Aver Pty Ltd

Preliminary and Limited Intrusive Site Investigation

Moriah College
Queens Park Road,
Queens Park, NSW

Part Lot 22 DP 879582 and Lot 3 DP 701512

10 October 2019

57079 / 123915 Rev 0

JBS&G

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Abbreviations

Term	Definition
ACM	Asbestos Containing Materials
AEC	Area of Environmental Concern
AHD	Australian Height Datum
AMP	Asbestos Management Plan
ASS	Acid Sulfate Soils
BaP	Benzo(a)pyrene
bgs	Below Ground Surface
BH	Borehole
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
COPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
DECCW	NSW Department of Environment, Climate Change and Water
DP	Deposited Plan
DQOs	Data Quality Objectives
DWE	NSW Department of Water and Energy
EPA	NSW Environment Protection Authority
GSW	General Solid Waste
JBS&G	JBS&G Australia Pty Ltd
LEP	Local Environmental Plan
Ha	Hectare
OCPs	Organochlorine Pesticides
OEH	Office of Environment and Heritage
PAHs	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
POEO Act	Protection of Environment Operations Act
PSI	Preliminary Site Investigation
RPD	Relative Percentage Difference
SSDA	State Significant Development Application
TRH	Total Recoverable Hydrocarbons

Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by Moriah War Memorial College Association (Trading as Moriah College, the Client) via Aver Pty Ltd (Aver, the Project Manager) to conduct a Preliminary Site Investigation (PSI) with limited intrusive works at a portion of Moriah College in Queens Park, NSW. Moriah College comprises the following addresses:

- 99 York Road, Queens Park (Lot 23 DP 879582, approximately 1.063 hectares (ha);
- 101 York Road, Queens Park (Lot 22 DP 879582), approximately 0.483 ha;
- 1 Queens Park Road, Queens Park (Lot 1 DP 701512), approximately 1.45 ha; and
- 3 Queens Park Road, Queens Park (Lot 3 DP 701512), approximately 2.6 ha.

The south-eastern portion of Moriah College is intended to be redeveloped. This comprises an investigation area of approximately 1.32 ha and includes Parts of Lot 22 DP 879582 and Lot 3 DP 701512 (the site), as shown in **Figure 1** and **2**. The area of investigation includes the areas in which replacement of existing buildings, and reconfiguration of landscaped and carpark areas is proposed. It is noted that a larger extent of work is proposed for surface works, however no new buildings or excavation is proposed within the work area outside the current extent identified as 'the site'.

This report has been prepared to accompany SSD-10352 and requirement no. 13 for contamination assessment. It is understood that an environmental assessment of the site is required to accompany the Moriah College redevelopment State Significant Development Application (SSDA).

The objectives of the PSI and limited intrusive investigation is to assess the potential for contamination based on current and historical site conditions/activities and to draw conclusions regarding the contamination status of the site, consistent with the requirements of the *State Environmental Planning Policy 55 – Remediation of Land* (SEPP 55) and associated Planning Guidelines.

The Secretary's Environmental Assessment Requirements (SEARs) requires the report to 'assess and quantify soil and groundwater contamination and demonstrate that the site is suitable for the proposed use in accordance with SEPP 55'.

The investigation has been developed in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards. The scope of work completed comprised:

- Desktop review of readily available site history and site condition records to identify areas of environmental concern (AECs) and associated contaminants of potential concern (COPCs);
- Obtain historical aerial photographs, council planning certificates, current and historical land title records, Office of Environment and Heritage (OEH) heritage records, EPA notifications, SafeWork Dangerous Goods records, contaminated land records, and review licensed groundwater well data;
- Review of previous investigation reports made available to JBS&G;
- Implementation of a limited intrusive program including systematic and targeted soil sampling; and
- Preparation of a PSI and limited intrusive investigation report in general accordance with relevant EPA endorsed guidelines, including recommendations with regards to management of any potential contamination present.

Sampling was undertaken at 7 locations using a excavator mounted auger (BH01 to BH05) or hand auger (BH06 and BH07). Soil samples were collected from the ground surface, then at regular intervals to a maximum depth of approximately 2.2 m.

The majority of the site surface was sealed, with some garden beds and grassed areas. Vegetation was observed to be healthy.

Fill materials comprised greyish brown, brown to light brown silty sand or brown sandy silt, and were encountered to depths of between 0.3 m (BH03) to 1.5 m (BH02) below the ground surface (bgs). Observed inclusions within fill materials included the presence of slag at 0.4 m (BH05), concrete fragments, brick, gravels, and limited metal fragments with a potential bituminous waterproofing coating (BH06). Natural soils underlying fill generally consisted of brown to light brown, white, orange, brown, yellow or grey sand.

No suspected ACM was identified within the soil or on the site surface during the investigation. No stains or odours were noted, and PID readings ranged between 0.1 ppm and 2.4 ppm.

It is noted that BH06 was located immediately outside of the site boundary due to underground services and soil accessibility, however is considered to be representative of fill material underlying this portion of the site.

Heavy metal and BaP concentrations were detected exceeding the ecological criteria at four sample locations (within 5 samples), which present a potential issue for future ecological receptors. The risk to plant health due to these exceedances would appear low based on the lack of stressed vegetation at the site, and the presence of substantial sealed surfaces across most of the site. Additionally, heavy PAHs such as BaP are not readily taken up by plants (NEPC 2013) and are unlikely to pose an unacceptable risk to plant growth at the site. The removal or relocation of elevated heavy metals in surface soils may be considered during redevelopment in future landscaping areas.

BaP concentrations were detected exceeding the human health criteria in surface fill at one sample location. It is noted that this location is marginally outside the site boundary, however is considered to be representative of underlying fill within this portion of the site. Fill at this location included a small quantity of bituminous waterproof coating material, likely the source of BaP. Leachability results indicate that the BaP is not leachable. The exposure risk is reduced given that the BaP appears related to minor bituminous material in soils beneath thick grass cover. While grass cover is maintained this is not considered to be a complete exposure pathway for ongoing users of the site and surrounding areas. Potential risks may require management if this material is found more widely within fill.

It is noted that slag was encountered within the north-western portion of the site (BH05). However, no elevated contaminant concentrations were identified. This was within the area identified by the groundskeeper as potentially used for disposal of furnace by-products. It is noted that this area was also identified as disturbed within the 1955 aerial image. Therefore, there is the potential for further slag within this portion of the site, however unlikely to be a potential risk to future on-site receptors.

Based on the investigation and subject to the limitations in **Section 11**, JBS&G concludes that:

- Fill material consisted of silty sands and sandy silts encountered to the depths of 0.3 to 1.5 m bgs, with minimal anthropogenic inclusions observed;
- The site has historically been used as a hospital, and later for education purposes. The site appears to have undergone cut and fill activities prior to the current facility being constructed;
- Elevated heavy metal and PAH contaminant concentrations observed above ecological assessment criteria do not appear to impact the current vegetation on-site. The removal or relocation of elevated heavy metals in surface soils should be considered in areas where

landscaping will be present following redevelopment. Ecological exceedances are not considered to affect areas of the site that are sealed;

- Due to the limited bituminous materials encountered and low leachability, the elevated BaP concentration at BH06 is not considered to affect the site suitability;
- There is potential that the slag identified at BH05 may be more widespread. However, soil data does not indicate that contaminants are present above the site assessment criteria; and
- For potential off-site disposal of materials, all soils would be classified as General Solid Waste.

In summary, no contamination which would preclude the redevelopment of the site has been identified.

It is recommended that a detailed soil assessment be undertaken at the site in accordance with recommended EPA sampling density to confirm the characterisation of potential contamination and to support management of materials during redevelopment. It is understood that this can be achieved following demolition of existing site buildings.

1. Introduction

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1.1 Objectives

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- Review of previous investigation reports made available to JBS&G;
- Implementation of a limited intrusive program including systematic and targeted soil sampling; and

- Preparation of a PSI and limited intrusive investigation report in general accordance with relevant EPA endorsed guidelines, including recommendations with regards to management of any potential contamination present.

2. Site Condition and Surrounding Environment

2.1 Site Identification

The site location is shown on **Figure 1**. The site layout 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. Photographs of the site are included in **Appendix A**.

Table 2.1 Summary Site Details

Lot/Deposited Plan (DP)	Part of Lot 22 in DP879582 and Part of Lot 3 in DP701512
Address	101 York Road, Queens Park, NSW 2022 3 Queens Park Road, Queens Park, NSW 2022
Local Government Authority	City of Waverley Council
Approximate MGA Coordinates (GDA 94 MGA 56)	E: 337618.412 N: 6247487.121
Site Zoning	SP2 Infrastructure land uses under the Waverley Local Environmental Plan (LEP) 2012
Current Use	Moriah College, Educational Establishment
Previous Use	The Eastern Suburbs Hospital
Site Area	Approximately 1.32 ha

2.2 Site Description

At the time of inspection on 25 July 2019, the site was utilised as an educational facility. The site description is limited to observations made of readily accessible and visible areas as building interiors were occupied and inaccessible at the time of inspection. Photographs taken during the inspection are presented in **Appendix A** (**Photographs 1** to **10**).

The site is bound by further Moriah College buildings to the north, York Road followed by Centennial Parklands to the south, the Banksia Scrub Landscape Conservation Area (as part of the Moriah College property) followed by York Road and Centennial Parklands to the west, and Baronga Avenue followed by Queens Park to the east. The site generally slopes downward towards the south as well as steep slopes off site adjacent to Baronga Avenue in the eastern portion of the site.

The site was surrounded by security fences and was accessed via boom gates from York Road. The ground surface covering Moriah College comprised predominately hardstand concrete groundcover, with some grassed areas and AstroTurf. The site ground surface appeared to be in good condition with no signs of disturbed or stained soils or distressed vegetation. Bare soil patches on grassy areas were observed and attributed to high trafficked areas within school grounds (see **Photographs 1-4**). The remaining ground cover also appeared to be in good condition.

Four two storey brick buildings exist in the northern portion of the site, comprising a Library (Building A) and senior campus classrooms (Buildings B, C and D) surrounding a small grassed area. A one storey building (Building Z) was also observed in the north western portion of the site, comprising classrooms with an attached playground and day care. A hazardous materials storage room was noted directly north of the investigation area near Building D (**Photograph 5**), however the client has indicated that signage was inaccurate, and no hazardous materials were stored therein.

