			X									
	JB04_0.4-0.5	May 07, 2017		Soil	S17-My07868		X							X	X		X
	JB04_0.5-0.6	May 07, 2017		Soil	S17-My07869			X									
	JB04_1.1-1.2	May 07, 2017		Soil	S17-My07870			X									
	JB05_0.1-0.2	May 07, 2017		Soil	S17-My07871							X			X		

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 12

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	545235
		Phone:	02 8245 0300
		Fax:	
Project Name:	PENRITH		
Project ID:	52372		

Received:	May 10, 2017 12:00 PM
Due:	May 17, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract)	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB05_0.5-0.6	May 07, 2017		Soil	S17-My07872			X									
	JB05_0.6-0.7	May 07, 2017		Soil	S17-My07873			X									
	JB05_1.1-1.2	May 07, 2017		Soil	S17-My07874			X									
	JB03_0.05-0.2	May 07, 2017		Soil	S17-My07875							X			X		
	JB03_0.2-0.45	May 07, 2017		Soil	S17-My07876			X									
	JB03_0.45-0.65	May 07, 2017		Soil	S17-My07877			X									
	JB03_1.1-1.2	May 07, 2017		Soil	S17-My07878			X									
	JB01_0.05-0.3	May 07, 2017		Soil	S17-My07879		X								X		X
	JB01_0.3-0.4	May 07, 2017		Soil	S17-My07880			X									
	JB01_1.1-1.2	May 07, 2017		Soil	S17-My07881	X			X			X			X	X	
	QC20170507_	May 07, 2017		Soil	S17-My07882			X									

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elbourne Laboratory - NATA Site # 1254 & 14271															X	X	X
ydney Laboratory - NATA Site # 18217							X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794						X											
erth Laboratory - NATA Site # 18217																	
	JB02_0.05-0.25	May 07, 2017		Soil	S17-My07883							X			X		
	JB02_0.25-0.35	May 07, 2017		Soil	S17-My07884			X									
	JB02_1.1-1.2	May 07, 2017		Soil	S17-My07885			X									
	RIN6-5	May 06, 2017		Water	S17-My07886		X			X	X			X	X		X
	RIN7-5	May 07, 2017		Water	S17-My07887		X			X	X			X	X		X
	TB	May 07, 2017		Water	S17-My07888								X				
	TS	May 07, 2017		Water	S17-My07889								X				
est Counts						4	16	46	4	8	8	10	2	13	31	4	16

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Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (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 & PFASs 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.

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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							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Benzene	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.001			0.001	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	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							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/L	< 0.005			0.005	Pass	
Aroclor-1221	mg/L	< 0.001			0.001	Pass	
Aroclor-1232	mg/L	< 0.005			0.005	Pass	
Aroclor-1242	mg/L	< 0.005			0.005	Pass	
Aroclor-1248	mg/L	< 0.005			0.005	Pass	
Aroclor-1254	mg/L	< 0.005			0.005	Pass	
Aroclor-1260	mg/L	< 0.005			0.005	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	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	127			70-130	Pass	
TRH C10-C14	%	99			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	111			70-130	Pass	
Toluene	%	103			70-130	Pass	
Ethylbenzene	%	106			70-130	Pass	
m&p-Xylenes	%	104			70-130	Pass	
o-Xylene	%	99			70-130	Pass	
Xylenes - Total	%	102			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethane	%	121			70-130	Pass	
1.1-Dichloroethene	%	122			70-130	Pass	
1.1.1-Trichloroethane	%	101			70-130	Pass	
1.1.1.2-Tetrachloroethane	%	106			70-130	Pass	
1.1.2-Trichloroethane	%	101			70-130	Pass	
1.1.2.2-Tetrachloroethane	%	96			70-130	Pass	
1.2-Dibromoethane	%	100			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.2-Dichlorobenzene	%	98			70-130	Pass	
1.2-Dichloroethane	%	99			70-130	Pass	
1.2-Dichloropropane	%	100			70-130	Pass	
1.2.3-Trichloropropane	%	114			70-130	Pass	
1.2.4-Trimethylbenzene	%	107			70-130	Pass	
1.3-Dichlorobenzene	%	100			70-130	Pass	
1.3-Dichloropropane	%	101			70-130	Pass	
1.3.5-Trimethylbenzene	%	106			70-130	Pass	
1.4-Dichlorobenzene	%	99			70-130	Pass	
2-Butanone (MEK)	%	106			70-130	Pass	
2-Propanone (Acetone)	%	100			70-130	Pass	
4-Chlorotoluene	%	100			70-130	Pass	
4-Methyl-2-pentanone (MIBK)	%	96			70-130	Pass	
Allyl chloride	%	126			70-130	Pass	
Benzene	%	100			70-130	Pass	
Bromobenzene	%	105			70-130	Pass	
Bromochloromethane	%	94			70-130	Pass	
Bromodichloromethane	%	99			70-130	Pass	
Bromoform	%	99			70-130	Pass	
Bromomethane	%	91			70-130	Pass	
Carbon disulfide	%	128			70-130	Pass	
Carbon Tetrachloride	%	100			70-130	Pass	
Chlorobenzene	%	97			70-130	Pass	
Chloroethane	%	85			70-130	Pass	
Chloroform	%	104			70-130	Pass	
Chloromethane	%	77			70-130	Pass	
cis-1.2-Dichloroethene	%	102			70-130	Pass	
cis-1.3-Dichloropropene	%	92			70-130	Pass	
Dibromochloromethane	%	96			70-130	Pass	
Dibromomethane	%	100			70-130	Pass	
Dichlorodifluoromethane	%	70			70-130	Pass	
Ethylbenzene	%	96			70-130	Pass	
Iodomethane	%	118			70-130	Pass	
Isopropyl benzene (Cumene)	%	94			70-130	Pass	
m&p-Xylenes	%	92			70-130	Pass	
Methylene Chloride	%	116			70-130	Pass	
o-Xylene	%	94			70-130	Pass	
Styrene	%	93			70-130	Pass	
Tetrachloroethene	%	111			70-130	Pass	
Toluene	%	93			70-130	Pass	
trans-1.2-Dichloroethene	%	122			70-130	Pass	
trans-1.3-Dichloropropene	%	93			70-130	Pass	
Trichloroethene	%	100			70-130	Pass	
Trichlorofluoromethane	%	84			70-130	Pass	
Vinyl chloride	%	82			70-130	Pass	
Xylenes - Total	%	92			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	115			70-130	Pass	
TRH C6-C10	%	113			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	86			70-130	Pass	
Acenaphthylene	%	91			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Anthracene	%	91			70-130	Pass	
Benz(a)anthracene	%	89			70-130	Pass	
Benzo(a)pyrene	%	86			70-130	Pass	
Benzo(b&j)fluoranthene	%	97			70-130	Pass	
Benzo(g.h.i)perylene	%	86			70-130	Pass	
Benzo(k)fluoranthene	%	95			70-130	Pass	
Chrysene	%	98			70-130	Pass	
Dibenz(a.h)anthracene	%	81			70-130	Pass	
Fluoranthene	%	92			70-130	Pass	
Fluorene	%	85			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	105			70-130	Pass	
Naphthalene	%	90			70-130	Pass	
Phenanthrene	%	92			70-130	Pass	
Pyrene	%	89			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	120			70-130	Pass	
4.4'-DDD	%	120			70-130	Pass	
4.4'-DDE	%	120			70-130	Pass	
4.4'-DDT	%	125			70-130	Pass	
a-BHC	%	110			70-130	Pass	
Aldrin	%	120			70-130	Pass	
b-BHC	%	120			70-130	Pass	
d-BHC	%	130			70-130	Pass	
Dieldrin	%	130			70-130	Pass	
Endosulfan I	%	125			70-130	Pass	
Endosulfan II	%	120			70-130	Pass	
Endosulfan sulphate	%	125			70-130	Pass	
Endrin	%	120			70-130	Pass	
Endrin aldehyde	%	115			70-130	Pass	
Endrin ketone	%	125			70-130	Pass	
g-BHC (Lindane)	%	120			70-130	Pass	
Heptachlor	%	110			70-130	Pass	
Heptachlor epoxide	%	80			70-130	Pass	
Methoxychlor	%	120			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	117			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	99			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	95			70-130	Pass	
Cadmium	%	99			70-130	Pass	
Chromium	%	93			70-130	Pass	
Copper	%	93			70-130	Pass	
Lead	%	92			70-130	Pass	
Mercury	%	102			70-130	Pass	
Nickel	%	93			70-130	Pass	
Zinc	%	94			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S17-My10928	NCP	%	107			70-130	Pass	
Acenaphthylene	S17-My10928	NCP	%	103			70-130	Pass	
Anthracene	S17-My10928	NCP	%	113			70-130	Pass	
Benz(a)anthracene	S17-My10928	NCP	%	99			70-130	Pass	
Benzo(a)pyrene	S17-My10928	NCP	%	104			70-130	Pass	
Benzo(b&j)fluoranthene	S17-My10928	NCP	%	100			70-130	Pass	
Benzo(g.h.i)perylene	S17-My10928	NCP	%	113			70-130	Pass	
Benzo(k)fluoranthene	S17-My10928	NCP	%	115			70-130	Pass	
Chrysene	S17-My10928	NCP	%	115			70-130	Pass	
Dibenz(a.h)anthracene	S17-My10928	NCP	%	104			70-130	Pass	
Fluoranthene	S17-My10928	NCP	%	112			70-130	Pass	
Fluorene	S17-My10928	NCP	%	104			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S17-My10928	NCP	%	109			70-130	Pass	
Naphthalene	S17-My10928	NCP	%	108			70-130	Pass	
Phenanthrene	S17-My10928	NCP	%	114			70-130	Pass	
Pyrene	S17-My10928	NCP	%	113			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S17-My07928	NCP	%	80			70-130	Pass	
Cadmium	S17-My07928	NCP	%	94			70-130	Pass	
Chromium	S17-My07928	NCP	%	78			70-130	Pass	
Copper	S17-My07928	NCP	%	73			70-130	Pass	
Lead	S17-My07928	NCP	%	81			70-130	Pass	
Mercury	S17-My07928	NCP	%	90			70-130	Pass	
Nickel	S17-My07928	NCP	%	73			70-130	Pass	
Zinc	S17-My07928	NCP	%	71			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S17-My07887	CP	%	115			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S17-My07887	CP	%	100			70-130	Pass	
Toluene	S17-My07887	CP	%	94			70-130	Pass	
Ethylbenzene	S17-My07887	CP	%	97			70-130	Pass	
m&p-Xylenes	S17-My07887	CP	%	94			70-130	Pass	
o-Xylene	S17-My07887	CP	%	90			70-130	Pass	
Xylenes - Total	S17-My07887	CP	%	92			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S17-My07887	CP	%	88			70-130	Pass	
TRH C6-C10	S17-My07887	CP	%	101			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S17-My07886	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	S17-My08539	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S17-My08539	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S17-My08539	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3.5-Trimethylbenzene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Propanone (Acetone)	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Chlorotoluene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Allyl chloride	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon disulfide	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroform	S17-My07928	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloromethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.2-Dichloroethene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.3-Dichloropropene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Methylene Chloride	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vinyl chloride	S17-My07928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C10	S17-My07886	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	S17-My08394	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	S17-My08394	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	S17-My08539	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S17-My08539	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S17-My08539	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S17-My07926	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	S17-My07926	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S17-My07926	NCP	mg/L	0.003	0.003	12	30%	Pass	
Copper	S17-My07926	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	S17-My07926	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S17-My07926	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S17-My07926	NCP	mg/L	0.001	0.001	4.0	30%	Pass	
Zinc	S17-My07926	NCP	mg/L	0.030	0.031	3.0	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.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Nibha Vaidya	Analytical Services Manager
Huong Le	Senior Analyst-Inorganic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Ryan Hamilton	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)

Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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010789

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 52372	LABORATORY BATCH NO.:
PROJECT NAME: Penrith AST	SAMPLERS: RM
DATE NEEDED BY: Std (5)	QC LEVEL: NEPM (2013)
PHONE: Sydney: 02 8245 0300 | Perth: 08 9488 0100 | Brisbane: 07 3112 2688	
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) RMammad@jbsg.com.au; (3) ..... @jbsg.com.au	

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

548083

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	TBIA	VOCs	OCP/PCB	Heavy Metals	TRH	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
JHA01 0.25-0.4	Soil	26/5/17	-	J + Icebrick + Bag	NA	X		X				X	
0.4-0.6													
JHA02 0.1-0.3									X				
0.3-0.5						X						X	
JHA03 0-0.2													
0.3-0.5													
JHA04 0.2-0.4						X	X					X	
0.4-0.6				-bag									
0.6-0.8				-bag			X		X				
JHA05 0-0.2									X				
0.2-0.5													
JHA06 0.2-0.4									X				
0.4-0.6						X						X	
0.8-1.0													
1.0-1.2						X	X	X				X	
JHA07 0.2-0.4													
0.4-0.6						X	X	X				X	
0.8-1.0				-bag									
1.3-1.5				-bag		[redacted]	X			X			

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: R Ammad DATE: 29-5-17	CONSIGNMENT NOTE NO.	NAME: Rupan DATE: 29/05	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF: 13:50	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

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

IMSO FormsO13 – Chain of Custody - Generic

29 MAY 2017 13:50

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

010790

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 52372	LABORATORY BATCH NO.:
PROJECT NAME: Penrith DSI	SAMPLERS: RM
DATE NEEDED BY: Std	QC LEVEL: NEPM (2013)

PHONE: Sydney: 02 8245 0300 | Perth: 08 9488 0100 | Brisbane: 07 3112 2688

SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) ....Rhammond.....@jbsg.com.au; (3) .....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Asbestos	Heavy Metals	PCB/OCP	Heavy Metals	TPH/BTEX	PAH (LL)	VOCs	BTEX	PHENOLS	PAHs	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
JHA08 0.2-0.4	Soil	26/5/17	-	J+B + Ice block		X	X	X									X	
↓ 0.4-0.6	↓			↓			X											
PSM01	Water			Bottles, vials & Ice bath					X	X	X	X						
PSM02									X	X	X	X						
PSM03									X	X	X	X						
RINS								X	X	X		X		X	X			
TS/TB													X					
QC01-W									X	X	X	X						
QC20170526-1	Soil	↓	↓	J+ Ice block			X					X						

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: Rohan H DATE: 29.5.17	CONSIGNMENT NOTE NO.	NAME:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	DATE: 29/5 13:50	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE: 29/05	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

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

IMSO FormsO13 – Chain of Custody - Generic

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

eurofins | mgt

Melbourne
3-5 Kingston Town Close
Oakleigh Vic 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 18217

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**JBS & G Australia (NSW) P/L**
Contact name:	Rohan Hammond
Project name:	PENRITH DSI
Project ID:	52372
COC number:	Not provided
Turn around time:	5 Day
Date/Time received:	May 29, 2017 1:50 PM
Eurofins | mgt reference:	**548083**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 10.8 degrees Celsius.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☑ Sample containers for volatile analysis received with zero headspace.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Notes

No Bag received for JHA01_0.4-0.6, sample on HOLD|

Contact notes

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

Nibha Vaidya on Phone : +61 (2) 9900 8400 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to Rohan Hammond - rhammond@jbsg.com.au.

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254 & 14271
Site# 1254 & 14271

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	548083
		Phone:	02 8245 0300
		Fax:	
Project Name:	PENRITH DSI		
Project ID:	52372		

Received:	May 29, 2017 1:50 PM
Due:	Jun 5, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	Metals M8 filtered	Phenols (IWRG 621)	BTEX	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271																		X
ydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794																		
erth Laboratory - NATA Site # 18217																		
ternal Laboratory																		
o	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**													
	JHA01_0.25-0.4	May 26, 2017		Soil	S17-My29193	X			X	X						X		X
	JHA02_0.1-0.3	May 26, 2017		Soil	S17-My29194						X					X		
	JHA02_0.3-0.5	May 26, 2017		Soil	S17-My29195	X										X		X
	JHA04_0.2-0.4	May 26, 2017		Soil	S17-My29196	X									X	X		X
	JHA04_0.6-0.8	May 26, 2017		Soil	S17-My29197						X				X	X		
	JHA05_0-0.2	May 26, 2017		Soil	S17-My29198						X					X		
	JHA06_0.2-0.4	May 26, 2017		Soil	S17-My29199						X					X		
	JHA06_0.4-0.6	May 26, 2017		Soil	S17-My29200	X										X		X
	JHA06_1.0-1.2	May 26, 2017		Soil	S17-My29201	X			X	X					X	X		X

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 12

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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elbourne Laboratory - NATA Site # 1254 & 14271																		X
ydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794																		
erth Laboratory - NATA Site # 18217																		
	JHA07_0.4-0.6	May 26, 2017		Soil	S17-My29202	X			X	X					X	X		X
	JHA07_1.3-1.5	May 26, 2017		Soil	S17-My29203										X	X		X
	JHA08_0.2-0.4	May 26, 2017		Soil	S17-My29204	X			X	X	X					X		
	JHA08_0.4-0.6	May 26, 2017		Soil	S17-My29205						X					X		
	PSM01	May 26, 2017		Water	S17-My29206							X		X	X		X	
	PSM02	May 26, 2017		Water	S17-My29207							X		X	X		X	
	PSM03	May 26, 2017		Water	S17-My29208							X		X	X		X	
	RINS	May 26, 2017		Water	S17-My29209			X	X	X	X		X	X	X		X	
	TS	May 26, 2017		Water	S17-My29210									X				
	TB	May 26, 2017		Water	S17-My29211									X				
	QC01_W	May 26, 2017		Water	S17-My29212							X		X	X		X	
	QC20170526-	May 26, 2017		Soil	S17-My29213						X				X	X		

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261 Site# 12142

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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Sample Detail					Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	Metals M8 filtered	Phenols (IWRG 621)	BTEX	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271																	X
Sydney Laboratory - NATA Site # 18217					X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 18217																	
1																	
	PSM01	May 26, 2017		Water (Trace)	S17-My29214			X									
	PSM02	May 26, 2017		Water (Trace)	S17-My29215			X									
	PSM03	May 26, 2017		Water (Trace)	S17-My29216			X									
	QC01_W	May 26, 2017		Water (Trace)	S17-My29217			X									
	JHA01_0.4-0.6	May 26, 2017		Soil	S17-My29219		X										
	JHA03_0-0.2	May 26, 2017		Soil	S17-My29220		X										
	JHA03_0.3-0.5	May 26, 2017		Soil	S17-My29221		X										
	JHA04_0.4-0.6	May 26, 2017		Soil	S17-My29222		X										
	JHA05_0.2-0.5	May 26, 2017		Soil	S17-My29223		X										
	JHA06_0.8-1.0	May 26, 2017		Soil	S17-My29224		X										
	JHA07_0.2-0.4	May 26, 2017		Soil	S17-My29225		X										

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261 Site # 14271

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
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elbourne Laboratory - NATA Site # 1254 & 14271																	X
ydney Laboratory - NATA Site # 18217					X	X	X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794																	
erth Laboratory - NATA Site # 18217																	
	JHA07_0.8-1.0	May 26, 2017		Soil	S17-My29226		X										
st Counts					7	8	5	5	5	8	4	1	7	11	14	5	7

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Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

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

Attention:	Rohan Hammond
Report	548083-AID
Project Name	PENRITH DSI
Project ID	52372
Received Date	May 29, 2017
Date Reported	Jun 05, 2017

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS4964 method is around 0.1 g/kg (0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis where required, this is considered to be at the nominal reporting limit of 0.01 % (w / w).The examination of large sample sizes(500 mL is recommended) may improve the likelihood of identifying ACM in the > 2mm fraction.The NEPM screening level of 0.001 % (w / w) asbestos in soil for FA(friable asbestos) and AF(asbestos fines) then applies where they are able to be quantified by gravimetric procedures.This quantitative screening is not generally applicable to FF(free fibres) and results of Trace Analysis are referred. *NOTE: NATA News March 2014, p.7, states in relation to AS4964: "This is a qualitative method with a nominal reporting limit of 0.01%" and that currently in Australia "there is no validated method available for the quantification of asbestos". Accordingly, NATA Accreditation does not cover the performance of this service (indicated with an asterisk).* *This report is consistent with the analytical procedures and reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended) and the Western Australia Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, 2009, including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil, June 2011.*

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Version: 1, Version Date: 29/01/2021

Project Name PENRITH DSI
Project ID 52372
Date Sampled May 26, 2017
Report 548083-AID

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
JHA01_0.25-0.4	17-My29193	May 26, 2017	Approximate Sample 756g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JHA02_0.3-0.5	17-My29195	May 26, 2017	Approximate Sample 577g Sample consisted of: Dark brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JHA04_0.2-0.4	17-My29196	May 26, 2017	Approximate Sample 653g Sample consisted of: Dark brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JHA06_0.4-0.6	17-My29200	May 26, 2017	Approximate Sample 617g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JHA06_1.0-1.2	17-My29201	May 26, 2017	Approximate Sample 605g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JHA07_0.4-0.6	17-My29202	May 26, 2017	Approximate Sample 764g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]
JHA08_0.2-0.4	17-My29204	May 26, 2017	Approximate Sample 635g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.[M11]

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
Asbestos - LTM-ASB-8020	Sydney	May 29, 2017	Indefinite

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ABN – 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
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Address: Level 1, 50 Margaret St
Sydney
NSW 2000

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Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	Metals M8 filtered	Phenols (IWRG 621)	BTEX	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271																		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																		
Perth Laboratory - NATA Site # 18217																		
External Laboratory																		
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**													
1	JHA01_0.25-0.4	May 26, 2017		Soil	S17-My29193	X			X	X						X		X
2	JHA02_0.1-0.3	May 26, 2017		Soil	S17-My29194						X					X		
3	JHA02_0.3-0.5	May 26, 2017		Soil	S17-My29195	X										X		X
4	JHA04_0.2-0.4	May 26, 2017		Soil	S17-My29196	X									X	X		X
5	JHA04_0.6-0.8	May 26, 2017		Soil	S17-My29197						X				X	X		
6	JHA05_0-0.2	May 26, 2017		Soil	S17-My29198						X					X		
7	JHA06_0.2-0.4	May 26, 2017		Soil	S17-My29199						X					X		
8	JHA06_0.4-0.6	May 26, 2017		Soil	S17-My29200	X										X		X
9	JHA06_1.0-1.2	May 26, 2017		Soil	S17-My29201	X			X	X					X	X		X

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ABN – 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
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Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
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Melbourne Laboratory - NATA Site # 1254 & 14271																		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																		
Perth Laboratory - NATA Site # 18217																		
10	JHA07_0.4-0.6	May 26, 2017		Soil	S17-My29202	X			X	X					X	X		X
11	JHA07_1.3-1.5	May 26, 2017		Soil	S17-My29203										X	X		X
12	JHA08_0.2-0.4	May 26, 2017		Soil	S17-My29204	X			X	X	X					X		
13	JHA08_0.4-0.6	May 26, 2017		Soil	S17-My29205						X					X		
14	PSM01	May 26, 2017		Water	S17-My29206							X		X	X		X	
15	PSM02	May 26, 2017		Water	S17-My29207							X		X	X		X	
16	PSM03	May 26, 2017		Water	S17-My29208							X		X	X		X	
17	RINS	May 26, 2017		Water	S17-My29209			X	X	X	X		X	X	X		X	
18	TS	May 26, 2017		Water	S17-My29210									X				
19	TB	May 26, 2017		Water	S17-My29211									X				
20	QC01_W	May 26, 2017		Water	S17-My29212							X		X	X		X	
21	QC20170526-	May 26, 2017		Soil	S17-My29213						X				X	X		

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Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
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Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																		
Perth Laboratory - NATA Site # 18217																		
	1																	
22	PSM01	May 26, 2017		Water (Trace)	S17-My29214			X										
23	PSM02	May 26, 2017		Water (Trace)	S17-My29215			X										
24	PSM03	May 26, 2017		Water (Trace)	S17-My29216			X										
25	QC01_W	May 26, 2017		Water (Trace)	S17-My29217			X										
26	JHA01_0.4-0.6	May 26, 2017		Soil	S17-My29219		X											
27	JHA03_0-0.2	May 26, 2017		Soil	S17-My29220		X											
28	JHA03_0.3-0.5	May 26, 2017		Soil	S17-My29221		X											
29	JHA04_0.4-0.6	May 26, 2017		Soil	S17-My29222		X											
30	JHA05_0.2-0.5	May 26, 2017		Soil	S17-My29223		X											
31	JHA06_0.8-1.0	May 26, 2017		Soil	S17-My29224		X											
32	JHA07_0.2-0.4	May 26, 2017		Soil	S17-My29225		X											

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Sydney
NSW 2000

Project Name: PENRITH DSI
Project ID: 52372

Order No.:
Report #: 548083
Phone: 02 8245 0300
Fax:

Received: May 29, 2017 1:50 PM
Due: Jun 5, 2017
Priority: 5 Day
Contact Name: Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	Metals M8 filtered	Phenols (IWRG 621)	BTEX	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271																		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																		
Perth Laboratory - NATA Site # 18217																		
33	JHA07_0.8-1.0	May 26, 2017		Soil	S17-My29226		X											
Test Counts						7	8	5	5	5	8	4	1	7	11	14	5	7

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Western Australia Department of Health
NOHSC	National Occupational Health and Safety Commission
ACM	Bonded asbestos-containing material means any material containing more than 1% asbestos and comprises asbestos-containing-material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin. Common examples of ACM include but are not limited to: pipe and boiler insulation, sprayed-on fireproofing, troweled-on acoustical plaster, floor tile and mastic, floor linoleum, transite shingles, roofing materials, wall and ceiling plaster, ceiling tiles, and gasket materials. This term is restricted to material that cannot pass a 7 mm x 7 mm sieve. This sieve size is selected because it approximates the thickness of common asbestos cement sheeting and for fragments to be smaller than this would imply a high degree of damage and hence potential for fibre release.
FA	FA comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded (crumbling).
PACM	Presumed Asbestos-Containing Material means thermal system insulation and surfacing material found in buildings, vessels, and vessel sections constructed no later than 1980 that are assumed to contain greater than one percent asbestos but have not been sampled or analyzed to verify or negate the presence of asbestos.
AF	Asbestos fines (AF) are defined as free fibres, or fibre bundles, smaller than 7mm. It is the free fibres which present the greatest risk to human health, although very small fibres (< 5 microns in length) are not considered to be such a risk. AF also includes small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve. (Note that for bonded ACM fragments to pass through a 7 mm x 7 mm sieve implies a substatntial degree of damage which increases the potential for fibre release.)
AC	Asbestos cement means a mixture of cement and asbestos fibres (typically 90:10 ratios).

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
N/A	Not applicable
M11	NATA accreditation does not cover the performance of this service.

Authorised by:

Nibha Vaidya Senior Analyst-Asbestos (NSW)

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 (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Rohan Hammond**

Report **548083-S**
Project name PENRITH DSI
Project ID 52372
Received Date May 29, 2017

Client Sample ID			**JHA01_0.25-0.4**	**JHA02_0.1-0.3**	**JHA02_0.3-0.5**	**JHA04_0.2-0.4**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S17-My29193**	**S17-My29194**	**S17-My29195**	**S17-My29196**
Date Sampled			**May 26, 2017**	**May 26, 2017**	**May 26, 2017**	**May 26, 2017**
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	-	23	< 20
TRH C15-C28	50	mg/kg	< 50	-	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	-	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	-	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	-	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	68	-	63	94
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	-	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	-	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	-	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	-	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	-	-	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	-	-	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	-	-	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	-	< 0.5
Allyl chloride	0.5	mg/kg	-	-	-	< 0.5

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Version: 1, Version Date: 29/01/2021

Client Sample ID			JHA01_0.25-0.4	JHA02_0.1-0.3	JHA02_0.3-0.5	JHA04_0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My29193	S17-My29194	S17-My29195	S17-My29196
Date Sampled			May 26, 2017	May 26, 2017	May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit				
Volatile Organics						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Bromobenzene	0.5	mg/kg	-	-	-	< 0.5
Bromochloromethane	0.5	mg/kg	-	-	-	< 0.5
Bromodichloromethane	0.5	mg/kg	-	-	-	< 0.5
Bromoform	0.5	mg/kg	-	-	-	< 0.5
Bromomethane	0.5	mg/kg	-	-	-	< 0.5
Carbon disulfide	0.5	mg/kg	-	-	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	-	-	< 0.5
Chlorobenzene	0.5	mg/kg	-	-	-	< 0.5
Chloroethane	0.5	mg/kg	-	-	-	< 0.5
Chloroform	0.5	mg/kg	-	-	-	< 0.5
Chloromethane	0.5	mg/kg	-	-	-	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	-	< 0.5
Dibromochloromethane	0.5	mg/kg	-	-	-	< 0.5
Dibromomethane	0.5	mg/kg	-	-	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	-	-	< 0.5
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
Iodomethane	0.5	mg/kg	-	-	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	-	< 0.5
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
Methylene Chloride	0.5	mg/kg	-	-	-	< 0.5
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Styrene	0.5	mg/kg	-	-	-	< 0.5
Tetrachloroethene	0.5	mg/kg	-	-	-	3.7
Toluene	0.1	mg/kg	-	-	-	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	-	< 0.5
Trichloroethene	0.5	mg/kg	-	-	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	-	-	< 0.5
Vinyl chloride	0.5	mg/kg	-	-	-	< 0.5
Xylenes - Total	0.3	mg/kg	-	-	-	< 0.3
Fluorobenzene (surr.)	1	%	-	-	-	94
4-Bromofluorobenzene (surr.)	1	%	-	-	-	94
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20	< 20
TRH C6-C10	20	mg/kg	< 20	-	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	-	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	-	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	-	< 100	< 100
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	< 50	< 50
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	1.2	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	1.5	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	1.7	1.2
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5

Client Sample ID			JHA01_0.25-0.4	JHA02_0.1-0.3	JHA02_0.3-0.5	JHA04_0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My29193	S17-My29194	S17-My29195	S17-My29196
Date Sampled			May 26, 2017	May 26, 2017	May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	0.8	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	0.9	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	0.7	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	0.7	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	0.8	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	1.1	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	0.8	-	2.3	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	0.6	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	0.8	< 0.5
Pyrene	0.5	mg/kg	0.8	-	2.1	< 0.5
Total PAH*	0.5	mg/kg	1.6	-	10.8	< 0.5
2-Fluorobiphenyl (surr.)	1	%	146	-	122	91
p-Terphenyl-d14 (surr.)	1	%	109	-	101	67
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Toxaphene	1	mg/kg	< 1	-	-	-
Dibutylchlorendate (surr.)	1	%	70	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	81	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-

Client Sample ID			JHA01_0.25-0.4	JHA02_0.1-0.3	JHA02_0.3-0.5	JHA04_0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My29193	S17-My29194	S17-My29195	S17-My29196
Date Sampled			May 26, 2017	May 26, 2017	May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Total PCB*	0.5	mg/kg	< 0.5	-	-	-
Dibutylchlorendate (surr.)	1	%	70	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	81	-	-	-
Phenolics (total)	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
% Moisture	1	%	6.2	21	22	10
Heavy Metals						
Arsenic	2	mg/kg	3.9	50	49	2.7
Cadmium	0.4	mg/kg	< 0.4	0.5	0.5	< 0.4
Chromium	5	mg/kg	21	11	12	53
Copper	5	mg/kg	11	230	200	19
Lead	5	mg/kg	6.8	430	910	7.0
Mercury	0.1	mg/kg	< 0.1	0.3	0.4	< 0.1
Nickel	5	mg/kg	25	8.8	8.7	58
Zinc	5	mg/kg	29	290	340	38

Client Sample ID			JHA04_0.6-0.8	JHA05_0-0.2	JHA06_0.2-0.4	JHA06_0.4-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My29197	S17-My29198	S17-My29199	S17-My29200
Date Sampled			May 26, 2017	May 26, 2017	May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	-	74
TRH C10-36 (Total)	50	mg/kg	-	-	-	74
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	65
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	-	-	-

Client Sample ID			JHA04_0.6-0.8	JHA05_0-0.2	JHA06_0.2-0.4	JHA06_0.4-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My29197	S17-My29198	S17-My29199	S17-My29200
Date Sampled			May 26, 2017	May 26, 2017	May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit				
Volatile Organics						
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	-	-	-
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	-	-	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	-	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	-	-	-
Allyl chloride	0.5	mg/kg	< 0.5	-	-	-
Benzene	0.1	mg/kg	< 0.1	-	-	-
Bromobenzene	0.5	mg/kg	< 0.5	-	-	-
Bromochloromethane	0.5	mg/kg	< 0.5	-	-	-
Bromodichloromethane	0.5	mg/kg	< 0.5	-	-	-
Bromoform	0.5	mg/kg	< 0.5	-	-	-
Bromomethane	0.5	mg/kg	< 0.5	-	-	-
Carbon disulfide	0.5	mg/kg	< 0.5	-	-	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	-	-	-
Chlorobenzene	0.5	mg/kg	< 0.5	-	-	-
Chloroethane	0.5	mg/kg	< 0.5	-	-	-
Chloroform	0.5	mg/kg	< 0.5	-	-	-
Chloromethane	0.5	mg/kg	< 0.5	-	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	-
Dibromochloromethane	0.5	mg/kg	< 0.5	-	-	-
Dibromomethane	0.5	mg/kg	< 0.5	-	-	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
Iodomethane	0.5	mg/kg	< 0.5	-	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
Methylene Chloride	0.5	mg/kg	< 0.5	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Styrene	0.5	mg/kg	< 0.5	-	-	-
Tetrachloroethene	0.5	mg/kg	0.6	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	-
Trichloroethene	0.5	mg/kg	0.7	-	-	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	-	-	-
Vinyl chloride	0.5	mg/kg	< 0.5	-	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	-
Fluorobenzene (surr.)	1	%	75	-	-	-
4-Bromofluorobenzene (surr.)	1	%	118	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	-	< 20
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50

Client Sample ID			JHA04_0.6-0.8	JHA05_0-0.2	JHA06_0.2-0.4	JHA06_0.4-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My29197	S17-My29198	S17-My29199	S17-My29200
Date Sampled			May 26, 2017	May 26, 2017	May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C16-C34	100	mg/kg	-	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	-	< 100
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	-	< 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	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
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	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Total PAH*	0.5	mg/kg	-	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	97
p-Terphenyl-d14 (surr.)	1	%	-	-	-	72
Phenolics (total)	0.1	mg/kg	-	-	-	< 0.1
% Moisture	1	%	25	12	13	14
Heavy Metals						
Arsenic	2	mg/kg	8.4	4.4	2.2	6.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	16	24	8.0	14
Copper	5	mg/kg	21	15	8.9	20
Lead	5	mg/kg	27	39	15	37
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	14	22	6.8	11
Zinc	5	mg/kg	25	64	32	48

Client Sample ID			JHA06_1.0-1.2	JHA07_0.4-0.6	JHA07_1.3-1.5	JHA08_0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My29201	S17-My29202	S17-My29203	S17-My29204
Date Sampled			May 26, 2017	May 26, 2017	May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	55	< 50	< 50	-
TRH C10-36 (Total)	50	mg/kg	55	< 50	< 50	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	122	102	106	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

Client Sample ID			JHA06_1.0-1.2	JHA07_0.4-0.6	JHA07_1.3-1.5	JHA08_0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My29201	S17-My29202	S17-My29203	S17-My29204
Date Sampled			May 26, 2017	May 26, 2017	May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit				
Volatile Organics						
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
Fluorobenzene (surr.)	1	%	72	63	59	-
4-Bromofluorobenzene (surr.)	1	%	122	102	106	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

Client Sample ID			JHA06_1.0-1.2	JHA07_0.4-0.6	JHA07_1.3-1.5	JHA08_0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S17-My29201	S17-My29202	S17-My29203	S17-My29204
Date Sampled			May 26, 2017	May 26, 2017	May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	89	95	94	-
p-Terphenyl-d14 (surr.)	1	%	71	73	78	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	-	< 1
Dibutylchlorendate (surr.)	1	%	103	90	-	97
Tetrachloro-m-xylene (surr.)	1	%	100	88	-	91
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibutylchlorendate (surr.)	1	%	103	90	-	97
Tetrachloro-m-xylene (surr.)	1	%	100	88	-	91
Phenolics (total)	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
% Moisture	1	%	16	8.8	25	11
Heavy Metals						
Arsenic	2	mg/kg	6.9	< 2	7.0	5.1
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	11	< 5	11	13
Copper	5	mg/kg	17	< 5	19	15
Lead	5	mg/kg	27	< 5	12	28
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	< 5	< 5	13
Zinc	5	mg/kg	50	14	18	310

Client Sample ID			JHA08_0.4-0.6	QC20170526-1
Sample Matrix			Soil	Soil
Eurofins | mgt Sample No.			S17-My29205	S17-My29213
Date Sampled			May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit		
Volatile Organics				
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5
Allyl chloride	0.5	mg/kg	-	< 0.5
Benzene	0.1	mg/kg	-	< 0.1
Bromobenzene	0.5	mg/kg	-	< 0.5
Bromochloromethane	0.5	mg/kg	-	< 0.5
Bromodichloromethane	0.5	mg/kg	-	< 0.5
Bromoform	0.5	mg/kg	-	< 0.5
Bromomethane	0.5	mg/kg	-	< 0.5
Carbon disulfide	0.5	mg/kg	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5
Chlorobenzene	0.5	mg/kg	-	< 0.5
Chloroethane	0.5	mg/kg	-	< 0.5
Chloroform	0.5	mg/kg	-	< 0.5
Chloromethane	0.5	mg/kg	-	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5
Dibromochloromethane	0.5	mg/kg	-	< 0.5
Dibromomethane	0.5	mg/kg	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5
Ethylbenzene	0.1	mg/kg	-	< 0.1
Iodomethane	0.5	mg/kg	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5
m&p-Xylenes	0.2	mg/kg	-	< 0.2
Methylene Chloride	0.5	mg/kg	-	< 0.5
o-Xylene	0.1	mg/kg	-	< 0.1
Styrene	0.5	mg/kg	-	< 0.5
Tetrachloroethene	0.5	mg/kg	-	< 0.5
Toluene	0.1	mg/kg	-	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5

Client Sample ID			JHA08_0.4-0.6	QC20170526-1
Sample Matrix			Soil	Soil
Eurofins | mgt Sample No.			S17-My29205	S17-My29213
Date Sampled			May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit		
Volatile Organics				
Trichloroethene	0.5	mg/kg	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5
Vinyl chloride	0.5	mg/kg	-	< 0.5
Xylenes - Total	0.3	mg/kg	-	< 0.3
Fluorobenzene (surr.)	1	%	-	59
4-Bromofluorobenzene (surr.)	1	%	-	104
% Moisture	1	%	9.8	23
Heavy Metals				
Arsenic	2	mg/kg	2.6	2.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	5.9	8.0
Copper	5	mg/kg	8.4	9.8
Lead	5	mg/kg	8.2	8.3
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5
Zinc	5	mg/kg	23	12

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	Sydney	Jun 01, 2017	14 Day
- Method: TRH C6-C36 - LTM-ORG-2010			
BTEX	Sydney	Jun 01, 2017	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 01, 2017	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 01, 2017	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Polycyclic Aromatic Hydrocarbons	Sydney	Jun 01, 2017	14 Days
- Method: LTM-ORG-2140 PAH and Phenols in Soils by GCMS			
Phenolics (total)	Melbourne	Jun 02, 2017	14 Day
- Method: APHA 5530B & D Phenols			
Metals M8	Sydney	Jun 01, 2017	28 Day
- Method: LTM-MET-3040_R0 TOTAL AND DISSOLVED METALS AND MERCURY IN WATERS BY ICP-MS			
Volatile Organics	Sydney	Jun 01, 2017	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Organochlorine Pesticides	Sydney	Jun 01, 2017	14 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	Jun 01, 2017	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Sydney	May 29, 2017	14 Day
- Method: LTM-GEN-7080 Moisture			

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 12

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	548083
		Phone:	02 8245 0300
		Fax:	
Project Name:	PENRITH DSI		
Project ID:	52372		

Received:	May 29, 2017 1:50 PM
Due:	Jun 5, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Eurofins | mgt Unit F3, Building F, 16 Mars Road, Lane Cove West, NSW, Australia, 2066
ABN : 50 005 085 521 Telephone : +61 2 9900 8400

Sample Detail	Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	Metals M8 filtered	Phenols (IWRG 621)	BTEX	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271													X
Sydney Laboratory - NATA Site # 18217	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 18217													
External Laboratory													

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID												
	JHA01_0.25-0.4	May 26, 2017		Soil	S17-My29193	X			X	X						X		X
	JHA02_0.1-0.3	May 26, 2017		Soil	S17-My29194						X					X		
	JHA02_0.3-0.5	May 26, 2017		Soil	S17-My29195	X										X		X
	JHA04_0.2-0.4	May 26, 2017		Soil	S17-My29196	X									X	X		X
	JHA04_0.6-0.8	May 26, 2017		Soil	S17-My29197						X				X	X		
	JHA05_0-0.2	May 26, 2017		Soil	S17-My29198						X					X		
	JHA06_0.2-0.4	May 26, 2017		Soil	S17-My29199						X					X		
	JHA06_0.4-0.6	May 26, 2017		Soil	S17-My29200	X										X		X
	JHA06_1.0-1.2	May 26, 2017		Soil	S17-My29201	X			X	X					X	X		X

Date Reported: Jun 05, 2017

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 12

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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elbourne Laboratory - NATA Site # 1254 & 14271																		X
ydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794																		
erth Laboratory - NATA Site # 18217																		
	JHA07_0.4-0.6	May 26, 2017		Soil	S17-My29202	X			X	X					X	X		X
	JHA07_1.3-1.5	May 26, 2017		Soil	S17-My29203										X	X		X
	JHA08_0.2-0.4	May 26, 2017		Soil	S17-My29204	X			X	X	X					X		
	JHA08_0.4-0.6	May 26, 2017		Soil	S17-My29205						X					X		
	PSM01	May 26, 2017		Water	S17-My29206							X		X	X		X	
	PSM02	May 26, 2017		Water	S17-My29207							X		X	X		X	
	PSM03	May 26, 2017		Water	S17-My29208							X		X	X		X	
	RINS	May 26, 2017		Water	S17-My29209			X	X	X	X		X	X	X		X	
	TS	May 26, 2017		Water	S17-My29210									X				
	TB	May 26, 2017		Water	S17-My29211									X				
	QC01_W	May 26, 2017		Water	S17-My29212							X		X	X		X	
	QC20170526-	May 26, 2017		Soil	S17-My29213						X				X	X		

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261 Site# 12142

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
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Sample Detail					Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	Metals M8 filtered	Phenols (IWRG 621)	BTEX	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271																	X
Sydney Laboratory - NATA Site # 18217					X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 18217																	
1																	
	PSM01	May 26, 2017		Water (Trace)	S17-My29214			X									
	PSM02	May 26, 2017		Water (Trace)	S17-My29215			X									
	PSM03	May 26, 2017		Water (Trace)	S17-My29216			X									
	QC01_W	May 26, 2017		Water (Trace)	S17-My29217			X									
	JHA01_0.4-0.6	May 26, 2017		Soil	S17-My29219		X										
	JHA03_0-0.2	May 26, 2017		Soil	S17-My29220		X										
	JHA03_0.3-0.5	May 26, 2017		Soil	S17-My29221		X										
	JHA04_0.4-0.6	May 26, 2017		Soil	S17-My29222		X										
	JHA05_0.2-0.5	May 26, 2017		Soil	S17-My29223		X										
	JHA06_0.8-1.0	May 26, 2017		Soil	S17-My29224		X										
	JHA07_0.2-0.4	May 26, 2017		Soil	S17-My29225		X										

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261 Site # 14271

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
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elbourne Laboratory - NATA Site # 1254 & 14271																	X
ydney Laboratory - NATA Site # 18217					X	X	X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794																	
erth Laboratory - NATA Site # 18217																	
	JHA07_0.8-1.0	May 26, 2017		Soil	S17-My29226		X										
st Counts					7	8	5	5	5	8	4	1	7	11	14	5	7

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Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (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 & PFASs 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.

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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							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB*	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Phenolics (total)	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	94			70-130	Pass	
TRH C10-C14	%	114			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	81			70-130	Pass	
Toluene	%	88			70-130	Pass	
Ethylbenzene	%	94			70-130	Pass	
m&p-Xylenes	%	90			70-130	Pass	
o-Xylene	%	95			70-130	Pass	
Xylenes - Total	%	92			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethane	%	121			70-130	Pass	
1.1-Dichloroethene	%	105			70-130	Pass	
1.1.1-Trichloroethane	%	122			70-130	Pass	
1.1.1.2-Tetrachloroethane	%	122			70-130	Pass	
1.1.2-Trichloroethane	%	116			70-130	Pass	
1.1.2.2-Tetrachloroethane	%	100			70-130	Pass	
1.2-Dibromoethane	%	119			70-130	Pass	
1.2-Dichlorobenzene	%	119			70-130	Pass	
1.2-Dichloroethane	%	130			70-130	Pass	
1.2-Dichloropropane	%	103			70-130	Pass	
1.2.3-Trichloropropane	%	107			70-130	Pass	
1.2.4-Trimethylbenzene	%	114			70-130	Pass	
1.3-Dichlorobenzene	%	123			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.3-Dichloropropane	%	113			70-130	Pass	
1.3.5-Trimethylbenzene	%	114			70-130	Pass	
1.4-Dichlorobenzene	%	121			70-130	Pass	
2-Butanone (MEK)	%	90			70-130	Pass	
2-Propanone (Acetone)	%	75			70-130	Pass	
4-Chlorotoluene	%	115			70-130	Pass	
4-Methyl-2-pentanone (MIBK)	%	100			70-130	Pass	
Allyl chloride	%	129			70-130	Pass	
Bromobenzene	%	104			70-130	Pass	
Bromochloromethane	%	71			70-130	Pass	
Bromodichloromethane	%	123			70-130	Pass	
Bromoform	%	124			70-130	Pass	
Bromomethane	%	75			70-130	Pass	
Carbon disulfide	%	122			70-130	Pass	
Carbon Tetrachloride	%	129			70-130	Pass	
Chlorobenzene	%	117			70-130	Pass	
Chloroethane	%	70			70-130	Pass	
Chloroform	%	92			70-130	Pass	
Chloromethane	%	84			70-130	Pass	
cis-1.2-Dichloroethene	%	106			70-130	Pass	
cis-1.3-Dichloropropene	%	119			70-130	Pass	
Dibromochloromethane	%	129			70-130	Pass	
Dibromomethane	%	118			70-130	Pass	
Dichlorodifluoromethane	%	124			70-130	Pass	
Iodomethane	%	91			70-130	Pass	
Isopropyl benzene (Cumene)	%	116			70-130	Pass	
Methylene Chloride	%	116			70-130	Pass	
Styrene	%	114			70-130	Pass	
Tetrachloroethene	%	128			70-130	Pass	
trans-1.2-Dichloroethene	%	126			70-130	Pass	
trans-1.3-Dichloropropene	%	113			70-130	Pass	
Trichloroethene	%	126			70-130	Pass	
Trichlorofluoromethane	%	119			70-130	Pass	
Vinyl chloride	%	100			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	89			70-130	Pass	
TRH C6-C10	%	89			70-130	Pass	
TRH >C10-C16	%	120			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	90			70-130	Pass	
Acenaphthylene	%	94			70-130	Pass	
Anthracene	%	98			70-130	Pass	
Benz(a)anthracene	%	88			70-130	Pass	
Benzo(a)pyrene	%	102			70-130	Pass	
Benzo(b&j)fluoranthene	%	92			70-130	Pass	
Benzo(g.h.i)perylene	%	97			70-130	Pass	
Benzo(k)fluoranthene	%	106			70-130	Pass	
Chrysene	%	116			70-130	Pass	
Dibenz(a.h)anthracene	%	91			70-130	Pass	
Fluoranthene	%	102			70-130	Pass	
Fluorene	%	100			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	93			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	%	105			70-130	Pass	
Phenanthrene	%	100			70-130	Pass	
Pyrene	%	102			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	78			70-130	Pass	
4.4'-DDD	%	97			70-130	Pass	
4.4'-DDE	%	86			70-130	Pass	
4.4'-DDT	%	87			70-130	Pass	
a-BHC	%	85			70-130	Pass	
Aldrin	%	81			70-130	Pass	
b-BHC	%	71			70-130	Pass	
d-BHC	%	91			70-130	Pass	
Dieldrin	%	76			70-130	Pass	
Endosulfan I	%	76			70-130	Pass	
Endosulfan II	%	77			70-130	Pass	
Endosulfan sulphate	%	80			70-130	Pass	
Endrin	%	72			70-130	Pass	
Endrin aldehyde	%	74			70-130	Pass	
Endrin ketone	%	73			70-130	Pass	
g-BHC (Lindane)	%	70			70-130	Pass	
Heptachlor	%	86			70-130	Pass	
Heptachlor epoxide	%	82			70-130	Pass	
Hexachlorobenzene	%	71			70-130	Pass	
Methoxychlor	%	107			70-130	Pass	
Toxaphene	%	101			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	106			70-130	Pass	
LCS - % Recovery							
Phenolics (total)	%	101			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	83			70-130	Pass	
Cadmium	%	93			70-130	Pass	
Chromium	%	80			70-130	Pass	
Copper	%	83			70-130	Pass	
Lead	%	94			70-130	Pass	
Mercury	%	116			70-130	Pass	
Nickel	%	80			70-130	Pass	
Zinc	%	85			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S17-My26068	NCP	%	94			70-130	Pass	
Acenaphthylene	S17-My26068	NCP	%	103			70-130	Pass	
Anthracene	S17-My26068	NCP	%	97			70-130	Pass	
Benz(a)anthracene	S17-My26068	NCP	%	99			70-130	Pass	
Benzo(a)pyrene	S17-My26068	NCP	%	108			70-130	Pass	
Benzo(b&j)fluoranthene	S17-My26068	NCP	%	102			70-130	Pass	
Benzo(g.h.i)perylene	S17-My26068	NCP	%	111			70-130	Pass	
Benzo(k)fluoranthene	S17-My26068	NCP	%	99			70-130	Pass	
Chrysene	S17-My26068	NCP	%	115			70-130	Pass	
Dibenz(a.h)anthracene	S17-My26068	NCP	%	104			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Fluoranthene	S17-My26068	NCP	%	114			70-130	Pass	
Fluorene	S17-My26068	NCP	%	109			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S17-My26068	NCP	%	115			70-130	Pass	
Naphthalene	S17-My26068	NCP	%	109			70-130	Pass	
Phenanthrene	S17-My26068	NCP	%	112			70-130	Pass	
Pyrene	S17-My26068	NCP	%	111			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDT	S17-My28848	NCP	%	82			70-130	Pass	
Endrin	S17-My28848	NCP	%	102			70-130	Pass	
Endrin ketone	S17-My28848	NCP	%	98			70-130	Pass	
Hexachlorobenzene	S17-My29258	NCP	%	91			70-130	Pass	
Methoxychlor	S17-My28848	NCP	%	92			70-130	Pass	
Toxaphene	S17-My29258	NCP	%	108			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S17-My28850	NCP	%	84			70-130	Pass	
Copper	S17-My28850	NCP	%	90			70-130	Pass	
Lead	S17-My28850	NCP	%	90			70-130	Pass	
Zinc	S17-My28850	NCP	%	102			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Cadmium	S17-My29194	CP	%	81			70-130	Pass	
Chromium	S17-My29194	CP	%	80			70-130	Pass	
Mercury	S17-My29194	CP	%	81			70-130	Pass	
Nickel	S17-My29194	CP	%	84			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S17-My29195	CP	%	113			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S17-My29195	CP	%	121			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethane	S17-My29122	NCP	%	93			70-130	Pass	
1.1-Dichloroethene	S17-My29122	NCP	%	102			70-130	Pass	
1.1.1-Trichloroethane	S17-My29122	NCP	%	129			70-130	Pass	
1.1.1.2-Tetrachloroethane	S17-My29122	NCP	%	103			70-130	Pass	
1.1.2-Trichloroethane	S17-My29122	NCP	%	115			70-130	Pass	
1.1.2.2-Tetrachloroethane	S17-My29122	NCP	%	87			70-130	Pass	
1.2-Dibromoethane	S17-My29122	NCP	%	116			70-130	Pass	
1.2-Dichlorobenzene	S17-My29122	NCP	%	115			70-130	Pass	
1.2-Dichloroethane	S17-My27249	NCP	%	123			70-130	Pass	
1.2-Dichloropropane	S17-My29122	NCP	%	96			70-130	Pass	
1.2.3-Trichloropropane	S17-My29122	NCP	%	113			70-130	Pass	
1.2.4-Trimethylbenzene	S17-My29122	NCP	%	101			70-130	Pass	
1.3-Dichlorobenzene	S17-My29122	NCP	%	114			70-130	Pass	
1.3-Dichloropropane	S17-My29122	NCP	%	112			70-130	Pass	
1.3.5-Trimethylbenzene	S17-My29122	NCP	%	99			70-130	Pass	
1.4-Dichlorobenzene	S17-My29122	NCP	%	111			70-130	Pass	
2-Butanone (MEK)	S17-My29122	NCP	%	74			70-130	Pass	
2-Propanone (Acetone)	S17-My29122	NCP	%	127			70-130	Pass	
4-Chlorotoluene	S17-My29122	NCP	%	103			70-130	Pass	
4-Methyl-2-pentanone (MIBK)	S17-My29122	NCP	%	110			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Allyl chloride	S17-My29122	NCP	%	82			70-130	Pass	
Bromobenzene	S17-My29122	NCP	%	96			70-130	Pass	
Bromochloromethane	S17-My29122	NCP	%	108			70-130	Pass	
Bromodichloromethane	S17-My29122	NCP	%	127			70-130	Pass	
Bromoform	S17-My29122	NCP	%	112			70-130	Pass	
Bromomethane	S17-My29122	NCP	%	78			70-130	Pass	
Carbon disulfide	S17-My27249	NCP	%	108			70-130	Pass	
Carbon Tetrachloride	S17-My29122	NCP	%	129			70-130	Pass	
Chlorobenzene	S17-My29122	NCP	%	89			70-130	Pass	
Chloroethane	S17-My27249	NCP	%	104			70-130	Pass	
Chloroform	S17-My29122	NCP	%	122			70-130	Pass	
Chloromethane	S17-My29122	NCP	%	78			70-130	Pass	
cis-1.2-Dichloroethene	S17-My29122	NCP	%	93			70-130	Pass	
cis-1.3-Dichloropropene	S17-My29122	NCP	%	127			70-130	Pass	
Dibromochloromethane	S17-My29122	NCP	%	126			70-130	Pass	
Dibromomethane	S17-My29122	NCP	%	121			70-130	Pass	
Dichlorodifluoromethane	S17-My29122	NCP	%	115			70-130	Pass	
Iodomethane	S17-My29122	NCP	%	81			70-130	Pass	
Isopropyl benzene (Cumene)	S17-My29122	NCP	%	95			70-130	Pass	
Methylene Chloride	S17-My29122	NCP	%	110			70-130	Pass	
Styrene	S17-My29122	NCP	%	92			70-130	Pass	
Tetrachloroethene	S17-My29122	NCP	%	127			70-130	Pass	
trans-1.2-Dichloroethene	S17-My29122	NCP	%	86			70-130	Pass	
trans-1.3-Dichloropropene	S17-My29122	NCP	%	110			70-130	Pass	
Trichloroethene	S17-My29122	NCP	%	115			70-130	Pass	
Trichlorofluoromethane	S17-My29122	NCP	%	113			70-130	Pass	
Vinyl chloride	S17-My29122	NCP	%	99			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S17-My29201	CP	%	99			70-130	Pass	
4.4'-DDD	S17-My29201	CP	%	125			70-130	Pass	
4.4'-DDE	S17-My29201	CP	%	118			70-130	Pass	
a-BHC	S17-My29201	CP	%	103			70-130	Pass	
Aldrin	S17-My29201	CP	%	109			70-130	Pass	
b-BHC	S17-My29201	CP	%	80			70-130	Pass	
d-BHC	S17-My29201	CP	%	111			70-130	Pass	
Dieldrin	S17-My29201	CP	%	98			70-130	Pass	
Endosulfan I	S17-My29201	CP	%	95			70-130	Pass	
Endosulfan II	S17-My29201	CP	%	91			70-130	Pass	
Endosulfan sulphate	S17-My29201	CP	%	94			70-130	Pass	
Endrin aldehyde	S17-My29201	CP	%	93			70-130	Pass	
g-BHC (Lindane)	S17-My29201	CP	%	80			70-130	Pass	
Heptachlor	S17-My29201	CP	%	51			70-130	Fail	Q08
Heptachlor epoxide	S17-My29201	CP	%	130			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	S17-My29201	CP	%	119			70-130	Pass	
Spike - % Recovery									
				Result 1					
Phenolics (total)	S17-My29201	CP	%	102			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S17-My29202	CP	%	90			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
BTEX				Result 1					
Benzene	S17-My29202	CP	%	77			70-130	Pass	
Toluene	S17-My29202	CP	%	84			70-130	Pass	
Ethylbenzene	S17-My29202	CP	%	93			70-130	Pass	
m&p-Xylenes	S17-My29202	CP	%	94			70-130	Pass	
o-Xylene	S17-My29202	CP	%	99			70-130	Pass	
Xylenes - Total	S17-My29202	CP	%	95			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S17-My29202	CP	%	96			70-130	Pass	
TRH C6-C10	S17-My29202	CP	%	86			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	S17-My29193	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S17-My29193	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S17-My29193	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S17-My29193	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S17-My29193	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S17-My29193	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S17-My29193	CP	mg/kg	< 0.5	0.6	38	30%	Fail	Q15
Benzo(g.h.i)perylene	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S17-My29193	CP	mg/kg	0.8	1.2	37	30%	Fail	Q15
Fluorene	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S17-My29193	CP	mg/kg	0.8	1.1	35	30%	Fail	Q15
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S17-My29193	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endrin	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S17-My29193	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S17-My29193	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Toxaphene	S17-My29193	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S17-My29193	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S17-My29193	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S17-Jn00513	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S17-My28846	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S17-My28846	NCP	mg/kg	24	22	12	30%	Pass	
Copper	S17-My28846	NCP	mg/kg	22	24	9.0	30%	Pass	
Lead	S17-My28846	NCP	mg/kg	77	72	7.0	30%	Pass	
Mercury	S17-My28846	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S17-My28846	NCP	mg/kg	6.9	6.3	9.0	30%	Pass	
Zinc	S17-My28846	NCP	mg/kg	66	62	7.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Phenolics (total)	S17-My29200	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S17-My29201	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S17-My29201	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S17-My29201	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S17-My29201	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S17-My29201	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S17-My29201	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S17-My29201	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.2.3-Trichloropropane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S17-My29201	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S17-My29201	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S17-My29201	CP	%	16	17	8.0	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.
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
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference
Q15	The RPD reported passes Eurofins | mgt's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Nibha Vaidya	Analytical Services Manager
Huong Le	Senior Analyst-Inorganic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Ryan Hamilton	Senior Analyst-Inorganic (NSW)
Ryan Hamilton	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)

Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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Version: 1, Version Date: 29/01/2021

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Certificate of Analysis

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

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Rohan Hammond**

Report **548083-W**
Project name PENRITH DSI
Project ID 52372
Received Date May 29, 2017

Client Sample ID			**PSM01**	**PSM02**	**PSM03**	**RINS**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins | mgt Sample No.			**S17-My29206**	**S17-My29207**	**S17-My29208**	**S17-My29209**
Date Sampled			**May 26, 2017**	**May 26, 2017**	**May 26, 2017**	**May 26, 2017**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	0.02	mg/L	0.15	0.05	0.04	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	0.74	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	1.1	1.9	0.2	< 0.1
TRH C29-C36	0.1	mg/L	0.1	< 0.1	< 0.1	< 0.1
TRH C10-36 (Total)	0.1	mg/L	1.2	2.64	0.2	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	0.073	0.021	0.021	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	0.002	< 0.001	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	0.004	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	89	91	95	92
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	0.003	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Propanone (Acetone)	0.001	mg/L	0.021	< 0.001	< 0.001	< 0.001
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

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Client Sample ID			PSM01	PSM02	PSM03	RINS
Sample Matrix			Water	Water	Water	Water
Eurofins | mgt Sample No.			S17-My29206	S17-My29207	S17-My29208	S17-My29209
Date Sampled			May 26, 2017	May 26, 2017	May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit				
Volatile Organics						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	0.002	< 0.002	< 0.002
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
o-Xylene	0.001	mg/L	< 0.001	0.002	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	0.059	< 0.001	0.007	< 0.001
Toluene	0.001	mg/L	0.073	0.021	0.021	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	0.004	< 0.003	< 0.003
Fluorobenzene (surr.)	1	%	68	71	71	67
4-Bromofluorobenzene (surr.)	1	%	89	91	95	92
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	0.08	0.04	0.03	< 0.02
TRH C6-C10	0.02	mg/L	0.15	0.06	0.05	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	1.6	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	1.2	1.0	0.2	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	1.6	< 0.05	< 0.05
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	-	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	-	< 0.001
Anthracene	0.001	mg/L	-	-	-	< 0.001
Benz(a)anthracene	0.001	mg/L	-	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	-	< 0.001

Client Sample ID			PSM01	PSM02	PSM03	RINS
Sample Matrix			Water	Water	Water	Water
Eurofins | mgt Sample No.			S17-My29206	S17-My29207	S17-My29208	S17-My29209
Date Sampled			May 26, 2017	May 26, 2017	May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	-	-	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	-	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	-	< 0.001
Chrysene	0.001	mg/L	-	-	-	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	-	-	-	< 0.001
Fluoranthene	0.001	mg/L	-	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	-	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	-	-	< 0.001
Naphthalene	0.001	mg/L	-	-	-	< 0.001
Phenanthrene	0.001	mg/L	-	-	-	< 0.001
Pyrene	0.001	mg/L	-	-	-	< 0.001
Total PAH*	0.001	mg/L	-	-	-	< 0.001
2-Fluorobiphenyl (surr.)	1	%	-	-	-	INT
p-Terphenyl-d14 (surr.)	1	%	-	-	-	INT
Organochlorine Pesticides						
Chlordanes - Total	0.001	mg/L	-	-	-	< 0.001
4.4'-DDD	0.0001	mg/L	-	-	-	< 0.0001
4.4'-DDE	0.0001	mg/L	-	-	-	< 0.0001
4.4'-DDT	0.0001	mg/L	-	-	-	< 0.0001
a-BHC	0.0001	mg/L	-	-	-	< 0.0001
Aldrin	0.0001	mg/L	-	-	-	< 0.0001
b-BHC	0.0001	mg/L	-	-	-	< 0.0001
d-BHC	0.0001	mg/L	-	-	-	< 0.0001
Dieldrin	0.0001	mg/L	-	-	-	< 0.0001
Endosulfan I	0.0001	mg/L	-	-	-	< 0.0001
Endosulfan II	0.0001	mg/L	-	-	-	< 0.0001
Endosulfan sulphate	0.0001	mg/L	-	-	-	< 0.0001
Endrin	0.0001	mg/L	-	-	-	< 0.0001
Endrin aldehyde	0.0001	mg/L	-	-	-	< 0.0001
Endrin ketone	0.0001	mg/L	-	-	-	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	-	-	-	< 0.0001
Heptachlor	0.0001	mg/L	-	-	-	< 0.0001
Heptachlor epoxide	0.0001	mg/L	-	-	-	< 0.0001
Hexachlorobenzene	0.0001	mg/L	-	-	-	< 0.0001
Methoxychlor	0.0001	mg/L	-	-	-	< 0.0001
Toxaphene	0.01	mg/L	-	-	-	< 0.01
Dibutylchlorendate (surr.)	1	%	-	-	-	75
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	62
Polychlorinated Biphenyls						
Aroclor-1016	0.005	mg/L	-	-	-	< 0.005
Aroclor-1221	0.001	mg/L	-	-	-	< 0.001
Aroclor-1232	0.005	mg/L	-	-	-	< 0.005
Aroclor-1242	0.005	mg/L	-	-	-	< 0.005
Aroclor-1248	0.005	mg/L	-	-	-	< 0.005
Aroclor-1254	0.005	mg/L	-	-	-	< 0.005
Aroclor-1260	0.005	mg/L	-	-	-	< 0.005
Total PCB*	0.001	mg/L	-	-	-	< 0.001
Dibutylchlorendate (surr.)	1	%	-	-	-	75
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	62

Client Sample ID			PSM01	PSM02	PSM03	RINS
Sample Matrix			Water	Water	Water	Water
Eurofins | mgt Sample No.			S17-My29206	S17-My29207	S17-My29208	S17-My29209
Date Sampled			May 26, 2017	May 26, 2017	May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	-	-	-	< 0.003
2.4-Dichlorophenol	0.001	mg/L	-	-	-	< 0.001
2.4.5-Trichlorophenol	0.001	mg/L	-	-	-	< 0.001
2.4.6-Trichlorophenol	0.01	mg/L	-	-	-	< 0.01
2.6-Dichlorophenol	0.003	mg/L	-	-	-	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	-	-	-	< 0.01
Pentachlorophenol	0.01	mg/L	-	-	-	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	-	-	-	< 0.03
Total Halogenated Phenol*	0.01	mg/L	-	-	-	< 0.01
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	-	-	-	< 0.1
2-Methyl-4.6-dinitrophenol	0.005	mg/L	-	-	-	< 0.005
2-Methylphenol (o-Cresol)	0.003	mg/L	-	-	-	< 0.003
2-Nitrophenol	0.005	mg/L	-	-	-	< 0.005
2.4-Dimethylphenol	0.001	mg/L	-	-	-	< 0.001
2.4-Dinitrophenol	0.001	mg/L	-	-	-	< 0.001
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	-	-	< 0.006
4-Nitrophenol	0.001	mg/L	-	-	-	0.003
Dinoseb	0.1	mg/L	-	-	-	< 0.1
Phenol	0.003	mg/L	-	-	-	< 0.003
Total Non-Halogenated Phenol*	0.1	mg/L	-	-	-	< 0.1
Phenol-d6 (surr.)	1	%	-	-	-	INT
Heavy Metals						
Arsenic	0.001	mg/L	-	-	-	< 0.001
Arsenic (filtered)	0.001	mg/L	0.001	0.001	0.003	-
Cadmium	0.0002	mg/L	-	-	-	< 0.0002
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	-
Chromium	0.001	mg/L	-	-	-	0.001
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Copper	0.001	mg/L	-	-	-	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Lead	0.001	mg/L	-	-	-	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Mercury	0.0001	mg/L	-	-	-	< 0.0001
Mercury (filtered)	0.0001	mg/L	0.0002	0.0002	< 0.0001	-
Nickel	0.001	mg/L	-	-	-	< 0.001
Nickel (filtered)	0.001	mg/L	0.004	0.006	< 0.001	-
Zinc	0.005	mg/L	-	-	-	< 0.005
Zinc (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	-

Client Sample ID			TS	TB	QC01_W	PSM01
Sample Matrix			Water	Water	Water	Water (Trace)
Eurofins | mgt Sample No.			S17-My29210	S17-My29211	S17-My29212	S17-My29214
Date Sampled			May 26, 2017	May 26, 2017	May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	0.02	mg/L	-	-	0.15	-
TRH C10-C14	0.05	mg/L	-	-	< 0.05	-
TRH C15-C28	0.1	mg/L	-	-	0.4	-
TRH C29-C36	0.1	mg/L	-	-	< 0.1	-
TRH C10-36 (Total)	0.1	mg/L	-	-	0.4	-
BTEX						
Benzene	0.001	mg/L	111%	< 0.001	< 0.001	-
Toluene	0.001	mg/L	98%	< 0.001	0.072	-
Ethylbenzene	0.001	mg/L	92%	< 0.001	< 0.001	-
m&p-Xylenes	0.002	mg/L	102%	< 0.002	< 0.002	-
o-Xylene	0.001	mg/L	103%	< 0.001	< 0.001	-
Xylenes - Total	0.003	mg/L	103%	< 0.003	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	99	94	92	-
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	-	-	< 0.001	-
1.1-Dichloroethene	0.001	mg/L	-	-	< 0.001	-
1.1.1-Trichloroethane	0.001	mg/L	-	-	< 0.001	-
1.1.1.2-Tetrachloroethane	0.001	mg/L	-	-	< 0.001	-
1.1.2-Trichloroethane	0.001	mg/L	-	-	< 0.001	-
1.1.2.2-Tetrachloroethane	0.001	mg/L	-	-	< 0.001	-
1.2-Dibromoethane	0.001	mg/L	-	-	< 0.001	-
1.2-Dichlorobenzene	0.001	mg/L	-	-	< 0.001	-
1.2-Dichloroethane	0.001	mg/L	-	-	< 0.001	-
1.2-Dichloropropane	0.001	mg/L	-	-	< 0.001	-
1.2.3-Trichloropropane	0.001	mg/L	-	-	< 0.001	-
1.2.4-Trimethylbenzene	0.001	mg/L	-	-	< 0.001	-
1.3-Dichlorobenzene	0.001	mg/L	-	-	< 0.001	-
1.3-Dichloropropane	0.001	mg/L	-	-	< 0.001	-
1.3.5-Trimethylbenzene	0.001	mg/L	-	-	< 0.001	-
1.4-Dichlorobenzene	0.001	mg/L	-	-	< 0.001	-
2-Butanone (MEK)	0.001	mg/L	-	-	< 0.001	-
2-Propanone (Acetone)	0.001	mg/L	-	-	0.021	-
4-Chlorotoluene	0.001	mg/L	-	-	< 0.001	-
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	-	-	< 0.001	-
Allyl chloride	0.001	mg/L	-	-	< 0.001	-
Benzene	0.001	mg/L	-	-	< 0.001	-
Bromobenzene	0.001	mg/L	-	-	< 0.001	-
Bromochloromethane	0.001	mg/L	-	-	< 0.001	-
Bromodichloromethane	0.001	mg/L	-	-	< 0.001	-
Bromoform	0.001	mg/L	-	-	< 0.001	-
Bromomethane	0.001	mg/L	-	-	< 0.001	-
Carbon disulfide	0.001	mg/L	-	-	< 0.001	-
Carbon Tetrachloride	0.001	mg/L	-	-	< 0.001	-
Chlorobenzene	0.001	mg/L	-	-	< 0.001	-
Chloroethane	0.001	mg/L	-	-	< 0.001	-
Chloroform	0.005	mg/L	-	-	< 0.005	-
Chloromethane	0.001	mg/L	-	-	< 0.001	-
cis-1.2-Dichloroethene	0.001	mg/L	-	-	< 0.001	-
cis-1.3-Dichloropropene	0.001	mg/L	-	-	< 0.001	-

Client Sample ID			TS	TB	QC01_W	PSM01
Sample Matrix			Water	Water	Water	Water (Trace)
Eurofins | mgt Sample No.			S17-My29210	S17-My29211	S17-My29212	S17-My29214
Date Sampled			May 26, 2017	May 26, 2017	May 26, 2017	May 26, 2017
Test/Reference	LOR	Unit				
Volatile Organics						
Dibromochloromethane	0.001	mg/L	-	-	< 0.001	-
Dibromomethane	0.001	mg/L	-	-	< 0.001	-
Dichlorodifluoromethane	0.001	mg/L	-	-	< 0.001	-
Ethylbenzene	0.001	mg/L	-	-	< 0.001	-
Iodomethane	0.001	mg/L	-	-	< 0.001	-
Isopropyl benzene (Cumene)	0.001	mg/L	-	-	< 0.001	-
m&p-Xylenes	0.002	mg/L	-	-	< 0.002	-
Methylene Chloride	0.001	mg/L	-	-	< 0.001	-
o-Xylene	0.001	mg/L	-	-	< 0.001	-
Styrene	0.001	mg/L	-	-	< 0.001	-
Tetrachloroethene	0.001	mg/L	-	-	0.051	-
Toluene	0.001	mg/L	-	-	0.072	-
trans-1.2-Dichloroethene	0.001	mg/L	-	-	< 0.001	-
trans-1.3-Dichloropropene	0.001	mg/L	-	-	< 0.001	-
Trichloroethene	0.001	mg/L	-	-	< 0.001	-
Trichlorofluoromethane	0.001	mg/L	-	-	< 0.001	-
Vinyl chloride	0.001	mg/L	-	-	< 0.001	-
Xylenes - Total	0.003	mg/L	-	-	< 0.003	-
Fluorobenzene (surr.)	1	%	-	-	69	-
4-Bromofluorobenzene (surr.)	1	%	-	-	92	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	-	-	< 0.01	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	-	-	0.08	-
TRH C6-C10	0.02	mg/L	-	-	0.15	-
TRH >C10-C16	0.05	mg/L	-	-	< 0.05	-
TRH >C16-C34	0.1	mg/L	-	-	0.4	-
TRH >C34-C40	0.1	mg/L	-	-	< 0.1	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	-	< 0.05	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.00005	mg/L	-	-	-	< 0.00005
Acenaphthylene	0.00005	mg/L	-	-	-	< 0.00005
Anthracene	0.00005	mg/L	-	-	-	< 0.00005
Benz(a)anthracene	0.00005	mg/L	-	-	-	< 0.00005
Benzo(a)pyrene	0.00001	mg/L	-	-	-	< 0.00001
Benzo(b&j)fluoranthene[N07]	0.00005	mg/L	-	-	-	< 0.00005
Benzo(g.h.i)perylene	0.00005	mg/L	-	-	-	< 0.00005
Benzo(k)fluoranthene	0.00005	mg/L	-	-	-	< 0.00005
Chrysene	0.00005	mg/L	-	-	-	< 0.00005
Dibenz(a.h)anthracene	0.00005	mg/L	-	-	-	< 0.00005
Fluoranthene	0.00005	mg/L	-	-	-	< 0.00005
Fluorene	0.00005	mg/L	-	-	-	< 0.00005
Indeno(1.2.3-cd)pyrene	0.00005	mg/L	-	-	-	< 0.00005
Naphthalene	0.00005	mg/L	-	-	-	0.00014
Phenanthrene	0.00005	mg/L	-	-	-	0.00008
Pyrene	0.00005	mg/L	-	-	-	< 0.00005
Total PAH*	0.00005	mg/L	-	-	-	0.00022
2-Fluorobiphenyl (surr.)	1	%	-	-	-	67
p-Terphenyl-d14 (surr.)	1	%	-	-	-	76