A chemical storage room was identified in Building C which appears to be associated with school use for design and technology classrooms (**Photograph 6**). A chemical storage room was also noted further north of Building A, which exists outside of the site.

During the soil investigation it was noted by the groundskeeper of the site that the area west of Building Z was historically used as a disposal area for furnace byproducts.

A small terraced garden area was present east of Building A (**Photographs 3** and **4**). Further south, tennis courts were present along the south-eastern border of the site (**Photograph 7**). The area appeared to have been levelled, with a steep slope observed on the east boundary leading to Baronga Avenue (**Photographs 8** and **9**).

The southern portion of the site comprised a car park with access from York Road. A moderate downward slope was observed from the buildings southward to York Road. To the southwest of the site and adjacent the car park was a small amphitheatre, which has been cut into the slope (**Photograph 10**).

No surface water existed on the site at the time of the investigation. No noticeable asbestos or evidence of storage tanks was observed.

2.3 Surrounding Land-use

Surrounding land-uses at the time of site inspection are described following:

- North: Moriah College buildings with Queens Park Road and residential areas situated beyond;
- South: York Road followed by Centennial Parklands;
- East: Baronga Avenue followed by Queens Park;
- West: Moriah College bushland, classified as Banksia Scrub Landscape Conservation Area – Biodiversity, followed by York Road and Centennial Parklands further west.

2.4 Topography

A review of topographic information obtained from Google Earth Pro (Google Earth, 2018[1]) indicated that site has an elevation of approximately 55 m Australian Height Datum (AHD) generally sloping to the south and west towards Centennial Parklands. The site appears to have been levelled (terraced) for specific purposes (e.g. amphitheatre, tennis courts, etc).

2.5 Geology and Soils

A review of the Geological Survey Sydney 1:100 000 Geological Sheet (9030, Edition 1, 1991) indicates that the site and surrounds are underlain by Quaternary deposits comprising medium to fine grained marine sands with podsols.

Reference to the online ESPADE 2.0 tool hosted by the NSW Office of Environment and Heritage (OEH 2019[2]) indicates that the site is present within the Tuggerah Soil Landscape Group. These soils comprise deep (> 200 cm) Podzols on dunes and Podzols/Humus Podzol intergrades on swales.

Limitations of this landscape group comprise extreme wind erosion hazard, non-cohesive, highly permeable soil, very low soil fertility, localised flooding and permanently high water tables.

A previous geotechnical investigation by Douglas Partners (DP 2000[3]) indicated the presence of sands extending to depths in excess of 20 m.

2.6 Hydrology

A review of SIX Map[4] indicated that the closest down-gradient surface water are Musgrave Pond and One More Shot Pond within the Centennial Parklands, approximately 115 m south of the site.

As discussed in **Section 2.2**, areas external to site buildings/structures were generally paved with some grassed areas. As such, precipitation falling onto the site is expected to follow the topographic gradient and infiltrate surface soils where exposed at a rate reflective of the permeability of the underlying soils. Excess water, especially during periods of heavy or prolonged rainfall, is expected to

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1 Google Earth Pro, accessed 25 July 2019, (Google Earth, 2019)

2 *ESPADE 2.0*. NSW Office of Environment and heritage, accessed 28 June 2019, (OEH 2019);

3 *Report On Geotechnical Investigation, Proposed Development, Moriah War Memorial College, Queens Park Road, Bondi Junction*. June 2000. Douglas Partners Pty Ltd. Project 28900. (DP 2000)

4 *Six Maps website, https://maps.six.nsw.gov.au/* accessed 25 July 2019.

be collected by the site's stormwater drainage network and transferred to the regional stormwater network.

2.7 Hydrogeology

A search of registered groundwater borehole information was undertaken on Water NSW[5] website and results are included as **Appendix B**. A total of 39 registered bores were located within a 1.5 km radius of the site. Due to the high number of registered bores available, the search was reduced to within a 500 m radius of the site. A total of 6 registered bores were located within a 500 m radius of the site, and their relevant information is summarised in **Table 2.2**.

Table 2.2: Registered Groundwater Bore Search Summary

Bore ID	Coordinates (GDA 94 MGA 56)	Use	Standing Water Level (m bgs)	Well Depth (m)	Approximate distance/ direction from site (m)	Lithology
GW106096	E: 337452 N: 6247864	Domestic – Water Supply	Unknown	9.5	365 m northwest	0-9.50 m: Sand
GW107106	E: 337348 N: 6247176	Domestic – Water Supply	Unknown	9.5	465 m northwest	0-9.50 m: Sand
GW107805	E: 337856 N: 6247171	Domestic – Water Supply	Unknown	Unknown	410 m southwest	-
GW110058	E: 337393 N: 6247904	Domestic – Water Supply	2	8	405 m southeast	-
GW110542	E: 337570 N: 6247507	Domestic – Water Supply	12.2	27.8	Onsite	0-1.0 m: Sand and fill 1.0-7.0 m: Light brown sand 7.0-13.0 m: Light grey sand 13.0-17.0 m: Yellow sand 17.0-20.0 m: Grey sand 20.0-23.0 m: Dark grey sand 23.0-27.5 m: Cream sand 27.5-28.0 m: Sand and clay
GW111553	E: 337673 N: 6247218	Domestic – Water Supply	Unknown	14	265 m south	-

2.8 Acid Sulfate Soils

A review of the Botany Bay[6] Acid Sulfate Soil Risk Map Edition Two, indicates that there is no known occurrence of acid sulfate soil materials at the site, and land management activities are not likely to be affected by acid sulfate soil materials. This is consistent with the topographic and geologic setting of the site.

In addition, 10.7 Planning Certificates (**Appendix E**) indicate the site is not affected by development controls relating to the likelihood of acid sulfate.

2.9 Meteorology

A review of average climate data for the nearest relevant Bureau of Meteorology monitoring location (Sydney Observatory Hill (ANSTO[7]), indicates the site is located within the following meteorological setting:

- Average minimum temperatures vary from 8.1 ^{o}C in July to 18.9 ^{o}C in February;
- Average maximum temperatures vary from 16.4 ^{o}C in July to 26.0 ^{o}C in January

[5] *Water NSW website, https://realtimedata.waternsw.com.au/, accessed 2 July 2019*
[6] *'Acid Sulphate Soil Risk Map – Botany Bay, Edition 2', 1997 1:25 000 (NSW DLWC), viewed 28 June 2019*
[7] *Commonwealth of Australia, 2013 Bureau of Meteorology, http://www.bom.gov.au/climate/data/stations, accessed by JBS&G on 25 July 2019*

- The average annual rainfall is approximately 1215 mm with rainfall greater than 1 mm occurring on an average of 100 days per year; and
- Monthly rainfall varies from 67.8 mm in September to 133.5 mm in June, with the wettest periods occurring on average in January to June.

3. Summary Site History

3.1 Previous Investigation Reports

A geotechnical report by Douglas Partners in 2000 (DP 2000) involved the advancement of eight boreholes to a maximum depth of 22 m and three test bores to 10 m below ground surface (bgs). Similar soil profiles were recorded at all borehole locations, with sand extending for the full depth of the investigation. Fill material with inclusions of asphalt and pavement material was encountered at three of the sample locations to depths of 0.3-0.6m. The sands encountered at two of these sample locations had been disturbed to depths of 2.8 m and 4.0 m. This was attributed to potential previous construction work or placement as fill. Sands extended to the full depth of investigation at 22m.

Groundwater levels were observed in Bores 2 and 3, at depths of 6.55 m and 8 m, corresponding to RL40.95 and RL41.3 respectively.

No contamination reports relating to the site have been made available for JBS&G review.

3.2 Office of Environment & Heritage Records

A search of the NSW EPA database was undertaken for the site and immediate surrounding properties. EPA records are provided in **Appendix C**. The search was undertaken through the following public registers:

- 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));
- NSW contaminated sites notified to the EPA (under Section 60 of the CLM Act); and
- NSW EPA Government PFAS Investigation Program.

No prevention, clean-up or prohibitions notices have been issued under the POEO Act for the site and immediate surroundings.

No environment protection licences were identified within close proximity to the site.

The site or land immediately surrounding the site do not appear on the EPA contaminated land register or list of sites notified to EPA.

The site is not listed on the NSW Government PFAS Investigation program. The nearest site is Alexandria Fire and Rescue NSW approximately 4km west of the site.

3.3 Australian and NSW Heritage Register

A search of the Australian Heritage and the NSW Heritage database did not identify any heritage listed items at the site.

There are heritage listed items in the surrounding area of Centennial Parklands.

Both Australian Heritage Trust and NSW Heritage information are included in **Appendix D.**

3.4 Section 10.7 Planning Certificate Search

Section 10.7 (2) and (5) Planning certificates were obtained for Lot 22 DP879582 and Lot 3 DP701512 from Waverley Council (**Appendix E**). The planning certificates included the following pertinent information regarding the site.

The section regarding the matters prescribed by section 59(2) of the Contaminated Land Management Act 1997 reported that the following information is available to Council:

- The land is not significantly contaminated land;
- The land is not subject to a management order;
- The land is not subject to an approved voluntary management proposal;
- The land is not subject to an ongoing maintenance order; and
- The land is not subject of a site audit statement.

In addition, the land is not restricted by development controls relating to the likelihood of landslip, bushfire, tidal inundation, subsidence, acid sulfate soils or flooding.

Under the Heritage Act 1977 the land is identified as being located within a Heritage Conservation Area. Site and surrounding area are classified as a conservation area. Development is excluded from the SEPP (Exempt and Complying Development) 2008, unless the development is for a detached outbuilding or swimming pool. Part of the land is identified as being high biodiversity. This corresponds to the bushland in the south west portion of the college site.

3.5 Aerial Photographs

Historical aerial photographs dated 1930, 1943, 1955, 1965, 1978, 1986, 1994, 2002, 2012 and 2019 provided by the Land and Property Information Division of the Department of Finances, Services and Innovation, as well as Near-Map Imagery, were reviewed for this assessment (**Appendix F**). The aerial photograph review identified the following features in relation to historical use of the site:

1930 The 1930 aerial is of poor quality, however the overall Moriah College property appears to have been cleared vacant land.
York Road and Queens Park Road appear the have been established. The surrounding land to the north of Queens Park Road appeared to have been developed for residential purposes. Parklands with associated ponds existed south, east and west of the overall property.