Client Sample ID			TS	TB	QC01_W	PSM01
Sample Matrix			**Water**	**Water**	**Water**	**Water (Trace)**
Eurofins | mgt Sample No.			**S17-My29210**	**S17-My29211**	**S17-My29212**	**S17-My29214**
Date Sampled			**May 26, 2017**	**May 26, 2017**	**May 26, 2017**	**May 26, 2017**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	-	-	< 0.001	-
Cadmium (filtered)	0.0002	mg/L	-	-	< 0.0002	-
Chromium (filtered)	0.001	mg/L	-	-	0.001	-
Copper (filtered)	0.001	mg/L	-	-	< 0.001	-
Lead (filtered)	0.001	mg/L	-	-	< 0.001	-
Mercury (filtered)	0.0001	mg/L	-	-	< 0.0001	-
Nickel (filtered)	0.001	mg/L	-	-	0.004	-
Zinc (filtered)	0.005	mg/L	-	-	< 0.005	-

Client Sample ID			PSM02	PSM03	QC01_W
Sample Matrix			**Water (Trace)**	**Water (Trace)**	**Water (Trace)**
Eurofins | mgt Sample No.			**S17-My29215**	**S17-My29216**	**S17-My29217**
Date Sampled			**May 26, 2017**	**May 26, 2017**	**May 26, 2017**
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.00005	mg/L	< 0.00005	< 0.00005	< 0.00005
Acenaphthylene	0.00005	mg/L	< 0.00005	< 0.00005	< 0.00005
Anthracene	0.00005	mg/L	< 0.00005	< 0.00005	< 0.00005
Benz(a)anthracene	0.00005	mg/L	< 0.00005	< 0.00005	< 0.00005
Benzo(a)pyrene	0.00001	mg/L	0.00001	< 0.00001	0.00001
Benzo(b&j)fluoranthene[N07]	0.00005	mg/L	0.00005	< 0.00005	< 0.00005
Benzo(g.h.i)perylene	0.00005	mg/L	< 0.00005	< 0.00005	< 0.00005
Benzo(k)fluoranthene	0.00005	mg/L	< 0.00005	< 0.00005	< 0.00005
Chrysene	0.00005	mg/L	< 0.00005	< 0.00005	< 0.00005
Dibenz(a.h)anthracene	0.00005	mg/L	< 0.00005	< 0.00005	< 0.00005
Fluoranthene	0.00005	mg/L	< 0.00005	< 0.00005	< 0.00005
Fluorene	0.00005	mg/L	< 0.00005	< 0.00005	< 0.00005
Indeno(1.2.3-cd)pyrene	0.00005	mg/L	< 0.00005	< 0.00005	< 0.00005
Naphthalene	0.00005	mg/L	0.00014	0.00009	0.00020
Phenanthrene	0.00005	mg/L	0.00007	< 0.00005	0.00005
Pyrene	0.00005	mg/L	< 0.00005	< 0.00005	< 0.00005
Total PAH*	0.00005	mg/L	0.00027	9E-05	0.00026
2-Fluorobiphenyl (surr.)	1	%	67	68	63
p-Terphenyl-d14 (surr.)	1	%	92	95	94

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	Sydney	May 31, 2017	7 Day
- Method: TRH C6-C36 - LTM-ORG-2010			
BTEX	Sydney	May 29, 2017	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 29, 2017	7 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 31, 2017	7 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Polycyclic Aromatic Hydrocarbons	Sydney	May 31, 2017	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Water by GCMS			
Metals M8	Sydney	May 29, 2017	28 Day
- Method: LTM-MET-3040 Metals in Waters by ICP-MS			
Volatile Organics	Sydney	May 29, 2017	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Organochlorine Pesticides	Sydney	May 31, 2017	7 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	May 31, 2017	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Metals M8 filtered	Sydney	May 29, 2017	28 Day
- Method: LTM-MET-3040 Metals in Waters by ICP-MS			
Phenols (Halogenated)	Sydney	May 31, 2017	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Water by GCMS			
Phenols (non-Halogenated)	Sydney	May 31, 2017	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Water by GCMS			

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Version: 1, Version Date: 29/01/2021

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 12

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	548083
		Phone:	02 8245 0300
		Fax:	
Project Name:	PENRITH DSI		
Project ID:	52372		

Received:	May 29, 2017 1:50 PM
Due:	Jun 5, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Eurofins | mgt Unit F3, Building F, 16 Mars Road, Lane Cove West, NSW, Australia, 2066
ABN : 50 005 085 521 Telephone : +61 2 9900 8400

Sample Detail	Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	Metals M8 filtered	Phenols (IWRG 621)	BTEX	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271													X
Sydney Laboratory - NATA Site # 18217	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 18217													
External Laboratory													

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID												
	JHA01_0.25-0.4	May 26, 2017		Soil	S17-My29193	X			X	X						X		X
	JHA02_0.1-0.3	May 26, 2017		Soil	S17-My29194						X					X		
	JHA02_0.3-0.5	May 26, 2017		Soil	S17-My29195	X										X		X
	JHA04_0.2-0.4	May 26, 2017		Soil	S17-My29196	X									X	X		X
	JHA04_0.6-0.8	May 26, 2017		Soil	S17-My29197						X				X	X		
	JHA05_0-0.2	May 26, 2017		Soil	S17-My29198						X					X		
	JHA06_0.2-0.4	May 26, 2017		Soil	S17-My29199						X					X		
	JHA06_0.4-0.6	May 26, 2017		Soil	S17-My29200	X										X		X
	JHA06_1.0-1.2	May 26, 2017		Soil	S17-My29201	X			X	X					X	X		X

Date Reported: Jun 05, 2017

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 12

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:** **Phone:** **Fax:**	548083 02 8245 0300
Project Name:	PENRITH DSI		
Project ID:	52372		

Received:	May 29, 2017 1:50 PM
Due:	Jun 5, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	Metals M8 filtered	Phenols (IWRG 621)	BTEX	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	JBS&G Suite 1
elbourne Laboratory - NATA Site # 1254 & 14271																		X
ydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794																		
erth Laboratory - NATA Site # 18217																		
	JHA07_0.4-0.6	May 26, 2017		Soil	S17-My29202	X			X	X					X	X		X
	JHA07_1.3-1.5	May 26, 2017		Soil	S17-My29203										X	X		X
	JHA08_0.2-0.4	May 26, 2017		Soil	S17-My29204	X			X	X	X					X		
	JHA08_0.4-0.6	May 26, 2017		Soil	S17-My29205						X					X		
	PSM01	May 26, 2017		Water	S17-My29206							X		X	X		X	
	PSM02	May 26, 2017		Water	S17-My29207							X		X	X		X	
	PSM03	May 26, 2017		Water	S17-My29208							X		X	X		X	
	RINS	May 26, 2017		Water	S17-My29209			X	X	X	X		X	X	X		X	
	TS	May 26, 2017		Water	S17-My29210									X				
	TB	May 26, 2017		Water	S17-My29211									X				
	QC01_W	May 26, 2017		Water	S17-My29212							X		X	X		X	
	QC20170526-	May 26, 2017		Soil	S17-My29213						X				X	X		

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261 Site# 12142

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	548083
		Phone:	02 8245 0300
		Fax:	
Project Name:	PENRITH DSI		
Project ID:	52372		

Received:	May 29, 2017 1:50 PM
Due:	Jun 5, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail					Asbestos - WA guidelines	HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	Metals M8 filtered	Phenols (IWRG 621)	BTEX	Volatile Organics	Moisture Set	Total Recoverable Hydrocarbons	JBS&G Suite 1
Melbourne Laboratory - NATA Site # 1254 & 14271																	X
Sydney Laboratory - NATA Site # 18217					X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 18217																	
1																	
	PSM01	May 26, 2017		Water (Trace)	S17-My29214			X									
	PSM02	May 26, 2017		Water (Trace)	S17-My29215			X									
	PSM03	May 26, 2017		Water (Trace)	S17-My29216			X									
	QC01_W	May 26, 2017		Water (Trace)	S17-My29217			X									
	JHA01_0.4-0.6	May 26, 2017		Soil	S17-My29219		X										
	JHA03_0-0.2	May 26, 2017		Soil	S17-My29220		X										
	JHA03_0.3-0.5	May 26, 2017		Soil	S17-My29221		X										
	JHA04_0.4-0.6	May 26, 2017		Soil	S17-My29222		X										
	JHA05_0.2-0.5	May 26, 2017		Soil	S17-My29223		X										
	JHA06_0.8-1.0	May 26, 2017		Soil	S17-My29224		X										
	JHA07_0.2-0.4	May 26, 2017		Soil	S17-My29225		X										

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261 Site # 14271

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
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elbourne Laboratory - NATA Site # 1254 & 14271																	X
ydney Laboratory - NATA Site # 18217					X	X	X	X	X	X	X	X	X	X	X	X	X
isbane Laboratory - NATA Site # 20794																	
erth Laboratory - NATA Site # 18217																	
	JHA07_0.8-1.0	May 26, 2017		Soil	S17-My29226		X										
st Counts					7	8	5	5	5	8	4	1	7	11	14	5	7

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Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (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 & PFASs 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.

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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							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.001			0.001	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dichlorophenol	mg/L	< 0.001			0.001	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.001			0.001	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.1			0.1	Pass	
2-Methyl-4.6-dinitrophenol	mg/L	< 0.005			0.005	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
2-Nitrophenol	mg/L	< 0.005			0.005	Pass	
2.4-Dimethylphenol	mg/L	< 0.001			0.001	Pass	
2.4-Dinitrophenol	mg/L	< 0.001			0.001	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	0.001			0.001	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	101			70-130	Pass	
TRH C10-C14	%	94			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	103			70-130	Pass	
Toluene	%	94			70-130	Pass	
Ethylbenzene	%	89			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	99			70-130	Pass	
o-Xylene	%	99			70-130	Pass	
Xylenes - Total	%	99			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethane	%	95			70-130	Pass	
1.1-Dichloroethene	%	101			70-130	Pass	
1.1.1-Trichloroethane	%	103			70-130	Pass	
1.1.1.2-Tetrachloroethane	%	98			70-130	Pass	
1.1.2-Trichloroethane	%	95			70-130	Pass	
1.1.2.2-Tetrachloroethane	%	90			70-130	Pass	
1.2-Dibromoethane	%	96			70-130	Pass	
1.2-Dichlorobenzene	%	97			70-130	Pass	
1.2-Dichloroethane	%	91			70-130	Pass	
1.2-Dichloropropane	%	88			70-130	Pass	
1.2.3-Trichloropropane	%	93			70-130	Pass	
1.2.4-Trimethylbenzene	%	97			70-130	Pass	
1.3-Dichlorobenzene	%	99			70-130	Pass	
1.3-Dichloropropane	%	91			70-130	Pass	
1.3.5-Trimethylbenzene	%	97			70-130	Pass	
1.4-Dichlorobenzene	%	99			70-130	Pass	
2-Butanone (MEK)	%	97			70-130	Pass	
2-Propanone (Acetone)	%	87			70-130	Pass	
4-Chlorotoluene	%	97			70-130	Pass	
4-Methyl-2-pentanone (MIBK)	%	91			70-130	Pass	
Allyl chloride	%	96			70-130	Pass	
Bromobenzene	%	90			70-130	Pass	
Bromochloromethane	%	90			70-130	Pass	
Bromodichloromethane	%	96			70-130	Pass	
Bromoform	%	98			70-130	Pass	
Bromomethane	%	101			70-130	Pass	
Carbon disulfide	%	100			70-130	Pass	
Carbon Tetrachloride	%	115			70-130	Pass	
Chlorobenzene	%	97			70-130	Pass	
Chloroethane	%	92			70-130	Pass	
Chloroform	%	98			70-130	Pass	
Chloromethane	%	89			70-130	Pass	
cis-1.2-Dichloroethene	%	94			70-130	Pass	
cis-1.3-Dichloropropene	%	96			70-130	Pass	
Dibromochloromethane	%	100			70-130	Pass	
Dibromomethane	%	95			70-130	Pass	
Dichlorodifluoromethane	%	105			70-130	Pass	
Iodomethane	%	118			70-130	Pass	
Isopropyl benzene (Cumene)	%	99			70-130	Pass	
Methylene Chloride	%	97			70-130	Pass	
Styrene	%	94			70-130	Pass	
Tetrachloroethene	%	107			70-130	Pass	
trans-1.2-Dichloroethene	%	96			70-130	Pass	
trans-1.3-Dichloropropene	%	93			70-130	Pass	
Trichloroethene	%	100			70-130	Pass	
Trichlorofluoromethane	%	112			70-130	Pass	
Vinyl chloride	%	105			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	%	89			70-130	Pass	
TRH C6-C10	%	99			70-130	Pass	
TRH >C10-C16	%	107			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	91			70-130	Pass	
Acenaphthylene	%	93			70-130	Pass	
Anthracene	%	117			70-130	Pass	
Benz(a)anthracene	%	127			70-130	Pass	
Benzo(a)pyrene	%	109			70-130	Pass	
Benzo(b&j)fluoranthene	%	99			70-130	Pass	
Benzo(g.h.i)perylene	%	108			70-130	Pass	
Benzo(k)fluoranthene	%	118			70-130	Pass	
Chrysene	%	114			70-130	Pass	
Dibenz(a.h)anthracene	%	123			70-130	Pass	
Fluoranthene	%	117			70-130	Pass	
Fluorene	%	101			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	125			70-130	Pass	
Naphthalene	%	87			70-130	Pass	
Phenanthrene	%	110			70-130	Pass	
Pyrene	%	116			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	71			30-130	Pass	
2.4-Dichlorophenol	%	96			30-130	Pass	
2.4.5-Trichlorophenol	%	107			30-130	Pass	
2.4.6-Trichlorophenol	%	114			30-130	Pass	
2.6-Dichlorophenol	%	82			30-130	Pass	
4-Chloro-3-methylphenol	%	84			30-130	Pass	
Tetrachlorophenols - Total	%	114			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	126			30-130	Pass	
2-Methyl-4.6-dinitrophenol	%	119			30-130	Pass	
2-Methylphenol (o-Cresol)	%	61			30-130	Pass	
2-Nitrophenol	%	102			30-130	Pass	
2.4-Dimethylphenol	%	80			30-130	Pass	
2.4-Dinitrophenol	%	113			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	54			30-130	Pass	
4-Nitrophenol	%	84			30-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	85			70-130	Pass	
Arsenic (filtered)	%	88			70-130	Pass	
Cadmium	%	97			70-130	Pass	
Cadmium (filtered)	%	86			70-130	Pass	
Chromium	%	89			70-130	Pass	
Chromium (filtered)	%	78			70-130	Pass	
Copper	%	92			70-130	Pass	
Copper (filtered)	%	79			70-130	Pass	
Lead	%	102			70-130	Pass	
Lead (filtered)	%	81			70-130	Pass	
Mercury	%	121			70-130	Pass	
Mercury (filtered)	%	99			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Nickel			%	89			70-130	Pass	
Nickel (filtered)			%	77			70-130	Pass	
Zinc			%	94			70-130	Pass	
Zinc (filtered)			%	81			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S17-My28874	NCP	%	90			70-130	Pass	
Cadmium (filtered)	S17-My28874	NCP	%	80			70-130	Pass	
Chromium (filtered)	S17-My28874	NCP	%	79			70-130	Pass	
Copper (filtered)	S17-My28874	NCP	%	71			70-130	Pass	
Lead (filtered)	S17-My28874	NCP	%	73			70-130	Pass	
Mercury (filtered)	S17-My28874	NCP	%	80			70-130	Pass	
Nickel (filtered)	S17-My28874	NCP	%	72			70-130	Pass	
Zinc (filtered)	S17-My28874	NCP	%	75			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S17-My29207	CP	%	104			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S17-My29207	CP	%	122			70-130	Pass	
Toluene	S17-My29207	CP	%	115			70-130	Pass	
Ethylbenzene	S17-My29207	CP	%	107			70-130	Pass	
m&p-Xylenes	S17-My29207	CP	%	120			70-130	Pass	
o-Xylene	S17-My29207	CP	%	116			70-130	Pass	
Xylenes - Total	S17-My29207	CP	%	118			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S17-My29207	CP	%	99			70-130	Pass	
TRH C6-C10	S17-My29207	CP	%	102			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S17-My29208	CP	%	72			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S17-My29208	CP	%	101			70-130	Pass	
Toluene	S17-My29208	CP	%	105			70-130	Pass	
Ethylbenzene	S17-My29208	CP	%	99			70-130	Pass	
m&p-Xylenes	S17-My29208	CP	%	100			70-130	Pass	
o-Xylene	S17-My29208	CP	%	100			70-130	Pass	
Xylenes - Total	S17-My29208	CP	%	100			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethane	S17-My29208	CP	%	95			70-130	Pass	
1.1-Dichloroethene	S17-My29208	CP	%	98			70-130	Pass	
1.1.1-Trichloroethane	S17-My29208	CP	%	115			70-130	Pass	
1.1.1.2-Tetrachloroethane	S17-My29208	CP	%	106			70-130	Pass	
1.1.2-Trichloroethane	S17-My29208	CP	%	103			70-130	Pass	
1.1.2.2-Tetrachloroethane	S17-My29208	CP	%	96			70-130	Pass	
1.2-Dibromoethane	S17-My29208	CP	%	104			70-130	Pass	
1.2-Dichlorobenzene	S17-My29208	CP	%	100			70-130	Pass	
1.2-Dichloroethane	S17-My29208	CP	%	105			70-130	Pass	
1.2-Dichloropropane	S17-My29208	CP	%	96			70-130	Pass	
1.2.3-Trichloropropane	S17-My29208	CP	%	102			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.2.4-Trimethylbenzene	S17-My29208	CP	%	98			70-130	Pass	
1.3-Dichlorobenzene	S17-My29208	CP	%	102			70-130	Pass	
1.3-Dichloropropane	S17-My29208	CP	%	102			70-130	Pass	
1.3.5-Trimethylbenzene	S17-My29208	CP	%	97			70-130	Pass	
1.4-Dichlorobenzene	S17-My29208	CP	%	101			70-130	Pass	
2-Butanone (MEK)	S17-My29208	CP	%	101			70-130	Pass	
2-Propanone (Acetone)	S17-My29208	CP	%	111			70-130	Pass	
4-Chlorotoluene	S17-My29208	CP	%	100			70-130	Pass	
4-Methyl-2-pentanone (MIBK)	S17-My29208	CP	%	104			70-130	Pass	
Allyl chloride	S17-My29208	CP	%	84			70-130	Pass	
Bromobenzene	S17-My29208	CP	%	93			70-130	Pass	
Bromochloromethane	S17-My29208	CP	%	95			70-130	Pass	
Bromodichloromethane	S17-My29208	CP	%	105			70-130	Pass	
Bromoform	S17-My29208	CP	%	107			70-130	Pass	
Bromomethane	S17-My29208	CP	%	92			70-130	Pass	
Carbon disulfide	S17-My29208	CP	%	93			70-130	Pass	
Carbon Tetrachloride	S17-My29208	CP	%	116			70-130	Pass	
Chlorobenzene	S17-My29208	CP	%	102			70-130	Pass	
Chloroethane	S17-My29208	CP	%	100			70-130	Pass	
Chloroform	S17-My29208	CP	%	103			70-130	Pass	
Chloromethane	S17-My29208	CP	%	75			70-130	Pass	
cis-1.2-Dichloroethene	S17-My29208	CP	%	99			70-130	Pass	
cis-1.3-Dichloropropene	S17-My29208	CP	%	103			70-130	Pass	
Dibromochloromethane	S17-My29208	CP	%	110			70-130	Pass	
Dibromomethane	S17-My29208	CP	%	105			70-130	Pass	
Dichlorodifluoromethane	S17-My29208	CP	%	104			70-130	Pass	
Iodomethane	S17-My29208	CP	%	121			70-130	Pass	
Isopropyl benzene (Cumene)	S17-My29208	CP	%	100			70-130	Pass	
Methylene Chloride	S17-My29208	CP	%	93			70-130	Pass	
Styrene	S17-My29208	CP	%	98			70-130	Pass	
Tetrachloroethene	S17-My29208	CP	%	110			70-130	Pass	
trans-1.2-Dichloroethene	S17-My29208	CP	%	95			70-130	Pass	
trans-1.3-Dichloropropene	S17-My29208	CP	%	100			70-130	Pass	
Trichloroethene	S17-My29208	CP	%	107			70-130	Pass	
Trichlorofluoromethane	S17-My29208	CP	%	110			70-130	Pass	
Vinyl chloride	S17-My29208	CP	%	100			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S17-My29208	CP	%	103			70-130	Pass	
TRH >C10-C16	S17-My29208	CP	%	74			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M17-Ap06717	NCP	%	80			70-130	Pass	
Cadmium	M17-Ap06717	NCP	%	87			70-130	Pass	
Chromium	M17-Ap06717	NCP	%	74			70-130	Pass	
Copper	M17-Ap06717	NCP	%	77			70-130	Pass	
Lead	M17-Ap06717	NCP	%	92			70-130	Pass	
Mercury	M17-Ap06717	NCP	%	111			70-130	Pass	
Nickel	M17-Ap06717	NCP	%	75			70-130	Pass	
Zinc	M17-Ap06717	NCP	%	74			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S17-My29206	CP	mg/L	0.15	0.15	1.0	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S17-My29206	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S17-My29206	CP	mg/L	0.073	0.071	2.0	30%	Pass	
Ethylbenzene	S17-My29206	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S17-My29206	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S17-My29206	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	S17-My29206	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S17-My29206	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S17-My29206	CP	mg/L	0.15	0.15	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S17-My28960	NCP	mg/L	0.002	0.002	2.0	30%	Pass	
Cadmium (filtered)	S17-My28960	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S17-My28960	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S17-My28960	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead (filtered)	S17-My28960	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	S17-My28960	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S17-My28960	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc (filtered)	S17-My28960	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3.5-Trimethylbenzene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Propanone (Acetone)	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Chlorotoluene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Allyl chloride	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon disulfide	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroform	S17-My29209	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloromethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
cis-1.2-Dichloroethene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.3-Dichloropropene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Methylene Chloride	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vinyl chloride	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S17-My26078	NCP	mg/L	0.002	< 0.001	<1	30%	Pass	
Cadmium	S17-My29209	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M17-My30918	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	S17-My29209	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S17-My29209	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S17-My30790	NCP	mg/L	0.003	0.003	7.0	30%	Pass	
Zinc	M17-My30918	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (If used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Nibha Vaidya	Analytical Services Manager
Ryan Hamilton	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)

[redacted]

Glenn Jackson
National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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eurofins | mgt

Melbourne
3-5 Kingston Town Close
Oakleigh Vic 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 18217

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

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

Contact name: Rohan Hammond
Project name: ADDITIONAL - PENRITH DSI
Project ID: 52372
COC number: Not provided
Turn around time: 1 Day
Date/Time received: Jun 6, 2017 11:56 AM
Eurofins | mgt reference: **549116**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 10.8 degrees Celsius.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

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

Nibha Vaidya on Phone : +61 (2) 9900 8400 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to Rohan Hammond - rhammond@jbsg.com.au.

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254 &
Site# 12

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**		**Received:**	Jun 6, 2017 11:56 AM
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	549116	**Due:**	Jun 8, 2017
		Phone:	02 8245 0300	**Priority:**	1 Day
		Fax:		**Contact Name:**	Rohan Hammond
Project Name:	ADDITIONAL - PENRITH DSI				
Project ID:	52372				

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Lead	USA Leaching Procedure
elbourne Laboratory - NATA Site # 1254 & 14271							
dney Laboratory - NATA Site # 18217						X	X
isbane Laboratory - NATA Site # 20794							
erth Laboratory - NATA Site # 18217							
ternal Laboratory							
o	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
	JHA02_0.3-0.5	May 26, 2017		US Leachate	S17-Jn05473	X	X
	JHA02_0.1-0.3	May 26, 2017		US Leachate	S17-Jn05474	X	X
st Counts						2	2

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Version: 1, Version Date: 29/01/2021

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Certificate of Analysis

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

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Rohan Hammond**

Report **549116-L**
Project name ADDITIONAL - PENRITH DSI
Project ID 52372
Received Date Jun 06, 2017

Client Sample ID			**JHA02_0.3-0.5**	**JHA02_0.1-0.3**
Sample Matrix			**US Leachate**	**US Leachate**
Eurofins | mgt Sample No.			**S17-Jn05473**	**S17-Jn05474**
Date Sampled			**May 26, 2017**	**May 26, 2017**
Test/Reference	LOR	Unit		
Heavy Metals				
Lead	0.01	mg/L	0.49	0.03
USA Leaching Procedure				
Leachate Fluid[C01]		comment	1.0	1.0
pH (initial)	0.1	pH Units	8.2	7.6
pH (off)	0.1	pH Units	5.1	5.1
pH (USA HCl addition)	0.1	pH Units	1.7	1.7

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Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our 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
Heavy Metals	Sydney	Jun 06, 2017	180 Day
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
USA Leaching Procedure	Sydney	Jun 06, 2017	14 Day
- Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes			

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 1427

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	549116
		Phone:	02 8245 0300
		Fax:	
Project Name:	ADDITIONAL - PENRITH DSI		
Project ID:	52372		

Received:	Jun 6, 2017 11:56 AM
Due:	Jun 8, 2017
Priority:	1 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Eurofins | mgt Unit F3, Building F, 16 Mars Road, Lane Cove West, NSW, Australia, 2066
ABN : 50 005 085 521 Telephone : +61 2 9900 8400

Date Reported:Jun 07, 2017

Sample Detail						Lead	USA Leaching Procedure
elbourne Laboratory - NATA Site # 1254 & 14271							
ydney Laboratory - NATA Site # 18217						X	X
isbane Laboratory - NATA Site # 20794							
erth Laboratory - NATA Site # 18217							
ternal Laboratory							
o	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
	JHA02_0.3-0.5	May 26, 2017		US Leachate	S17-Jn05473	X	X
	JHA02_0.1-0.3	May 26, 2017		US Leachate	S17-Jn05474	X	X
st Counts						2	2

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Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (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 & PFASs

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.

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Quality Control Results

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank									
Heavy Metals									
Lead			mg/L	< 0.01			0.01	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Heavy Metals				Result 1					
Lead	S17-Jn05434	NCP	%	76			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	S17-Jn05474	CP	mg/L	0.03	0.03	3.0	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
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other

Authorised By

Nibha Vaidya	Analytical Services Manager
Ryan Hamilton	Senior Analyst-Metal (NSW)

Glenn Jackson
National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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010783

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 52372
PROJECT NAME: Dennis
DATE NEEDED BY: Std
LABORATORY BATCH NO.:
SAMPLERS: RH
QC LEVEL: NEPM (2013)
PHONE: Sydney: 02 8245 0300 | Perth: 08 9488 0100 | Brisbane: 07 3112 2688
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) RHamman@jbsg.com.au; (3) .....@jbsg.com.au
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

545643

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	VOCs 8260	Lagoon Soil TRH		TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
01	Carbon	5/5/17	-	Carbon tube	NA	X	X	X			
02								X			
03											
04								X			
05											
06											
07											
08											
09											
10											
QC01-SW								X			
MB											

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: Richard DATE: 10/5/17	CONSIGNMENT NOTE NO.	NAME: Vinod James 17:00	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	DATE: 10/5/17	
NAME: DATE:	CONSIGNMENT NOTE NO.	OF: EFFORT	COOLER TEMP ..... deg C
OF:	TRANSPORT CO	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
		OF:	COOLER TEMP ..... deg C

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

IMSO FormsO13 – Chain of Custody - Generic

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Melbourne
3-5 Kingston Town Close
Oakleigh Vic 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 18217

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**JBS & G Australia (NSW) P/L**
Contact name:	Rohan Hammond
Project name:	PENRITH
Project ID:	52372
COC number:	Not provided
Turn around time:	5 Day
Date/Time received:	May 10, 2017 5:00 PM
Eurofins | mgt reference:	**545643**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 28 degrees Celsius.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☒ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

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

Nibha Vaidya on Phone : +61 (2) 9900 8400 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to Rohan Hammond - rhammond@jbsg.com.au.

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 12

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	545643
		Phone:	02 8245 0300
		Fax:	
Project Name:	PENRITH		
Project ID:	52372		

Received:	May 10, 2017 5:00 PM	
Due:	May 17, 2017	
Priority:	5 Day	
Contact Name:	Rohan Hammond	

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Isopropanol*	VOC AIR-TRH (Total Recoverable Hydrocarbons)	VOCs in Ambient Air by GC/MS
elbourne Laboratory - NATA Site # 1254 & 14271						X	X	X
ydney Laboratory - NATA Site # 18217								
isbane Laboratory - NATA Site # 20794								
erth Laboratory - NATA Site # 18217								
ternal Laboratory								
o	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
	SV01_FRONT	May 05, 2017		Air	S17-My10366	X	X	X
	SV01_BACK	May 05, 2017		Air	S17-My10367	X	X	X
	SV02_FRONT	May 05, 2017		Air	S17-My10368	X	X	X
	SV02_BACK	May 05, 2017		Air	S17-My10369	X	X	X
	SV03_FRONT	May 05, 2017		Air	S17-My10370	X		X
	SV03_BACK	May 05, 2017		Air	S17-My10371	X		X
	SV04_FRONT	May 05, 2017		Air	S17-My10372	X	X	X
	SV04_BACK	May 05, 2017		Air	S17-My10373	X	X	X
	SV05_FRONT	May 05, 2017		Air	S17-My10374	X		X

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 12

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:** **Phone:** **Fax:**	545643 02 8245 0300
Project Name:	PENRITH		
Project ID:	52372		

Received:	May 10, 2017 5:00 PM
Due:	May 17, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Isopropanol*	VOC AIR-TRH (Total Recoverable Hydrocarbons)	VOCs in Ambient Air by GC/MS
elbourne Laboratory - NATA Site # 1254 & 14271						X	X	X
ydney Laboratory - NATA Site # 18217								
isbane Laboratory - NATA Site # 20794								
erth Laboratory - NATA Site # 18217								
	SV05_BACK	May 05, 2017		Air	S17-My10375	X		X
	SV06_FRONT	May 05, 2017		Air	S17-My10376	X		X
	SV06_BACK	May 05, 2017		Air	S17-My10377	X		X
	SV07_FRONT	May 05, 2017		Air	S17-My10378	X		X
	SV07_BACK	May 05, 2017		Air	S17-My10379	X		X
	SV08_FRONT	May 05, 2017		Air	S17-My10380	X		X
	SV08_BACK	May 05, 2017		Air	S17-My10381	X		X
	SV09_FRONT	May 05, 2017		Air	S17-My10382	X		X
	SV09_BACK	May 05, 2017		Air	S17-My10383	X		X
	SV10_FRONT	May 05, 2017		Air	S17-My10384	X		X
	SV10_BACK	May 05, 2017		Air	S17-My10385	X		X
	QC01_SV_FR	May 05, 2017		Air	S17-My10386	X	X	X

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Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
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2-5 Kingston Town Close
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ABN– 50 005 085 521
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Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	545643
		Phone:	02 8245 0300
		Fax:	
Project Name:	PENRITH		
Project ID:	52372		

Received:	May 10, 2017 5:00 PM
Due:	May 17, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Isopropanol*	VOC AIR-TRH (Total Recoverable Hydrocarbons)	VOCs in Ambient Air by GC/MS
elbourne Laboratory - NATA Site # 1254 & 14271						X	X	X
ydney Laboratory - NATA Site # 18217								
isbane Laboratory - NATA Site # 20794								
erth Laboratory - NATA Site # 18217								
	ONT							
	QC01_SV_BACK	May 05, 2017		Air	S17-My10387	X	X	X
	MB_FRONT	May 05, 2017		Air	S17-My10388	X		X
	MB_BACK	May 05, 2017		Air	S17-My10389	X		X
st Counts						24	8	24

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

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Certificate of Analysis

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Level 1, 50 Margaret St
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NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Rohan Hammond**

Report **545643-A**
Project name PENRITH
Project ID 52372
Received Date May 10, 2017

Client Sample ID			**SV01_FRONT**	**SV01_BACK**	**SV02_FRONT**	**SV02_BACK**
Sample Matrix			**Air**	**Air**	**Air**	**Air**
Eurofins | mgt Sample No.			**S17-My10366**	**S17-My10367**	**S17-My10368**	**S17-My10369**
Date Sampled			**May 05, 2017**	**May 05, 2017**	**May 05, 2017**	**May 05, 2017**
Test/Reference	LOR	Unit				
Isopropanol*	10	Total ug	< 10	< 10	< 10	< 10
TRH >C10-C16	10	Total ug	< 10	< 10	< 10	< 10
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH C6-C10	10	Total ug	< 10	< 10	< 10	< 10
VOCs in Ambient Air by GC/MS						
Naphthalene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromo-3-chloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Client Sample ID			SV01_FRONT	SV01_BACK	SV02_FRONT	SV02_BACK
Sample Matrix			Air	Air	Air	Air
Eurofins | mgt Sample No.			S17-My10366	S17-My10367	S17-My10368	S17-My10369
Date Sampled			May 05, 2017	May 05, 2017	May 05, 2017	May 05, 2017
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
Ethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Propylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
p-Isopropyltoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
sec-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	5	Total ug	< 5	< 5	< 5	< 5
tert-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	Total ug	< 1.5	< 1.5	< 1.5	< 1.5
Fluorobenzene (surr.)	1	%	113	111	123	119
4-Bromofluorobenzene (surr.)	1	%	94	93	95	96
Dibromofluoromethane (surr.)	1	%	102	99	110	104
1.2-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SV03_FRONT	SV03_BACK	SV04_FRONT	SV04_BACK
Sample Matrix			Air	Air	Air	Air
Eurofins | mgt Sample No.			S17-My10370	S17-My10371	S17-My10372	S17-My10373
Date Sampled			May 05, 2017	May 05, 2017	May 05, 2017	May 05, 2017
Test/Reference	LOR	Unit				
Isopropanol*	10	Total ug	< 10	< 10	< 10	< 10
TRH >C10-C16	10	Total ug	-	-	< 10	< 10
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH C6-C10	10	Total ug	-	-	11	< 10
VOCs in Ambient Air by GC/MS						
Naphthalene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromo-3-chloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SV03_FRONT	SV03_BACK	SV04_FRONT	SV04_BACK
Sample Matrix			Air	Air	Air	Air
Eurofins | mgt Sample No.			S17-My10370	S17-My10371	S17-My10372	S17-My10373
Date Sampled			May 05, 2017	May 05, 2017	May 05, 2017	May 05, 2017
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
1.2.3-Trichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Propylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
p-Isopropyltoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
sec-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	5	Total ug	< 5	< 5	< 5	< 5
tert-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	Total ug	< 0.5	< 0.5	10	< 0.5
Toluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	Total ug	< 1.5	< 1.5	< 1.5	< 1.5
Fluorobenzene (surr.)	1	%	121	119	117	119
4-Bromofluorobenzene (surr.)	1	%	102	97	94	98
Dibromofluoromethane (surr.)	1	%	110	105	106	107
1.2-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SV05_FRONT	SV05_BACK	SV06_FRONT	SV06_BACK
Sample Matrix			Air	Air	Air	Air
Eurofins | mgt Sample No.			S17-My10374	S17-My10375	S17-My10376	S17-My10377
Date Sampled			May 05, 2017	May 05, 2017	May 05, 2017	May 05, 2017
Test/Reference	LOR	Unit				
Isopropanol*	10	Total ug	< 10	< 10	< 10	< 10
VOCs in Ambient Air by GC/MS						
Naphthalene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromo-3-chloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Propylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
p-Isopropyltoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
sec-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	5	Total ug	< 5	< 5	< 5	< 5
tert-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	Total ug	340	< 0.5	< 0.5	< 0.5
Toluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	Total ug	56	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	Total ug	< 1.5	< 1.5	< 1.5	< 1.5
Fluorobenzene (surr.)	1	%	132	121	116	119
4-Bromofluorobenzene (surr.)	1	%	106	97	98	94