1943 The site remains unchanged from the 1930 aerial image. Several buildings had been constructed in the north western corner of the overall property.
The surrounding land appears relatively unchanged with the exception of the construction of Baronga Avenue, east of the site boundary. Residential properties were visible south of the Parkland and site

1955 Some groundworks are visible in the western portion of the site which extends west in the overall property, possibly associated with anecdotal records of the disposal of furnace bi-products. Additionally, buildings are visible in the north western portion of the site and extend north in the overall property. A driveway had been constructed through the centre of the site.
The surrounding area remains unchanged from the 1943 aerial image.

1965 The site remains relatively unchanged with tree/shrub cover now visible. Minor extensions appear to have been completed on some of the buildings and paved paths/driveways constructed in the overall property. Ground cover is also visible in the overall property.
The surrounding area remains unchanged from the 1955 aerial image.

1978 More tree cover is visible across the overall property including the site. The site and surrounding area remained relatively unchanged from the 1965 aerial.

1986 The site remains relatively unchanged from the 1978 aerial with the exception of growth of vegetation. The site and surrounding area remained relatively unchanged from the 1978 aerial.

1994 The eastern portion of overall property (including the site) has been redeveloped with a large complex of building constructed across the area, in the layout of present-day Moriah College. The vegetation in the south eastern portion of the site has been replaced with a carpark, tennis courts and Buildings A and B. Buildings C and D had also been constructed in the north western portion of the site.
The surrounding area remains unchanged from the 1986 aerial image.

2002 The overall property remains relatively unchanged from the 1994 aerial, with the exception of the growth of vegetated area in the south west corner.
The surrounding area remains unchanged from the 1994 aerial image.

2019 Current site conditions are discussed in **Section 2.2**
The north western portion of the overall property had been redeveloped with building replaced by a larger complex and carpark. Original buildings remain in the very north eastern corner. The surrounding area remains unchanged from the 2002 aerial image.

3.6 Historical Title Review

A copy of the historical title's documentation obtained for the site is provided in **Appendix G**. The historical title details are summarised in **Table 3.1**.

Table 3.1: Summary of Historical Site Titles

Date	Owner / Occupation
Lot 22 in DP 879582	
03.02.1936 (1936 to 1984)	The Eastern Suburbs Hospital
09.04.1984 (1984 to 1985)	Minister for Public Works
06.12.1985 (1986 to 2010)	Minister for Education Now Minister for Education and Training (Resumed for the purpose of a Technical College at Bondi Junction)
25.08.2010 (2010 to 2014)	State Property Authority Now Government Property NSW
17.02.2014 (2014 to date)	Robert Nathan Simons Robert Malcolm Goot Robert Barry Gavshon Daniel Goulburn Graham Bruce Einfeld
Lot 3 in DP 701512	
03.02.1936 (1936 to 1984)	The Eastern Suburbs Hospital
09.04.1984 (1984 to 2008)	Minister for Public Works
23.09.2008 (2008 to 2014)	State Property Authority Now Government Property NSW
17.02.204 (2014 to date)	Robert Nathan Simons Robert Malcolm Goot Robert Barry Gavshon Daniel Goulburn Graham Bruce Einfeld

One lease was found to have existed in 1984 that has since been removed or has expired due to an effluxion of time which has not been investigated.

Based on the government body that owned the various lots comprising the site, it is inferred that between 1936-1984, the site was likely used for public health or education services. The Minister for Public works owned the property from 1984 to 1985 and the site was likely used as an education facility from that time until the present.

3.7 SafeWork NSW Dangerous Goods Records

A search of SafeWork NSW records for on-site storage of Dangerous Goods was undertaken at 101 York Road and 3 Queens Park Road (**Appendix H**). No records were found on the site.

3.8 Loose-Asbestos Fill Register

A search of the Fair-Trading NSW Loose-fill Asbestos Insulation Register (LFAI register[8]) for the site address has indicated the site is not currently registered as being affected by the presence of LFAI.

3.9 Integrity Assessment and Summary of Site History

From the review of historical site information, the site was a cleared vacant parcel of land prior to ownership by The Eastern Suburbs Hospital from 1936. It is considered that the site has been used for educational purposes from 1984 until the present.

Based on the range of sources and the general consistency of the historical information, as well as historical aerial photographs, 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.

[8] https://www.fairtrading.nsw.gov.au/loose-fill-asbestos-insulation-register accessed 15 August 2019

4. Conceptual Site Model (CSM)

4.1 Potential Areas of Environmental Concern

Based on the history review and observations made during the JBS&G inspection of the site, areas of environmental concern have been identified and are presented in **Table 4.1**.

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

Area of Environmental Concern (AEC)	Primary Contaminants of Potential Concern (COPC)
Anthropogenic fill materials of unknown origin used to create existing/current site levels	Total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene and xylene (BTEX), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCBs), heavy metals, organochlorine pesticides (OCPs) and asbestos
Former structures, including demolition of structures	Asbestos, heavy metals (lead-based paint)
Car parking and storage of general site waste	Heavy metals, TRH, BTEX, PAH, asbestos
Landscaping and garden maintenance	OCPs
Furnace byproduct disposal area	TRH, BTEX, heavy metals, PAHs

4.2 Potentially Contaminated Media

Potentially contaminated media present at the site includes:

- Surface soils;
- Fill material;
- Natural soils;
- Soil vapour; and
- Groundwater.

There is potential that fill material may have been used at the site associated with site levelling and grading activities, relating to the historical construction across the site and overall property. In addition, exposed bare soils and anthropogenic materials in soil/fill has been identified in fill material (DP 2000). As such, fill material at the site has been identified as a potentially contaminated medium which is accessible to site users.

Based on the potential leachability of contaminants within fill material/surface soils and the historical use of the site, vertical migration of contamination from the fill materials/surface soils into the underlying natural soils may have occurred. As such, the natural site soils are considered to be a potentially contaminated medium.

Given the reported geology (**Section 2.5**) and hydrogeology (**Section 2.7**), groundwater is also considered to be a potentially contaminated medium depending on potential contamination of fill and off-site sources. However, given the historical land use typically has a low-risk of gross leachable/mobile contamination, the depth to groundwater, and residential/parkland nature of surrounding properties, the potential for groundwater impacts is considered unlikely.

Given the potential for volatile soil and groundwater contamination associated with potentially contaminated fill/natural soils and/or historical/current land use activities, soil vapour is also considered to be a potentially contaminated medium. However, soil vapour contamination is considered unlikely given there are no identified sources of potential volatile contamination (e.g. underground or above ground storage tanks). It is expected that any volatile contaminates (e.g. potential fuel leaks from parked cars) would be isolated and volatilise rapidly at the site surface into ambient atmospheric conditions.

4.3 Potential for Migration from Site

Contaminants generally migrate from site AECs via a combination of windblown dusts, rainwater infiltration, groundwater migration, vapour convection/diffusion 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 potentially present in solid form (e.g. heavy metals, asbestos etc.) or liquid form (e.g. fuels/oils associated with car parking activities, leakages, spillages etc.).

Given the observations of bare ground at high traffic areas there is a potential for wind-blown dust migration.

Infiltration of water and subsequent migration through the soil profile is considered limited since most of the site is sealed.

Considering the expected underlying surface soils, geology, depth to groundwater, and the current site use as a school, the potential for contamination of groundwater and subsequent migration off-site is considered low. In addition, it is considered a low risk for contaminants to potentially migrate off-site via surface water runoff from the site.

There are no identified sources of potential volatile contamination on the site, therefore potential soil vapour contamination and subsequent off-site migration of vapours is unlikely.

4.4 Receptors

Potential receptors of environmental impact within the site which will need to be addressed with respect to potential risks to current and/or future site user include:

- Current and future site users and landowners who may potentially be exposed to COPC through direct contact with impacted soils and/or inhalation of dusts / fibres associated with impacted soils; and/or
- Excavation / construction / maintenance workers conducting activities at the site, who may potentially be exposed to COPC through direct contact with impacted soils/groundwater present within excavations and/or inhalation of dusts / fibres associated with impacted soils;
- Flora species to be established on the (limited) vegetated areas of the site; and
- Existing and/or future users / occupants of adjoining properties should contamination be identified to be migrating from the current site. This is anticipated to be limited to potential contaminant migration via windblown dusts / fibres.

Given no sign of vegetation stress from contamination was identified during the site walkover, the risk to flora is considered low. Grassed surfaces are substantially disturbed by pedestrian access.

Interaction with potentially impacted groundwater is not considered to be likely due to the depth of groundwater previously reported.

4.5 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 solid (sediments, dust etc), liquid (surface water and groundwater) or gas.

Man-made preferential pathways are likely present throughout the site, generally associated with areas of previously disturbed natural ground present beneath the existing ground surface and unconsolidated fill materials. Fill materials and disturbed natural soil are anticipated to have a higher permeability than the underlying natural soils and/or bedrock.

5. Sampling and Analysis Plan

5.1 Data Quality Objectives

Data Quality Objectives (DQOs) have been developed for the investigation, as discussed in the following sections.

5.1.1 State the Problem

The site has historically been used as a hospital and more recently as an educational facility. It is understood that a PSI for the site is required to accompany the Moriah College redevelopment State Significant Development Application.

5.1.2 Identify the Decision

Based on the decision making process for assessing urban redevelopment sites detailed in EPA (2017[9]), the following decisions are to be made:

- Are there any unacceptable risks from soil to likely future on site receptors?
- Are there any issues relating to local area background soil concentrations that exceed the appropriate soil criteria?
- Are there any impacts of chemical mixtures?
- Are there any aesthetic issues?
- Is there any potential for contaminant migration from the site?

5.1.3 Identify Inputs to the Decision

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

- Historical site information, inspection of the site and discussion with the client to identify potential AECs and COPCs at the site;
- The collection and interpretation of environmental data through collection and analysis of soil samples;
- Laboratory analysis of samples of potentially contaminated media for COPC; and
- Confirmation that data generated by sample analyses were of sufficient quality to allow reliable comparison to assessment criteria as undertaken by assessment of quality assurance / quality control (QA/QC).