Client Sample ID			SV05_FRONT	SV05_BACK	SV06_FRONT	SV06_BACK
Sample Matrix			Air	Air	Air	Air
Eurofins | mgt Sample No.			S17-My10374	S17-My10375	S17-My10376	S17-My10377
Date Sampled			May 05, 2017	May 05, 2017	May 05, 2017	May 05, 2017
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
Dibromofluoromethane (surr.)	1	%	116	107	102	106
1.2-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SV07_FRONT	SV07_BACK	SV08_FRONT	SV08_BACK
Sample Matrix			Air	Air	Air	Air
Eurofins | mgt Sample No.			S17-My10378	S17-My10379	S17-My10380	S17-My10381
Date Sampled			May 05, 2017	May 05, 2017	May 05, 2017	May 05, 2017
Test/Reference	LOR	Unit				
Isopropanol*	10	Total ug	< 10	< 10	< 10	< 10
VOCs in Ambient Air by GC/MS						
Naphthalene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromo-3-chloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SV07_FRONT	SV07_BACK	SV08_FRONT	SV08_BACK
Sample Matrix			Air	Air	Air	Air
Eurofins | mgt Sample No.			S17-My10378	S17-My10379	S17-My10380	S17-My10381
Date Sampled			May 05, 2017	May 05, 2017	May 05, 2017	May 05, 2017
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
n-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Propylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
p-Isopropyltoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
sec-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	5	Total ug	< 5	< 5	< 5	< 5
tert-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	Total ug	< 1.5	< 1.5	< 1.5	< 1.5
Fluorobenzene (surr.)	1	%	118	116	117	125
4-Bromofluorobenzene (surr.)	1	%	98	96	95	98
Dibromofluoromethane (surr.)	1	%	110	103	106	109
1.2-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SV09_FRONT	SV09_BACK	SV10_FRONT	SV10_BACK
Sample Matrix			Air	Air	Air	Air
Eurofins | mgt Sample No.			S17-My10382	S17-My10383	S17-My10384	S17-My10385
Date Sampled			May 05, 2017	May 05, 2017	May 05, 2017	May 05, 2017
Test/Reference	LOR	Unit				
Isopropanol*	10	Total ug	< 10	< 10	< 10	< 10
VOCs in Ambient Air by GC/MS						
Naphthalene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromo-3-chloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SV09_FRONT	SV09_BACK	SV10_FRONT	SV10_BACK
Sample Matrix			Air	Air	Air	Air
Eurofins | mgt Sample No.			S17-My10382	S17-My10383	S17-My10384	S17-My10385
Date Sampled			May 05, 2017	May 05, 2017	May 05, 2017	May 05, 2017
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
2.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Propylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
p-Isopropyltoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
sec-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	5	Total ug	< 5	< 5	< 5	< 5
tert-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	Total ug	< 0.5	< 0.5	87	< 0.5
Toluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	Total ug	< 0.5	< 0.5	21	< 0.5
Trichlorofluoromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	Total ug	< 1.5	< 1.5	< 1.5	< 1.5
Fluorobenzene (surr.)	1	%	120	116	120	122
4-Bromofluorobenzene (surr.)	1	%	97	90	93	99
Dibromofluoromethane (surr.)	1	%	107	100	107	105
1.2-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			QC01_SV_FRONT	QC01_SV_BACK	MB_FRONT	MB_BACK
Sample Matrix			**Air**	**Air**	**Air**	**Air**
Eurofins | mgt Sample No.			**S17-My10386**	**S17-My10387**	**S17-My10388**	**S17-My10389**
Date Sampled			**May 05, 2017**	**May 05, 2017**	**May 05, 2017**	**May 05, 2017**
Test/Reference	LOR	Unit				
Isopropanol*	10	Total ug	< 10	< 10	< 10	< 10
TRH >C10-C16	10	Total ug	< 10	< 10	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH C6-C10	10	Total ug	< 10	< 10	-	-
VOCs in Ambient Air by GC/MS						
Naphthalene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromo-3-chloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Propylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
p-Isopropyltoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
sec-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	5	Total ug	< 5	< 5	< 5	< 5
tert-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			QC01_SV_FRONT	QC01_SV_BACK	MB_FRONT	MB_BACK
Sample Matrix			**Air**	**Air**	**Air**	**Air**
Eurofins | mgt Sample No.			**S17-My10386**	**S17-My10387**	**S17-My10388**	**S17-My10389**
Date Sampled			**May 05, 2017**	**May 05, 2017**	**May 05, 2017**	**May 05, 2017**
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
Xylenes - Total	1.5	Total ug	< 1.5	< 1.5	< 1.5	< 1.5
Fluorobenzene (surr.)	1	%	120	123	119	121
4-Bromofluorobenzene (surr.)	1	%	92	92	95	95
Dibromofluoromethane (surr.)	1	%	105	107	105	105
1.2-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our 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
Isopropanol*	Melbourne	May 10, 2017	14 Day
- Method: Isopropanol : NIOSH 1400			
VOCs in Ambient Air by GC/MS	Melbourne	May 10, 2017	14 Day
- Method: LTM-ORG-2030 VOCs in Ambient Air by GC/MS			
VOC AIR-TRH (Total Recoverable Hydrocarbons)			
TRH >C10-C16	Melbourne	May 10, 2017	7 Day
- Method: MGT 100A			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	May 10, 2017	7 Day
- Method: TRH C6-C40 - LTM-ORG-2010			

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 14271

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	545643
		Phone:	02 8245 0300
		Fax:	
Project Name:	PENRITH		
Project ID:	52372		

Received:	May 10, 2017 5:00 PM
Due:	May 17, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Eurofins | mgt Unit F3, Building F, 16 Mars Road, Lane Cove West, NSW, Australia, 2066
ABN : 50 005 085 521 Telephone : +61 2 9900 8400

Date Reported:May 17, 2017

Sample Detail						Isopropanol*	VOC AIR-TRH (Total Recoverable Hydrocarbons)	VOCs in Ambient Air by GC/MS
elbourne Laboratory - NATA Site # 1254 & 14271						X	X	X
ydney Laboratory - NATA Site # 18217								
isbane Laboratory - NATA Site # 20794								
erth Laboratory - NATA Site # 18217								
cternal Laboratory								
o	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
	SV01_FRONT	May 05, 2017		Air	S17-My10366	X	X	X
	SV01_BACK	May 05, 2017		Air	S17-My10367	X	X	X
	SV02_FRONT	May 05, 2017		Air	S17-My10368	X	X	X
	SV02_BACK	May 05, 2017		Air	S17-My10369	X	X	X
	SV03_FRONT	May 05, 2017		Air	S17-My10370	X		X
	SV03_BACK	May 05, 2017		Air	S17-My10371	X		X
	SV04_FRONT	May 05, 2017		Air	S17-My10372	X	X	X
	SV04_BACK	May 05, 2017		Air	S17-My10373	X	X	X
	SV05_FRONT	May 05, 2017		Air	S17-My10374	X		X

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 12

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:** **Phone:** **Fax:**	545643 02 8245 0300
Project Name:	PENRITH		
Project ID:	52372		

Received:	May 10, 2017 5:00 PM
Due:	May 17, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Isopropanol*	VOC AIR-TRH (Total Recoverable Hydrocarbons)	VOCs in Ambient Air by GC/MS
elbourne Laboratory - NATA Site # 1254 & 14271						X	X	X
ydney Laboratory - NATA Site # 18217								
isbane Laboratory - NATA Site # 20794								
erth Laboratory - NATA Site # 18217								
	SV05_BACK	May 05, 2017		Air	S17-My10375	X		X
	SV06_FRONT	May 05, 2017		Air	S17-My10376	X		X
	SV06_BACK	May 05, 2017		Air	S17-My10377	X		X
	SV07_FRONT	May 05, 2017		Air	S17-My10378	X		X
	SV07_BACK	May 05, 2017		Air	S17-My10379	X		X
	SV08_FRONT	May 05, 2017		Air	S17-My10380	X		X
	SV08_BACK	May 05, 2017		Air	S17-My10381	X		X
	SV09_FRONT	May 05, 2017		Air	S17-My10382	X		X
	SV09_BACK	May 05, 2017		Air	S17-My10383	X		X
	SV10_FRONT	May 05, 2017		Air	S17-My10384	X		X
	SV10_BACK	May 05, 2017		Air	S17-My10385	X		X
	QC01_SV_FR	May 05, 2017		Air	S17-My10386	X	X	X

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 1427

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	545643
		Phone:	02 8245 0300
		Fax:	
Project Name:	PENRITH		
Project ID:	52372		

Received:	May 10, 2017 5:00 PM
Due:	May 17, 2017
Priority:	5 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Isopropanol*	VOC AIR-TRH (Total Recoverable Hydrocarbons)	VOCs in Ambient Air by GC/MS
elbourne Laboratory - NATA Site # 1254 & 14271						X	X	X
ydney Laboratory - NATA Site # 18217								
isbane Laboratory - NATA Site # 20794								
erth Laboratory - NATA Site # 18217								
	ONT							
	QC01_SV_BACK	May 05, 2017		Air	S17-My10387	X	X	X
	MB_FRONT	May 05, 2017		Air	S17-My10388	X		X
	MB_BACK	May 05, 2017		Air	S17-My10389	X		X
st Counts						24	8	24

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Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (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 & PFASs 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.

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Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
VOCs in Ambient Air by GC/MS							
Naphthalene	Total ug	< 0.5			0.5	Pass	
1.1-Dichloroethane	Total ug	< 0.5			0.5	Pass	
1.1-Dichloroethene	Total ug	< 0.5			0.5	Pass	
1.1-Dichloropropene	Total ug	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	Total ug	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	Total ug	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	Total ug	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	Total ug	< 0.5			0.5	Pass	
1.2-Dibromo-3-chloropropane	Total ug	< 0.5			0.5	Pass	
1.2-Dibromoethane	Total ug	< 0.5			0.5	Pass	
1.2-Dichloroethane	Total ug	< 0.5			0.5	Pass	
1.2-Dichloropropane	Total ug	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	Total ug	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	Total ug	< 0.5			0.5	Pass	
1.3-Dichloropropane	Total ug	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	Total ug	< 0.5			0.5	Pass	
2-Chlorotoluene	Total ug	< 0.5			0.5	Pass	
2.2-Dichloropropane	Total ug	< 0.5			0.5	Pass	
4-Chlorotoluene	Total ug	< 0.5			0.5	Pass	
Benzene	Total ug	< 0.5			0.5	Pass	
Bromochloromethane	Total ug	< 0.5			0.5	Pass	
Bromodichloromethane	Total ug	< 0.5			0.5	Pass	
Bromoform	Total ug	< 0.5			0.5	Pass	
Carbon Tetrachloride	Total ug	< 0.5			0.5	Pass	
Chlorobenzene	Total ug	< 0.5			0.5	Pass	
Chloroform	Total ug	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	Total ug	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	Total ug	< 0.5			0.5	Pass	
Dibromochloromethane	Total ug	< 0.5			0.5	Pass	
Dibromomethane	Total ug	< 0.5			0.5	Pass	
Ethylbenzene	Total ug	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	Total ug	< 0.5			0.5	Pass	
n-Butylbenzene	Total ug	< 0.5			0.5	Pass	
n-Propylbenzene	Total ug	< 0.5			0.5	Pass	
p-Isopropyltoluene	Total ug	< 0.5			0.5	Pass	
sec-Butylbenzene	Total ug	< 0.5			0.5	Pass	
Styrene	Total ug	< 5			5	Pass	
tert-Butylbenzene	Total ug	< 0.5			0.5	Pass	
Tetrachloroethene	Total ug	< 0.5			0.5	Pass	
Toluene	Total ug	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	Total ug	< 0.5			0.5	Pass	
Trichloroethene	Total ug	< 0.5			0.5	Pass	
Trichlorofluoromethane	Total ug	< 0.5			0.5	Pass	
Vinyl chloride	Total ug	< 0.5			0.5	Pass	
Xylenes - Total	Total ug	< 1.5			1.5	Pass	
1.2-Dichlorobenzene	Total ug	< 0.5			0.5	Pass	
1.2.3-Trichlorobenzene	Total ug	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	Total ug	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	Total ug	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	Total ug	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Hexachlorobutadiene	Total ug	< 0.5			0.5	Pass	
LCS - % Recovery							
VOCs in Ambient Air by GC/MS							
Naphthalene	%	100			70-130	Pass	
Benzene	%	115			70-130	Pass	
Ethylbenzene	%	89			70-130	Pass	
Toluene	%	92			70-130	Pass	
Trichloroethene	%	104			70-130	Pass	
Xylenes - Total	%	94			70-130	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	N/A
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Authorised By

Nibha Vaidya	Analytical Services Manager
Alex Petridis	Senior Analyst-Metal (VIC)
Alex Petridis	Senior Analyst-Organic (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)

Glenn Jackson
National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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12 Ashley Street, Chatswood, NSW 2067
tel: +61 2 9910 6200

email: sydney@envirolab.com.au
envirolab.com.au

Envirolab Services Pty Ltd - Sydney | ABN 37 112 535 645

CERTIFICATE OF ANALYSIS 166525

Client:

JBS & G (NSW & WA) Pty Ltd
Level 1, 50 Margaret St
Sydney
NSW 2000

Attention: Rohan Hammond

Sample log in details:

Your Reference:	**52372, Penrith**		
No. of samples:	4 soils		
Date samples received / completed instructions received	08/05/17	/	11/05/17

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:	18/05/17	/	18/05/17
Date of Preliminary Report:	Not Issued		

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

Results Approved By:

David Springer
General Manager

ACCREDITED FOR TECHNICAL COMPETENCE

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

VOCs in soil		
Our Reference:	UNITS	166525-1
Your Reference	----------	QA20170506-1
	-	
Date Sampled	----------	6/05/2017
Type of sample		Soil
Date extracted	-	12/05/2017
Date analysed	-	12/05/2017
Dichlorodifluoromethane	mg/kg	<1
Chloromethane	mg/kg	<1
Vinyl Chloride	mg/kg	<1
Bromomethane	mg/kg	<1
Chloroethane	mg/kg	<1
Trichlorofluoromethane	mg/kg	<1
1,1-Dichloroethene	mg/kg	<1
trans-1,2-dichloroethene	mg/kg	<1
1,1-dichloroethane	mg/kg	<1
cis-1,2-dichloroethene	mg/kg	<1
bromochloromethane	mg/kg	<1
chloroform	mg/kg	<1
2,2-dichloropropane	mg/kg	<1
1,2-dichloroethane	mg/kg	<1
1,1,1-trichloroethane	mg/kg	<1
1,1-dichloropropene	mg/kg	<1
Cyclohexane	mg/kg	<1
carbon tetrachloride	mg/kg	<1
Benzene	mg/kg	<0.2
dibromomethane	mg/kg	<1
1,2-dichloropropane	mg/kg	<1
trichloroethene	mg/kg	<1
bromodichloromethane	mg/kg	<1
trans-1,3-dichloropropene	mg/kg	<1
cis-1,3-dichloropropene	mg/kg	<1
1,1,2-trichloroethane	mg/kg	<1
Toluene	mg/kg	<0.5
1,3-dichloropropane	mg/kg	<1
dibromochloromethane	mg/kg	<1
1,2-dibromoethane	mg/kg	<1
tetrachloroethene	mg/kg	<1
1,1,1,2-tetrachloroethane	mg/kg	<1
chlorobenzene	mg/kg	<1
Ethylbenzene	mg/kg	<1
bromoform	mg/kg	<1
m+p-xylene	mg/kg	<2
styrene	mg/kg	<1
1,1,2,2-tetrachloroethane	mg/kg	<1
o-Xylene	mg/kg	<1

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VOCs in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- - ---------- 	166525-1 QA20170506-1 6/05/2017 Soil
1,2,3-trichloropropane	mg/kg	<1
isopropylbenzene	mg/kg	<1
bromobenzene	mg/kg	<1
n-propyl benzene	mg/kg	<1
2-chlorotoluene	mg/kg	<1
4-chlorotoluene	mg/kg	<1
1,3,5-trimethyl benzene	mg/kg	<1
tert-butyl benzene	mg/kg	<1
1,2,4-trimethyl benzene	mg/kg	<1
1,3-dichlorobenzene	mg/kg	<1
sec-butyl benzene	mg/kg	<1
1,4-dichlorobenzene	mg/kg	<1
4-isopropyl toluene	mg/kg	<1
1,2-dichlorobenzene	mg/kg	<1
n-butyl benzene	mg/kg	<1
1,2-dibromo-3-chloropropane	mg/kg	<1
1,2,4-trichlorobenzene	mg/kg	<1
hexachlorobutadiene	mg/kg	<1
1,2,3-trichlorobenzene	mg/kg	<1
Surrogate Dibromofluorometha	%	112
Surrogate aaa-Trifluorotoluene	%	99
Surrogate Toluene-d_8	%	98
Surrogate 4-Bromofluorobenzene	%	91

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vTRH(C6-C10)/BTEXN in Soil		
Our Reference:	UNITS	166525-1
Your Reference	---------- -	QA20170506-1
Date Sampled	----------	6/05/2017
Type of sample		Soil
Date extracted	-	12/05/2017
Date analysed	-	12/05/2017
TRHC$_6$ - C$_9$	mg/kg	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25
vTPHC$_6$ - 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
Total +ve Xylenes	mg/kg	<1
naphthalene	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	99

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svTRH (C10-C40) in Soil		
Our Reference:	UNITS	166525-1
Your Reference	----------	QA20170506-1
	-	
Date Sampled	----------	6/05/2017
Type of sample		Soil
Date extracted	-	12/05/2017
Date analysed	-	13/05/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100
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	%	98

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PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- - ---------- 	 166525-1 QA20170506-1 6/05/2017 Soil
Date extracted	-	12/05/2017
Date analysed	-	15/05/2017
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Total +ve PAH's	mg/kg	<0.05
Surrogate p-Terphenyl-d14	%	85

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Organochlorine Pesticides in soil		
Our Reference:	UNITS	166525-1
Your Reference	----------	QA20170506-1
	-	
Date Sampled	----------	6/05/2017
Type of sample		Soil
Date extracted	-	12/05/2017
Date analysed	-	12/05/2017
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Surrogate TCMX	%	86

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PCBs in Soil		
Our Reference:	UNITS	166525-1
Your Reference	----------	QA20170506-1
	-	
Date Sampled	----------	6/05/2017
Type of sample		Soil
Date extracted	-	12/05/2017
Date analysed	-	12/05/2017
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
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate TCLMX	%	86

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Acid Extractable metals in soil			
Our Reference:	UNITS	166525-1	166525-2
Your Reference	----------	QA20170506-1	QA20170506-2
	-		
Date Sampled	----------	6/05/2017	6/05/2017
Type of sample		Soil	Soil
Date prepared	-	12/05/2017	12/05/2017
Date analysed	-	12/05/2017	12/05/2017
Arsenic	mg/kg	4	6
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	38	32
Copper	mg/kg	5	15
Lead	mg/kg	8	14
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	2	4
Zinc	mg/kg	3	11

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Misc Soil - Inorg		
Our Reference:	UNITS	166525-1
Your Reference	---------- -	QA20170506-1
Date Sampled	----------	6/05/2017
Type of sample		Soil
Date prepared	-	12/05/2017
Date analysed	-	12/05/2017
Total Phenolics (as Phenol)	mg/kg	<5

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Moisture			
Our Reference:	UNITS	166525-1	166525-2
Your Reference	----------	QA20170506-1	QA20170506-2
	-		
Date Sampled	----------	6/05/2017	6/05/2017
Type of sample		Soil	Soil
Date prepared	-	12/05/2017	12/05/2017
Date analysed	-	15/05/2017	15/05/2017
Moisture	%	7.5	8.5

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Asbestos ID - soils NEPM - ASB-001		
Our Reference:	UNITS	166525-1
Your Reference	---------- -	QA20170506-1
Date Sampled	----------	6/05/2017
Type of sample		Soil
Date analysed	-	16/05/2017
Sample mass tested	g	528.12
Sample Description	-	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected
Total Asbestos[#1]	g/kg	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected
ACM >7mm Estimation*	g	–
FA and AF Estimation*	g	–
ACM >7mm Estimation*	%(w/w)	<0.01
FA and AF Estimation*[#2]	%(w/w)	<0.001

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Method ID	Methodology Summary
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
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-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-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).
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'TEQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'TEQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'TEQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. 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-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. 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.
Metals-020	Determination of various metals by ICP-AES.

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Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. **NOTE** #1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF) **NOTE** #2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

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QUALITY CONTROL VOCs in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			12/05/2017	166525-1	12/05/2017 || 12/05/2017	LCS-5	12/05/2017
Date analysed	-			12/05/2017	166525-1	12/05/2017 || 12/05/2017	LCS-5	12/05/2017
Dichlorodifluoromethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
Chloromethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
Vinyl Chloride	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
Bromomethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
Chloroethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
Trichlorofluoromethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,1-Dichloroethene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
trans-1,2-dichloroethene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,1-dichloroethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	LCS-5	97%
cis-1,2-dichloroethene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
bromochloromethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
chloroform	mg/kg	1	Org-014	<1	166525-1	<1 || <1	LCS-5	104%
2,2-dichloropropane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,2-dichloroethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	LCS-5	111%
1,1,1-trichloroethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	LCS-5	101%
1,1-dichloropropene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
Cyclohexane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
carbon tetrachloride	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
Benzene	mg/kg	0.2	Org-014	<0.2	166525-1	<0.2 || <0.2	[NR]	[NR]
dibromomethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,2-dichloropropane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
trichloroethene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	LCS-5	94%
bromodichloromethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	LCS-5	116%
trans-1,3-dichloropropene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
cis-1,3-dichloropropene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,1,2-trichloroethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
Toluene	mg/kg	0.5	Org-014	<0.5	166525-1	<0.5 || <0.5	[NR]	[NR]
1,3-dichloropropane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
dibromochloromethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	LCS-5	128%
1,2-dibromoethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
tetrachloroethene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	LCS-5	108%
1,1,1,2-tetrachloroethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
chlorobenzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
Ethylbenzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
bromoform	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
m+p-xylene	mg/kg	2	Org-014	<2	166525-1	<2 || <2	[NR]	[NR]
styrene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
o-Xylene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]

QUALITY CONTROL VOCs in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
isopropylbenzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
bromobenzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
n-propyl benzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
2-chlorotoluene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
4-chlorotoluene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
tert-butyl benzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
sec-butyl benzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
4-isopropyl toluene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
n-butyl benzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,2,4-trichlorobenzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
hexachlorobutadiene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
Surrogate Dibromofluorometha	%		Org-014	110	166525-1	112 || 114 || RPD: 2	LCS-5	109%
Surrogate aaa-Trifluorotoluene	%		Org-014	100	166525-1	99 || 98 || RPD: 1	LCS-5	97%
Surrogate Toluene-d_8	%		Org-014	97	166525-1	98 || 97 || RPD: 1	LCS-5	98%
Surrogate 4-Bromofluorobenzene	%		Org-014	92	166525-1	91 || 95 || RPD: 4	LCS-5	103%

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QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			12/05/2017	166525-1	12/05/2017 || 12/05/2017	LCS-5	12/05/2017
Date analysed	-			12/05/2017	166525-1	12/05/2017 || 12/05/2017	LCS-5	12/05/2017
TRHC$_6$ - C$_9$	mg/kg	25	Org-016	<25	166525-1	<25 || <25	LCS-5	103%
TRHC$_6$ - C$_{10}$	mg/kg	25	Org-016	<25	166525-1	<25 || <25	LCS-5	103%
Benzene	mg/kg	0.2	Org-016	<0.2	166525-1	<0.2 || <0.2	LCS-5	92%
Toluene	mg/kg	0.5	Org-016	<0.5	166525-1	<0.5 || <0.5	LCS-5	96%
Ethylbenzene	mg/kg	1	Org-016	<1	166525-1	<1 || <1	LCS-5	102%
m+p-xylene	mg/kg	2	Org-016	<2	166525-1	<2 || <2	LCS-5	112%
o-Xylene	mg/kg	1	Org-016	<1	166525-1	<1 || <1	LCS-5	98%
naphthalene	mg/kg	1	Org-014	<1	166525-1	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	100	166525-1	99 || 98 || RPD: 1	LCS-5	97%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			12/05/2017	166525-1	12/05/2017 || 12/05/2017	LCS-5	12/05/2017
Date analysed	-			12/05/2017	166525-1	13/05/2017 || 13/05/2017	LCS-5	12/05/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	50	Org-003	<50	166525-1	<50 || <50	LCS-5	106%
TRHC$_{15}$ - C$_{28}$	mg/kg	100	Org-003	<100	166525-1	<100 || <100	LCS-5	100%
TRHC$_{29}$ - C$_{36}$	mg/kg	100	Org-003	<100	166525-1	<100 || <100	LCS-5	91%
TRH>C$_{10}$-C$_{16}$	mg/kg	50	Org-003	<50	166525-1	<50 || <50	LCS-5	106%
TRH>C$_{16}$-C$_{34}$	mg/kg	100	Org-003	<100	166525-1	<100 || <100	LCS-5	100%
TRH>C$_{34}$-C$_{40}$	mg/kg	100	Org-003	<100	166525-1	<100 || <100	LCS-5	91%
Surrogate o-Terphenyl	%		Org-003	100	166525-1	98 || 97 || RPD: 1	LCS-5	88%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			12/05/2017	166525-1	12/05/2017 || 12/05/2017	LCS-5	12/05/2017
Date analysed	-			12/05/2017	166525-1	15/05/2017 || 15/05/2017	LCS-5	12/05/2017
Naphthalene	mg/kg	0.1	Org-012	<0.1	166525-1	<0.1 || <0.1	LCS-5	107%
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012	<0.1	166525-1	<0.1 || <0.1	LCS-5	104%
Phenanthrene	mg/kg	0.1	Org-012	<0.1	166525-1	<0.1 || <0.1	LCS-5	107%
Anthracene	mg/kg	0.1	Org-012	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	166525-1	<0.1 || <0.1	LCS-5	112%
Pyrene	mg/kg	0.1	Org-012	<0.1	166525-1	<0.1 || <0.1	LCS-5	111%
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012	<0.1	166525-1	<0.1 || <0.1	LCS-5	99%
Benzo(b,j +k)fluoranthene	mg/kg	0.2	Org-012	<0.2	166525-1	<0.2 || <0.2	[NR]	[NR]

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	166525-1	<0.05 || <0.05	LCS-5	83%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012	80	166525-1	85 || 81 || RPD: 5	LCS-5	112%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			12/05/2017	166525-1	12/05/2017 || 12/05/2017	LCS-5	12/05/2017
Date analysed	-			12/05/2017	166525-1	12/05/2017 || 12/05/2017	LCS-5	12/05/2017
HCB	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	LCS-5	103%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	LCS-5	94%
Heptachlor	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	LCS-5	105%
delta-BHC	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	LCS-5	91%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	LCS-5	102%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	LCS-5	114%
Dieldrin	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	LCS-5	106%
Endrin	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	LCS-5	111%
pp-DDD	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	LCS-5	108%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	LCS-5	104%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-005	91	166525-1	86 || 87 || RPD: 1	LCS-5	110%

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QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			12/05/2017	166525-1	12/05/2017 || 12/05/2017	LCS-5	12/05/2017
Date analysed	-			12/05/2017	166525-1	12/05/2017 || 12/05/2017	LCS-5	12/05/2017
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	166525-1	<0.1 || <0.1	LCS-5	101%
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	166525-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-006	91	166525-1	86 || 87 || RPD: 1	LCS-5	86%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			12/05/2017	166525-1	12/05/2017 || 12/05/2017	LCS-5	12/05/2017
Date analysed	-			12/05/2017	166525-1	12/05/2017 || 12/05/2017	LCS-5	12/05/2017
Arsenic	mg/kg	4	Metals-020	<4	166525-1	4 || 5 || RPD: 22	LCS-5	109%
Cadmium	mg/kg	0.4	Metals-020	<0.4	166525-1	<0.4 || <0.4	LCS-5	102%
Chromium	mg/kg	1	Metals-020	<1	166525-1	38 || 50 || RPD: 27	LCS-5	105%
Copper	mg/kg	1	Metals-020	<1	166525-1	5 || 4 || RPD: 22	LCS-5	105%
Lead	mg/kg	1	Metals-020	<1	166525-1	8 || 11 || RPD: 32	LCS-5	98%
Mercury	mg/kg	0.1	Metals-021	<0.1	166525-1	<0.1 || <0.1	LCS-5	106%
Nickel	mg/kg	1	Metals-020	<1	166525-1	2 || 2 || RPD: 0	LCS-5	97%
Zinc	mg/kg	1	Metals-020	<1	166525-1	3 || 3 || RPD: 0	LCS-5	98%

QUALITY CONTROL Misc Soil - Inorg	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			12/05/2017	[NT]	[NT]	LCS-1	12/05/2017
Date analysed	-			12/05/2017	[NT]	[NT]	LCS-1	12/05/2017
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	LCS-1	98%

QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	166525-1	12/05/2017
Date analysed	-	[NT]	[NT]	166525-1	12/05/2017
Dichlorodifluoromethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Chloromethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Vinyl Chloride	mg/kg	[NT]	[NT]	[NR]	[NR]
Bromomethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Chloroethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Trichlorofluoromethane	mg/kg	[NT]	[NT]	[NR]	[NR]

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QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
1,1-Dichloroethene	mg/kg	[NT]	[NT]	[NR]	[NR]
trans-1,2-dichloroethene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,1-dichloroethane	mg/kg	[NT]	[NT]	166525-1	98%
cis-1,2-dichloroethene	mg/kg	[NT]	[NT]	[NR]	[NR]
bromochloromethane	mg/kg	[NT]	[NT]	[NR]	[NR]
chloroform	mg/kg	[NT]	[NT]	166525-1	103%
2,2-dichloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2-dichloroethane	mg/kg	[NT]	[NT]	166525-1	113%
1,1,1-trichloroethane	mg/kg	[NT]	[NT]	166525-1	110%
1,1-dichloropropene	mg/kg	[NT]	[NT]	[NR]	[NR]
Cyclohexane	mg/kg	[NT]	[NT]	[NR]	[NR]
carbon tetrachloride	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
dibromomethane	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2-dichloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]
trichloroethene	mg/kg	[NT]	[NT]	166525-1	92%
bromodichloromethane	mg/kg	[NT]	[NT]	166525-1	118%
trans-1,3-dichloropropene	mg/kg	[NT]	[NT]	[NR]	[NR]
cis-1,3-dichloropropene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,1,2-trichloroethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Toluene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,3-dichloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]
dibromochloromethane	mg/kg	[NT]	[NT]	166525-1	131%
1,2-dibromoethane	mg/kg	[NT]	[NT]	[NR]	[NR]
tetrachloroethene	mg/kg	[NT]	[NT]	166525-1	109%
1,1,1,2-tetrachloroethane	mg/kg	[NT]	[NT]	[NR]	[NR]
chlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethylbenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
bromoform	mg/kg	[NT]	[NT]	[NR]	[NR]
m+p-xylene	mg/kg	[NT]	[NT]	[NR]	[NR]
styrene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,1,2,2-tetrachloroethane	mg/kg	[NT]	[NT]	[NR]	[NR]
o-Xylene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]
isopropylbenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
bromobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
n-propyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
2-chlorotoluene	mg/kg	[NT]	[NT]	[NR]	[NR]
4-chlorotoluene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
tert-butyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
1,3-dichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
sec-butyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
4-isopropyl toluene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
n-butyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2,4-trichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
hexachlorobutadiene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluorometha	%	[NT]	[NT]	166525-1	113%
Surrogate aaa-Trifluorotoluene	%	[NT]	[NT]	166525-1	97%
Surrogate Toluene-d_8	%	[NT]	[NT]	166525-1	96%
Surrogate 4-Bromofluorobenzene	%	[NT]	[NT]	166525-1	101%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	166525-1	12/05/2017
Date analysed	-	[NT]	[NT]	166525-1	12/05/2017
TRHC_6 - C_9	mg/kg	[NT]	[NT]	166525-1	98%
TRHC_6 - C_{10}	mg/kg	[NT]	[NT]	166525-1	98%
Benzene	mg/kg	[NT]	[NT]	166525-1	86%
Toluene	mg/kg	[NT]	[NT]	166525-1	95%
Ethylbenzene	mg/kg	[NT]	[NT]	166525-1	94%
m+p-xylene	mg/kg	[NT]	[NT]	166525-1	108%
o-Xylene	mg/kg	[NT]	[NT]	166525-1	91%
naphthalene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	[NT]	[NT]	166525-1	97%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	166525-1	12/05/2017
Date analysed	-	[NT]	[NT]	166525-1	13/05/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	[NT]	[NT]	166525-1	107%
TRHC$_{15}$ - C$_{28}$	mg/kg	[NT]	[NT]	166525-1	100%
TRHC$_{29}$ - C$_{36}$	mg/kg	[NT]	[NT]	166525-1	83%
TRH>C$_{10}$-C$_{16}$	mg/kg	[NT]	[NT]	166525-1	107%
TRH>C$_{16}$-C$_{34}$	mg/kg	[NT]	[NT]	166525-1	100%
TRH>C$_{34}$-C$_{40}$	mg/kg	[NT]	[NT]	166525-1	83%
Surrogate o-Terphenyl	%	[NT]	[NT]	166525-1	92%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	166525-1	12/05/2017
Date analysed	-	[NT]	[NT]	166525-1	12/05/2017
Naphthalene	mg/kg	[NT]	[NT]	166525-1	107%
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	166525-1	104%
Phenanthrene	mg/kg	[NT]	[NT]	166525-1	107%
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	166525-1	113%
Pyrene	mg/kg	[NT]	[NT]	166525-1	112%
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	166525-1	98%
Benzo(b,j+k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	166525-1	83%
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	[NT]	[NT]	166525-1	110%

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QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	166525-1	12/05/2017
Date analysed	-	[NT]	[NT]	166525-1	12/05/2017
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	166525-1	106%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	166525-1	96%
Heptachlor	mg/kg	[NT]	[NT]	166525-1	108%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	166525-1	93%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	166525-1	104%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	166525-1	117%
Dieldrin	mg/kg	[NT]	[NT]	166525-1	109%
Endrin	mg/kg	[NT]	[NT]	166525-1	114%
pp-DDD	mg/kg	[NT]	[NT]	166525-1	110%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	166525-1	106%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	166525-1	112%

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QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	166525-1	12/05/2017
Date analysed	-	[NT]	[NT]	166525-1	12/05/2017
Aroclor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	mg/kg	[NT]	[NT]	166525-1	100%
Aroclor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	166525-1	91%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	[NT]	[NT]	166525-2	12/05/2017
Date analysed	-	[NT]	[NT]	166525-2	12/05/2017
Arsenic	mg/kg	[NT]	[NT]	166525-2	76%
Cadmium	mg/kg	[NT]	[NT]	166525-2	82%
Chromium	mg/kg	[NT]	[NT]	166525-2	119%
Copper	mg/kg	[NT]	[NT]	166525-2	87%
Lead	mg/kg	[NT]	[NT]	166525-2	89%
Mercury	mg/kg	[NT]	[NT]	166525-2	110%
Nickel	mg/kg	[NT]	[NT]	166525-2	76%
Zinc	mg/kg	[NT]	[NT]	166525-2	81%

Report Comments:

Asbestos-ID in soil: NEPM
This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.
This is reported outside our scope of NATA accreditation.

Asbestos ID was analysed by Approved Identifier:	Lucy Zhu
Asbestos ID was authorised by Approved Signatory:	Paul Ching

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NR: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

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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.

Measurement Uncertainty estimates are available for most tests upon request.

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ENVIROLAB

09122

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 52372
PROJECT NAME: Penrith
DATE NEEDED BY:

LABORATORY BATCH NO.:
SAMPLERS: SG
QC LEVEL: NEPM (2013)

PHONE: Sydney: 02 8245 0300 | Perth: 08 9488 0100 | Brisbane: 07 3112 2688

SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) ..Rhammond..@jbsg.com.au; (3) .....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

TESTING TBA

	SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
1	QA20160506-1	SOIL	6/5		~~Bag~~ + Jar + ice				
2	QA20160506-2		↓						
3	QC2017 0507-1a		7.5		Jar + Bag				
4	QC2017 0507-2a		"		" "				

ENVIROLAB GROUP
Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 166525
Date Received: 8-5-17
Time Received: 12.30
Received by: JE
Temp: ~~Cool~~/Ambient 7.3°C
Cooling: Ice/~~Icepack~~
Security: (Intact)/Broken/None

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: Saray DATE: 8/5/17 OF: JBS&G	CONSIGNMENT NOTE NO. TRANSPORT CO.	NAME: JE DATE: 8.5.17 OF: ELS	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C
NAME: DATE: OF:	CONSIGNMENT NOTE NO. TRANSPORT CO	NAME: DATE: OF:	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C

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

Simon Song

From: Rohan Hammond <RHammond@jbsg.com.au>
Sent: Thursday, 11 May 2017 10:04 AM
To: Simon Song
Subject: RE: Sample Receipt for 166525 52372, Penrith

Hi Simon,

Can we schedule the following analysis on 5 day TAT:

QA20170506-1: Asbestos WA, OCPs, PCBs, VOCs and Suite 4 (TRH/BTEX/PAH/8 Metals/Phenols
QA20170506-2: 8 metals

Thanks and regards,
Rohan.

#166525

From: Simon Song [mailto:SSong@envirolab.com.au]
Sent: Monday, May 8, 2017 4:43 PM
To: AdminNSW <adminNSW@jbsg.com.au>; Rohan Hammond <RHammond@jbsg.com.au>
Subject: Sample Receipt for 166525 52372, Penrith

Please refer to attached for a copy of your COC and our Sample Receipt Advice (SRA).
Please open and read the SRA as it contains important information.
Please let the lab know immediately if there are any issues.

Results will be available by 6.30pm on the date indicated.

PLEASE NOTE COMBO PRICES WILL ONLY APPLY IF COMBOS ARE SELECTED ON COC.

The new 2016-2017 Price List commences 1st November 2015 - please contact us if you don't have a copy.

Please note that subcontracted testing or non routine testing may take significantly longer than just the standard 5 day TAT, contact the lab to get an approximate due date.

Enquiries should be made directly to:

customerservice@envirolab.com.au

Regards

Envirolab Services
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
www.envirolabservices.com.au

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549116

Enviro Sample NSW

From: Nibha Vaidya
Sent: Tuesday, 6 June 2017 11:56 AM
To: Enviro Sample NSW; COC NSW; Rupan Virk
Subject: 1 DAY TAT - FW: Eurofins | mgt Test Results - Report 548083 : Site PENRITH DSI (52372)

Additional TCLP please – 1 day TAT

Kind Regards,

Nibha Vaidya
Phone : +61 2 9900 8415
Mobile : +61 499 900 805
Email : NibhaVaidya@eurofins.com

From: Rohan Hammond [mailto:RHammond@jbsg.com.au]
Sent: Tuesday, 6 June 2017 11:25 AM
To: Nibha Vaidya
Subject: FW: Eurofins | mgt Test Results - Report 548083 : Site PENRITH DSI (52372)

Hi Nibha,

Apologies, can we change that to TCLP Lead on JHA02 0.3-0.5 and JHA02 0.1-0.2

No ASLPs required.

195 194

24 HR TAT (if possible).

Rohan.

From: Rohan Hammond
Sent: Tuesday, June 6, 2017 10:25 AM
To: 'NibhaVaidya@eurofins.com' <NibhaVaidya@eurofins.com>
Subject: RE: Eurofins | mgt Test Results - Report 548083 : Site PENRITH DSI (52372)

6/6 UL

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eurofins | mgt

Melbourne
3-5 Kingston Town Close
Oakleigh Vic 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

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

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 18217

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

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

Contact name: Rohan Hammond
Project name: ADDITIONAL - PENRITH DSI
Project ID: 52372
COC number: Not provided
Turn around time: 1 Day
Date/Time received: Jun 6, 2017 11:56 AM
Eurofins | mgt reference: **549116**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 10.8 degrees Celsius.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

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

Nibha Vaidya on Phone : +61 (2) 9900 8400 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to Rohan Hammond - rhammond@jbsg.com.au.

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254 &
Site# 12

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**		**Received:**	Jun 6, 2017 11:56 AM
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	549116	**Due:**	Jun 8, 2017
		Phone:	02 8245 0300	**Priority:**	1 Day
		Fax:		**Contact Name:**	Rohan Hammond
Project Name:	ADDITIONAL - PENRITH DSI				
Project ID:	52372				

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Lead	USA Leaching Procedure
elbourne Laboratory - NATA Site # 1254 & 14271							
dney Laboratory - NATA Site # 18217						X	X
isbane Laboratory - NATA Site # 20794							
erth Laboratory - NATA Site # 18217							
ternal Laboratory							
o	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
	JHA02_0.3-0.5	May 26, 2017		US Leachate	S17-Jn05473	X	X
	JHA02_0.1-0.3	May 26, 2017		US Leachate	S17-Jn05474	X	X
st Counts						2	2

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eurofins | mgt

Certificate of Analysis

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

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Rohan Hammond**

Report **549116-L**
Project name ADDITIONAL - PENRITH DSI
Project ID 52372
Received Date Jun 06, 2017

Client Sample ID			**JHA02_0.3-0.5**	**JHA02_0.1-0.3**
Sample Matrix			**US Leachate**	**US Leachate**
Eurofins | mgt Sample No.			**S17-Jn05473**	**S17-Jn05474**
Date Sampled			**May 26, 2017**	**May 26, 2017**
Test/Reference	LOR	Unit		
Heavy Metals				
Lead	0.01	mg/L	0.49	0.03
USA Leaching Procedure				
Leachate Fluid[C01]		comment	1.0	1.0
pH (initial)	0.1	pH Units	8.2	7.6
pH (off)	0.1	pH Units	5.1	5.1
pH (USA HCl addition)	0.1	pH Units	1.7	1.7

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Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our 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
Heavy Metals	Sydney	Jun 06, 2017	180 Day
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
USA Leaching Procedure	Sydney	Jun 06, 2017	14 Day
- Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes			

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

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1254
Site# 1427

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	549116
		Phone:	02 8245 0300
		Fax:	
Project Name:	ADDITIONAL - PENRITH DSI		
Project ID:	52372		

Received:	Jun 6, 2017 11:56 AM
Due:	Jun 8, 2017
Priority:	1 Day
Contact Name:	Rohan Hammond

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Eurofins | mgt Unit F3, Building F, 16 Mars Road, Lane Cove West, NSW, Australia, 2066
ABN : 50 005 085 521 Telephone : +61 2 9900 8400

Date Reported:Jun 07, 2017

Sample Detail						Lead	USA Leaching Procedure
elbourne Laboratory - NATA Site # 1254 & 14271							
ydney Laboratory - NATA Site # 18217						X	X
isbane Laboratory - NATA Site # 20794							
erth Laboratory - NATA Site # 18217							
ternal Laboratory							
o	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
	JHA02_0.3-0.5	May 26, 2017		US Leachate	S17-Jn05473	X	X
	JHA02_0.1-0.3	May 26, 2017		US Leachate	S17-Jn05474	X	X
st Counts						2	2

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Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (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 & PFASs

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.

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Quality Control Results

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank									
Heavy Metals									
Lead			mg/L	< 0.01			0.01	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Heavy Metals				Result 1					
Lead	S17-Jn05434	NCP	%	76			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	S17-Jn05474	CP	mg/L	0.03	0.03	3.0	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
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other

Authorised By

Nibha Vaidya	Analytical Services Manager
Ryan Hamilton	Senior Analyst-Metal (NSW)

Glenn Jackson
National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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Appendix M Detailed Quality Assurance / Quality Control Documentation

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ESDAT QA Checker
Project:52372
Filter: ALL

Overview Summary
- Count of Samples
- Summary By Compound
- Count of Results

Holding Times
- Holding Time Errors (1271)

Blanks
- Field Blanks
- Detects in Lab Blanks (4)
- SDG's without Storage Blanks (0)
- SDG's without Method Blanks (0)

Duplicates
- Field and Interlab Duplicates
- Lab Duplicates with high RPDs (0)
- Duplicate Samples with incorrect or missing Parent Samples (0)
- Samples at the same Location/Depth/Time not specified as duplicates (0)

Surrogates
- Surrogate Variation > 30% or outside lab LCL or UCL (26)

Lab Control Samples
- SDG's without a Laboratory Control Sample (0)
- Laboratory Control Samples, Error > 30% (2)

Certified and Standard Reference Materials
- Certified Reference Materials - Error > 30% (0)

Matrix Spikes
- SDG's without a Matrix Spike (0)
- Trip Spikes with invalid Control Sample (0)
- Less than 1 matrix spike in 20 samples, or less than 1 matrix duplicate in 20 samples (0)
- Matrix Spike Recoveries less than 70% or greater than 130% or outside lab LCL or UCL (2)
- Trip Spike Recoveries (70% - 130% is acceptable) (12)

Inorganic
- Na + CL > TDS (0)
- BOD > COD (0)
- BOD > COD (0)

Other
- Unit Conversion Problems (0)
- OriginalChemNames Requiring Validation (0)
- Samples with no Results (0)
- Samples associated with Wells which are not specified in the Well Table (0)
- Aborted Analysis (0)

Contents

Count of Samples

Matrix Type	GAS	SOIL	WATER
First Sample Date	5/5/2017	5/6/2017	5/6/2017
Last Sample Date	5/5/2017	6/5/2017	5/26/2017
Sampling Period (days)	1	31	21
Number of Samples Submitted	24	48	14
Number of Non QA Samples Submitted	20	42	6
Number of Field Blanks	2	0	0
Number of Trip Blanks	0	0	2
Number of Rinsates	0	0	3
Number of Field Duplicates	2	3	2
Number of Trip Spikes	0	0	2
Number of Lab Duplicates	0	12	3
Number of LCSs	1	23	18
Number of CRMs	0	0	0
Number of Method Blanks	2	18	14
Number of Storage Blanks	0	0	0
Number of Matrix Spikes	0	23	7
Number of Matrix Spike Dupes	0	0	0

Filter: ALL

			Num Results	Holding Times (days)			Lab Control Samples			Method and Storage Blanks			Laboratory Duplicates			Surrogates			Matrix,Trip and Compound Spikes			Field,Rinsate and Trip Blanks			Field Duplicates		
Chem_Group	ChemName	Range	Non QA (Normal + Composite)	Volatility Group	Sample to Extraction	Sample to Analysis	Acceptable	Recovery %	Num Reported	Acceptable	Range	Num Reported	Acceptable	Max RPD > EQL x 1	Num Reported	Acceptable	Recovery %	Num Reported	Acceptable	Recovery %	Num Reported	Acceptable	Range	Num Reported	Acceptable	Max RPD > EQL x 1	Num Reported	Acceptable
BTEX	Benzene		20	VOC	5	12	Y	115 to 115	1	Y		0			0	N		0			0			0			2	Y
	Ethylbenzene		20	VOC	5	12	Y	89 to 89	1	Y		0			0	N		0			0			0			2	Y
	Toluene		20	VOC	5	12	Y	92 to 92	1	Y		0			0	N		0			0			0			2	Y
	Xylene (Total)		20	VOC	5	12	Y	94 to 94	1	Y		0			0	N		0			0			0			2	Y
Chlorinated Alkanes	1,1,1,2-tetrachloroethane		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
	1,1,1-trichloroethane		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
	1,1,2,2-tetrachloroethane		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
	1,1,2-trichloroethane		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
	1,1-dichloroethane		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
	1,2,3-trichloropropane		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
	1,2-dibromo-3-chloropropane		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
	1,2-dichloroethane		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
	1,2-dichloropropane		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
	1,3-dichloropropane		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
	2,2-dichloropropane		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
	Bromochloromethane		20	Other	5	12	Y		0			0			0	N		0			0			0			2	Y
	Carbon tetrachloride		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
	Trichlorofluoromethane		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
Chlorinated Alkenes	1,1-dichloroethene		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
	1,1-dichloropropene		20	VOC	5	12	Y		0			0			0	N		0			0			0			2	Y
	2-chlorotoluene		20	VOC	5	12	Y		0		ND	5	Y		0	N		0			0			0			2	Y
	4-chlorotoluene		20	VOC	5	12	Y		0		ND	5	Y		0	N		0			0			0			2	Y
	cis-1,2-dichloroethene		20	VOC	5	12	Y		0		ND	5	Y		0	N		0			0			0			2	Y
	cis-1,3-dichloropropene		20	VOC	5	12	Y		0		ND	5	Y		0	N		0			0			0			2	Y
	Tetrachloroethene		20	SVOC	5	12	Y		0		ND	5	Y		0	N		0			0			0			2	Y
	trans-1,3-dichloropropene		20	VOC	5	12	Y		0		ND	4	Y		0	N		0			0			0			2	Y
	Trichloroethene		20	VOC	5	12	Y	104 to 104	1	Y	ND	3	Y		0	N		0			0			0			2	Y
	Vinyl Chloride		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
Chlorinated Benzenes	1,2,3-trichlorobenzene		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	1,2,4-trichlorobenzene		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	1,2-Dichlorobenzene		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	1,3-dichlorobenzene		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	1,4-dichlorobenzene		20	VOC	5	12	Y		0		ND	1	Y		0	N		0			0			0			2	Y
	Chlorobenzene		20	Other	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
Miscellaneous Hydrocarbons	1,2-dibromoethane		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	Dibromomethane		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
Miscellaneous Industrial Chemicals	Hexachlorobutadiene		20	VOC	5	12	Y		0		ND	1	Y		0	N		0			0			0			2	Y
Monocyclic Aromatic Hydrocarbons	1,2,4-trimethyl benzene		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	1,3,5-trimethyl benzene		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	4-isopropyl toluene		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	Isopropylbenzene		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	n-butyl benzene		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	n-propyl benzene		20	VOC	5	12	Y		0		ND	2	Y		0	N		0			0			0			2	Y
	sec-butyl benzene		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	Styrene		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	Tert-butyl benzene		20	VOC	5	12	Y		0		ND	1	Y		0	N		0			0			0			2	Y
Organic Alcohols	Isopropyl alcohol		20	VOC	5	12	Y		0		ND	1	Y		0	N		0			0			0			2	Y
Polycyclic Aromatic Hydrocarbons	Naphthalene		20	VOC	5	12	Y	100 to 100	1	Y	ND	2	Y		0	N		0			0			0			2	Y
Surrogate	Fluorobenzene (surr.)		0	SVOC			Y		0		ND	3	Y		0	N	111 to 132	24	N		0			0			0	N
	Surrogate 4-BFB		0	VOC			Y		0		ND	3	Y		0	N	90 to 106	24	Y		0			0			0	N
	Surrogate Dibromofluoromethane		0	VOC			Y		0		ND	3	Y		0	N	99 to 116	24	Y		0			0			0	N
TRHs (NEPC 2013)	>C10-C16 Fraction		6	SVOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	C6-C10 Fraction		6	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
Trihalomethanes	Bromodichloromethane		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	Chloroform		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	Dibromochloromethane		20	VOC	5	12	Y		0		ND	3	Y		0	N		0			0			0			2	Y
	Tribromomethane		20	VOC	5	12	Y		0		ND	1	Y		0	N		0			0			0			2	Y
Asbestos	Approx. Sample Mass		20	Other	3 to 11	10 to 11	Y		0		ND	1	Y		0	N		0			0			0			1	Y
	Asbestos from ACM in Soil		20	Other	3 to 11	10 to 11	Y		0		ND	3	Y		0	N		0			0			0			1	Y
	Asbestos from FA & AF in Soil		20	Other	3 to 11	10 to 11	Y		0		ND	3	Y		0	N		0			0			0			1	Y
Asbestos	Asbestos ID in Soil		0	Other	-20	-20	N		0		ND	3	Y		0	N		0			0			0			0	N
Asbestos	Mass ACM		20	Other	3 to 11	10 to 11	Y		0		ND	3	Y		0	N		0			0			0			1	Y
	Mass AF		20	Other	3 to 11	10 to 11	Y		0		ND	3	Y		0	N		0			0			0			1	Y
	Mass Asbestos in ACM		20	Other	3 to 11	10 to 11	Y		0			0			0	N		0			0			0			1	Y
	Mass Asbestos in AF		20	Other	3 to 11	10 to 11	Y		0			0			0	N		0			0			0			1	Y
	Mass Asbestos in FA		20	Other	3 to 11	10 to 11	Y		0			0			0	N		0			0			0			1	Y
	Mass Asbestos in FA & AF		20	Other	3 to 11	10 to 11	Y		0			0			0	N		0			0			0			1	Y
	Mass FA		20	Other	3 to 11	10 to 11	Y		0			0			0	N		0			0			0			1	Y
Asbestos - Trace Analysis	ACM - Comment		20	Other	3 to 11	10 to 11	Y		0			0			0	N		0			0			0			1	Y
	AF - Comment		20	Other	3 to 11	10 to 11	Y		0		ND	3	Y		0	N		0			0			0			1	Y
	FA - Comment		20	Other	3 to 11	10 to 11	Y		0		ND	3	Y		0	N		0			0			0			1	Y
	Organic Fibres - Comment		20	Other	3 to 11	10 to 11	Y		0		ND	3	Y		0	N		0			0			0			1	Y
	Respirable Fibres - Comment		20	Other	3 to 11	10 to 11	Y		0		ND	3	Y		0	N		0			0			0			1	Y
	Synthetic Fibres - Comment		20	Other	3 to 11	10 to 11	Y		0		ND	4	Y		0	N		0			0			0			1	Y
Asbestos ID - soils NEPM	ACM >7mm Estimatio[n^]		0	Other		-20	N		0		ND	3	Y		0	N		0			0			0			0	N
	FA and AF Estimatio[n^#2]		0	Other		-20	N		0		ND	3	Y		0	N		0			0			0			0	N
	Total Asbestos#1		0	Other		-20	N		0		ND	3	Y		0	N		0			0			0			0	N
BTEX	Benzene	0.1 mg/kg	24	VOC	6 to 183	10 to 183	N	81 to 114	3	Y	ND	3	Y		2	Y		0		77 to 119	3	Y		0			1	Y
	Ethylbenzene	0.1 mg/kg	24	VOC	6 to 183	10 to 183	N	94 to 106	3	Y	ND	2	Y		2	Y		0		93 to 122	3	Y		0			1	Y
	Toluene	0.1 mg/kg	24	VOC	6 to 183	10 to 183	N	88 to 129	3	Y	ND	2	Y		2	Y		0		84 to 117	3	Y		0			1	Y
	Xylene (m & p)	0.2 mg/kg	24	VOC	6 to 183	10 to 183	N	90 to 112	3	Y	ND	3	Y		2	Y		0		94 to 123	3	Y		0			1	Y
	Xylene (o)	0.1 mg/kg	24	VOC	6 to 183	10 to 183	N	95 to 109	3	Y	ND	1	Y		2	Y		0		91 to 125	3	Y		0			1	Y

Filter: ALL

	Xylene (Total)	0.3 mg/kg	24	VOC	6 to 183	10 to 183	N	74 to 92	2	Y	ND	3	Y		1	Y		0		88 to 95	2	Y		0			2	Y
Chlorinated Alkanes	1,1,1,2-tetrachloroethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	95 to 122	2	Y	ND	2	Y		3	Y		0		103 to 119	2	Y		0			2	Y
	1,1,1-trichloroethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	93 to 122	3	Y	ND	1	Y		3	Y		0		110 to 129	3	Y		0			2	Y
	1,1,2,2-tetrachloroethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	87 to 100	2	Y	ND	3	Y		3	Y		0		87 to 114	2	Y		0			2	Y
	1,1,2-trichloroethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	112 to 116	2	Y	ND	3	Y		3	Y		0		115 to 116	2	Y		0			2	Y
	1,1-dichloroethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	97 to 124	3	Y	ND	1	Y		3	Y		0		93 to 111	3	Y		0			2	Y
	1,2,3-trichloropropane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	107 to 119	2	Y	ND	3	Y		3	Y		0		113 to 127	2	Y		0			2	Y
	1,2-dibromo-3-chloropropane		0	VOC	183	183	N		0		ND	3	Y		1	Y		0			0			0			0	N
	1,2-dichloroethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	111 to 130	3	N	ND	1	Y		3	Y		0		109 to 123	3	Y		0			2	Y
	1,2-dichloropropane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	103 to 113	2	Y	ND	1	Y		3	Y		0		96 to 109	2	Y		0			2	Y
	1,3-dichloropropane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	111 to 113	2	Y	ND	1	Y		3	Y		0		112 to 112	2	Y		0			2	Y
	2,2-dichloropropane		0	VOC	183	183	N		0		ND	3	Y		1	Y		0			0			0			0	N
	Bromochloromethane	0.5 mg/kg	15	Other	6 to 183	10 to 183	N	71 to 112	2	Y	ND	1	Y		3	Y		0		108 to 123	2	Y		0			2	Y
	Carbon tetrachloride	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	92 to 129	2	Y	ND	2	Y		3	Y		0		112 to 129	2	Y		0			2	Y
	Chloroethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	70 to 70	1	N	ND	3	Y		3	Y		0		72 to 104	2	Y		0			2	Y
	Chloromethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	83 to 84	2	Y	ND	3	Y		3	Y		0		71 to 78	2	Y		0			2	Y
	Dichlorodifluoromethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	83 to 124	2	Y	ND	3	Y		3	Y		0		70 to 115	2	N		0			2	Y
	Dichloromethane	0.5 mg/kg	15	SVOC	6 to 10	10 to 11	N	81 to 116	2	Y	ND	1	Y		2	Y		0		110 to 123	2	Y		0			2	Y
	Trichlorofluoromethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	79 to 119	2	Y	ND	3	Y		3	Y		0		87 to 113	2	Y		0			2	Y
Chlorinated Alkenes	1,1-dichloroethene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	81 to 105	2	Y	ND	2	Y		3	Y		0		102 to 128	2	Y		0			2	Y
	1,1-dichloropropene		0	VOC	183	183	N		0		ND	3	Y		1	Y		0			0			0			0	N
	2-chlorotoluene		0	VOC	183	183	N		0		ND	3	Y		1	Y		0			0			0			0	N
	3-chloropropene	0.5 mg/kg	15	SVOC	6 to 10	10 to 11	N	73 to 129	2	Y	ND	1	Y		2	Y		0		82 to 121	2	Y		0			2	Y
	4-chlorotoluene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	114 to 115	2	Y	ND	3	Y		3	Y		0		103 to 114	2	Y		0			2	Y
	cis-1,2-dichloroethene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	106 to 124	2	Y	ND	3	Y		3	Y		0		93 to 125	2	Y		0			2	Y
	cis-1,3-dichloropropene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	102 to 119	2	Y	ND	3	Y		3	Y		0		98 to 127	2	Y		0			2	Y
	Tetrachloroethene	0.5 mg/kg	15	SVOC	6 to 183	10 to 183	N	108 to 128	3	Y	ND	3	Y		3	Y		0		90 to 127	3	Y		0			2	Y
	trans-1,2-dichloroethene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	124 to 126	2	Y	ND	3	Y		1	Y		0		86 to 126	2	Y		0			2	Y
	trans-1,3-dichloropropene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	102 to 113	2	Y	ND	3	Y		3	Y		0		96 to 110	2	Y		0			2	Y
	Trichloroethene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	94 to 126	3	Y	ND	3	Y		3	Y		0		92 to 115	3	Y		0			2	Y
	Vinyl Chloride	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	84 to 100	2	Y	ND	2	Y		1	Y		0		99 to 99	1	Y		0			2	Y
Chlorinated Benzenes	1,2,3-trichlorobenzene		0	VOC	183	183	N		0		ND	1	Y		1	Y		0			0			0			0	N
	1,2,4-trichlorobenzene		0	VOC	183	183	N		0		ND	3	Y		1	Y		0			0			0			0	N
	1,2-Dichlorobenzene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	113 to 119	2	Y	ND	3	Y		3	Y		0		113 to 115	2	Y		0			2	Y
	1,3-dichlorobenzene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	114 to 123	2	Y	ND	3	Y		3	Y		0		114 to 114	2	Y		0			2	Y
	1,4-dichlorobenzene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	112 to 121	2	Y	ND	3	Y		3	Y		0		111 to 113	2	Y		0			2	Y
	Chlorobenzene	0.5 mg/kg	15	Other	6 to 183	10 to 183	N	90 to 117	2	Y	ND	2	Y		3	Y		0		89 to 101	2	Y		0			2	Y
	Hexachlorobenzene	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	71 to 100	2	Y	ND	1	Y		1	Y		0		91 to 116	2	Y		0			1	Y
Ionic Balance	Cation Exchange Capacity	0.05 meq/100g	4	Other	10 to 11	10 to 11	Y		0			0			0	N		0			0			0			0	N
	EC 1:5 soil:water	10 µS/cm	4	Other	9 to 10	10 to 11	Y		0			0			0	N		0			0			0			0	N
	pH (TCLP - HCl addition)	0.1 ph Units	2	other	11	12	Y		0		ND	1	Y		0	N		0			0			0			0	N
	pH (TCLP - initial)	0.1 ph Units	2	other	11	12	Y		0		ND	3	Y		0	N		0			0			0			0	N
	pH (TCLP - off)	0.1 ph Units	2	other	11	12	Y		0		ND	3	Y		0	N		0			0			0			0	N
	pH 1:5 soil:water	0.1 ph Units	4	Other	9 to 10	10 to 11	Y		0		ND	3	Y		0	N		0			0			0			0	N
Metals & Metalloids	Arsenic (Total)	2 mg/kg	35	Other	4 to 183	4 to 183	N	83 to 109	4	Y	ND	3	Y	22	2	Y		0		76 to 84	3	Y		0		83	3	N
	Cadmium	0.4 mg/kg	35	Other	4 to 183	4 to 183	N	84 to 102	4	Y	ND	3	Y		3	Y		0		81 to 83	3	Y		0			3	Y
	Chromium (Total)	5 mg/kg	35	Other	4 to 183	4 to 183	N	80 to 105	4	Y	ND	3	Y	27	3	Y		0		80 to 119	3	Y		0		32	3	Y
	Copper	5 mg/kg	35	Other	4 to 183	4 to 183	N	83 to 105	4	Y	ND	3	Y	22	3	Y		0		81 to 90	3	Y		0		64	3	N
	Lead	5 mg/kg	37	Other	4 to 183	4 to 183	N	87 to 99	4	Y	ND	3	Y	32	3	Y		0		76 to 90	4	Y		0		36	3	Y
	Mercury (Inorganic)	0.1 mg/kg	35	Other	4 to 183	4 to 183	N	99 to 116	4	Y	ND	3	Y		2	Y		0		81 to 110	3	Y		0			3	Y
	Nickel	5 mg/kg	35	Other	4 to 183	4 to 183	N	80 to 97	4	Y	ND	3	Y	7	3	Y		0		76 to 84	3	Y		0			3	Y
	Zinc	5 mg/kg	35	Other	4 to 183	4 to 183	N	85 to 98	4	Y	ND	3	Y	7	3	Y		0		81 to 102	3	Y		0		98	3	N
Miscellaneous Hydrocarbons	1,2-dibromoethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	110 to 119	2	Y	ND	3	Y		3	Y		0		106 to 116	2	Y		0			2	Y
	2-Butanone (MEK)	0.5 mg/kg	15	VOC	6 to 10	10 to 11	N	80 to 90	2	Y	ND	3	Y		2	Y		0		74 to 124	2	Y		0			2	Y
	4-Methyl-2-pentanone (MIBK)	0.5 mg/kg	15	VOC	6 to 10	10 to 11	N	100 to 106	2	Y	ND	3	Y		2	Y		0		110 to 111	2	Y		0			2	Y
	Bromomethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	75 to 75	1	Y	ND	1	Y		3	Y		0		78 to 78	1	Y		0			2	Y
	Cyclohexane		0	VOC	183	183	N		0		ND	1	Y		1	Y		0			0			0			0	N
	Dibromomethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	112 to 118	2	Y	ND	1	Y		3	Y		0		106 to 121	2	Y		0			2	Y
	Iodomethane	0.5 mg/kg	15	VOC	6 to 10	10 to 11	N	76 to 91	2	Y	ND	2	Y		2	Y		0		81 to 118	2	Y		0			2	Y
Miscellaneous Industrial Chemicals	Hexachlorobutadiene		0	VOC	183	183	N		0		ND	3	Y		1	Y		0			0			0			0	N
Monocyclic Aromatic Hydrocarbons	1,2,4-trimethyl benzene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	114 to 118	2	Y	ND	2	Y		3	Y		0		101 to 114	2	Y		0			2	Y
	1,3,5-trimethyl benzene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	114 to 118	2	Y	ND	3	Y		3	Y		0		99 to 112	2	Y		0			2	Y
	4-isopropyl toluene		0	VOC	183	183	N		0		ND	3	Y		1	Y		0			0			0			0	N
	Bromobenzene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	104 to 118	2	Y	ND	3	Y		3	Y		0		96 to 116	2	Y		0			2	Y
	Isopropylbenzene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	88 to 116	2	Y	ND	3	Y		3	Y		0		95 to 101	2	Y		0			2	Y
	n-butyl benzene		0	VOC	183	183	N		0		ND	3	Y		1	Y		0			0			0			0	N
	n-propyl benzene		0	VOC	183	183	N		0		ND	6	Y		1	Y		0			0			0			0	N
	sec-butyl benzene		0	VOC	183	183	N		0			0			1	Y		0			0			0			0	N
	Styrene	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	84 to 114	2	Y	ND	3	Y		3	Y		0		92 to 98	2	Y		0			2	Y
	Tert-butyl benzene		0	VOC	183	183	N		0		ND	3	Y		1	Y		0			0			0			0	N
Organic Sulfur Compounds	Carbon disulfide	0.5 mg/kg	15	VOC	6 to 10	10 to 11	N	78 to 122	2	Y	ND	1	Y		2	Y		0		108 to 108	1	Y		0			2	Y
Organochlorine Pesticides	4,4-DDE	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	86 to 114	3	Y	ND	2	Y		1	Y		0		87 to 118	3	Y		0			1	Y
	Aldrin	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	81 to 98	3	Y		0			1	Y		0		88 to 109	3	Y		0			1	Y
	alpha-BHC	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	85 to 103	3	Y		0			1	Y		0		86 to 106	3	Y		0			1	Y
	alpha-Chlordane		0	SVOC	183	183	N		0			0			1	Y		0			0			0			0	N
	beta-BHC	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	71 to 94	3	Y		0			1	Y		0		80 to 96	3	Y		0			1	Y
	Chlordane	0.1 mg/kg	9	SVOC	6 to 10	10 to 11	N	78 to 92	2	Y		0			0	N		0		85 to 99	2	Y		0			1	Y
	DDD	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	89 to 108	3	Y		0			1	Y		0		100 to 125	3	Y		0			1	Y
	DDT	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	85 to 87	2	Y		0			1	Y		0		78 to 82	2	Y		0			1	Y
	DDT+DDE+DDD (Sum of Total)		0	SVOC	183	183	N		0			0			1	Y		0			0			0			1	Y
	delta-BHC	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	91 to 100	2	Y		0			1	Y		0		92 to 111	2	Y		0			1	Y
	Dieldrin	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	76 to 106	3	Y		0			1	Y		0		84 to 109	3	Y		0			1	Y
	Endosulfan alpha	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	76 to 90	2	Y	ND	3	Y		1	Y		0		85 to 95	2	Y		0			1	Y
	Endosulfan beta	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	77 to 88	2	Y		0			1	Y		0		77 to 91	2	Y		0			1	Y
	Endosulfan sulphate	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	80 to 104	3	Y	ND	3	Y		1	Y		0		94 to 106	3	Y		0			1	Y
	Endrin	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	72 to 111	3	Y	ND	3	Y		1	Y		0		92 to 114	3	Y		0			1	Y
	Endrin aldehyde	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	74 to 75	2	Y	ND	3	Y		1	Y		0		79 to 93	2	Y		0			1	Y
	Endrin ketone	0.05 mg/kg	9	SVOC	6 to 10	10 to 11	N	73 to 89	2	Y	ND	3	Y		0	N		0		76 to 98	2	Y		0			1	Y
	gamma-Chlordane		0	SVOC	183	183	N		0			0			1	Y		0			0			0			0	N
	Heptachlor	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	85 to 105	3	Y	ND	1	Y		1	Y		0		51 to 108	3	N		0			1	Y
	Heptachlor Epoxide	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	82 to 102	2	Y	ND	3	Y		1	Y		0		82 to 130	3	N		0			1	Y
	Lindane	0.05 mg/kg	9	SVOC	6 to 183	10 to 183	N	70 to 91	2	N	ND	3	Y		1	Y		0		77 to 80	2	Y		0			1	Y
	Methoxychlor	0.2 mg/kg	9	SVOC	6 to 183	10 to 183	N	86 to 107	2	Y	ND	3	Y		1	Y		0		83 to 92	2	Y		0			1	Y
	Toxaphene	1 mg/kg	9	SVOC	6 to 10	10 to 11	N	88 to 101	2	Y		0			0	N		0		89 to 108	2	Y		0			1	Y
Other	% Clay	1 %	4	Other	9 to 10	10 to 11	Y	100 to 100	1	Y	ND	3	Y	0	1	Y		0			0			0			0	N
	% Moisture 103oC	1 %	40	Other	3 to 4	10 to 11	Y		0		ND	3	Y	6	3	Y		0			0			0		45	3	Y