Specifically, sufficient data needed to be collected from each of the identified potentially impacted media (e.g. fill material and natural soils) in the identified AEC for the associated COPC.

5.1.4 Define the Study Boundaries

The study area was defined as Part of Lot 22 in DP879582 and Part of Lot 3 in DP701512, and as shown in **Figures 1** and **2**. The site has an area of approximately 1.32 hectares.

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

[9] *Contaminated Land Management – Guidelines for the NSW Site Auditor Scheme (3rd Edition).* NSW Environmental Protection Authority 2017 (EPA 2017)

5.1.5 Develop and Decision Rule

A summary of the decision rules for the assessment are presented in **Table 5.1**.

Table 5.1: Summary of Decision Rules

Decision Required to be Made	Decision Rule
1. Are there any unacceptable risks to on site future receptors from soils?	Soil analytical data were compared against EPA endorsed criteria including NEPC (2013). For the characterisation sample sets, statistical analysis of the data was undertaken if required and in accordance with relevant guidance documents, to facilitate the decisions. The following statistical criteria were adopted with respect to soils, where appropriate: 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% upper confidence limit (UCL) of the average concentration for each analyte was below the adopted site criterion. Where results were below criteria, and/or if the statistical criteria stated above were satisfied, and site characterisation indicates potentially unacceptable risks are unlikely, the answer to the decision was No. Otherwise the answer to the decision was Yes.
2. Are there any issues relating to the local area background soil concentrations that exceed appropriate soil criteria?	Analytical data in natural soil samples were compared to the background levels for urban areas of NSW as described in NEPC 2013. Where concentrations were less than the background levels, the answer to the decision was No. Otherwise the answer to the decision was Yes.
3. Are there any chemical mixtures?	Were there more than one group of contaminants present which increase the risk of harm? If there was, the answer to the decision was Yes. Otherwise, the answer to the decision was No.
4. Are there any aesthetic issues associated with potentially impacted media at the site?	If there were any unacceptable odours, soil discolouration, or other aesthetic issues, the answer to the decision was Yes. Otherwise, the answer to the decision was No.
5. Is there any potential for contaminant migration from the site?	A qualitative assessment of contaminant sources, migration pathways and receptors was completed during assessment of investigation data collected. If the assessment identifies unacceptable risks to off-site receptors, the answer to the decision was Yes. Otherwise the answer to the decision was No.

5.1.6 Specific Limits on Decision Errors

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

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

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

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

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

Table 5.2 Summary of Data Quality Indicators

Data Quality Indicators	Frequency	Data Quality Criteria
Precision		
Split duplicates (intra laboratory)	1 / 20 samples	<50% RPD[1], Asbestos samples in agreement
Blind duplicates (inter laboratory)	1 / 20 samples	<50% RPD[1], Asbestos samples in agreement
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.	-	Organics (14 days), inorganics (6 months)
Laboratory Blanks	1 per lab batch	<LOR
Trip spike	1 per lab batch	70-130% recovery
Trip blank	1 per lab batch	<LOR
Rinsate sample (reusable sampling equipment)	1 per sampling event/media	<LOR
Comparability		
Standard operating procedures for sample collection & handling	All Samples	All Samples
Standard analytical methods used for all analyses	All Samples	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

Note:

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

5.2 Investigation Methodology

5.2.1 Soil Sampling Approach and Methodology

Sampling was undertaken at 7 locations placed systematically across the site in general accordance with EPA (1995) Sampling Design Guidelines. The number and positioning of sampling locations is considered suitable for the investigation objectives.

Soil samples were collected during the site investigation works using an excavator mounted auger (BH01 to BH05) or hand auger (BH06 and BH07). Soil samples were collected from the ground surface, then at regular intervals to a maximum depth of approximately 2.0 m to 2.2 m.

Visual inspection of the spoil was undertaken at each location for the presence of discolouration or other indications of potentially contaminated materials. Observations were recorded on borelogs, which are presented in **Appendix J**.

Soil samples designated for laboratory analysis were immediately transferred to laboratory supplied sample jars and sealed with a Teflon-lined screw closure. The sample containers were then placed in a pre-cooled insulated box for sample preservation prior to and during shipment to the testing laboratory. Preservation of the primary soil and QA/QC samples obtained during this investigation was completed in accordance with recognised protocols (NEPC 2013).

The samples were transported under standard JBS&G chain-of-custody protocols to the National Association of Testing Authority (NATA) registered laboratories, Eurofins|mgt Pty Ltd (Eurofins) and Envirolab Services Pty Ltd (Envirolab).

Not all samples collected were analysed. Selected samples were analysed in accordance with the analytical schedule (**Section 5.3**). However, all samples remain at the primary laboratory for a period of two months. This allows for future analysis to be completed in the event that further information is required to characterise site conditions, provided that proposed analytes remain within analytical holding times.

5.2.2 Decontamination

New gloves were used for each sample collection. Before use at each location, the auger equipment (excavator and hand) was decontaminated with detergent and thoroughly rinsed. A rinsate sample was collected and decontamination records are included in **Appendix I**.

5.2.3 Soil Field PID Screening

Samples collected during the sampling event were screened on site using a calibrated photo-ionisation detector (PID) to assess the potential presence of VOCs including petroleum hydrocarbons. Samples obtained for PID screening were placed in a sealed plastic bag for a period of approximately five minutes to equilibrate, prior to a PID being attached to the bag. Readings were then monitored for a period of approximately one minute or until values stabilised and the stabilised/highest readings were recorded on the borehole logs. PID screening results were recorded on the bore logs included as **Appendix J**. PID calibration records are included in **Appendix I**.

5.2.4 Soil Duplicate / Triplicate Preparation

Field soil duplicate and triplicate samples were obtained during sampling using the above sampling methods. The collected samples were then divided laterally into three samples and placed in three clean glass jars or sample bags as appropriate. Each sample was then labelled with a primary, duplicate or triplicate sample identification before being placed in the same chilled esky for transport to the laboratory.

5.3 Laboratory Analyses

JBS&G contracted a NATA certified laboratory (Eurofins | mgt) for the required analysis to which the primary and duplicate samples were submitted. Triplicates samples were submitted to a secondary NATA accredited laboratory (Envirolab Services Pty Ltd). Laboratory analysis of samples excluding quality assurance / quality control samples, was conducted as summarised in **Table 5.3**. Duplicate and triplicate samples were collected at rate of 1 per 20 primary samples.

Table 5.3: Analytical Schedule

Sample Type	No. of Sampling Locations	Analyses (exc. QA/QC)
Soil	7 locations	Heavy metals – 11 samples PAHs - 11 samples Asbestos – 14 samples TRH/BTEX – 11 samples PCBs – 7 samples OCPs – 7 samples pH, CEC, % clay – 1 sample

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, 3rd Edition, NSW EPA, 2017 (EPA 2017).*
- *Waste Classification Guidelines Part 1: Classifying waste, NSW EPA, 2014 (EPA 2014)*

6.2 Assessment Criteria

As per the decision process for assessment of urban development site (EPA 2017), a set of health and ecological assessment thresholds derived from NEPC (2013) or other EPA approved guidelines was used for evaluation of site contamination data collected for this assessment. The site is currently in use as a combined primary and secondary school. On this basis and as the most conservative land use, residential criteria were adopted as the site assessment criteria. The soil assessment criteria are presented in **Tables A** and **B**, **Appendix K** and summarised as follows:

- Health based Investigation Levels (HILs) for residential land use (HIL-A) (NEPC 2013);
- Health Screening Levels (HSLs) for petroleum hydrocarbons considering potential for vapour intrusion, coarse grained soil commercial industrial (HSL-A), at the depths of the investigation, 0.0-1.0 m and 1.0-2.0m (NEPC 2013);
- HSLs for asbestos levels in soil for residential land use (NEPC 2013);
- Management limits for petroleum hydrocarbons for commercial/industrial, coarse grained soils (NEPC 2013);
- Ecological Investigation/Screening Levels (EILs/ESLs) for residential land use, coarse grained soils (NEPC 2013). Site specific Ecological investigation levels (EILs) criteria were calculated, consistent with NEPC (2013) based on the following assumptions; soil cation exchange capacity = 0.96 meq/100g; soil pH = 7.8 pH units; percentage of clay content = 5%; and Conductivity= 10 uS/cm;
- Aesthetic considerations, applicable for all land uses (NEPC 2013); and
- General Solid Waste criteria (Tables 1 and 2, EPA 2014).

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

It is noted that management limits for petroleum hydrocarbons are considered after health and ecological criteria, and generally relate to issues such as formation of non-aqueous phase liquid, fire and explosive hazards, and potential effects on buried infrastructure.

7. Quality Assurance / Quality Control

7.1 QA / QC Assessment

The QA/QC results for soil samples collected at the site are summarised and discussed in **Appendix L.** Detailed QA/QC results are included in the laboratory reports.

The field sampling and handling procedures produced QA/QC results which indicate that the soil data are of an acceptable quality and suitable for use in site characterisation.

The NATA certified laboratory results sheets indicate that the project laboratories were generally achieving levels of performance within their recommended control limits during the period when the samples of this program were analysed.

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

8. Soil Investigation Results

8.1 Field Observations

The lithology encountered at the site during the field works is summarised below. Borehole logs are included in **Appendix J**. A total of seven borehole locations (BH01 to BH07) were completed by JBS&G on 4 August 2019 for the current investigation, as shown on **Figure 3**. Photographs of the materials encountered are shown in **Photographs 11-17**, **Appendix A**.

The majority of the site surface was sealed, with some garden beds and grass area. Vegetation was observed to be healthy.

Fill materials comprised greyish brown, brown to light brown silty sand or brown sandy silt, and were encountered to depths of between 0.3 m (BH03) to 1.5 m (BH02) below the ground surface (bgs). Observed inclusions within fill materials included the presence of slag at 0.4 m (BH05, see **Photograph 15**), concrete fragments, brick, gravels and limited metal fragments with a potential bituminous waterproofing coating (BH06, see **Photograph 16**). No suspected ACM was identified within the soil or on the site surface during the investigation. No stains or odours were noted, and PID readings ranged between 0.1 ppm and 2.4 ppm.