Filter: ALL

	Moisture		0	Other	4 to 183	-21 to 5	N		0		ND	3	Y		0	N		0			0			0			0	N
PAHs in Soil	Benzo(b,j+k)fluoranthene		0	Other	183	-21	N		0		ND	3	Y		1	Y		0			0			0			0	N
Phenols	Phenols (Total)	0.1 mg/kg	20	SVOC	7 to 183	10 to 183	N	87 to 101	3	Y	ND	5	Y		1	Y		0		102 to 102	1	Y	ND	5	Y		1	Y
Polychlorinated Biphenyls	Aroclor 1016	0.5 mg/kg	9	SVOC	6 to 183	10 to 183	N		0		ND	5	Y		2	Y		0			0		ND	5	Y		1	Y
	Aroclor 1221	0.1 mg/kg	9	SVOC	6 to 183	10 to 183	N		0		ND	5	Y		2	Y		0			0		ND	5	Y		1	Y
	Aroclor 1232	0.5 mg/kg	9	SVOC	6 to 183	10 to 183	N		0		ND	5	Y		2	Y		0			0		ND	5	Y		1	Y
	Aroclor 1242	0.5 mg/kg	9	SVOC	6 to 183	10 to 183	N		0		ND	5	Y		2	Y		0			0		ND	5	Y		1	Y
	Aroclor 1248	0.5 mg/kg	9	SVOC	6 to 183	10 to 183	N		0		ND	3	Y		2	Y		0			0		ND	5	Y		1	Y
	Aroclor 1254	0.5 mg/kg	9	SVOC	6 to 183	10 to 183	N	101 to 101	1	Y	ND	3	Y		2	Y		0		100 to 100	1	Y	ND	3	Y		1	Y
	Aroclor 1260	0.5 mg/kg	9	SVOC	6 to 183	10 to 183	N	98 to 106	2	Y	ND	3	Y		2	Y		0		111 to 119	2	Y	ND	3	Y		1	Y
	PCBs (Total)	0.5 mg/kg	9	SVOC	6 to 183	10 to 183	N		0		ND	3	Y		1	Y		0			0		ND	3	Y		1	Y
Polycyclic Aromatic Hydrocarbons	Acenaphthene	0.5 mg/kg	20	SVOC	6 to 183	-21 to 11	N	90 to 100	2	Y	ND	3	Y		3	Y		0		94 to 99	2	Y	ND	3	Y		1	Y
	Acenaphthylene	0.5 mg/kg	20	SVOC	6 to 183	-21 to 11	N	94 to 101	2	Y	ND	3	Y		3	Y		0		102 to 103	2	Y	ND	3	Y		1	Y
	Anthracene	0.5 mg/kg	20	SVOC	6 to 183	-21 to 11	N	98 to 102	2	Y	ND	3	Y		3	Y		0		97 to 103	2	Y	ND	3	Y		1	Y
	Benz(a)anthracene	0.5 mg/kg	20	SVOC	6 to 183	-21 to 11	N	88 to 100	2	Y	ND	1	Y	18	3	Y		0		99 to 107	2	Y		0			1	Y
	Benzo(a)pyrene	0.5 mg/kg	20	SVOC	6 to 183	-21 to 11	N	83 to 102	3	Y	ND	3	Y	18	3	Y		0		83 to 108	3	Y	ND	3	Y		1	Y
	Benzo(a)pyrene TEQ (lower bound[c])	0.5 mg/kg	20	SVOC	3 to 183	-21 to 11	N		0		ND	3	Y		1	Y		0			0		ND	3	Y		1	Y
	Benzo(a)pyrene TEQ (medium bound[c])	0.5 mg/kg	20	SVOC	3 to 183	-21 to 11	N		0		ND	3	Y		1	Y		0			0		ND	3	Y	0	1	Y
	Benzo(a)pyrene TEQ (upper bound[c])	0.5 mg/kg	20	SVOC	3 to 183	-21 to 11	N		0		ND	1	Y		1	Y		0			0			0		0	1	Y
	Benzo(b,j)fluoranthene	0.5 mg/kg	20	SVOC	6 to 10	10 to 11	N	92 to 104	2	Y	ND	3	Y	33	2	Y		0		102 to 110	2	Y	ND	3	Y		1	Y
	Benzo(g,h,i)perylene	0.5 mg/kg	20	SVOC	6 to 183	-21 to 11	N	90 to 97	2	Y	ND	3	Y		3	Y		0		105 to 111	2	Y	ND	3	Y		1	Y
	Benzo(k)fluoranthene	0.5 mg/kg	20	SVOC	6 to 10	10 to 11	N	106 to 106	2	Y	ND	3	Y		2	Y		0		99 to 105	2	Y	ND	3	Y		1	Y
	Chrysene	0.5 mg/kg	20	SVOC	6 to 183	-21 to 11	N	99 to 116	3	Y	ND	3	Y	18	3	Y		0		98 to 115	3	Y	ND	3	Y		1	Y
	Dibenz(a,h)anthracene	0.5 mg/kg	20	SVOC	6 to 183	-21 to 11	N	87 to 91	2	Y	ND	3	Y		3	Y		0		100 to 104	2	Y	ND	3	Y		1	Y
	Fluoranthene	0.5 mg/kg	20	SVOC	6 to 183	-21 to 11	N	102 to 112	3	Y	ND	2	Y	40	3	Y		0		111 to 114	3	Y	ND	3	Y		1	Y
	Fluorene	0.5 mg/kg	20	SVOC	6 to 183	-21 to 11	N	100 to 104	3	Y	ND	3	Y		3	Y		0		103 to 109	3	Y	ND	3	Y		1	Y
	Indeno(1,2,3-c,d)pyrene	0.5 mg/kg	20	SVOC	6 to 183	-21 to 11	N	93 to 93	2	Y	ND	3	Y		3	Y		0		105 to 115	2	Y	ND	3	Y		1	Y
	Naphthalene	0.5 mg/kg	40	VOC	6 to 183	-21 to 183	N	89 to 112	5	Y	ND	1	Y		4	Y		0		96 to 113	5	Y		0			2	Y
	PAHs (Total)	0.5 mg/kg	20	SVOC	3 to 4	10 to 11	Y		0		ND	1	Y		0	N		0			0			0			1	Y
	Phenanthrene	0.5 mg/kg	20	SVOC	6 to 183	-21 to 11	N	100 to 107	3	Y	ND	2	Y	18	3	Y		0		98 to 112	3	Y	ND	3	Y		1	Y
	Pyrene	0.5 mg/kg	20	SVOC	6 to 183	-21 to 11	N	102 to 111	3	Y	ND	3	Y	32	3	Y		0		109 to 112	3	Y	ND	3	Y		1	Y
	Total Positive PAHs		0	SVOC	183	-21	N		0		ND	3	Y		1	Y		0			0		ND	3	Y		0	N
Solvents	2-Propanone (Acetone)	0.5 mg/kg	15	Other	6 to 10	10 to 11	Y	75 to 89	2	Y	ND	3	Y		0	N		0		103 to 127	2	Y	ND	3	Y		2	Y
Surrogate	4-Terphenyl-d14		0	SVOC			Y	112 to 112	1	Y	ND	3	Y		0	N	67 to 134	25	N		0		ND	3	Y		0	N
	Fluorobenzene (surr.)		0	SVOC			Y		0		ND	3	Y		0	N	59 to 108	17	N		0		ND	3	Y		0	N
	Surrogate 2-fluorobiphenyl		0	SVOC			Y		0		ND	3	Y		0	N	89 to 146	19	N		0		ND	3	Y		0	N
	Surrogate 4-BFB		0	VOC			Y	103 to 103	1	Y	ND	3	Y		0	N	63 to 149	31	N		0		ND	3	Y		0	N
	Surrogate aaa-Trifluorotoluene		0	SVOC			Y	97 to 97	2	Y	ND	3	Y		0	N	97 to 100	10	Y		0		ND	3	Y		0	N
	Surrogate Dibromofluoromethane		0	VOC			Y	109 to 109	1	Y	ND	1	Y		0	N	109 to 114	5	Y		0			0			0	N
	Surrogate Dibutylchlorendate		0	SVOC			Y		0		ND	1	Y		0	N	70 to 134	10	N		0			0			0	N
	Surrogate o-Terphenyl		0	SVOC			Y	88 to 88	1	Y	ND	3	Y		0	N	88 to 100	5	Y		0		ND	3	Y		0	N
	Surrogate TCMX		0	SVOC			Y	86 to 110	2	Y	ND	3	Y		0	N	81 to 118	20	Y		0		ND	3	Y		0	N
	Surrogate toluene-d8		0	VOC			Y	98 to 98	1	Y	ND	3	Y		0	N	96 to 98	5	Y		0		ND	3	Y		0	N
TPHs (NEPC 1999)	C10-C14 Fraction	20 mg/kg	20	SVOC	6 to 183	-23 to 11	N	98 to 114	3	Y	ND	3	Y		3	Y		0		102 to 113	3	Y	ND	3	Y		1	Y
	C10-C36 Fraction (Total)	50 mg/kg	20	SVOC	3 to 4	10 to 11	Y		0		ND	2	Y		0	N		0			0		ND	3	Y		1	Y
	C15-C28 Fraction	50 mg/kg	20	SVOC	6 to 183	-23 to 11	N	100 to 100	1	Y	ND	1	Y	25	3	Y		0		100 to 100	1	Y	ND	1	Y		1	Y
	C29-C36 Fraction	50 mg/kg	20	SVOC	6 to 183	-23 to 11	N	91 to 91	1	Y	ND	5	Y	38	3	Y		0		83 to 83	1	Y	ND	3	Y		1	Y
	C6-C9 Fraction	20 mg/kg	20	VOC	6 to 183	10 to 183	N	76 to 103	3	Y	ND	5	Y		2	Y		0		89 to 98	3	Y	ND	3	Y		1	Y
TRHs (NEPC 2013)	>C10-C16 Fraction	50 mg/kg	20	SVOC	6 to 183	-23 to 11	N	106 to 120	3	Y	ND	5	Y		3	Y		0		107 to 121	3	Y	ND to 0.001 mg/l	3	N		1	Y
	>C10-C16 less Naphthalene (F2)	50 mg/kg	20	SVOC	3 to 183	-23 to 11	N		0		ND	5	Y		1	Y		0			0		ND to 0.001 mg/l	3	N		1	Y
	>C10-C40 Fraction (Total)		0	SVOC	183	-23	N		0		ND	5	Y		1	Y		0			0		ND	3	Y		0	N
	>C16-C34 Fraction	100 mg/kg	20	SVOC	6 to 183	-23 to 11	N	100 to 100	1	Y	ND	5	Y	24	3	Y		0		100 to 100	1	Y	ND	3	Y		1	Y
	>C34-C40 Fraction	100 mg/kg	20	SVOC	6 to 183	-23 to 11	N	91 to 91	1	Y	ND	5	Y		3	Y		0		83 to 83	1	Y	ND	3	Y		1	Y
	C6-C10 Fraction	20 mg/kg	20	VOC	6 to 183	10 to 183	N	72 to 103	3	Y	ND	5	Y		2	Y		0		85 to 98	3	Y	ND	3	Y		1	Y
	C6-C10 less BTEX (F1)	20 mg/kg	20	VOC	3 to 183	10 to 183	N		0		ND	3	Y		1	Y		0			0		ND	3	Y		1	Y
Trihalomethanes	Bromodichloromethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	112 to 123	3	Y	ND	2	Y		3	Y		0		116 to 127	3	Y	ND	3	Y		2	Y
	Chloroform	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	92 to 129	3	Y	ND	2	Y		3	Y		0		103 to 128	3	Y	ND	3	Y		2	Y
	Dibromochloromethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	105 to 129	3	Y	ND	3	Y		3	Y		0		112 to 131	3	N	ND	3	Y		2	Y
	Tribromomethane	0.5 mg/kg	15	VOC	6 to 183	10 to 183	N	84 to 124	2	Y	ND	1	Y		3	Y		0		112 to 112	2	Y		0			2	Y
BTEX	Benzene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	86 to 111	4	Y	ND	3	Y		0	N		0		100 to 122	5	Y	ND	3	Y		0	N
	Ethylbenzene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	86 to 106	4	Y	ND	2	Y		0	N		0		92 to 107	5	Y	ND	3	Y		1	Y
	Toluene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	86 to 103	4	Y	ND	1	Y		0	N		0		92 to 115	5	Y		0		1	1	Y
	Xylene (m & p)	0.002 mg/L	3	VOC	3 to 4	4 to 11	Y	87 to 104	4	Y	ND	3	Y		0	N		0		88 to 120	5	Y	ND	3	Y		0	N
	Xylene (o)	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	87 to 99	4	Y	ND	3	Y		0	N		0		85 to 116	5	Y	ND	3	Y		0	N
	Xylene (Total)	0.003 mg/L	3	VOC	3 to 4	10 to 11	Y	92 to 102	3	Y	ND	1	Y		0	N		0		87 to 118	5	Y		0			0	N
Chlorinated Alkanes	1,1,1,2-tetrachloroethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	98 to 106	2	Y	ND	3	Y		1	Y		0		106 to 106	1	Y	ND	3	Y		1	Y
	1,1,1-trichloroethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	83 to 103	3	Y	ND	3	Y		1	Y		0		115 to 115	1	Y	ND	3	Y		1	Y
	1,1,2,2-tetrachloroethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	90 to 96	2	Y	ND	1	Y		1	Y		0		96 to 96	1	Y		0			1	Y
	1,1,2-trichloroethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	95 to 101	2	Y	ND	1	Y		1	Y		0		103 to 103	1	Y		0			1	Y
	1,1-dichloroethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	88 to 121	3	Y	ND	1	Y		1	Y		0		95 to 95	1	Y		0			1	Y
	1,2,3-trichloropropane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	93 to 114	2	Y	ND	3	Y		1	Y		0		102 to 102	1	Y	ND	3	Y		1	Y
	1,2-dibromo-3-chloropropane		0	VOC	4	4	Y		0		ND	1	Y		0	N		0			0			0			0	N
	1,2-dichloroethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	86 to 99	3	Y	ND	2	Y		1	Y		0		105 to 105	1	Y	ND	3	Y		1	Y
	1,2-dichloropropane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	88 to 100	2	Y	ND	2	Y		1	Y		0		96 to 96	1	Y	ND	3	Y		1	Y
	1,3-dichloropropane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	91 to 101	2	Y	ND	2	Y		1	Y		0		102 to 102	1	Y	ND	3	Y		1	Y
	2,2-dichloropropane		0	VOC	4	4	Y		0		ND	2	Y		0	N		0			0		ND	3	Y		0	N
	Bromochloromethane	0.001 mg/L	3	Other	3 to 4	4 to 11	Y	90 to 94	2	Y	ND	2	Y		1	Y		0		95 to 95	1	Y	ND	3	Y		1	Y
	Carbon tetrachloride	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	100 to 115	2	Y	ND	2	Y		1	Y		0		116 to 116	1	Y	ND	3	Y		1	Y
	Chloroethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	85 to 92	2	Y	ND	2	Y		1	Y		0		100 to 100	1	Y	ND	3	Y		1	Y
	Chloromethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	77 to 89	2	Y	ND	2	Y		1	Y		0		75 to 75	1	Y	ND	3	Y		1	Y
	Dichlorodifluoromethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	70 to 105	2	N	ND	2	Y		1	Y		0		104 to 104	1	Y	ND	3	Y		1	Y
	Dichloromethane	0.001 mg/L	3	SVOC	3 to 4	10 to 11	Y	97 to 116	2	Y	ND	2	Y		1	Y		0		93 to 93	1	Y	ND	3	Y		1	Y
	Trichlorofluoromethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	84 to 112	2	Y	ND	2	Y		1	Y		0		110 to 110	1	Y	ND	3	Y		1	Y
Chlorinated Alkenes	1,1-dichloroethene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	101 to 122	2	Y	ND	2	Y		1	Y		0		98 to 98	1	Y	ND	3	Y		1	Y
	1,1-dichloropropene		0	VOC	4	4	Y		0		ND	2	Y		0	N		0			0		ND	3	Y		0	N
	2-chlorotoluene		0	VOC	4	4	Y		0		ND	2	Y		0	N		0			0		ND	3	Y		0	N
	3-chloropropene	0.001 mg/L	3	SVOC	3 to 4	10 to 11	Y	96 to 126	2	Y	ND	2	Y		1	Y		0		84 to 84	1	Y	ND	3	Y		1	Y
	4-chlorotoluene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	97 to 100	2	Y	ND	2	Y		1	Y		0		100 to 100	1	Y	ND	3	Y		1	Y
	cis-1,2-dichloroethene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	94 to 102	2	Y	ND	2	Y		1	Y		0		99 to 99	1	Y	ND	3	Y		1	Y
	cis-1,3-dichloropropene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	92 to 96	2	Y	ND	2	Y		1	Y		0		103 to 103	1	Y	ND	3	Y		1	Y
	Tetrachloroethene	0.001 mg/L	3	SVOC	3 to 4	4 to 11	Y	92 to 111	3	Y	ND	2	Y		1	Y		0		110 to 110	1	Y	ND	3	Y	15	1	Y
	trans-1,2-dichloroethene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	96 to 122	2	Y	ND	2	Y		0	N		0		95 to 95	1	Y	ND	3	Y		1	Y
	trans-1,3-dichloropropene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	93 to 93	2	Y	ND	1	Y		1	Y		0		100 to 100	1	Y	ND	1	Y		1	Y
	Trichloroethene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	82 to 100	3	Y	ND	2	Y		1	Y		0		107 to 107	1	Y	ND	3	Y		1	Y
	Vinyl Chloride	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	82 to 105	2	Y	ND	1	Y		0	N		0		100 to 100	1	Y		0			1	Y

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Chlorinated Benzenes	1,2,3-trichlorobenzene		0	VOC	4	4	Y		0		ND	1	Y		0	**N**		0			0		ND	1	Y		0	**N**
	1,2,4-trichlorobenzene		0	VOC	4	4	Y		0		ND	1	Y		0	**N**		0			0		ND	1	Y		0	**N**
	1,2-Dichlorobenzene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	97 to 98	2	Y	ND	1	Y		1	Y		0		100 to 100	1	Y	ND	1	Y		1	Y
	1,3-dichlorobenzene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	99 to 100	2	Y	ND	1	Y		1	Y		0		102 to 102	1	Y	ND	1	Y		1	Y
	1,4-dichlorobenzene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	99 to 99	2	Y	ND	1	Y		1	Y		0		101 to 101	1	Y	ND	1	Y		1	Y
	Chlorobenzene	0.001 mg/L	3	Other	3 to 4	4 to 11	Y	97 to 97	2	Y	ND	1	Y		1	Y		0		102 to 102	1	Y	ND	1	Y		1	Y
	Hexachlorobenzene		0	SVOC	3 to 5	10 to 11	Y		0		ND	1	Y		0	**N**		0			0		ND	1	Y		0	**N**
Herbicides & Fungicides	Dinoseb		0	SVOC	5	10	Y		0		ND	1	Y		0	**N**		0			0		ND	1	Y		0	**N**
Metals & Metalloids	Arsenic (Total)	0.001 mg/L	3	Other	3 to 4	4 to 11	Y	85 to 101	4	Y	ND	1	Y		0	**N**		0		80 to 90	3	Y	ND	1	Y	0	1	Y
	Cadmium	0.0002 mg/L	3	Other	3 to 4	4 to 11	Y	86 to 104	4	Y	ND	1	Y		1	Y		0		80 to 94	3	Y	ND	1	Y		1	Y
	Chromium (Total)	0.001 mg/L	3	Other	3 to 4	4 to 11	Y	78 to 101	4	Y	ND	1	Y		0	**N**		0		74 to 79	3	Y	ND	1	Y	0	1	Y
	Copper	0.001 mg/L	3	Other	3 to 4	4 to 11	Y	79 to 100	4	Y	ND	1	Y		1	Y		0		71 to 77	3	Y	ND	1	Y		1	Y
	Lead	0.001 mg/L	3	Other	3 to 4	4 to 11	Y	81 to 104	4	Y	ND	1	Y		1	Y		0		73 to 92	3	Y	ND	1	Y		1	Y
	Mercury (Inorganic)	0.0001 mg/L	3	Other	3 to 4	4 to 11	Y	96 to 121	4	Y	0.001 to 0.001 mg/	1	**N**		1	Y		0		80 to 111	3	Y	0.003 to 0.003 mg/l	1	**N**	67	1	**N**
	Nickel	0.001 mg/L	3	Other	3 to 4	4 to 11	Y	77 to 102	4	Y	ND	1	Y		0	**N**		0		72 to 75	3	Y	ND	1	Y	0	1	Y
	Zinc	0.005 mg/L	3	Other	3 to 4	4 to 11	Y	81 to 102	4	Y		0			0	**N**		0		71 to 75	3	Y	ND	1	Y		1	Y
Miscellaneous Hydrocarbons	1,2-dibromoethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	96 to 100	2	Y		0			1	Y		0		104 to 104	1	Y	ND	1	Y		1	Y
	2-Butanone (MEK)	0.001 mg/L	3	VOC	3 to 4	10 to 11	Y	97 to 106	2	Y	ND	1	Y		1	Y		0		101 to 101	1	Y	ND	1	Y		1	Y
	4-Methyl-2-pentanone (MIBK)	0.001 mg/L	3	VOC	3 to 4	10 to 11	Y	91 to 96	2	Y	ND	1	Y		1	Y		0		104 to 104	1	Y	ND	3	Y		1	Y
	Bromomethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	91 to 101	2	Y	ND	1	Y		1	Y		0		92 to 92	1	Y	ND	3	Y		1	Y
	Cyclohexane		0	VOC	4	4	Y		0		ND	1	Y		0	**N**		0			0		ND	3	Y		0	**N**
	Dibromomethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	95 to 100	2	Y	ND	1	Y		1	Y		0		105 to 105	1	Y	ND	3	Y		1	Y
	Iodomethane	0.001 mg/L	3	VOC	3 to 4	10 to 11	Y	118 to 118	2	Y	ND	1	Y		1	Y		0		121 to 121	1	Y	ND	3	Y		1	Y
Miscellaneous Industrial Chemicals	Hexachlorobutadiene		0	VOC	4	4	Y		0		ND	1	Y		0	**N**		0			0		ND	3	Y		0	**N**
Monocyclic Aromatic Hydrocarbons	1,2,4-trimethyl benzene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	97 to 107	2	Y	ND	1	Y		1	Y		0		98 to 98	1	Y	ND	3	Y		1	Y
	1,3,5-trimethyl benzene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	97 to 106	2	Y	ND	1	Y		1	Y		0		97 to 97	1	Y	ND	3	Y		1	Y
	4-isopropyl toluene		0	VOC	4	4	Y		0		ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	Bromobenzene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	90 to 105	2	Y	ND	3	Y		1	Y		0		93 to 93	1	Y	ND	3	Y		1	Y
	Isopropylbenzene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	94 to 99	2	Y	ND	3	Y		1	Y		0		100 to 100	1	Y	ND	3	Y		1	Y
	n-butyl benzene		0	VOC	4	4	Y		0		ND to 0.001 mg/l	3	**N**		0	**N**		0			0		ND	3	Y		0	**N**
	n-propyl benzene		0	VOC	4	4	Y		0		ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	sec-butyl benzene		0	VOC	4	4	Y		0		ND	1	Y		0	**N**		0			0			0			0	**N**
	Styrene	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	93 to 94	2	Y	ND to 0.001 mg/l	2	**N**		1	Y		0		98 to 98	1	Y	ND	3	Y		1	Y
	Tert-butyl benzene		0	VOC	4	4	Y		0		ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
Organic Sulfur Compounds	Carbon disulfide	0.001 mg/L	3	VOC	3 to 4	10 to 11	Y	100 to 128	2	Y	ND	2	Y		1	Y		0		93 to 93	1	Y	ND	3	Y		1	Y
Organochlorine Pesticides	4,4-DDE		0	SVOC	3 to 5	10 to 11	Y	120 to 120	1	Y	ND to 0.001 mg/l	3	**N**		0	**N**		0			0		ND	3	Y		0	**N**
	Aldrin		0	SVOC	3 to 5	10 to 11	Y	120 to 120	1	Y	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	alpha-BHC		0	SVOC	3 to 5	10 to 11	Y	110 to 110	1	Y	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	beta-BHC		0	SVOC	3 to 5	10 to 11	Y	120 to 120	1	Y	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	Chlordane		0	SVOC	3 to 5	10 to 11	Y	120 to 120	1	Y	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	DDD		0	SVOC	3 to 5	10 to 11	Y	120 to 120	1	Y	ND	6	Y		0	**N**		0			0		ND	6	Y		0	**N**
	DDT		0	SVOC	3 to 5	10 to 11	Y	125 to 125	1	Y		0			0	**N**		0			0		ND	3	Y		0	**N**
	delta-BHC		0	SVOC	3 to 5	10 to 11	Y	130 to 130	1	**N**	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	Dieldrin		0	SVOC	3 to 5	10 to 11	Y	130 to 130	1	**N**	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	Endosulfan alpha		0	SVOC	3 to 5	10 to 11	Y	125 to 125	1	Y		0			0	**N**		0			0			0			0	**N**
	Endosulfan beta		0	SVOC	3 to 5	10 to 11	Y	120 to 120	1	Y	ND	2	Y		0	**N**		0			0		ND	3	Y		0	**N**
	Endosulfan sulphate		0	SVOC	3 to 5	10 to 11	Y	125 to 125	1	Y		0			0	**N**		0			0			0			0	**N**
	Endrin		0	SVOC	3 to 5	10 to 11	Y	120 to 120	1	Y		0			0	**N**		0			0			0			0	**N**
	Endrin aldehyde		0	SVOC	3 to 5	10 to 11	Y	115 to 115	1	Y		0			0	**N**		0			0			0			0	**N**
	Endrin ketone		0	SVOC	3 to 5	10 to 11	Y	125 to 125	1	Y		0			0	**N**		0			0			0			0	**N**
	Heptachlor		0	SVOC	3 to 5	10 to 11	Y	110 to 110	1	Y		0			0	**N**		0			0			0			0	**N**
	Heptachlor Epoxide		0	SVOC	3 to 5	10 to 11	Y	80 to 80	1	Y		0			0	**N**		0			0			0			0	**N**
	Lindane		0	SVOC	3 to 5	10 to 11	Y	120 to 120	1	Y		0			0	**N**		0			0			0			0	**N**
	Methoxychlor		0	SVOC	3 to 5	10 to 11	Y	120 to 120	1	Y		0			0	**N**		0			0			0			0	**N**
	Pentachlorophenol		0	SVOC	5	10	Y		0			0			0	**N**		0			0			0			0	**N**
	Toxaphene		0	SVOC	3 to 5	10 to 11	Y		0			0			0	**N**		0			0			0			0	**N**
PAHs in Soil	Benzo(b,j+k)fluoranthene		0	Other	4	5	Y		0		ND	3	Y		0	**N**		0			0		ND to 0.05 mg/l	3	**N**		0	**N**
Phenols	2,4,5-trichlorophenol		0	SVOC	5	10	Y	107 to 107	1	Y		0			0	**N**		0			0		ND	3	Y		0	**N**
	2,4,6-trichlorophenol		0	SVOC	5	10	Y	114 to 114	1	Y	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	2,4-dichlorophenol		0	SVOC	5	10	Y	96 to 96	1	Y	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	2,4-dimethylphenol		0	SVOC	5	10	Y	80 to 80	1	Y	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	2,4-dinitrophenol		0	SVOC	5	10	Y	113 to 113	1	Y	ND	3	Y		0	**N**		0			0		ND to 0.05 mg/l	3	**N**		0	**N**
	2,6-dichlorophenol		0	SVOC	5	10	Y	82 to 82	1	Y		0			0	**N**		0			0		ND to 0.05 mg/l	3	**N**		0	**N**
	2-chlorophenol		0	SVOC	5	10	Y	71 to 71	1	Y	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	2-Methylphenol		0	SVOC	5	10	Y	61 to 61	1	**N**	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	2-nitrophenol		0	SVOC	5	10	Y	102 to 102	1	Y	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	3- & 4-Methylphenol		0	SVOC	5	10	Y	54 to 54	1	**N**		0			0	**N**		0			0		ND	3	Y		0	**N**
	4,6-Dinitro-2-methylphenol		0	SVOC	5	10	Y	119 to 119	1	Y	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	4,6-Dinitro-o-cyclohexyl phenol		0	SVOC	5	10	Y	126 to 126	1	Y	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	4-Chloro-3-Methylphenol		0	SVOC	5	10	Y	84 to 84	1	Y	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	4-nitrophenol		0	SVOC	5	10	Y	84 to 84	1	Y	ND	3	Y		0	**N**		0			0		ND	3	Y		0	**N**
	Phenol		0	SVOC	5	10	Y		0						0	**N**		0			0						0	**N**
	Total Halogenated Phenol		0	SVOC	3	10	Y		0						0	**N**		0			0						0	**N**
	Total Non-Halogenated Phenol		0	SVOC	3	10	Y		0						0	**N**		0			0						0	**N**
	Total Tetrachlorophenols		0	SVOC	5	10	Y	114 to 114	1	Y					0	**N**		0			0						0	**N**
Polychlorinated Biphenyls	Aroclor 1016		0	SVOC	3 to 5	10 to 11	Y		0						0	**N**		0			0						0	**N**
	Aroclor 1221		0	SVOC	3 to 5	10 to 11	Y		0						0	**N**		0			0						0	**N**
	Aroclor 1232		0	SVOC	3 to 5	10 to 11	Y		0						0	**N**		0			0						0	**N**
	Aroclor 1242		0	SVOC	3 to 5	10 to 11	Y		0						0	**N**		0			0						0	**N**
	Aroclor 1248		0	SVOC	3 to 5	10 to 11	Y		0						0	**N**		0			0						0	**N**
	Aroclor 1254		0	SVOC	3 to 5	10 to 11	Y		0						0	**N**		0			0						0	**N**
	Aroclor 1260		0	SVOC	3 to 5	10 to 11	Y	117 to 117	1	Y					0	**N**		0			0						0	**N**
	PCBs (Total)		0	SVOC	3 to 5	10 to 11	Y		0						0	**N**		0			0						0	**N**
Polycyclic Aromatic Hydrocarbons	Acenaphthene	0.00005 mg/L	3	SVOC	3 to 5	5 to 11	Y	86 to 91	2	Y					0	**N**		0		107 to 107	1	Y					1	Y
	Acenaphthylene	0.00005 mg/L	3	SVOC	3 to 5	5 to 11	Y	91 to 93	2	Y					0	**N**		0		103 to 103	1	Y					1	Y
	Anthracene	0.00005 mg/L	3	SVOC	3 to 5	5 to 11	Y	91 to 117	2	Y					0	**N**		0		113 to 113	1	Y					1	Y
	Benz(a)anthracene	0.00005 mg/L	3	SVOC	3 to 5	5 to 11	Y	89 to 127	2	Y					0	**N**		0		99 to 99	1	Y					1	Y
	Benzo(a)pyrene	0.00001 mg/L	3	SVOC	3 to 5	5 to 11	Y	86 to 109	3	Y					0	**N**		0		104 to 104	1	Y				0	1	Y
	Benzo(a)pyrene TEQ (WHO)		0	SVOC	4	5	Y		0						0	**N**		0			0						0	**N**
	Benzo(b,j)fluoranthene	0.00005 mg/L	3	SVOC	3 to 5	10 to 11	Y	97 to 99	2	Y					0	**N**		0		100 to 100	1	Y					1	Y
	Benzo(g,h,i)perylene	0.00005 mg/L	3	SVOC	3 to 5	5 to 11	Y	86 to 108	2	Y					0	**N**		0		113 to 113	1	Y					1	Y
	Benzo(k)fluoranthene	0.00005 mg/L	3	SVOC	3 to 5	10 to 11	Y	95 to 118	2	Y					0	**N**		0		115 to 115	1	Y					1	Y
	Chrysene	0.00005 mg/L	3	SVOC	3 to 5	5 to 11	Y	98 to 114	3	Y					0	**N**		0		115 to 115	1	Y					1	Y
	Dibenz(a,h)anthracene	0.00005 mg/L	3	SVOC	3 to 5	5 to 11	Y	81 to 123	2	Y					0	**N**		0		104 to 104	1	Y					1	Y
	Fluoranthene	0.00005 mg/L	3	SVOC	3 to 5	5 to 11	Y	92 to 117	3	Y					0	**N**		0		112 to 112	1	Y					1	Y

Filter: ALL

	Fluorene	0.00005 mg/L	3	SVOC	3 to 5	5 to 11	Y	81 to 101	3	Y					0	N		0		104 to 104	1	Y					1	Y
	Indeno(1,2,3-c,d)pyrene	0.00005 mg/L	3	SVOC	3 to 5	5 to 11	Y	105 to 125	2	Y					0	N		0		109 to 109	1	Y					1	Y
	Naphthalene	0.00005 to 0.01 mg/L	6	VOC	3 to 5	4 to 11	Y	75 to 115	5	Y					0	N		0		88 to 108	4	Y				35	2	Y
	PAHs (Total)	0.00005 mg/L	3	SVOC	3 to 4	10 to 11	Y		0						0	N		0			0					17	1	Y
	Phenanthrene	0.00005 mg/L	3	SVOC	3 to 5	5 to 11	Y	92 to 110	3	Y					0	N		0		114 to 114	1	Y				46	1	Y
	Pyrene	0.00005 mg/L	3	SVOC	3 to 5	5 to 11	Y	89 to 116	3	Y					0	N		0		113 to 113	1	Y					1	Y
	Total Positive PAHs		0	SVOC	4	5	Y		0						0	N		0			0						0	N
Solvents	2-Propanone (Acetone)	1 µg/L	3	Other	3 to 4	10 to 11	Y	87 to 100	2	Y					0	N		0		111 to 111	1	Y				0	1	Y
Surrogate	4-Terphenyl-d14		0	SVOC			Y	96 to 96	1	Y					0	N	0 to 145	10	N		0						0	N
	Fluorobenzene (surr.)		0	SVOC			Y		0						0	N	67 to 107	7	N		0						0	N
	Surrogate 2-fluorobiphenyl		0	SVOC			Y		0						0	N	0 to 81	7	N		0						0	N
	Surrogate 4-BFB		0	VOC			Y	88 to 88	2	Y					0	N	88 to 99	17	Y		0						0	N
	Surrogate Dibromofluoromethane		0	VOC			Y	108 to 108	2	Y					0	N	108 to 110	6	Y		0						0	N
	Surrogate Dibutylchlorendate		0	SVOC			Y		0						0	N	75 to 109	3	Y		0						0	N
	Surrogate o-Terphenyl		0	SVOC			Y	112 to 112	1	Y					0	N	80 to 112	3	Y		0						0	N
	Surrogate Phenol-d6		0	SVOC			Y		0						0	N		1	N		0						0	N
	Surrogate TCMX		0	SVOC			Y		0						0	N	62 to 62	1	N		0						0	N
	Surrogate toluene-d8		0	VOC			Y	103 to 103	2	Y					0	N	101 to 103	6	Y		0						0	N
TPHs (NEPC 1999)	C10-C14 Fraction	0.05 mg/L	3	SVOC	3 to 5	4 to 11	Y	94 to 119	3	Y					0	N		0		72 to 72	1	Y					1	Y
	C10-C36 Fraction (Total)	0.1 mg/L	3	SVOC	3 to 4	10 to 11	Y		0						0	N		0			0					100	1	N
	C15-C28 Fraction	0.1 mg/L	3	SVOC	3 to 5	4 to 11	Y	118 to 118	1	Y					0	N		0			0					93	1	N
	C29-C36 Fraction	0.1 mg/L	3	SVOC	3 to 5	4 to 11	Y	111 to 111	1	Y					0	N		0			0					0	1	Y
	C6-C9 Fraction	0.02 mg/L	3	VOC	3 to 4	4 to 11	Y	86 to 127	3	Y				0	2	Y		0		104 to 115	2	Y				0	1	Y
TRHs (NEPC 2013)	>C10-C16 Fraction	0.05 mg/L	3	SVOC	3 to 5	4 to 11	Y	99 to 119	3	Y					0	N		0		74 to 74	1	Y					1	Y
	>C10-C16 less Naphthalene (F2)	0.05 mg/L	3	SVOC	3 to 4	4 to 11	Y		0						0	N		0			0						1	Y
	>C16-C34 Fraction	0.1 mg/L	3	SVOC	3 to 5	4 to 11	Y	118 to 118	1	Y					0	N		0			0					100	1	N
	>C34-C40 Fraction	0.1 mg/L	3	SVOC	3 to 5	4 to 11	Y	111 to 111	1	Y					0	N		0			0						1	Y
	C6-C10 Fraction	0.02 mg/L	3	VOC	3 to 4	4 to 11	Y	86 to 113	3	Y				0	2	Y		0		101 to 102	2	Y				0	1	Y
	C6-C10 less BTEX (F1)	0.02 mg/L	3	VOC	3 to 4	4 to 11	Y		0						0	N		0			0					0	1	Y
Trihalomethanes	Bromodichloromethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	90 to 99	3	Y					1	Y		0		105 to 105	1	Y					1	Y
	Chloroform	0.005 mg/L	3	VOC	3 to 4	4 to 11	Y	90 to 104	3	Y					1	Y		0		103 to 103	1	Y					1	Y
	Dibromochloromethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	96 to 104	3	Y					1	Y		0		110 to 110	1	Y					1	Y
	Tribromomethane	0.001 mg/L	3	VOC	3 to 4	4 to 11	Y	98 to 99	2	Y					1	Y		0		107 to 107	1	Y					1	Y

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Contents

Count of Results

Matrix_Type	Sample_Type	Reg	Leached	Spike_Compounds	Surrogate
GAS	Normal	1052	0	0	60
GAS	Field_D	108	0	0	6
GAS	Field_B	104	0	0	6
GAS	MB	51	0	0	0
GAS	LCS	6	0	0	0
SOIL	Normal	2464	8	0	94
SOIL	MB	370	1	0	9
SOIL	LAB_D	362	1	0	9
SOIL	LCS	264	0	0	9
SOIL	MS	47	0	207	9
SOIL	Field_D	214	0	0	8
SOIL	Interlab_D	158	0	0	9
WATER	Rinsate	377	0	0	17
WATER	MB	358	0	0	8
WATER	Normal	270	0	0	12
WATER	LCS	249	0	0	8
WATER	MS	0	0	114	0
WATER	Interlab_D	99	0	0	8
WATER	Field_D	90	0	0	4
WATER	LAB_D	62	0	0	0
WATER	Trip_S	12	0	0	2
WATER	Trip_B	12	0	0	2

[Filter]

Field Blanks (GAS)
Filter: ALL

SDG	545643	545643
Field ID	MB_FRONT	MB_BACK
Sampled_Date/Time	5/5/2017	5/5/2017
Sample Type	Field_B	Field_B

Chem_Group	ChemName	Units	EQL		
BTEX	Benzene	mg/m3	0.08333335	<0.08333335	<0.08333335
	Ethylbenzene	mg/m3	0.08333335	<0.08333335	<0.08333335
	Toluene	mg/m3	0.08333335	<0.08333335	<0.08333335
	Xylene (Total)	mg/m3	0.25000005	<0.25000005	<0.25000005
Chlorinated Alkanes	1,1,1,2-tetrachloroethane	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,1,1-trichloroethane	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,1,2,2-tetrachloroethane	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,1,2-trichloroethane	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,1-dichloroethane	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,2,3-trichloropropane	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,2-dibromo-3-chloropropane	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,2-dichloroethane	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,2-dichloropropane	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,3-dichloropropane	mg/m3	0.08333335	<0.08333335	<0.08333335
	2,2-dichloropropane	mg/m3	0.08333335	<0.08333335	<0.08333335
	Bromochloromethane	mg/m3	0.08333335	<0.08333335	<0.08333335
	Carbon tetrachloride	mg/m3	0.08333335	<0.08333335	<0.08333335
	Trichlorofluoromethane	mg/m3	0.08333335	<0.08333335	<0.08333335
Chlorinated Alkenes	1,1-dichloroethene	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,1-dichloropropene	mg/m3	0.08333335	<0.08333335	<0.08333335
	2-chlorotoluene	mg/m3	0.08333335	<0.08333335	<0.08333335
	4-chlorotoluene	mg/m3	0.08333335	<0.08333335	<0.08333335
	cis-1,2-dichloroethene	mg/m3	0.08333335	<0.08333335	<0.08333335
	cis-1,3-dichloropropene	mg/m3	0.08333335	<0.08333335	<0.08333335
	Tetrachloroethene	mg/m3	0.08333335	<0.08333335	<0.08333335
	trans-1,3-dichloropropene	mg/m3	0.08333335	<0.08333335	<0.08333335
	Trichloroethene	mg/m3	0.08333335	<0.08333335	<0.08333335
	Vinyl Chloride	mg/m3	0.08333335	<0.08333335	<0.08333335
Chlorinated Benzenes	1,2,3-trichlorobenzene	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,2,4-trichlorobenzene	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,2-Dichlorobenzene	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,3-dichlorobenzene	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,4-dichlorobenzene	mg/m3	0.08333335	<0.08333335	<0.08333335
	Chlorobenzene	mg/m3	0.08333335	<0.08333335	<0.08333335
Miscellaneous Hydrocarbons	1,2-dibromoethane	mg/m3	0.08333335	<0.08333335	<0.08333335
	Dibromomethane	mg/m3	0.08333335	<0.08333335	<0.08333335
Miscellaneous Industrial Chemicals	Hexachlorobutadiene	mg/m3	0.08333335	<0.08333335	<0.08333335
Monocyclic Aromatic Hydrocarbons	1,2,4-trimethyl benzene	mg/m3	0.08333335	<0.08333335	<0.08333335
	1,3,5-trimethyl benzene	mg/m3	0.08333335	<0.08333335	<0.08333335
	4-isopropyl toluene	mg/m3	0.08333335	<0.08333335	<0.08333335
	Isopropylbenzene	mg/m3	0.08333335	<0.08333335	<0.08333335
	n-butyl benzene	mg/m3	0.08333335	<0.08333335	<0.08333335
	n-propyl benzene	mg/m3	0.08333335	<0.08333335	<0.08333335
	sec-butyl benzene	mg/m3	0.08333335	<0.08333335	<0.08333335
	Styrene	mg/m3	0.8333335	<0.8333335	<0.8333335
	Tert-butyl benzene	mg/m3	0.08333335	<0.08333335	<0.08333335
Organic Alcohols	Isopropyl alcohol	mg/m3	1.666667	<1.666667	<1.666667
Polycyclic Aromatic Hydrocarbons	Naphthalene	mg/m3	0.08333335	<0.08333335	<0.08333335
TRHs (NEPC 2013)	>C10-C16 Fraction	mg/m3	1.666667		
	C6-C10 Fraction	mg/m3	1.666667		
Trihalomethanes	Bromodichloromethane	mg/m3	0.08333335	<0.08333335	<0.08333335
	Chloroform	mg/m3	0.08333335	<0.08333335	<0.08333335
	Dibromochloromethane	mg/m3	0.08333335	<0.08333335	<0.08333335
	Tribromomethane	mg/m3	0.08333335	<0.08333335	<0.08333335

Document Set ID: 9456504
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Field Blanks (WATER)
Filter: ALL

SDG	545235	545235	548083	545235	548083
Field ID	RINS 6-5-17	RINS 7-5-17	RINS	TB	TB
Sampled_Date/Time	5/6/2017	5/7/2017	5/26/2017	5/7/2017	5/26/2017
Sample Type	Rinsate	Rinsate	Rinsate	Trip_B	Trip_B

Chem_Group	ChemName	Units	EQL					
BTEX	Benzene	mg/l	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Ethylbenzene	mg/l	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Toluene	mg/l	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylene (o)	mg/l	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylene (m & p)	mg/l	0.002	<0.002	<0.002	<0.002	<0.002	<0.002
	Xylene (Total)	mg/l	0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Chlorinated Alkanes	1,1,1,2-tetrachloroethane	mg/l	0.001	<0.001	<0.001	<0.001		
	1,1,1-trichloroethane	mg/l	0.001	<0.001	<0.001	<0.001		
	1,1,2,2-tetrachloroethane	mg/l	0.001	<0.001	<0.001	<0.001		
	1,1,2-trichloroethane	mg/l	0.001	<0.001	<0.001	<0.001		
	1,1-dichloroethane	mg/l	0.001	<0.001	<0.001	<0.001		
	1,2,3-trichloropropane	mg/l	0.001	<0.001	<0.001	<0.001		
	1,2-dibromo-3-chloropropane	mg/l	0.001					
	1,2-dichloroethane	mg/l	0.001	<0.001	<0.001	<0.001		
	1,2-dichloropropane	mg/l	0.001	<0.001	<0.001	<0.001		
	1,3-dichloropropane	mg/l	0.001	<0.001	<0.001	<0.001		
	2,2-dichloropropane	mg/l	0.001					
	Bromochloromethane	mg/l	0.001	<0.001	<0.001	<0.001		
	Carbon tetrachloride	mg/l	0.001	<0.001	<0.001	<0.001		
	Chloroethane	mg/l	0.001	<0.001	<0.001	<0.001		
	Chloromethane	mg/l	0.001	<0.001	<0.001	<0.001		
	Dichlorodifluoromethane	mg/l	0.001	<0.001	<0.001	<0.001		
	Dichloromethane	mg/l	0.001	<0.001	<0.001	<0.001		
	Trichlorofluoromethane	mg/l	0.001	<0.001	<0.001	<0.001		
Chlorinated Alkenes	1,1-dichloroethene	mg/l	0.001	<0.001	<0.001	<0.001		
	1,1-dichloropropene	mg/l	0.001					
	2-chlorotoluene	mg/l	0.001					
	3-chloropropene	mg/l	0.001	<0.001	<0.001	<0.001		
	4-chlorotoluene	mg/l	0.001	<0.001	<0.001	<0.001		
	cis-1,2-dichloroethene	mg/l	0.001	<0.001	<0.001	<0.001		
	cis-1,3-dichloropropene	mg/l	0.001	<0.001	<0.001	<0.001		
	Tetrachloroethene	mg/l	0.001	<0.001	<0.001	<0.001		
	trans-1,2-dichloroethene	mg/l	0.001	<0.001	<0.001	<0.001		
	trans-1,3-dichloropropene	mg/l	0.001	<0.001	<0.001	<0.001		
	Trichloroethene	mg/l	0.001	<0.001	<0.001	<0.001		
	Vinyl Chloride	mg/l	0.001	<0.001	<0.001	<0.001		
Chlorinated Benzenes	1,2,3-trichlorobenzene	mg/l	0.001					
	1,2,4-trichlorobenzene	mg/l	0.001					
	1,2-Dichlorobenzene	mg/l	0.001	<0.001	<0.001	<0.001		
	1,3-dichlorobenzene	mg/l	0.001	<0.001	<0.001	<0.001		
	1,4-dichlorobenzene	mg/l	0.001	<0.001	<0.001	<0.001		
	Chlorobenzene	mg/l	0.001	<0.001	<0.001	<0.001		
	Hexachlorobenzene	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
Herbicides & Fungicides	Dinoseb	mg/l	0.1			<0.1		
Metals & Metalloids	Arsenic (Total)	mg/l	0.001	<0.001	<0.001	<0.001		
	Arsenic (Total) (Filtered)	mg/l	0.001					
	Cadmium	mg/l	0.0002	<0.0002	<0.0002	<0.0002		
	Cadmium (Filtered)	mg/l	0.0001					
	Chromium (Total)	mg/l	0.001	<0.001	<0.001	**0.001**		
	Chromium (Total) (Filtered)	mg/l	0.001					
	Copper	mg/l	0.001	**0.001**	**0.001**	<0.001		
	Copper (Filtered)	mg/l	0.001					
	Lead	mg/l	0.001	<0.001	<0.001	<0.001		
	Lead (Filtered)	mg/l	0.001					
	Mercury (Inorganic)	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	Mercury (Inorganic) (Filtered)	mg/l	0.00005					
	Nickel	mg/l	0.001	<0.001	<0.001	<0.001		
	Nickel (Filtered)	mg/l	0.001					
	Zinc	mg/l	0.005	<0.005	<0.005	<0.005		
	Zinc (Filtered)	mg/l	0.001					
Miscellaneous Hydrocarbons	1,2-dibromoethane	mg/l	0.001	<0.001	<0.001	<0.001		
	2-Butanone (MEK)	mg/l	0.001	<0.001	<0.001	<0.001		
	4-Methyl-2-pentanone (MIBK)	mg/l	0.001	<0.001	<0.001	<0.001		
	Bromomethane	mg/l	0.001	<0.001	<0.001	<0.001		
	Cyclohexane	mg/l	0.001					
	Dibromomethane	mg/l	0.001	<0.001	<0.001	<0.001		
	Iodomethane	mg/l	0.001	<0.001	<0.001	<0.001		
Miscellaneous Industrial Chemicals	Hexachlorobutadiene	mg/l	0.001					
Monocyclic Aromatic Hydrocarbons	1,2,4-trimethyl benzene	mg/l	0.001	<0.001	<0.001	<0.001		
	1,3,5-trimethyl benzene	mg/l	0.001	<0.001	<0.001	<0.001		
	4-isopropyl toluene	mg/l	0.001					
	Bromobenzene	mg/l	0.001	<0.001	<0.001	<0.001		
	Isopropylbenzene	mg/l	0.001	<0.001	<0.001	<0.001		
	n-butyl benzene	mg/l	0.001					
	n-propyl benzene	mg/l	0.001					
	sec-butyl benzene	mg/l	0.001					
	Styrene	mg/l	0.001	<0.001	<0.001	<0.001		
	Tert-butyl benzene	mg/l	0.001					
Organic Sulfur Compounds	Carbon disulfide	mg/l	0.001	<0.001	<0.001	<0.001		
Organochlorine Pesticides	4,4-DDE	µg/l	0.1	<0.1	<0.1	<0.1		
	Aldrin	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	alpha-BHC	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	beta-BHC	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	Dieldrin	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	DDD	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	DDT	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	Chlordane	mg/l	0.001	<0.001	<0.001	<0.001		
	delta-BHC	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	Endosulfan alpha	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	Endosulfan beta	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	Endosulfan sulphate	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	Endrin	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	Endrin aldehyde	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	Endrin ketone	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	Heptachlor	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	Heptachlor Epoxide	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	Lindane	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	Methoxychlor	mg/l	0.0001	<0.0001	<0.0001	<0.0001		
	Pentachlorophenol	mg/l	0.01			<0.01		
	Toxaphene	mg/l	0.01	<0.01	<0.01	<0.01		
Phenols	2,4,5-trichlorophenol	mg/l	0.001			<0.001		
	2,4,6-trichlorophenol	mg/l	0.01			<0.01		
	2,4-dichlorophenol	mg/l	0.001			<0.001		
	2,4-dimethylphenol	mg/l	0.001			<0.001		
	2,4-dinitrophenol	mg/l	0.001			<0.001		
	2,6-dichlorophenol	mg/l	0.003			<0.003		
	2-chlorophenol	mg/l	0.003			<0.003		
	2-Methylphenol	mg/l	0.003			<0.003		
	2-nitrophenol	mg/l	0.005			<0.005		
	3- & 4-Methylphenol	mg/l	0.006			<0.006		
	4,6-Dinitro-2-methylphenol	mg/l	0.005			<0.005		
	4,6-Dinitro-o-cyclohexyl phenol	mg/l	0.1			<0.1		
	4-Chloro-3-Methylphenol	mg/l	0.01			<0.01		
	4-nitrophenol	mg/l	0.001			**0.003**		
	Phenol	mg/l	0.003			<0.003		
	Total Halogenated Phenol	mg/l	0.01			<0.01		
	Total Non-Halogenated Phenol	mg/l	0.1			<0.1		
	Total Tetrachlorophenols	mg/l	0.03			<0.03		
Polychlorinated Biphenyls	Aroclor 1016	mg/l	0.005	<0.005	<0.005	<0.005		
	Aroclor 1221	mg/l	0.001	<0.001	<0.001	<0.001		
	Aroclor 1232	mg/l	0.005	<0.005	<0.005	<0.005		
	Aroclor 1242	mg/l	0.005	<0.005	<0.005	<0.005		
	Aroclor 1248	mg/l	0.005	<0.005	<0.005	<0.005		
	Aroclor 1254	mg/l	0.005	<0.005	<0.005	<0.005		
	Aroclor 1260	mg/l	0.005	<0.005	<0.005	<0.005		
	PCBs (Total)	mg/l	0.001	<0.001	<0.001	<0.001		
Polycyclic Aromatic Hydrocarbons	Acenaphthene	mg/l	0.00005	<0.001	<0.001	<0.001		
	Acenaphthylene	mg/l	0.00005	<0.001	<0.001	<0.001		

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Field Blanks (WATER)
Filter: ALL

			SDG	545235	545235	548083	545235	548083
			Field ID	RINS 6-5-17	RINS 7-5-17	RINS	TB	TB
			Sampled_Date/Time	5/6/2017	5/7/2017	5/26/2017	5/7/2017	5/26/2017
			Sample Type	Rinsate	Rinsate	Rinsate	Trip_B	Trip_B
	Anthracene	mg/l	0.00005	<0.001	<0.001	<0.001		
	Benz(a)anthracene	mg/l	0.00005	<0.001	<0.001	<0.001		
	Benzo(a)pyrene	mg/l	0.00001	<0.001	<0.001	<0.001		
	Benzo(a)pyrene TEQ (WHO)	mg/l	0.0005					
	Benzo(b,j)fluoranthene	mg/l	0.00005	<0.001	<0.001	<0.001		
	Benzo(g,h,i)perylene	mg/l	0.00005	<0.001	<0.001	<0.001		
	Benzo(k)fluoranthene	mg/l	0.00005	<0.001	<0.001	<0.001		
	Chrysene	mg/l	0.00005	<0.001	<0.001	<0.001		
	Dibenz(a,h)anthracene	mg/l	0.00005	<0.001	<0.001	<0.001		
	Fluoranthene	mg/l	0.00005	<0.001	<0.001	<0.001		
	Fluorene	mg/l	0.00005	<0.001	<0.001	<0.001		
	Indeno(1,2,3-c,d)pyrene	mg/l	0.00005	<0.001	<0.001	<0.001		
	Naphthalene	mg/l	0.00005	<0.01	<0.01	<0.01		
	Phenanthrene	mg/l	0.00005	<0.001	<0.001	<0.001		
	Pyrene	mg/l	0.00005	<0.001	<0.001	<0.001		
	PAHs (Total)	mg/l	0.00005	<0.001	<0.001	<0.001		
	Total Positive PAHs	mg/l						
Solvents	2-Propanone (Acetone)	µg/l	1	<1	<1	<1		
TPHs (NEPC 1999)	C6-C9 Fraction	mg/l	0.01	<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		
	>C10-C16 less Naphthalene (F2)	mg/l	0.05	**0.05**	<0.05	<0.05		
	C6-C10 Fraction	mg/l	0.01	<0.02	<0.02	<0.02		
	C6-C10 less BTEX (F1)	mg/l	0.01	<0.02	<0.02	<0.02		
Trihalomethanes	Bromodichloromethane	mg/l	0.001	<0.001	<0.001	<0.001		
	Chloroform	mg/l	0.001	<0.005	<0.005	<0.005		
	Dibromochloromethane	mg/l	0.001	<0.001	<0.001	<0.001		
	Tribromomethane	mg/l	0.001	<0.001	<0.001	<0.001		

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Version: 1, Version Date: 29/01/2021

Contents

Detects in Lab Blanks

SDG	Lab_Report_Number	Matrix_Type	SampleCode	Field_ID	Depth	Sampled_Date-Time	Sample_Type	Compound	Prefix	Result	Extraction_Date
548083	548083	WATER	METHODBLANK_10_548083			5/26/2017	MB	4-Nitrophenol		0.001 MG/L	6/5/2017
548083	548083	WATER	METHODBLANK_10_548083			5/26/2017	MB	Benz(a)anthracene		0.001 MG/L	6/5/2017
548083	548083	WATER	METHODBLANK_10_548083			5/26/2017	MB	Benzo(b&j)fluoranthene		0.001 MG/L	6/5/2017
548083	548083	WATER	METHODBLANK_10_548083			5/26/2017	MB	Chrysene		0.001 MG/L	6/5/2017

Field Duplicates (GAS)
Filter: ALL

SDG	545643	545643	
Field ID	SV01_FRONT	QC01_SV_FRONT	**RPD**
Sampled Date/Time	5/5/2017	5/5/2017	

Chem_Gro	ChemNam	Units	EQL			
Organic Al	Isopropyl a	mg/m3	1.666667	<1.6667	<1.6667	0
cohols						
Chlorinated	1,1,1,2-tetr	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,1,1-trichl	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,1,2,2-tetr	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,1,2-trichl	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,1-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,2,3-trichl	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,2-dibrom	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,2-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,2-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,3-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	2,2-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	Bromochlo	mg/m3	0.08333335	<0.0833	<0.0833	0
	Carbon tet	mg/m3	0.08333335	<0.0833	<0.0833	0
	Trichloroflu	mg/m3	0.08333335	<0.0833	<0.0833	0
l Alkanes						
Chlorinated	1,1-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,1-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	2-chlorotol	mg/m3	0.08333335	<0.0833	<0.0833	0
	4-chlorotol	mg/m3	0.08333335	<0.0833	<0.0833	0
	cis-1,2-dich	mg/m3	0.08333335	<0.0833	<0.0833	0
	cis-1,3-dich	mg/m3	0.08333335	<0.0833	<0.0833	0
	Tetrachlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	trans-1,3-d	mg/m3	0.08333335	<0.0833	<0.0833	0
	Trichloroeth	mg/m3	0.08333335	<0.0833	<0.0833	0
	Vinyl Chlor	mg/m3	0.08333335	<0.0833	<0.0833	0
l Alkenes						
Trihalomet	Bromodich	mg/m3	0.08333335	<0.0833	<0.0833	0
	Chloroform	mg/m3	0.08333335	<0.0833	<0.0833	0
	Dibromoch	mg/m3	0.08333335	<0.0833	<0.0833	0
	Tribromom	mg/m3	0.08333335	<0.0833	<0.0833	0
anes						
TRHs (NEP	>C10-C16	mg/m3	1.666667	<1.6667	<1.6667	0
	C6-C10 Fra	mg/m3	1.666667	<1.6667	<1.6667	0
C 2013)						
BTEX	Benzene	mg/m3	0.08333335	<0.0833	<0.0833	0
	Ethylbenze	mg/m3	0.08333335	<0.0833	<0.0833	0
	Toluene	mg/m3	0.08333335	<0.0833	<0.0833	0
	Xylene (To	mg/m3	0.25000005	<0.25	<0.25	0
Polycyclic A	Naphthalen	mg/m3	0.08333335	<0.0833	<0.0833	0
Aromatic Hydrocarbons						
Monocyclic	1,2,4-trime	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,3,5-trime	mg/m3	0.08333335	<0.0833	<0.0833	0
	4-isopropyl	mg/m3	0.08333335	<0.0833	<0.0833	0

Filter: ALL

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Field Duplicates (GAS)
Filter: ALL

			SDG	545643	545643	
			Field ID	SV01_FRONT	QC01_SV_FRONT	**RPD**
			Sampled Date/Time	5/5/2017	5/5/2017	
	Isopropylbe	mg/m3	0.08333335	<0.0833	<0.0833	0
	n-butyl ben	mg/m3	0.08333335	<0.0833	<0.0833	0
	n-propyl be	mg/m3	0.08333335	<0.0833	<0.0833	0
	sec-butyl b	mg/m3	0.08333335	<0.0833	<0.0833	0
	Styrene	mg/m3	0.8333335	<0.8333	<0.8333	0
	Tert-butyl b	mg/m3	0.08333335	<0.0833	<0.0833	0
Aromatic Hydrocarbons						
Miscellaneo	1,2-dibrom	mg/m3	0.08333335	<0.0833	<0.0833	0
	Dibromome	mg/m3	0.08333335	<0.0833	<0.0833	0
ous Hydrocarbons						
Chlorinated	1,2,3-trichl	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,2,4-trichl	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,2-Dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,3-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,4-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	Chlorobenz	mg/m3	0.08333335	<0.0833	<0.0833	0
l Benzenes						
Miscellaneo	Hexachlor	mg/m3	0.08333335	<0.0833	<0.0833	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 (1-20 x EQL); 30 (2
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories.

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Version: 1, Version Date: 29/01/2021

Field Duplicates (GAS)
Filter: ALL

SDG	545643	545643	
Field ID	SV01_BACK	QC01_SV_BACK	**RPD**
Sampled Date/Time	5/5/2017	5/5/2017	

Chem_Gro	ChemNam	Units	EQL			
Organic Alc	Isopropyl a	mg/m3	1.666667	<1.6667	<1.6667	0
cohols						
Chlorinated	1,1,1,2-tetr	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,1,1-trichl	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,1,2,2-tetr	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,1,2-trichl	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,1-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,2,3-trichl	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,2-dibrom	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,2-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,2-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,3-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	2,2-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	Bromochlo	mg/m3	0.08333335	<0.0833	<0.0833	0
	Carbon tet	mg/m3	0.08333335	<0.0833	<0.0833	0
	Trichloroflu	mg/m3	0.08333335	<0.0833	<0.0833	0
l Alkanes						
Chlorinated	1,1-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,1-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	2-chlorotol	mg/m3	0.08333335	<0.0833	<0.0833	0
	4-chlorotol	mg/m3	0.08333335	<0.0833	<0.0833	0
	cis-1,2-dich	mg/m3	0.08333335	<0.0833	<0.0833	0
	cis-1,3-dich	mg/m3	0.08333335	<0.0833	<0.0833	0
	Tetrachlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	trans-1,3-d	mg/m3	0.08333335	<0.0833	<0.0833	0
	Trichloroeth	mg/m3	0.08333335	<0.0833	<0.0833	0
	Vinyl Chlor	mg/m3	0.08333335	<0.0833	<0.0833	0
l Alkenes						
Trihalomeths	Bromodich	mg/m3	0.08333335	<0.0833	<0.0833	0
	Chloroform	mg/m3	0.08333335	<0.0833	<0.0833	0
	Dibromoch	mg/m3	0.08333335	<0.0833	<0.0833	0
	Tribromom	mg/m3	0.08333335	<0.0833	<0.0833	0
anes						
TRHs (NEP	>C10-C16	mg/m3	1.666667	<1.6667	<1.6667	0
	C6-C10 Fra	mg/m3	1.666667	<1.6667	<1.6667	0
C 2013)						
BTEX	Benzene	mg/m3	0.08333335	<0.0833	<0.0833	0
	Ethylbenze	mg/m3	0.08333335	<0.0833	<0.0833	0
	Toluene	mg/m3	0.08333335	<0.0833	<0.0833	0
	Xylene (To	mg/m3	0.25000005	<0.25	<0.25	0
Polycyclic A	Naphthalen	mg/m3	0.08333335	<0.0833	<0.0833	0
Aromatic Hydrocarbons						
Monocyclic	1,2,4-trime	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,3,5-trime	mg/m3	0.08333335	<0.0833	<0.0833	0
	4-isopropyl	mg/m3	0.08333335	<0.0833	<0.0833	0

Filter: ALL

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Field Duplicates (GAS)
Filter: ALL

			SDG	545643	545643	
			Field ID	SV01_BACK	QC01_SV_BACK	**RPD**
			Sampled Date/Time	5/5/2017	5/5/2017	
	Isopropylbe	mg/m3	0.08333335	<0.0833	<0.0833	0
	n-butyl ben	mg/m3	0.08333335	<0.0833	<0.0833	0
	n-propyl be	mg/m3	0.08333335	<0.0833	<0.0833	0
	sec-butyl b	mg/m3	0.08333335	<0.0833	<0.0833	0
	Styrene	mg/m3	0.8333335	<0.8333	<0.8333	0
	Tert-butyl b	mg/m3	0.08333335	<0.0833	<0.0833	0
Aromatic Hydrocarbons						
Miscellaneo	1,2-dibrom	mg/m3	0.08333335	<0.0833	<0.0833	0
	Dibromome	mg/m3	0.08333335	<0.0833	<0.0833	0
ous Hydrocarbons						
Chlorinated	1,2,3-trichl	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,2,4-trichl	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,2-Dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,3-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	1,4-dichlor	mg/m3	0.08333335	<0.0833	<0.0833	0
	Chlorobenz	mg/m3	0.08333335	<0.0833	<0.0833	0
l Benzenes						
Miscellaneo	Hexachlor	mg/m3	0.08333335	<0.0833	<0.0833	0

*RPDs have only been considered where a concentratior
**High RPDs are in bold (Acceptable RPDs for each EQL 0-30 x EQL); 30 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound b Any methods in the row header relate to th

Filter: ALL

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Field Duplicates (SOIL)
Filter: ALL

		SDG	545235	545235		545235	545235		548083	548083		545235	ENVIROLAB 2017-05-11T00:00:00		545235	ENVIROLAB 2017-05-11T00:00:00		
		Field ID	JB18_0.1-0.2	QC20160506_1	**RPD**	JB09_0.15-0.20	QC20160506_2	**RPD**	JHA07_1.3-1.5	QC20170526-1	**RPD**	JB18_0.1-0.2	QA20170506-1	**RPD**	JB09_0.15-0.20	QA20170506-2	**RPD**
		Sampled Date/Time	5/6/2017	5/6/2017		5/6/2017	5/6/2017		5/26/2017	5/26/2017		5/6/2017	5/6/2017		5/6/2017	5/6/2017	
Chem_Grd	**ChemName**	**Units**	**EQL**														
Metals & M	Arsenic (Tc	mg/kg	2 (Primary): 4 (Interlab)	7.5	8.6	14	10.0	8.1	21	**7.0**	**2.9**	**83**	**7.5**	**4.0**	**61**	10.0	6.0	50
	Cadmium	mg/kg	0.4	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0
	Chromium	mg/kg	5 (Primary): 1 (Interlab)	39.0	50.0	25	46.0	42.0	9	11.0	8.0	32	39.0	38.0	3	**46.0**	**32.0**	**36**
	Copper	mg/kg	5 (Primary): 1 (Interlab)	6.2	<5.0	21	**28.0**	**16.0**	**55**	**19.0**	**9.8**	**64**	6.2	5.0	21	**28.0**	**15.0**	**60**
	Lead	mg/kg	5 (Primary): 1 (Interlab)	12.0	12.0	0	15.0	20.0	29	12.0	8.3	36	12.0	8.0	40	15.0	14.0	7
	Mercury (H	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
	Nickel	mg/kg	5 (Primary): 1 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	2.0	0	<5.0	4.0	0
	Zinc	mg/kg	5 (Primary): 1 (Interlab)	<5.0	<5.0	0	**7.2**	**21.0**	**98**	18.0	12.0	40	<5.0	3.0	0	7.2	11.0	42
etalloids																		
Chlorinated	1,1,1,2-tetr	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	1,1,1-trichl	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	1,1,2,2-tetr	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	1,1,2-trichl	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	1,1-dichlor	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	1,2,3-trichl	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	1,2-dichlor	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	1,2-dichlor	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	1,3-dichlor	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Bromochlo	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Carbon tet	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Chloroetha	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Chloromet	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Dichlorodif	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Dichlorome	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0	<0.5					
	Trichlorofl	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
l Alkanes																		
Chlorinated	1,1-dichlor	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	3-chloropro	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0	<0.5					
	4-chlorotol	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	cis-1,2-dich	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	cis-1,3-dich	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Tetrachloro	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	trans-1,2-d	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	trans-1,3-d	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Trichloroet	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Vinyl Chlor	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
l Alkenes																		
Trihalomet	Bromodich	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Chloroform	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Dibromoch	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Tribromom	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
xanes																		
TPHs (NEP	C6-C9 Fra	mg/kg	20 (Primary): 25 (Interlab	<20.0	<20.0	0							<20.0	<25.0	0			
	C10-C14 F	mg/kg	20 (Primary): 50 (Interlab	<20.0	<20.0	0							<20.0	<50.0	0			
	C15-C28 F	mg/kg	50 (Primary): 100 (Interla	<50.0	<50.0	0							<50.0	<100.0	0			
	C29-C36 F	mg/kg	50 (Primary): 100 (Interla	<50.0	<50.0	0							<50.0	<100.0	0			
	C10-C36 F	mg/kg	50	<50.0	<50.0	0							<50.0					
°C 1999)																		
TRHs (NEP	>C10-C16	mg/kg	50	<50.0	<50.0	0							<50.0	<50.0	0			
	>C16-C34	mg/kg	100	<100.0	<100.0	0							<100.0	<100.0	0			
	>C34-C40	mg/kg	100	<100.0	<100.0	0							<100.0	<100.0	0			
	>C10-C16	mg/kg	50	<50.0	<50.0	0							<50.0	<50.0	0			
	C6-C10 Fra	mg/kg	20 (Primary): 25 (Interlab	<20.0	<20.0	0							<20.0	<25.0	0			
	C6-C10 less	mg/kg	20 (Primary): 25 (Interlab	<20.0	<20.0	0							<20.0	<25.0	0			
°C 2013)																		
BTEX	Benzene	mg/kg	0.1 (Primary): 0.2 (Interla	<0.1	<0.1	0							<0.1	<0.2	0			
	Ethylbenze	mg/kg	0.1 (Primary): 1 (Interlab	<0.1	<0.1	0							<0.1	<1.0	0			
	Toluene	mg/kg	0.1							<0.1	<0.1	0						
	Toluene	mg/kg	0.1 (Primary): 0.5 (Interla	<0.1									<0.1	<0.5	0			
	Xylene (o)	mg/kg	0.1 (Primary): 1 (Interlab	<0.1	<0.1	0							<0.1	<1.0	0			
	Xylene (m	mg/kg	0.2 (Primary): 2 (Interlab	<0.2	<0.2	0							<0.2	<2.0	0			
	Xylene (To	mg/kg	0.3 (Primary): 1 (Interlab	<0.3	<0.3	0				<0.3	<0.3	0	<0.3	<1.0	0			
Polycyclic A	Acenaphth	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Acenaphth	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Anthracene	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Benz(a)ant	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Benzo(a)py	mg/kg	0.5 (Primary): 0.05 (Inter	<0.5	<0.5	0							<0.5	<0.05	0			
	Benzo(a)py	mg/kg	0.5	<0.5	<0.5	0							<0.5	<0.5	0			
	Benzo(a)py	mg/kg	0.5	0.6	0.6	0							0.6	<0.5	18			
	Benzo(a)py	mg/kg	0.5	1.2	1.2	0							**1.2**	**<0.5**	**82**			
	Benzo(b,j)f	mg/kg	0.5	<0.5	<0.5	0							<0.5					
	Benzo(g,h,	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Benzo(k)fl	mg/kg	0.5	<0.5	<0.5	0							<0.5					
	Chrysene	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Dibenz(a,h	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Fluoranthe	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Fluorene	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Indeno(1,2	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Naphthaler	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0							<0.5	<0.1	0			
	Naphthaler	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0							<0.5	<0.1	0			
	Phenanthre	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Pyrene	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	PAHs (Tot	mg/kg	0.5	<0.5	<0.5	0							<0.5					
romatic Hydrocarbons																		
Monocyclic	1,2,4-trime	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	1,3,5-trime	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Bromoben	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Isopropylbe	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Styrene	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
Aromatic Hydrocarbons																		
Miscellaneo	1,2-dibrom	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	2-Butanone	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0	<0.5					
	4-Methyl-2	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0	<0.5					
	Bromomet	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Dibromome	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Iodomethan	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0	<0.5					
us Hydrocarbons																		
Chlorinated	1,2-Dichlor	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	1,3-dichlor	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	1,4-dichlor	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Chloroben	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<1.0	0			
	Hexachloro	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
Benzenes																		
Solvents	2-Propanol	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0	<0.5					
Polychlorin	Aroclor 10	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Aroclor 12	mg/kg	0.1	<0.1	<0.1	0							<0.1	<0.1	0			
	Aroclor 12	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Aroclor 12	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Aroclor 12	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Aroclor 12	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	Aroclor 12	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
	PCBs (Tota	mg/kg	0.5 (Primary): 0.1 (Interla	<0.5	<0.5	0							<0.5	<0.1	0			
ated Biphenyls																		
Phenols	Phenols (T	mg/kg	0.1 (Primary): 5 (Interlab	<0.1	<0.1	0							<0.1	<5.0	0			
Organic Su	Carbon dis	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0	<0.5					
fur Compounds																		
Organochl	4,4-DDE	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	Aldrin	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	alpha-BHC	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	beta-BHC	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	Dieldrin	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	DDD	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	DDT	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	Chlordane	mg/kg	0.1	<0.1	<0.1	0							<0.1					
	delta-BHC	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	Endosulfan	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	Endosulfan	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	Endosulfan	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	Endrin	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	Endrin alde	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	Endrin ketc	mg/kg	0.05	<0.05	<0.05	0							<0.05					
	Heptachlor	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	Heptachlor	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	Lindane	mg/kg	0.05 (Primary): 0.1 (Inter	<0.05	<0.05	0							<0.05	<0.1	0			
	Methoxych	mg/kg	0.2 (Primary): 0.1 (Interla	<0.2	<0.2	0							<0.2	<0.1	0			
	Toxaphene	mg/kg	1	<1.0	<1.0	0							<1.0					
rine Pesticides																		
Asbestos	Approx. Sa	G		506.0	752.0	39							506.0					
	Asbestos fi	%w/w		0.0	0.0	0							0.0					
	Asbestos fi	%w/w		0.0	0.0	0							0.0					
	Mass ACM	G		0.0	0.0	0							0.0					
	Mass Asbe	G		0.0	0.0	0							0.0					
	Mass FA	G		0.0	0.0	0							0.0					
	Mass Asbe	G		0.0	0.0	0							0.0					
	Mass AF	G		0.0	0.0	0							0.0					
	Mass Asbe	G		0.0	0.0	0							0.0					
	Mass Asbe	G		0.0	0.0	0							0.0					
Asbestos -	ACM - Con	COMMENT		1.0	1.0	0							1.0					
	AF - Comm	COMMENT		1.0	1.0	0							1.0					
	FA - Comm	COMMENT		1.0	1.0	0							1.0					
	Organic Fib	COMMENT		1.0	1.0	0							1.0					
	Respirable	COMMENT		1.0	1.0	0							1.0					
	Synthetic F	COMMENT		1.0	1.0	0							1.0					
Trace Analysis																		
Other	% Moisture	%	1	8.1	6.4	23	8.9	14.0	45	25.0	23.0	8	8.1			8.9		

*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 (1-20 x EQL); 30 (20-30 x EQL); 30 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

Field Duplicates (WATER)
Filter: ALL

SDG	548083	548083		548083	548083		548083	ENVIROLAB 2017-05-29T00:00:00	
Field ID	PSM01	QC01_W	**RPD**	PSM01	QC01_W	**RPD**	PSM01	QC01-W/A	**RPD**
Sampled Date/Time	5/26/2017	5/26/2017		5/26/2017	5/26/2017		5/26/2017	5/26/2017	

Chem_Gro	ChemNam	Units	EQL									
Metals & M	Arsenic (T	mg/l	0.001	0.001	<0.001	0				0.001	<0.001	0
	Cadmium	mg/l	0.0002 (Primary): 0.0001	<0.0002	<0.0002	0				<0.0002	<0.0001	0
	Chromium	mg/l	0.001	<0.001	0.001	0				<0.001	<0.001	0
	Copper (Fi	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Lead (Filte	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Mercury (I	mg/l	0.0001 (Primary): 0.0000	**0.0002**	**<0.0001**	**67**				**0.0002**	**<0.0001**	**120**
	Nickel (Filt	mg/l	0.001	0.004	0.004	0				0.004	0.005	22
	Zinc (Filter	mg/l	0.005 (Primary): 0.001 (	<0.005	<0.005	0				<0.005	0.003	0
etalloids												
Chlorinated	1,1,1,2-tetr	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	1,1,1-trichl	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	1,1,2,2-tetr	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	1,1,2-trichl	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	1,1-dichlor	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	1,2,3-trichl	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	1,2-dichlor	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	1,2-dichlor	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	1,3-dichlor	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Bromochlo	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Carbon tet	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Chloroetha	mg/l	0.001 (Primary): 0.01 (Ir	<0.001	<0.001	0				<0.001	<0.01	0
	Chlorometl	mg/l	0.001 (Primary): 0.01 (Ir	<0.001	<0.001	0				<0.001	<0.01	0
	Dichlorodif	mg/l	0.001 (Primary): 0.01 (Ir	<0.001	<0.001	0				<0.001	<0.01	0
	Dichlorome	mg/l	0.001	<0.001	<0.001	0				<0.001		
	Trichlorofl	mg/l	0.001 (Primary): 0.01 (Ir	<0.001	<0.001	0				<0.001	<0.01	0
l Alkanes												
Chlorinated	1,1-dichlor	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	3-chloropr	mg/l	0.001	<0.001	<0.001	0				<0.001		
	4-chlorotol	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	cis-1,2-dic	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	cis-1,3-dic	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Tetrachlor	mg/l	0.001	0.059	0.051	15				0.059	0.049	19
	trans-1,2-d	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	trans-1,3-d	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Trichloroet	mg/l	0.001	<0.001	<0.001	0				<0.001	0.001	0
	Vinyl Chlor	mg/l	0.001 (Primary): 0.01 (Ir	<0.001	<0.001	0				<0.001	<0.01	0
l Alkenes												
Trihalomet	Bromodich	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Chloroform	mg/l	0.005 (Primary): 0.001 (	<0.005	<0.005	0				<0.005	<0.001	0
	Dibromoch	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Tribromom	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
nanes												
TPHs (NEI	C6-C9 Fra	mg/l	0.02 (Primary): 0.01 (Int	0.15	0.15	0				0.15	0.15	0
	C10-C14 F	mg/l	0.05	<0.05	<0.05	0				<0.05	<0.05	0
	C15-C28 F	mg/l	0.1	**1.1**	**0.4**	**93**				**1.1**	**0.18**	**144**
	C29-C36 F	mg/l	0.1	0.1	<0.1	0				0.1	<0.1	0
	C10-C36 F	mg/l	0.1	**1.2**	**0.4**	**100**				1.2		
C 1999)												
TRHs (NEI	>C10-C16	mg/l	0.05	<0.05	<0.05	0				<0.05	<0.05	0
	>C16-C34	mg/l	0.1	**1.2**	**0.4**	**100**				**1.2**	**0.16**	**153**
	>C34-C40	mg/l	0.1	<0.1	<0.1	0				<0.1	<0.1	0
	>C10-C16	mg/l	0.05	<0.05	<0.05	0				<0.05	<0.05	0
	C6-C10 Fr	mg/l	0.02 (Primary): 0.01 (Int	0.15	0.15	0				0.15	0.17	13
	C6-C10 les	mg/l	0.02 (Primary): 0.01 (Int	0.08	0.08	0				0.08	0.076	5
C 2013)												
BTEX	Benzene	mg/l	0.001	<0.001						<0.001	<0.001	0
	Ethylbenze	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Toluene	mg/l	0.001	0.073	0.072	1				0.073	0.094	25
	Xylene (o)	mg/l	0.001	<0.001						<0.001	<0.001	0
	Xylene (m	mg/l	0.002	<0.002						<0.002	<0.002	0
Polycyclic A	Acenaphth	mg/l	0.00005				<0.0001	<0.0001	0			
	Acenaphth	mg/l	0.00005				<0.0001	<0.0001	0			
	Anthracen	mg/l	0.00005				<0.0001	<0.0001	0			
	Benz(a)an	mg/l	0.00005				<0.0001	<0.0001	0			
	Benzo(a)p	mg/l	0.00001				<0.0	0.0	0			
	Benzo(b,j)f	mg/l	0.00005				<0.0001	<0.0001	0			
	Benzo(g,h,	mg/l	0.00005				<0.0001	<0.0001	0			
	Benzo(k)flu	mg/l	0.00005				<0.0001	<0.0001	0			
	Chrysene	mg/l	0.00005				<0.0001	<0.0001	0			
	Dibenz(a,h	mg/l	0.00005				<0.0001	<0.0001	0			
	Fluoranthe	mg/l	0.00005				<0.0001	<0.0001	0			
	Fluorene	mg/l	0.00005				<0.0001	<0.0001	0			
	Indeno(1,2	mg/l	0.00005				<0.0001	<0.0001	0			
	Naphthale	mg/l	0.01 (Primary): 0.001 (Ir	<0.01	<0.01	0				<0.01	<0.0002	0
	Naphthale	mg/l	0.00005				0.0001	0.0002	35			
	Phenanthr	mg/l	0.00005				0.0001	0.0001	46			
	Pyrene	mg/l	0.00005				<0.0001	<0.0001	0			
	PAHs (Tot	mg/l	0.00005				0.0002	0.0003	17			
Aromatic Hydrocarbons												
Monocyclic	1,2,4-trime	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	1,3,5-trime	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Bromoben	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Isopropylb	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Styrene	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
Aromatic Hydrocarbons												
Miscellane	1,2-dibrom	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	2-Butanon	mg/l	0.001	<0.001	<0.001	0				<0.001		
	4-Methyl-2	mg/l	0.001	<0.001	<0.001	0				<0.001		
	Bromomet	mg/l	0.001 (Primary): 0.01 (Ir	<0.001	<0.001	0				<0.001	<0.01	0
	Dibromom	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Iodometha	mg/l	0.001	<0.001	<0.001	0				<0.001		
ous Hydrocarbons												
Chlorinated	1,2-Dichlor	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	1,3-dichlor	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	1,4-dichlor	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
	Chloroben	mg/l	0.001	<0.001	<0.001	0				<0.001	<0.001	0
l Benzenes												
Solvents	2-Propano	µg/l	1	21.0	21.0	0				21.0		
Organic Su	Carbon dis	mg/l	0.001	<0.001	<0.001	0				<0.001		