It is noted that BH06 was located immediately outside of the site boundary due to underground services and soil accessibility, however is considered to be representative of fill material underlying this portion of the site.

Natural soils underlying fill generally consisted of brown to light brown, white, orange, brown, yellow or grey sand. Natural sands were encountered from depths of 0.3 m to 1.5, to the base of the bore holes. No odours, staining, asbestos impacted material or groundwater seepage was observed during the investigation.

8.2 Laboratory Results

Representative samples from 7 borehole locations were analysed for a range of COPCs (**Table 5.3**). Borehole locations and concentration exceeding the adopted investigation criteria are shown on **Figure 3**. The summarised laboratory results are presented in **Tables A** to **C**, **Appendix K** and are discussed below with reference to the adopted investigation criteria and limitations. Detailed laboratory reports and chain of custody documentation are provided in **Appendix M.**

8.2.1 Heavy Metals

Concentrations of heavy metals were reported below the laboratory LOR or adopted human health criteria in all soil samples selected for analysis.

Concentrations of heavy metals were reported below the laboratory limit of reporting (LOR) or adopted ecological criteria in all soil samples selected for analysis with the exception of the following:

- Copper with a concentration of 40 mg/kg at sample location BH06_0-0.1, exceeding the adopted ecological criterion of 35 mg/kg. Statistical analysis of the reported copper concentrations for the site indicated that the 95% UCL for the data set is 19.46 mg/kg, below the adopted ecological criteria;
- Nickel with a concentration range of 6.4 mg/kg to 13 mg/kg at sample locations BH01_0-0.1, BH03_0.2-0.3, BH04_0-0.1 and BH04_0.4-0.5 (including associated QA20190804-01 and QC20190804-01 samples), exceeding the adopted ecological criterion of 6 mg/kg. Statistical analysis of the reported nickel concentrations for the site indicated that the 95% UCL for the data set is 10.41 mg/kg, and therefore remains above the adopted ecological criteria;

- Zinc with a concentration of 210 mg/kg at sample location BH06_0-0.1, and a concentration of 300 mg/kg at sample location BH02_0.9-1.0, exceeding the adopted ecological criterion of 140 mg/kg. Statistical analysis of the reported zinc concentrations for the site indicated that the 95% UCL for the data set is 177 mg/kg, and therefore remains above the adopted ecological criteria;

The UCL calculation results are presented in **Appendix N**.

8.2.2 TRH

No volatile TRH was reported within samples analysed, and no TRH exceeded health-based vapour intrusion HSLs.

Concentrations of TRH were reported below the laboratory LOR or adopted ecological criteria in all soil samples selected for analysis with the exception of sample BH06_0-0.1 with a TRH C16-C34 concentration of 480 mg/kg, exceeding the adopted ecological criterion of 300 mg/kg.

Statistical analysis of the reported TRH C16-C34 concentrations from the site indicated that the 95% UCL for the data set is 273.9 mg/kg, below the adopted ecological criteria (see **Appendix N**).

Concentrations of TRH were reported below the laboratory LOR or adopted management limits in all soil samples selected for analysis.

8.2.3 BTEX

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

8.2.4 PCBs

PCB concentrations in the analysed soil samples were reported below the laboratory LOR and the adopted assessment criteria.

8.2.5 PAHs

Concentrations of PAHs were reported below the adopted human health criteria in all soil samples selected for analysis with the exception of BaP Toxic Equivalence Quotient (TEQ) at sample location BH06_0-0.1 with a concentration of 8.8 mg/kg; exceeding the adopted health criterion of 3 mg/kg. Statistical analysis was unable to be completed as the single analyte concentration exceeded 250% of the adopted site criterion.

Concentrations of PAHs were reported below the laboratory LOR or adopted ecological criteria in all soil samples selected for analysis with the exception of the following:

- Benzo(a)pyrene (BaP) at sample location BH04_0.4-0.5 with a concentration of 0.8 mg/kg, exceeding the adopted ecological criterion of 0.7 mg/kg; and
- BaP at sample location BH06_0-0.1 with a concentration of 5.5 mg/kg; exceeding the adopted ecological criterion of 0.7 mg/kg.

Statistical analysis of the reported BaP concentrations for the site indicated that the 95% UCL for the data set is 2.861 mg/kg, and therefore remains above the adopted ecological criteria (see **Appendix N**).

8.2.6 OCPs

OCP concentrations in the analysed soil samples were reported below the laboratory LOR and the adopted assessment criteria.

8.2.7 Asbestos

No asbestos was identified in the samples submitted to the laboratory for analysis.

8.2.8 Waste Classification

All soil analytical results were compared to EPA (2014) *Waste Classification Guidelines* General Soil Waste (GSW) CT1 criteria. BaP and Lead exceeded the CT1 concentrations (Table 1 of the guidelines), however leachable concentrations were reported below the GSW TCLP1 criteria (Table 2 of the guidelines). BaP and lead concentrations were also below the GSW Specific Contaminant Concentration (SCC1, Table 2 of the guidelines), see **Table B and C, Appendix K**.

Preliminary results indicate that should soil require off-site disposal it would be classified as GSW.

9. Site Characterisation

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

9.1 Potential Risks to Future On-site Receptors

Heavy metal and BaP concentrations were detected exceeding the ecological criteria at four sample locations (within 5 samples), which present a potential issue for future ecological receptors. The risk to plant health due to these exceedances would appear low based on the lack of stressed vegetation at the site, and the presence of substantial sealed surfaces across most of the site. Additionally, heavy PAHs such as BaP are not readily taken up by plants (NEPC 2013) and are unlikely to pose an unacceptable risk to plant growth at the site. The removal or relocation of elevated heavy metals in surface soils may be considered during redevelopment in future landscaping areas.

BaP concentrations were detected exceeding the human health criteria in surface fill at one sample location. It is noted that this location is marginally outside the site boundary, however is considered to be representative of underlying fill within this portion of the site. Fill at this location included a small quantity of bituminous waterproof coating material, likely the source of BaP. Leachability results indicate that the BaP is not leachable. The exposure risk is reduced given that the BaP appears related to minor bituminous material in soils beneath thick grass cover. While grass cover is maintained this is not considered to be a complete exposure pathway for ongoing users of the site and surrounding areas. Potential risks may require management if this material is found more widely within fill.

It is noted that slag was encountered within the north-western portion of the site (BH05). However, no elevated contaminant concentrations were identified. This was within the area identified by the groundskeeper as potentially used for disposal of furnace by-products. It is noted that this area was also identified as disturbed within the 1955 aerial image. Therefore, there is the potential for further slag within this portion of the site, however unlikely to be a potential risk to future on-site receptors.

9.2 Background Soil Concentrations

In-situ natural soils were encountered from depths between 0.3 to 1.5 m bgs. The soil samples collected from the natural material indicated metal concentrations were below the background metal concentrations provided in NEPM 2014.

9.3 Chemical Mixtures

There were no potential chemical mixtures identified during the investigation that may pose a management issue at the site.

9.4 Aesthetic Issues

No asbestos, odours or staining were observed during the investigation and only minimal anthropogenic inclusions were noted.

9.5 Potential Migration of Contaminants

No groundwater investigation was undertaken at the site, however soils are considered unlikely to be a source of impact to groundwater below the site. As the majority of the site is sealed it is considered that infiltration of surface water through fill material to groundwater would be minimal, reducing the potential migration of impacts.

Migration of vapours is considered unlikely due to the lack of reported concentrations of volatile chemicals of concern analysed during the assessment.

10. Conclusions and Recommendations

Based on the investigation and subject to the limitations in **Section 11**, JBS&G concludes that:

- Fill material consisted of silty sands and sandy silts encountered to the depths of 0.3 to 1.5 m bgs, with minimal anthropogenic inclusions observed;
- The site has historically been used as a hospital, and later for education purposes. The site appears to have undergone cut and fill activities prior to the current facility being constructed;
- Elevated heavy metal and PAH contaminant concentrations observed above ecological assessment criteria do not appear to impact the current vegetation on-site. The removal or relocation of elevated heavy metals in surface soils should be considered in areas where landscaping will be present following redevelopment. Ecological exceedances are not considered to affect areas of the site that are sealed;
- Due to the limited bituminous materials encountered and low leachability, the elevated BaP concentration at BH06 is not considered to affect the site suitability;
- There is potential that the slag identified at BH05 may be more widespread. However, soil data does not indicate that contaminants are present above the site assessment criteria; and
- For potential off-site disposal of materials, all soils would be classified as General Solid Waste.

In summary, no contamination which would preclude the redevelopment of the site has been identified.

10.1 Recommendations

It is recommended that a detailed soil assessment be undertaken at the site in accordance with recommended EPA sampling density to confirm the characterisation of potential contamination and to support management of materials during redevelopment. It is understood that this can be achieved following demolition of existing site buildings.

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 enquiries.