*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 (1-20 x EQL); 30 (20-30 x EQL); 30 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laborat

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Surrogate Variation > 30% or outside lab LCL or UCL

SDG	Expr1001	Lab_Report_Number	Sample_Type	Matrix_Type	SampleCode	Field_ID	Depth	Sampled_Date-Time	Compound	Recovery %	Unit	LCL	UCL	Lab_Qualifier	Lab_Comments
545235	545235	545235	Normal	SOIL	S17-My07740	JB11_0.05-0.15	0.05 - 0.15	5/6/2017	Dibutylchlorendate (surr.)	134	%	70	130		
545235	545235	545235	Normal	SOIL	S17-My07851	JB17_0.1-0.25	0.1 - 0.25	5/7/2017	4-Bromofluorobenzene (surr.)	141	%	70	130		
545235	545235	545235	Normal	SOIL	S17-My07857	JB14_0.1-0.3	0.1 - 0.3	5/7/2017	4-Bromofluorobenzene (surr.)	149	%	70	130		
545235	545235	545235	Normal	SOIL	S17-My07879	JB01_0.05-0.3	0.05 - 0.3	5/7/2017	p-Terphenyl-d14 (surr.)	134	%	30	130		
545235	545235	545235	Rinsate	WATER	S17-My07886	RINS 6-5-17	RINS	5/6/2017	p-Terphenyl-d14 (surr.)	142	%	30	130		
545235	545235	545235	Rinsate	WATER	S17-My07887	RINS 7-5-17	RINS	5/7/2017	p-Terphenyl-d14 (surr.)	145	%	30	130		
545643	545643	545643	Normal	GAS	S17-My10374	SV05_FRONT	FRONT	5/5/2017	Fluorobenzene (surr.)	132	%	50	150		
548083	548083	548083	Rinsate	WATER	S17-My29209	RINS	RINS	5/26/2017	Fluorobenzene (surr.)	67	%	50	150		
548083	548083	548083	Rinsate	WATER	S17-My29209	RINS	RINS	5/26/2017	Tetrachloro-m-xylene (surr.)	62	%	70	130		
548083	548083	548083	Rinsate	WATER	S17-My29209	RINS	RINS	5/26/2017	2-Fluorobiphenyl (surr.)	0	%	30	130		
548083	548083	548083	Rinsate	WATER	S17-My29209	RINS	RINS	5/26/2017	p-Terphenyl-d14 (surr.)	0	%	30	130		
548083	548083	548083	Rinsate	WATER	S17-My29209	RINS	RINS	5/26/2017	Phenol-d6 (surr.)	0	%	20	130		
548083	548083	548083	Normal	SOIL	S17-My29193	JHA01_0.25-0.4	JHA010.25 -	5/26/2017	2-Fluorobiphenyl (surr.)	146	%	30	130		
548083	548083	548083	Normal	SOIL	S17-My29193	JHA01_0.25-0.4	JHA010.25 -	5/26/2017	4-Bromofluorobenzene (surr.)	68	%	70	130		
548083	548083	548083	Normal	SOIL	S17-My29195	JHA02_0.3-0.5	JHA020.3 - 0	5/26/2017	4-Bromofluorobenzene (surr.)	63	%	70	130		
548083	548083	548083	Normal	SOIL	S17-My29196	JHA04_0.2-0.4	JHA040.2 - 0	5/26/2017	p-Terphenyl-d14 (surr.)	67	%	30	130		
548083	548083	548083	Normal	SOIL	S17-My29200	JHA06_0.4-0.6	JHA060.4 - 0	5/26/2017	4-Bromofluorobenzene (surr.)	65	%	70	130		
548083	548083	548083	Normal	SOIL	S17-My29202	JHA07_0.4-0.6	JHA070.4 - 0	5/26/2017	Fluorobenzene (surr.)	63	%	50	150		
548083	548083	548083	Normal	SOIL	S17-My29203	JHA07_1.3-1.5	JHA071.3 - 1	5/26/2017	Fluorobenzene (surr.)	59	%	50	150		
548083	548083	548083	Normal	WATER	S17-My29206	PSM01	PSM01	5/26/2017	Fluorobenzene (surr.)	68	%	50	150		
548083	548083	548083	Field_D	WATER	S17-My29212	QC01_W	PSM01	5/26/2017	Fluorobenzene (surr.)	69	%	50	150		
548083	548083	548083	Field_D	SOIL	S17-My29213	QC20170526-1	JHA07	5/26/2017	Fluorobenzene (surr.)	59	%	50	150		
548083	548083	548083	Normal	WATER	S17-My29214	PSM01	PSM01	5/26/2017	2-Fluorobiphenyl (surr.)	67	%	30	130		
548083	548083	548083	Normal	WATER	S17-My29215	PSM02	PSM02	5/26/2017	2-Fluorobiphenyl (surr.)	67	%	30	130		
548083	548083	548083	Normal	WATER	S17-My29216	PSM03	PSM03	5/26/2017	2-Fluorobiphenyl (surr.)	68	%	30	130		
548083	548083	548083	Field_D	WATER	S17-My29217	QC01_W	PSM01	5/26/2017	2-Fluorobiphenyl (surr.)	63	%	30	130		

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Laboratory Control Samples, Error > 30%

SDG	Matrix_Type	SampleCode	Method_Name	OriginalChemName	Recovery %	Unit	Result_Type	Lab_Comments
548083	WATER	LCS_13_548083	E008 Speciated Phenols	2-Methylphenol (o-Cresol)	61	%	REG	
548083	WATER	LCS_13_548083	E008 Speciated Phenols	3&4-Methylphenol (m&p-Cresol)	54	%	REG	

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Matrix Spike Recoveries less than 70% or greater than 130% or outside lab LCL or UCL

SDG	Lab_Report_Number	Matrix_Type	SampleCode	Field_ID	Depth	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	Lab_Comments
ENVIROLAB 2017-05-11T00:00:00	166525	SOIL	166525-1MS				Org-014 - VOC in soil	dibromochloromethane	131	REG	
548083	548083	SOIL	S17-My29201-SPK	JHA06_1.0-1.2	JHA061 - 1.2	5/26/2017	E013 Organochlorine Pesticides (OC)	Heptachlor	51	SC	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference

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Trip Spike Recoveries (70% - 130% is acceptable)

SDG	Lab_Report_Number	Matrix_Type	SampleCode	Field_ID	Method_Name	Compound	Trip_Spike_Result	Trip_Spike_Control	Result_Units	Spike_Recovery_%	Acceptable	Result_Type	Lab_Comments
545235	545235	WATER	S17-My07889	TS	TRH C6-C40 - LTM-ORG-2010	Benzene	NA	NA	NA	105	Y	REG	
545235	545235	WATER	S17-My07889	TS	TRH C6-C40 - LTM-ORG-2010	Ethylbenzene	NA	NA	NA	92	Y	REG	
545235	545235	WATER	S17-My07889	TS	TRH C6-C40 - LTM-ORG-2010	m&p-Xylenes	NA	NA	NA	88	Y	REG	
545235	545235	WATER	S17-My07889	TS	TRH C6-C40 - LTM-ORG-2010	o-Xylene	NA	NA	NA	85	Y	REG	
545235	545235	WATER	S17-My07889	TS	TRH C6-C40 - LTM-ORG-2010	Toluene	NA	NA	NA	92	Y	REG	
545235	545235	WATER	S17-My07889	TS	TRH C6-C40 - LTM-ORG-2010	Xylenes - Total	NA	NA	NA	87	Y	REG	
548083	548083	WATER	S17-My29210	TS	TRH C6-C40 - LTM-ORG-2010	Benzene	NA	NA	NA	111	Y	REG	
548083	548083	WATER	S17-My29210	TS	TRH C6-C40 - LTM-ORG-2010	Ethylbenzene	NA	NA	NA	92	Y	REG	
548083	548083	WATER	S17-My29210	TS	TRH C6-C40 - LTM-ORG-2010	m&p-Xylenes	NA	NA	NA	102	Y	REG	
548083	548083	WATER	S17-My29210	TS	TRH C6-C40 - LTM-ORG-2010	o-Xylene	NA	NA	NA	103	Y	REG	
548083	548083	WATER	S17-My29210	TS	TRH C6-C40 - LTM-ORG-2010	Toluene	NA	NA	NA	98	Y	REG	
548083	548083	WATER	S17-My29210	TS	TRH C6-C40 - LTM-ORG-2010	Xylenes - Total	NA	NA	NA	103	Y	REG	

Appendix N Field Borehole Logs

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JB01

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/07/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - GRAVEL Subgrade		
		0.05		Fill	Fill - Sandy CLAY - dark brown, heterogeneous, loose, damp, organic colouration/odour, small glass fragments	JB01 0.05-0.3 PID = 0.4 ppm	No Odours, No Staining, No ACM
		0.30		CL-ML	Sandy CLAY - red-brown/ light brown with grey mottles, homogeneous, firm, damp, medium-high plasticity	JB01 0.3-0.4 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5						
	1.0					JB01 1.1-1.2 PID = 0.1 ppm	No Odours, No Staining, No ACM
		1.20			Borehole JB01 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

BOREHOLE JBSG BOREHOLE.GPJ GINT STD AUSTRALIA.GDT 19/5/17

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JB02

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/07/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - GRAVEL Subgrade		
		0.05		Fill	Fill - Sandy CLAY - brown-light brown, heterogeneous, loose, dry, brick and gravel fragments	JB02 0.05-0.25 PID = 0.3 ppm	No Odours, No Staining, No ACM
		0.25		CL-ML	Silty CLAY - light brown with grey mottles, homogeneous, firm, damp, medium-high plasticity	JB02 0.25-0.35 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5						
	1.0					JB02 1.1-1.2 PID = 0.1 ppm	No Odours, No Staining, No ACM
		1.20			Borehole JB02 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

BOREHOLE JBSG BOREHOLE.GPJ GINT STD AUSTRALIA.GDT 19/5/17

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JB03

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/07/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - GRAVEL Subgrade		
		0.05		Fill	Fill - Silty SAND - grey, heterogeneous, loose, damp, medium-fine grained, gravel throughout	JB03 0.05-0.2 PID = 0.2 ppm	No Odours, No Staining, No ACM
		0.20		Fill	Sandy CLAY - dark brown, heterogeneous, loose, damp, inclusions of small metal fragments	JB03 0.2-0.45 PID = 0.2 ppm	No Odours, No Staining, No ACM
	0.5	0.45		CL-ML	Silty CLAY - light brown with grey-orange mottles, homogeneous, firm, medium-high plasticity	JB03 0.45-0.65 PID = 0.1 ppm	No Odours, No Staining, No ACM
	1.0						
						JB03 1.1-1.2 PID = 0.1 ppm	No Odours, No Staining, No ACM
		1.20			Borehole JB03 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

BOREHOLE JBSG BOREHOLE.GPJ GINT STD AUSTRALIA.GDT 19/5/17

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

JB04

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/07/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.10		Fill	Fill - Sandy CLAY - light brown with red mottles, heterogeneous, loose, dry, brick and gravel fragments	JB04 0.1-0.2 PID = 0.2 ppm	No Odours, No Staining, No ACM
	0.5					JB04 0.4-0.5 PID = 0.2 ppm	No Odours, No Staining, No ACM
		0.50		CL-ML	Silty CLAY - light brown with grey mottles, homogeneous, firm, damp, medium-high plasticity	JB04 0.5-0.6 PID = 0.1 ppm	No Odours, No Staining, No ACM
	1.0						
						JB04 1.1-1.2 PID = 0.2 ppm	No Odours, No Staining, No ACM
		1.20			Borehole JB04 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JB05

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/07/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.10		Fill	Fill - Sandy CLAY - light brown with red mottles, heterogeneous, loose, dry, metal, glass and brick fragments	JB05 0.1-0.2 PID = 0.3 ppm	No Odours, No Staining, No ACM
	0.5					JB05 0.5-0.6 PID = 0.1 ppm	No Odours, No Staining, No ACM
		0.60		CL-ML	Silty CLAY - light brown with grey mottles, homogeneous, firm, damp, medium-high plasticity	JB05 0.6-0.7 PID = 0.1 ppm	No Odours, No Staining, No ACM
	1.0					JB05 1.1-1.2 PID = 0.2 ppm	No Odours, No Staining, No ACM
		1.20			Borehole JB05 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JB06

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/06/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.10		Fill	Fill - Sandy CLAY - yellow/ brown, heterogeneous, dample medium plasticity, medium sized black-orange gravels	JB06 0.1-0.2 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5	0.40		CL-ML	Silty CLAY - grey, homogeneous, firm, low plasticity	JB06 0.4-0.5 PID = 0.1 ppm	No Odours, No Staining, No ACM
		0.60		CL-ML	Silty CLAY - light grey, homogeneous, firm, low plasticity		
	1.0						
		1.20			Borehole JB06 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JB07

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/07/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.10		Fill	Fill - Sandy CLAY - orange/ yellow, heterogeneous, dry, loose, medium-fine grained sands, gravel throughout	JB07 0.1-0.2 PID = 0.2 ppm	No Odours, No Staining, No ACM
		0.20		CL-ML	Silty CLAY - light brown with grey mottles, homogeneous, firm, medium-high plasticity	JB07 0.2-0.3 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5						
	1.0					JB07 1.1-1.2 PID = 0.1 ppm	No Odours, No Staining, No ACM
		1.20			Borehole JB07 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JB08

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/06/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.10		Fill	Fill - Sandy CLAY - yellow/ brown, heterogeneous, damp, medium plasticity, medium sized red-blue gravels	JB08 0.1-0.2 PID = 0.2 ppm	No Odours, No Staining, No ACM
		0.20		CL-ML	Silty CLAY - dark grey/ brown with orange mottles, homogeneous, firm, damp, high plasticity	JB08 0.2-0.3 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5						
		0.60		CL-ML	Silty CLAY - light grey/ brown with increased orange mottles, homogeneous, firm, damp, high plasticity	JB08 0.6-0.7 PID = 0 ppm	No Odours, No Staining, No ACM
	1.0						
		1.20			Borehole JB08 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JB09

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/06/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.15		Fill	Fill - Sandy CLAY - yellow/ brown, heterogeneous, damp, medium plasticity, medium sized red-orange-blue gravels	JB09 0.15-0.2 PID = 0.1 ppm	No Odours, No Staining, No ACM
		0.20		CL-ML	Silty CLAY - dark grey/ brown with orange mottles, homogeneous, firm, damp, high plasticity	JB09 0.2-0.3 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5	0.45		CL-ML	Silty CLAY - light grey/ brown with increased orange mottles, homogeneous, firm, damp, high plasticity	JB09 0.45-0.55 PID = 0.1 ppm	No Odours, No Staining, No ACM
	1.0						
		1.20			Borehole JB09 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JB10

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/07/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.10		Fill	Fill - Sandy CLAY - orange/ brown, heterogeneous, damp, loose, fine-grained sand, medium-large gravels, minor ash	JB10 0.1-0.2 PID = 0 ppm	No Odours, No Staining, No ACM
						JB10 0.3-0.4 PID = 0.1 ppm	No Odours, No Staining, No ACM
		0.40		CL-ML	Silty CLAY - brown/ light brown with grey-orange mottles, firm, damp, medium-high plasticity	JB10 0.4-0.5 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5						
	1.0					JB10 1-1.2 PID = 0.1 ppm	No Odours, No Staining, No ACM
		1.20			Borehole JB10 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JB11

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/06/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - Silty SAND - Silty Sandy Mulch	JB11 0-0.05 PID = 0 ppm	No Odours, No Staining, No ACM
		0.05		Fill	Fill - Silty SAND - brown, heterogeneous, loose, sub-rounded, medium-fine grained, root inclusions	JB11 0.05-0.15 PID = 0.1 ppm	No Odours, No Staining, No ACM
		0.25		Fill	Fill - Gravelly SILT - light yellow/ brown, heterogeneous, soft, wet, fine-grained	JB11 0.25-0.35 PID = 0.1 ppm	No Odours, No Staining, No ACM
		0.35		CL-ML	Silty CLAY - light brown with orange-red mottles, homogeneous, firm, medium plasticity	JB11 0.35-0.45 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5						
	1.0						
		1.20			Borehole JB11 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JB12

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/07/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.10		Fill	Fill - Sandy CLAY - dark brown, heterogeneous, loose, dry, medium-fine grained sand, gravel throughout	JB12 0.1-0.25 PID = 0.2 ppm	No Odours, No Staining, No ACM
		0.25		CL-ML	Silty CLAY - light brown with grey-orange mottles, homogeneous, firm, damp, medium-high plasticity	JB12 0.25-0.35 PID = 0.2 ppm	No Odours, No Staining, No ACM
	0.5						
	1.0					JB12 1.1-1.2 PID = 0.1 ppm	No Odours, No Staining, No ACM
		1.20			Borehole JB12 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JB13

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/07/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.10		Fill	Fill - Clayey SAND - red/ brown, heterogeneous, loose, dry, trace gravel inclusions	JB13 0.1-0.2 PID = 0.2 ppm	No Odours, No Staining, No ACM
		0.20		CL-ML	Silty CLAY - light brown with grey-orange mottles, homogeneous, damp, firm, medium-high plasticity	JB13 0.2-0.3 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5						
	1.0					JB13 1.1-1.2 PID = 0.1 ppm	No Odours, No Staining, No ACM
		1.20			Borehole JB13 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JB14

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/07/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.10		Fill	Fill - Sandy CLAY - red-brown/ dark brown, heterogeneous, organic colouration/odour, gravel throughout	JB14 0.1-0.3 PID = 0.2 ppm	No Odours, No Staining, No ACM
		0.30		CL-ML	Silty CLAY - light brown with grey mottles, homogeneous, firm, damp, medium-high plasticity	JB14 0.3-0.4 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5						
	1.0					JB14 1.1-1.2 PID = 0.1 ppm	No Odours, No Staining, No ACM
		1.20			Borehole JB14 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JB15

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/06/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 2.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.10		Fill	Fill - Sandy CLAY - yellow/ brown, heterogeneous, damp, medium plasticity, blue-orange fine-medium gravels	JB15 0.1-0.2 PID = 0.2 ppm	No Odours, No Staining, No ACM
		0.40		Fill	Fill - Silty CLAY - dark grey/ brown, heterogeneous, damp, medium plasticity, blue-orange fine-medium gravels	JB15 0.4-0.5 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5	0.50		CL-ML	Silty CLAY - grey-brown with orange-light grey mottles, homogeneous, firm	JB15 0.5-0.6 PID = 0.1 ppm	No Odours, No Staining, No ACM
		0.70		CL-ML	Silty CLAY - light brown with orange-light grey mottles, homogeneous, firm		
	1.0						
	1.5						
	2.0						
		2.00		CL-ML	Silty CLAY - grey with orange-light grey mottles, homogeneous, firm		
		2.20			Borehole JB15 terminated at 2.2m		
	2.5						
	3.0						
	3.5						

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JB16

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/06/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.05		Fill	Fill - Sandy SILT - light grey, heterogeneous, soft, damp, non-plastic, blue-orange-red fine-medium grained gravels	JB16 0.05-0.15 PID = 0.2 ppm	No Odours, No Staining, No ACM
		0.35		CL-ML	Silty CLAY - grey with orange mottles, homogeneous, firm, damp, high plasticity	JB16 0.35-0.45 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5	0.45		CL-ML	Silty CLAY - light grey with increas increased orange mottles, homogeneous, firm, damp, high plasticity		
	1.0						
		1.20			Borehole JB16 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JB17

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/07/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.10		Fill	Fill - Sandy CLAY - orange/ brown, heterogeneous, dry, loose, fine-grained sand, gravel throughout	JB17 0.1-0.25 PID = 0.2 ppm	No Odours, No Staining, No ACM
		0.25		CL-ML	Silty CLAY - light brown with grey mottles, homogeneous, damp, firm, medium-high plasticity	JB17 0.25-0.35 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5						
	1.0					JB17 1.1-1.2 PID = 0.1 ppm	No Odours, No Staining, No ACM
		1.20			Borehole JB17 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JB18

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/06/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 2.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.10		Fill	Fill - Sandy CLAY - yellow/ brown, heterogeneous, damp, medium plasticity, blue-orange fine-medium gravels	JB18 0.1-0.2 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5	0.40		Fill	Fill - Silty CLAY - grey/ brown with orange/ light grey mottles, homogeneous, soft, small charcoal pieces	JB18 0.4-0.5 PID = 0.1 ppm	No Odours, No Staining, No ACM
		0.60		CL-ML	Fill - Silty CLAY - light brown with orange/ light grey mottles, homogeneous, firm	JB18 0.6-0.7 PID = 0.1 ppm	No Odours, No Staining, No ACM
	1.0						
		1.40		CL-ML	Fill - Silty CLAY - light grey with orange/ light grey mottles, homogeneous, firm		
	1.5						
	2.0						
		2.20			Borehole JB18 terminated at 2.2m		
	2.5						
	3.0						
	3.5						

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JB19

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/06/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 3.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.10		Fill	Fill - Sandy CLAY - yellow/ brown, heterogeneous, damp, medium plasticity, blue-orange fine-medium gravels	JB19 0.1-0.2 PID = 0.2 ppm	No Odours, No Staining, No ACM
		0.30		Fill	Fill - Silty Gravelly SAND - light yellow/ brown, heterogeneous, dry, fine blue gravels	JB19 0.3-0.4 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5						
	1.0					JB19 0.9-1 PID = 0.1 ppm	No Odours, No Staining, No ACM
	1.5						
		1.60		Fill	Fill - Silty Gravelly SAND - light yellow/ brown, heterogeneous, saturated, coarse blue gravels	JB19 1.6-1.7 PID = 0 ppm	No Odours, No Staining, No ACM
		1.80		CL-ML	Silty CLAY - light brown with grey-orange mottles, stiff, damp, high plasticity	JB19 1.8-1.9 PID = 0 ppm	No Odours, No Staining, No ACM
	2.0						
	2.5						
	3.0						
		3.20			Borehole JB19 terminated at 3.2m		
	3.5						

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JB20

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 5/06/2017
Logged By: Sarah Gray
Contractor: Terratest
Total Hole Depth (mbgs): 3.2
Bore Diameter (mm): 125

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
Push Tube				Fill	Fill - ASPHALT Layer		
		0.05		Fill	Fill - Sandy CLAY - yellow/ brown, heterogeneous, damp, orange-brown fine-medium gravels	JB20 0.05-0.15 PID = 0.1 ppm	No Odours, No Staining, No ACM
	0.5						
		0.50		Fill	Fill - Gravelly Silty SAND - light yellow-brown, heterogeneous, dry, sub-rounded, fine blue gravels	JB20 0.5-0.6 PID = 0.1 ppm	No Odours, No Staining, No ACM
	1.0						
		1.15		Fill	Fill - Silty CLAY - red/ brown, heterogeneous, high plasticity, stiff, fine blue gravels	JB20 1.15-1.25 PID = 0.2 ppm	No Odours, No Staining, No ACM
		1.25		Fill	Fill - Silty CLAY - brown, heterogeneous, firm, medium plasticity, fine blue gravels	JB20 1.25-1.35 PID = 0.1 ppm	No Odours, No Staining, No ACM
	1.5						
		1.50		Fill	Fill - Sandy GRAVEL - brown, heterogeneous, angular, medium-density, fine blue gravels	JB20 1.5-1.6 PID = 0.2 ppm	No Odours, No Staining, No ACM (Bag Collected)
						JB20 1.7-1.8 PID = 0.2 ppm	Slight Odour - No Staining, No ACM (Bag Collected)
		1.80		Fill	Silty CLAY - black, heterogeneous, damp, low plasticity		
		1.90		CL-ML	Silty CLAY - black, heterogeneous, wet, low plasticity	JB20 1.9-2 PID = 0.2 ppm	No Odours, No Staining, No ACM
	2.0						
		2.00		CL-ML	Silty CLAY - brown, homogeneous, wet, stiff		
		2.20		CL-ML	Silty CLAY - grey, homogeneous, wet, stiff		
	2.5						
	3.0						
		3.20			Borehole JB20 terminated at 3.2m		
	3.5						

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JHA01

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 26/05/2017
Logged By: Rohan Hammond
Contractor:
Total Hole Depth (mbgs): 0.7
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
Hand Auger				Fill	Fill - CONCRETE slab		
		0.25		Fill	Fill - SAND - yellow/ brown, homogeneous, poorly graded, coarse, angular, inclusions of soft dark brown clay	JHA01 0.25-0.4 PID = 0 ppm	No Odours, No Staining, No ACM identified
	0.5	0.40		SC	Silty CLAY - yellow/ grey with mottles, high plasticity, no inclusions	JHA01 0.4-0.6 PID = 0 ppm	No Odours, No Staining, No ACM identified
		0.70			Borehole JHA01 terminated at 0.7m		
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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Version: 1, Version Date: 29/01/2021

JHA02

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 26/05/2017
Logged By: Rohan Hammond
Contractor:
Total Hole Depth (mbgs): 0.5
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
Hand Auger				Fill	Fill - CONCRETE slab		
		0.10		Fill	Fill - Gravelly SAND - yellow/ brown, heterogeneous, damp, poorly graded, coarse, inclusions of silt and brick	JHA02 0.1-0.3 PID = 0 ppm	No Odours, No Staining, No ACM identified
		0.30		Fill	Fill - Gravelly SAND - brown-black, heterogeneous, poorly graded, coarse, angular, dense, inclusions of brick, concrete and slag	JHA02 0.3-0.5 PID = 0 ppm	No Odours, No Staining, No ACM identified
	0.5						
		0.50			Borehole JHA02 terminated at 0.5m		Refusal
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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Document Set ID: 9456504
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JHA03

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 26/05/2017
Logged By: Rohan Hammond
Contractor:
Total Hole Depth (mbgs): 0.5
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
Hand Auger	0.5			Fill	Fill - Gravelly SAND - brown, heterogeneous, dry, poorly graded, coarse sands with fine gravels, angular, dense, inclusions of bark	JHA03 0-0.2 PID = 0 ppm	No Odours, No Staining, No ACM identified
						JHA03 0.3-0.5 PID = 0 ppm	No Odours, No Staining, No ACM identified
		0.50			Borehole JHA03 terminated at 0.5m		Refusal on tree roots
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

JHA04

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 26/05/2017
Logged By: Rohan Hammond
Contractor:
Total Hole Depth (mbgs): 0.8
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
Hand Auger				Fill	Fill - CONCRETE slab		
		0.20		Fill	Fill - Gravelly SAND - brown, heterogeneous, wet, poorly graded, coarse gravels, angular, inclusions of brick, gravels and terracotta	JHA04 0.2-0.4 PID = 0 ppm	No Odours, No Staining, No ACM identified
	0.5	0.40		CL-ML	Silty CLAY - grey, heterogeneous, dense, medium plasticity, stiff, damp	JHA04 0.4-0.6 PID = 0 ppm	No Odours, No Staining, No ACM identified
						JHA04 0.6-0.8 PID = 0 ppm	No Odours, No Staining, No ACM identified
		0.80			Borehole JHA04 terminated at 0.8m		
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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Version: 1, Version Date: 29/01/2021

JHA05

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 26/05/2017
Logged By: Rohan Hammond
Contractor:
Total Hole Depth (mbgs): 0.5
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
Hand Auger	0.5			Fill	Fill - Gravelly SAND - brown, heterogeneous, dry, poorly graded, coarse sands with fine gravels, angular, dense, inclusions of tree roots	JHA05 0-0.2 PID = 0 ppm	No Odours, No Staining, No ACM identified
						JHA05 0.2-0.5 PID = 0 ppm	No Odours, No Staining, No ACM identified
		0.50			Borehole JHA05 terminated at 0.5m		Refusal
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JHA06

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 26/05/2017
Logged By: Rohan Hammond
Contractor:
Total Hole Depth (mbgs): 1.2
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
Hand Auger				Fill	Fill - CONCRETE slab		
		0.20		Fill	Fill - Gravelly SAND - brown, heterogeneous, damp, poorly graded, angular, medium dense, inclusions of demolition waste, rootlets and wire	JHA06 0.2-0.4 PID = 0 ppm	No Odours, No Staining, No ACM identified
	0.5					JHA06 0.4-0.6 PID = 0 ppm	No Odours, No Staining, No ACM identified
		0.60		CL-ML	Silty CLAY - brown, heterogeneous, damp, firm, angular, dense, inclusions of concrete and brick		
	1.0					JHA06 0.8-1 PID = 0 ppm	No Odours, No Staining, No ACM identified
						JHA06 1-1.2 PID = 0 ppm	No Odours, No Staining, No ACM identified
		1.20			Borehole JHA06 terminated at 1.2m		Refusal
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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JHA07

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 26/05/2017
Logged By: Rohan Hammond
Contractor:
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
Hand Auger				Fill	Fill - CONCRETE slab		
		0.15		Fill	Fill - SAND - yellow/ brown, homogeneous, poorly graded, loose, coarse, angular, no inclusions	JHA07 0.2-0.4 PID = 0 ppm	No Odours, No Staining, No ACM identified
	0.5	0.40		Fill	Fill - SAND - brown, heterogeneous, dense, poorly graded, coarse, angular, inclusions of organics and gravels	JHA07 0.4-0.6 PID = 0 ppm	No Odours, No Staining, No ACM identified
	1.0					JHA07 0.8-1 PID = 0 ppm	No Odours, No Staining, No ACM identified
		1.20		CL-ML	Silty CLAY - grey/ yellow with mottles, heterogeneous, saturated, soft, high plasticity, no inclusions	JHA07 1.3-1.5 PID = 0 ppm	No Odours, No Staining, No ACM identified Slight staining and odour, No ACM identified
	1.5	1.50			Borehole JHA07 terminated at 1.5m		
	2.0						
	2.5						
	3.0						
	3.5						

BOREHOLE JBSG BOREHOLE.GPJ GINT STD AUSTRALIA.GDT 7/9/17

Document Set ID: 9456504
Version: 1, Version Date: 29/01/2021

JHA08

Project Number: 52372
Client: Penrith City Council
Project Name: Central Park Village
Site Address: 114-146 Henry Street and Allen Place Carpark, Penrith

Date: 26/05/2017
Logged By: Rohan Hammond
Contractor:
Total Hole Depth (mbgs): 0.6
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
Hand Auger				Fill	Fill - CONCRETE slab		
		0.15		Fill	Fill - Gravelly SAND - dark brown, heterogeneous, damp, poorly graded, coarse sands and gravels, medium dense, inclusions of demolition waste, brick, nails, igneous gravels, crushed rock	JHA08 0.2-0.4 PID = 0 ppm	No Odours, No Staining, No ACM identified
	0.5					JHA08 0.4-0.6 PID = 0 ppm	No Odours, No Staining, No ACM identified
		0.60			Borehole JHA08 terminated at 0.6m		Refusal
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						

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Appendix O Statistical Analyses

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Version: 1, Version Date: 29/01/2021

	Nonparametric UCL Statistics for Uncensored Full Data Sets	
User Selected Options		
Date/Time of Computation	6/29/2017 11:04:51 AM	
From File	WorkSheet.xls	
Full Precision	OFF	
Confidence Coefficient	95%	
Number of Bootstrap Operations	2000	

B(a)P (Green Spaces)

General Statistics

Total Number of Observations	9	Number of Distinct Observations	3
		Number of Missing Observations	0
Minimum	0.5	Mean	0.567
Maximum	0.9	Median	0.5
SD	0.141	Std. Error of Mean	0.0471
Coefficient of Variation	0.25	Skewness	2.121
Mean of logged Data	-0.59	SD of logged Data	0.213

Note: Sample size is small (e.g., <10), if data are collected using ISM approach
you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).
Chebyshev UCL can be computed using the Nonparametric and All UCL Options.

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.654	95% Adjusted-CLT UCL (Chen-1995)	0.68
		95% Modified-t UCL (Johnson-1978)	0.66

Nonparametric Distribution Free UCLs

95% CLT UCL	0.644	95% Jackknife UCL	0.654
95% Standard Bootstrap UCL	N/A	95% Bootstrap-t UCL	N/A
95% Hall's Bootstrap UCL	N/A	95% Percentile Bootstrap UCL	N/A
95% BCA Bootstrap UCL	N/A		
90% Chebyshev(Mean, Sd) UCL	0.708	95% Chebyshev(Mean, Sd) UCL	0.772
97.5% Chebyshev(Mean, Sd) UCL	0.861	99% Chebyshev(Mean, Sd) UCL	1.036

Suggested UCL to Use

95% Student's-t UCL	0.654	or 95% Modified-t UCL	0.66

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.
For additional insight the user may want to consult a statistician.

Gamma UCL Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	6/29/2017 10:54:49 AM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Lead (Green Spaces)

General Statistics

Total Number of Observations	17	Number of Distinct Observations	14
		Number of Missing Observations	0
Minimum	5	Mean	123
Maximum	910	Median	39
SD	226.8	SD of logged Data	1.525
Coefficient of Variation	1.845	Skewness	3.063

Gamma GOF Test

A-D Test Statistic	0.762	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.792	Data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.216	**Kolmogrov-Smirnoff Gamma GOF Test**
5% K-S Critical Value	0.22	Data appear Gamma Distributed at 5% Significance Level

Data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.569	k star (bias corrected MLE)	0.508
Theta hat (MLE)	216.2	Theta star (bias corrected MLE)	242.2
nu hat (MLE)	19.34	nu star (bias corrected)	17.26
MLE Mean (bias corrected)	123	MLE Sd (bias corrected)	172.6
		Approximate Chi Square Value (0.05)	8.856
Adjusted Level of Significance	0.0346	Adjusted Chi Square Value	8.231

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	239.6	95% Adjusted Gamma UCL (use when n<50)	257.8

Suggested UCL to Use

95% Adjusted Gamma UCL	257.8

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.
For additional insight the user may want to consult a statistician.

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Lognormal UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation	6/29/2017 3:04:03 PM										
5	From File	WorkSheet.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10												
11	**Copper (Green Spaces)**											
12												
13	**General Statistics**											
14	Total Number of Observations					16	Number of Distinct Observations					14
15							Number of Missing Observations					0
16	Minimum					5	Mean					43.66
17	Maximum					230	Median					16
18	SD					68.62	Std. Error of Mean					17.16
19	Coefficient of Variation					1.572	Skewness					2.343
20												
21	**Lognormal GOF Test**											
22	Shapiro Wilk Test Statistic					0.898	**Shapiro Wilk Lognormal GOF Test**					
23	5% Shapiro Wilk Critical Value					0.887	Data appear Lognormal at 5% Significance Level					
24	Lilliefors Test Statistic					0.202	**Lilliefors Lognormal GOF Test**					
25	5% Lilliefors Critical Value					0.222	Data appear Lognormal at 5% Significance Level					
26	**Data appear Lognormal at 5% Significance Level**											
27												
28	**Lognormal Statistics**											
29	Minimum of Logged Data					1.609	Mean of logged Data					3.043
30	Maximum of Logged Data					5.438	SD of logged Data					1.123
31												
32	**Assuming Lognormal Distribution**											
33	95% H-UCL					91.23	90% Chebyshev (MVUE) UCL					72.03
34	95% Chebyshev (MVUE) UCL					87.83	97.5% Chebyshev (MVUE) UCL					109.8
35	99% Chebyshev (MVUE) UCL					152.8						
36												
37	**Nonparametric Distribution Free UCLs**											
38	95% CLT UCL					71.88	95% Jackknife UCL					73.74
39	95% Standard Bootstrap UCL					71.86	95% Bootstrap-t UCL					163.7
40	95% Hall's Bootstrap UCL					206.6	95% Percentile Bootstrap UCL					72.98
41	95% BCA Bootstrap UCL					83.46						
42	90% Chebyshev(Mean, Sd) UCL					95.13	95% Chebyshev(Mean, Sd) UCL					118.4
43	97.5% Chebyshev(Mean, Sd) UCL					150.8	99% Chebyshev(Mean, Sd) UCL					214.4
44												
45	**Suggested UCL to Use**											
46	95% Chebyshev (Mean, Sd) UCL					118.4						
47												
48	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
49	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
50	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
51	For additional insight the user may want to consult a statistician.											
52												

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		Name	Name	Signature	Date
A	Rohan Hammond	Dr. Greg Dasey	Dr. Greg Dasey	DRAFT FOR APPROVAL	ϕ July 2017

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