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

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

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

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

Figures



Legend

- Moriah College
- Approximate Site Boundary
- Extent of Surface Works
- LGA boundary
- Train Station
- Train Line
- Primary Road
- Local Road
- Waterbody area
- Waterway
- Parks and reserves
- Land

JBS&G

Job No: 57079	
Client: AVER	
Version: R01 Rev 0	Date 20/08/2019
Drawn By: CA	Checked By: LL

Scale 1:12,000

0 200 400
metres

Coord. Sys. GDA 1994 MGA Zone 56

101 York Road,
Queens Park, NSW

SITE LOCATION

FIGURE 1

File Name: N:\Projects\AVER\57079 Moriah College PSI DSI\GIS\Maps\R01 Rev 0\57079_01_SiteLocation.mxd
Reference: NSW LPI, 2019



Legend

- Moriah College
- Approximate Site Boundary
- Cadastre (NSW LPI, 2019)
- Extent of Surface Works

JBS&G

Job No: 57079	
Client: AVER	
Version: R01 Rev 0	Date 20/08/2019
Drawn By: CA	Checked By: LL
Scale 1:1,750	

0 20 40
metres

Coord. Sys. GDA 1994 MGA Zone 56

101 York Road,
Queens Park, NSW

SITE LAYOUT

FIGURE 2

File Name: N:\Projects\AVER\57079 Moriah College PSI DSI\GIS\Maps\R01 Rev 0\57079_02_SiteLayout.mxd
Reference: NSW LPI, 2019



BH02	Depth (m BGS)	Concentration	Criteria (Value)
Analyte			
Zinc	0.9-1.0	300 mg/kg	EIL Residential (140 mg/kg)

BH04	Depth (m BGS)	Concentration	Criteria (Value)
Analyte			
Nickel	0-0.1	10 mg/kg	EIL Residential (6 mg/kg)
Nickel	0.4-0.5	9.3 mg/kg	EIL Residential (6 mg/kg)

BH03	Depth (m BGS)	Concentration	Criteria (Value)
Analyte			
Nickel	0-0.1	6.4 mg/kg	EIL Residential (6 mg/kg)

BH01	Depth (m BGS)	Concentration	Criteria (Value)
Analyte			
Nickel	0-0.1	13 mg/kg	EIL Residential (6 mg/kg)

BH06	Depth (m BGS)	Concentration	Criteria (Value)
Analyte			
Benzo(a)pyrene TEQ	0-0.1	8.8 mg/kg	HIL A (3 mg/kg)
Benzo(a)pyrene	0-0.1	5.5 mg/kg	ESL Residential (0.7 mg/kg)
Zinc	0-0.1	210 mg/kg	EIL Residential (140 mg/kg)

Legend

- Moriah College
- Approximate Site Boundary
- Cadastre (NSW LPI, 2019)
- Extent of Surface Works
- Sample Locations

JBS&G

Job No: 57079

Client: AVER

Version: R01 Rev 0 | Date 20/08/2019

Drawn By: AS | Checked By: LL

Scale 1:1,750

0 20 40
metres

Coord. Sys. GDA 1994 MGA Zone 56

101 York Road, Queens Park, NSW

SAMPLE LOCATIONS AND CONCENTRATIONS ABOVE INVESTIGATION LEVELS

FIGURE 3

File Name: N:\Projects\AVER\57079 Moriah College PSI DSI\GIS\Maps\R01 Rev 0\57079_03_SampleLocations.mxd
Reference: NSW LPI, 2019

Appendix A Photographic Log

1. COURTYARD BETWEEN BUILDINGS C AND D, FACING WEST



2. GARDEN AREA EAST OF BUILDING B, FACING EAST



3. TERRACED GARDEN AREA EAST OF BUILDING A, FACING NORTHEAST



4. TERRACED GARDEN AREA EAST OF BUILDING A, FACING SOUTHEAST, BARE SOIL PATCHES EVIDENT.



JBS&G

Job No: 57079

Client: Aver

Version: R01	Date: 19/08/2019
Drawn By: LL	Checked By: SM

Not to Scale

Coord. Sys n/a

Moriah College
Queens Park Road,
Queens Park, NSW

APPENDIX A: PHOTO LOG

5. HAZARDOUS MATERIALS STORAGE SIGNAGE NORTH OF BUILDING D. NO HAZARDOUS MATERIALS KNOWN TO BE PRESENT WITHIN STORAGE AREA.



6. CHEMICAL STORAGE ROOM UNDERSTOOD TO BE ASSOCIATED WITH DESIGN AND TECHNOLOGY CLASSROOMS.



7. GRASSED AREA SOUTH OF BUILDING B, FACING SOUTH. TENNIS COURTS PRESENT TO EAST.



8. INTERSECTION OF BARONGA AVE AND YORK RD FROM SOUTH-EASTERN CORNER OF SITE. OBSERVED STEEP SLOPE FROM SITE TENNIS COURTS DOWN TO ROADWAY.



JBS&G

Job No: 57079

Client: Aver

Version: R01	Date: 19/08/2019
Drawn By: LL	Checked By: SM

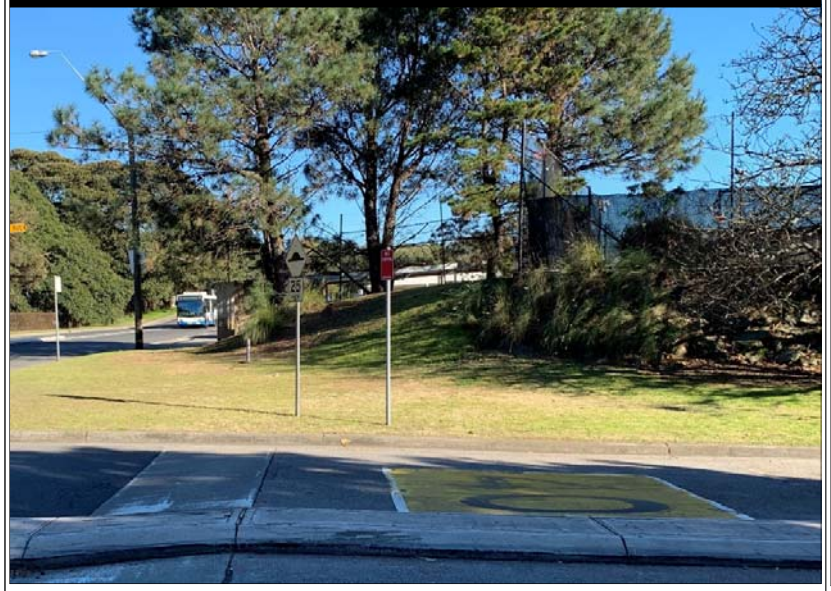
Not to Scale

Coord. Sys n/a

Moriah College
Queens Park Road,
Queens Park, NSW

APPENDIX A: PHOTO LOG

9. PHOTO TAKEN FACING WEST FROM BARONGA AVE. TENNIS COURTS PRESENT TO NORTH, AND SLOPE PRESENT TO THE SOUTH TOWARDS YORK RD.



10. AMPHITHEATRE IN SOUTH-WESTERN CORNER OF SITE, FACING NORTHEAST.



11. BH01 NATURAL GREY SANDS



12. BH02 FILL SOILS WITH CONCRETE/SANDSTONE COBBLES



JBS&G

Job No: 57079	
Client: Aver	
Version: R01	Date: 19/08/2019
Drawn By: LL	Checked By: SM
Not to Scale	
Coord. Sys n/a	

Moriah College
Queens Park Road,
Queens Park, NSW

APPENDIX A: PHOTO LOG

13. BH03 NATURAL LIGHT BROWN SANDS



14. FILL SOILS ENCOUNTERED AT BH04 TO 0.8 M DEPTH



15. SLAG ENCOUNTERED AT BH05



16. METAL FRAGMENTS ENCOUNTERED AT BH06



JBS&G

Job No: 57079	
Client: Aver	
Version: R01	Date: 19/08/2019
Drawn By: LL	Checked By: SM
Not to Scale	
Coord. Sys n/a	

Moriah College
Queens Park Road,
Queens Park, NSW

APPENDIX A: PHOTO LOG

17. BH07 NATURAL YELLOW/ORANGE SANDS



Job No: 57079	
Client: Aver	
Version: R01	Date: 19/08/2019
Drawn By: LL	Checked By: SM
Not to Scale	
Coord. Sys n/a	

Moriah College
Queens Park Road,
Queens Park, NSW

APPENDIX A: PHOTO LOG

Appendix B Registered Groundwater Bores

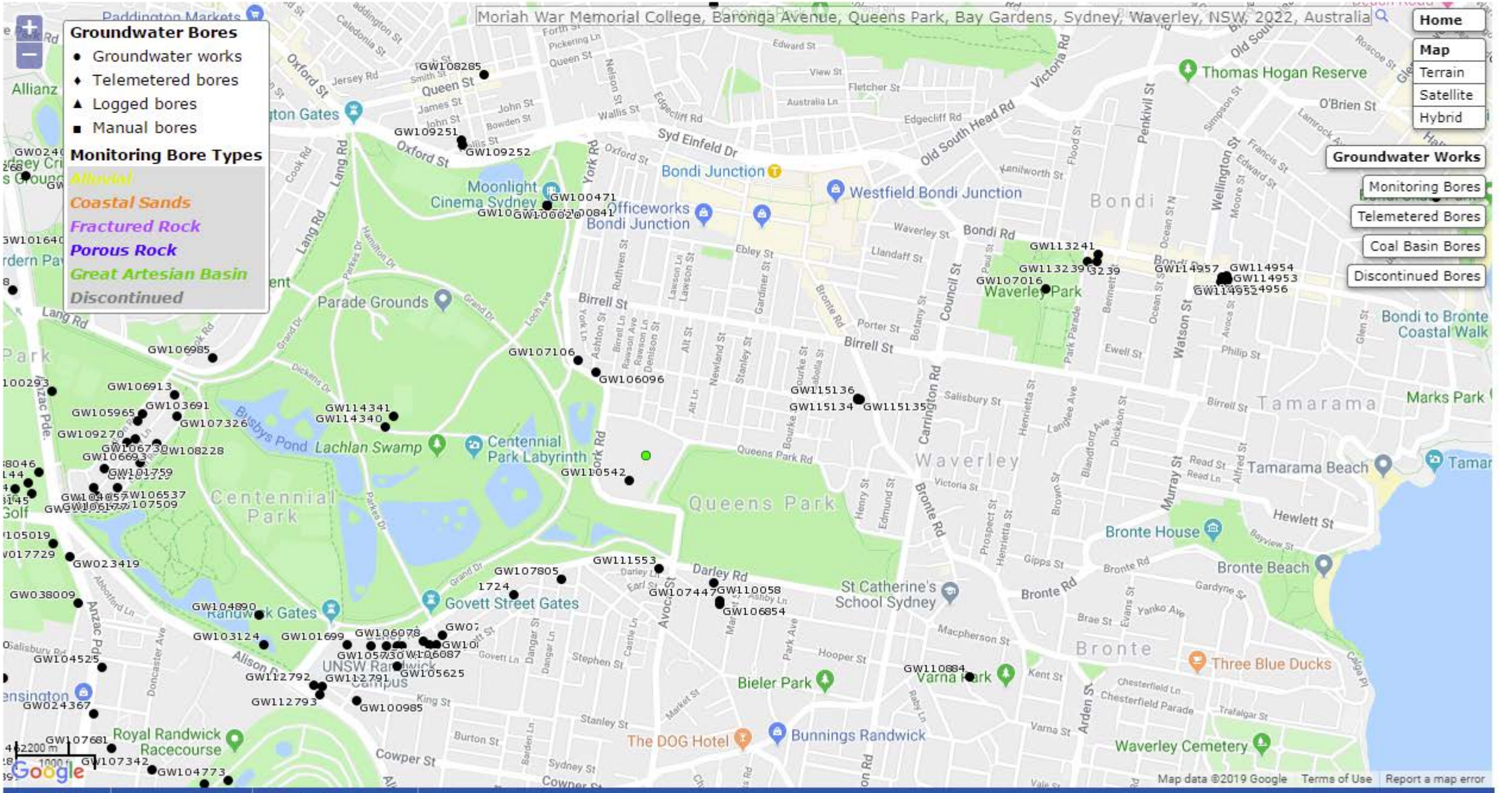
All Groundwater Site Details

All Groundwater Map

bookmark this page

All data times are Eastern Standard Time

Map | Info



Scale = 1 : 14K | 335580, 6248840, 56

WaterNSW
Work Summary

GW106096

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): DOMESTIC

Work Type: Spear
Work Status:
Construct.Method: Auger
Owner Type: Private

Commenced Date:
Completion Date: 15/05/2004
Final Depth: 9.50 m
Drilled Depth: 9.50 m

Contractor Name:
Driller: Rosario Fedele
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ALEXANDRIA	16/10/4600
Licensed:			

Region: 10 - Sydney South Coast
River Basin: 213 - SYDNEY COAST - GEORGES RIVER
Area/District:
CMA Map: 9130-3S
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: (Unknown)
Northing: 6247864.000
Easting: 337452.000
Latitude: 33°53'49.5"S
Longitude: 151°14'31.4"E

GS Map: -
MGA Zone: 56
Coordinate Source: GIS - Geogra

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	9.50	100			Auger
1	1	Casing	Lining	0.00	0.00				

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	9.50	9.50	sand	Sand	

Remarks

01/12/2009: updated from original form A

***** End of GW106096 *****

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.

WaterNSW
Work Summary

GW107106

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): DOMESTIC

Work Type: Spear
Work Status:
Construct.Method: Auger
Owner Type: Private

Commenced Date:
Completion Date: 04/06/2005
Final Depth: 9.50 m
Drilled Depth: 9.50 m

Contractor Name: (None)
Driller: Rosario Fedele
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ALEXANDRIA	18//4600
Licensed:			

Region: 10 - Sydney South Coast
River Basin: 213 - SYDNEY COAST - GEORGES RIVER
Area/District:
CMA Map: 9130-3S
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6247904.000
Easting: 337393.000
Latitude: 33°53'48.2"S
Longitude: 151°14'29.1"E

GS Map: -
MGA Zone: 56
Coordinate Source: GIS - Geogra

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	9.50	100			Auger

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	9.50	9.50	sand	Sand	

Remarks

18/02/2010: updated from original form A

***** End of GW107106 *****

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.

WaterNSW
Work Summary

GW107805

Licence:
Licence Status:

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

Work Type: Bore
Work Status: Abandoned,Backfilled
Construct.Method: Auger
Owner Type: Private

Commenced Date:
Completion Date: 27/02/2006
Final Depth:
Drilled Depth:

Contractor Name: COMBINED DRILLING SERVICES
Driller: Achilles Chris Mylonas
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ALEXANDRIA	C//173194
Licensed:			

Region: 10 - Sydney South Coast
River Basin: 213 - SYDNEY COAST - GEORGES RIVER
Area/District:
CMA Map: 9130-3S
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6247176.000
Easting: 337348.000
Latitude: 33°54'11.8"S
Longitude: 151°14'26.9"E

GS Map: -
MGA Zone: 56
Coordinate Source: GIS - Geogra

Remarks

19/04/2010: due to a clay layer at 7m the installation was abandoned and naturally backfilled to surface.
19/04/2010: updated from original form A

***** End of GW107805 *****

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.

WaterNSW
Work Summary

GW110058

Licence:
Licence Status:

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

Work Type: Spear
Work Status:
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 01/01/2006
Final Depth: 8.00 m
Drilled Depth:

Contractor Name: (None)
Driller: Unkown Unknown
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m): 2.000
Salinity Description:
Yield (L/s): 2.200

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ALEXANDRIA	3//6209
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: 6247171.000
Easting: 337856.000
Latitude: 33°54'12.2"S
Longitude: 151°14'46.6"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Remarks

01/01/2006: Form A Remarks:
Casing: PVC 50mm.

***** End of GW110058 *****

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.

WaterNSW
Work Summary

GW110542

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): DOMESTIC

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

Commenced Date:
Completion Date: 12/10/2009
Final Depth: 27.80 m
Drilled Depth: 28.00 m

Contractor Name: INTERTEC DRILLING SERVICES
Driller: William Crump
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m): 12.200
Salinity Description:
Yield (L/s): 0.600

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ALEXANDRIA	22//879582
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: 6247507.000
Easting: 337570.000
Latitude: 33°54'01.2"S
Longitude: 151°14'35.7"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	5.00	228			Auger
1		Hole	Hole	5.00	28.00	330			Other
1		Annulus	Concrete	-0.10	0.50	228			
1		Annulus	Concrete	0.00	28.00	330			
1		Annulus	Waterworn/Rounded	1.00	11.00				Graded
1		Annulus	Waterworn/Rounded	11.00	27.50				Graded
1	1	Casing	Steel	-0.45	0.75	168			Suspended in Clamps
1	1	Casing	Pvc Class 9	0.30	24.30	140			Driven into small hole, Screwed and Glued
1	1	Opening	Screen	24.30	27.30	140		0	Stainless Steel, Screwed and Glued, A: 0.70mm
1	1	Casing	Stainless Steel	27.30	27.80	140			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)
23.00	27.50	4.50	Unknown	12.20		0.60			134.00

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	1.00	1.00	SAND AND FILL	Sand Grains (Lithic)	
1.00	7.00	6.00	SAND L/BROWN	Sand Grains (Lithic)	
7.00	13.00	6.00	SAND L/GREY	Sand Grains (Lithic)	
13.00	17.00	4.00	SAND YELLOW	Sand Grains (Lithic)	
17.00	20.00	3.00	SAND GREY	Sand Grains (Lithic)	
20.00	23.00	3.00	SAND D/GREY	Sand Grains (Lithic)	
23.00	27.50	4.50	SAND CREAM	Sand Grains (Lithic)	
27.50	28.00	0.50	SAND AND CLAY	Sand Grains (Lithic)	

Remarks

12/10/2009: Form A Remarks:
Bentonite seal from 0.5 to 1m.

***** End of GW110542 *****

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.

WaterNSW
Work Summary

GW111553

Licence:
Licence Status:

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

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

Commenced Date:
Completion Date: 01/01/2005
Final Depth: 14.00 m
Drilled Depth: 14.00 m

Contractor Name: (None)
Driller: Unkown Unknown
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ALEXANDRIA	17//4698
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: 6247218.000
Easting: 337673.000
Latitude: 33°54'10.6"S
Longitude: 151°14'39.6"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

***** End of GW111553 *****

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 C EPA Records

Search results

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

Suburb - Queens Park

returned 0 result

Search Again

For business and industry

For local government

Contact us

131 555 (tel:131555)

info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)

EPA Office Locations (https://www.epa.nsw.gov.au/about-us/contact-us/locations)

Accessibility (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)
Disclaimer (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)
Privacy (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy)
Copyright (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)

Find us on (https://au.linkedin.environment-protection-authority-(https://twitter.com/NSWEPA)

Search results

Your search for:Suburb: QUEENS PARK

Search Again
Refine Search

did not find any records in our database.

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

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

Search TIP

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

... more search tips

More information about particular sites may be available from:

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

See What's in the record and What's not in the record.

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

23 July 2019

Background

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

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

After receiving a report, the first step is to confirm that the report does not relate to a pollution incident. The *Protection of the Environment Operations Act 1997* (POEO Act) deals with pollution incidents, waste stockpiling or dumping. The EPA also has an **incident management** process to manage significant incidents.

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

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

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

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

Frequently asked questions

What is the difference between the 'List of NSW contaminated sites notified to 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 in the list of NSW contaminated sites notified to the EPA indicate that the notifiers consider that the sites are contaminated and warrant reporting to 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 does my site appear on the list?

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

- The site owner and/or the person partly or fully responsible for causing the contamination notified 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 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 mean the site is not contaminated.

The EPA relies upon responsible parties to notify contaminated sites.

How are 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 the EPA website.
- The contamination with respect to the current use or approved use of the site, as defined under the *Contaminated Land Management Act 1997,* is not significant enough that it warrants EPA regulation.
- The contamination does not require EPA regulation and can be managed by a planning approval process.
- The contamination is related to an operational underground petroleum storage system, such as a service station or fuel depot. The contamination may be managed under the POEO Act and the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2014.

Note: There are specific instances where contamination is managed under a specifically tailored program operated by another agency. For example the **Division of Resources & Geoscience's Derelict Mines Program** and the **NSW DPI Cattle tick dip site locator**.

The Legacy contamination management procedures for these sites will be detailed in a Memorandum of Understanding between the NSW EPA, NSW Resources and Energy and Dept. Primary Industries (Crown Lands and Biosecurity) (Note: the MoU is currently in draft).

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, particularly the EPA site management class, is meant to be indicative only, and a starting point for your own assessment. Site contamination as a legacy of past site uses is not uncommon, particularly in an urban 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.

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

If you have questions about a site on the list of sites notified to the EPA you can contact the Environment Line at any time. By phone: 131 555 or by email: info@environment.nsw.gov.au

List of NSW Contaminated Sites Notified to the EPA

Disclaimer

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

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

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

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

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

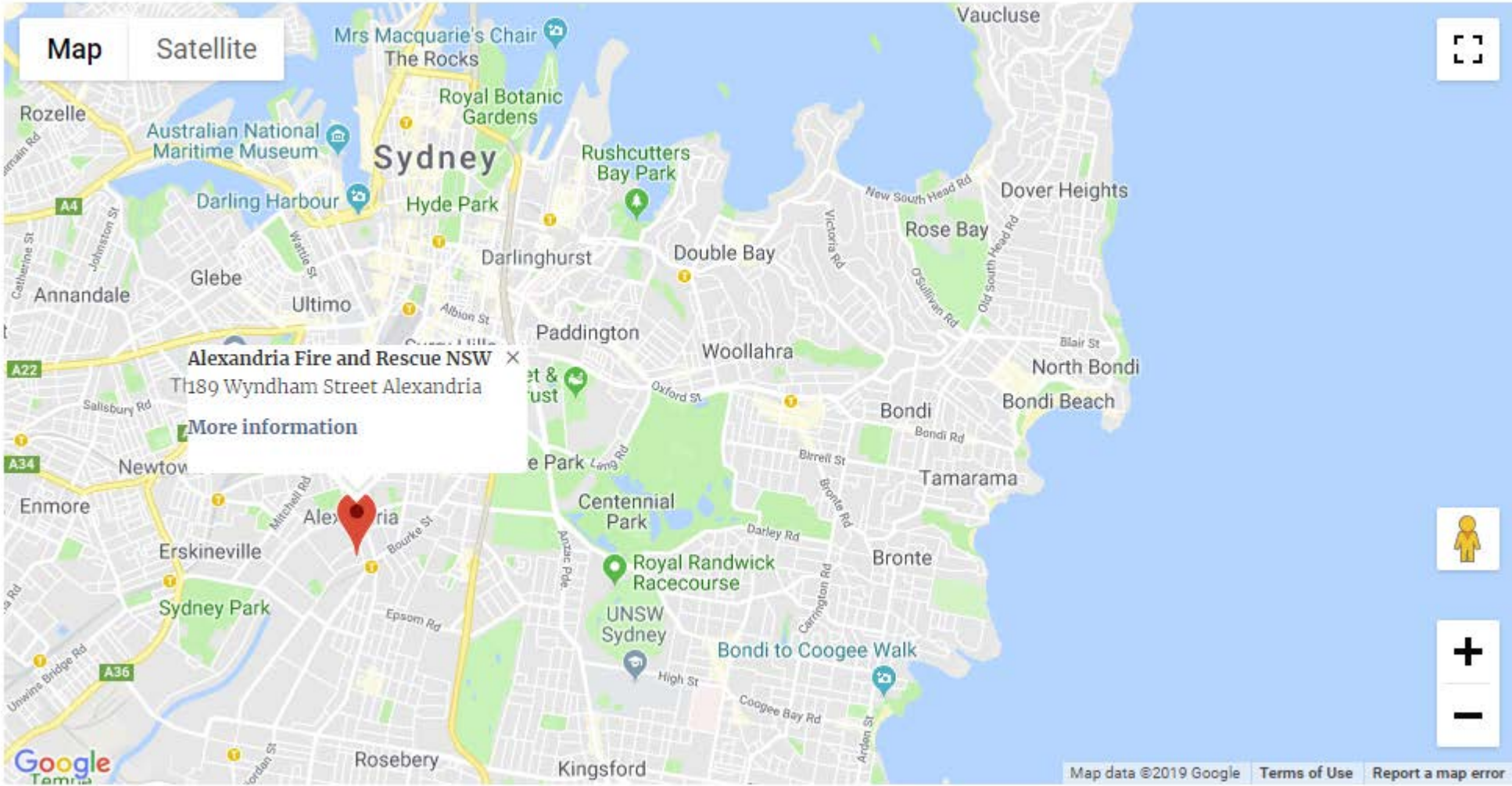
Site Status	Explanation
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or *Protection of the Environment Operations Act 1997*.
Under Preliminary Investigation Order	The EPA has issued a Preliminary Investigation Order under s10 of the *Contaminated Land Management Act 1997*, to obtain additional information needed to complete the assessment.
Regulation under CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the *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.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record.
Contamination currently regulated under POEO Act	Contamination is currently regulated under the *Protection of the Environment Operations Act 1997* (POEO Act). The EPA as *the appropriate regulatory authority* reasonably suspects that a pollution incident is occurring/ has occurred and that it requires regulation under the POEO Act. The EPA may use environment protection notices, such as clean up notices, to require clean up action to be taken. Such regulatory notices are available on the POEO public register.
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the *Environmental Planning and Assessment Act 1979* (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the *Protection of the Environment Operations Act 1997* (POEO Act).
Contamination was addressed via the planning process (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.

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
PROSPECT	Pincott's Cottage, Gate C1	Off Reservoir ROAD	Unclassified	Regulation under CLM Act not required	-33.81589773	150.9144343
PROSPECT	Gatehouse, 544 Reservoir Road	544 Reservoir ROAD	Unclassified	Regulation under CLM Act not required	-33.81049244	150.9157439
PROSPECT	Cottage 3, William Lawson Drive	William Lawson DRIVE	Unclassified	Regulation under CLM Act not required	-33.81490331	150.9149885
PUNCHBOWL	Former BP Service Station	1375 Canterbury Road, corner Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.93170424	151.0537302
PUNCHBOWL	Punchbowl Laundry	42-44 Belmore ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.93582701	151.0562638
PUNCHBOWL	Caltex Service Station Punchbowl	1285-1289 Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.93146308	151.0596348
PUTNEY	Putney Marina	20 Waterview STREET	Other Industry	Regulation being finalised	-33.82608091	151.1003966
PYMBLE	Caltex Service Station	1089 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.74102977	151.1385257
PYMBLE	Shell Coles Express Service Station	21 Ryde ROAD	Service Station	Regulation under CLM Act not required	-33.75198512	151.1438115
PYMBLE	Former 3M site	950 Pacific HIGHWAY	Gasworks	Regulation under CLM Act not required	-33.75050288	151.1460578
PYMBLE	Pymble West Dry Cleaners	6 Philip MALL	Other Industry	Under preliminary investigation order	-33.76109009	151.1284329
PYRMONT	Former Council Works Depot (Fig and Wattle Depot)	14-26 Wattle STREET	Other Industry	Regulation under CLM Act not required	-33.8752655	151.1942645
QUAKERS HILL	7-Eleven (former Mobil) Service Station	83 Lalor ROAD	Service Station	Regulation under CLM Act not required	-33.72759077	150.8966764
QUAKERS HILL	Caltex) Service Station Quakers Hill	450 Quakers Hill PARKWAY	Service Station	Regulation under CLM Act not required	-33.72998613	150.9023617
QUEANBEYAN	Former Mobil Service Station	153 Uriarra ROAD	Service Station	Regulation under CLM Act not required	-35.34425514	149.2148687
QUEANBEYAN	Bill Lilley Automotive	169 Crawford STREET	Service Station	Regulation under CLM Act not required	-35.35138121	149.232486
QUEANBEYAN	Woolworths Queanbeyan Service Station	196 Crawford (Cnr Morisset St) STREET	Service Station	Regulation under CLM Act not required	-35.35163055	149.2335759
QUEANBEYAN	Caltex Queanbeyan Service Station	88 Macquoid (also known as Bungendore Rd) STREET	Service Station	Regulation under CLM Act not required	-35.34930535	149.2438607
QUEANBEYAN	Former Mobil Emoleum Depot	109-111 High STREET	Other Petroleum	Regulation under CLM Act not required	-35.3396115	149.237556
QUEANBEYAN	Former Caltex Depot	20-30 Railway STREET	Other Petroleum	Regulation under CLM Act not required	-35.34523	149.22333
QUEANBEYAN EAST	BP-Branded Service Station Queanbeyan	50 Yass ROAD	Service Station	Regulation under CLM Act not required	-35.34126641	149.2445103
QUEANBEYAN WEST	Caltex Service Station	Lanyon Dr Cnr Mccrae St (1 Suraci Place) STREET	Service Station	Regulation under CLM Act not required	-35.36372923	149.2067531

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
QUIRINDI	Former Mobil Depot Quirindi	4-6 Cross STREET	Other Petroleum	Regulation under CLM Act not required	-31.49903355	150.681972
QUIRINDI	Tamarang ServiCentre Quirindi	113-117 Station (also known as 119-121 Nowland) STREET	Service Station	Under assessment	-31.50179204	150.6814611
QUIRINDI	Caltex Service Station, Quirindi	199-201 George STREET	Service Station	Regulation under CLM Act not required	-31.50654793	150.6803589
RAMSGATE	Shell Coles Express Service Station	Grand Parade cnr Ramsgate ROAD	Service Station	Regulation under CLM Act not required	-33.98537988	151.1471234
RANDWICK	7-Eleven Service Station	126-130 Barker STREET	Service Station	Contamination currently regulated under CLM Act	-33.92096152	151.2355927
RANDWICK	Caltex Service Station	2 Alison ROAD	Service Station	Regulation under CLM Act not required	-33.9065752	151.2320697
RANDWICK	Metro Petroleum	345 Avoca STREET	Service Station	Regulation under CLM Act not required	-33.92544832	151.2396799
RANDWICK	Service Station, Randwick	33-37 Carrington ROAD	Service Station	Contamination currently regulated under CLM Act	-33.90655015	151.2525065
RAVENSWORTH	Ravensworth Operations Narama Mine	Lemington ROAD	Other Industry	Regulation under CLM Act not required	-32.47115903	151.0359579
RAVENSWORTH	Cumnock Colliery	Pikes Gully ROAD	Other Industry	Regulation under CLM Act not required	-32.40218281	150.9960082
RAYMOND TERRACE	Shell Coles Express Raymond Terrace	107 Adelaide (formerly Pacific Highway) STREET	Service Station	Regulation under CLM Act not required	-32.76110922	151.7492847
RAYMOND TERRACE	Caltex Service Station Raymond Terrace	136 Adelaide Street, corner Glenelg STREET	Service Station	Regulation under CLM Act not required	-32.76503842	151.7425264
RAYMOND TERRACE	Former Motor Registry	53 William STREET	Other Petroleum	Regulation under CLM Act not required	-32.76286473	151.7445839
RAYMOND TERRACE	Raymond Terrace Wastewater Treatment Works	22 Elizabeth AVENUE	Other Industry	Regulation under CLM Act not required	-32.774658	151.749978
REDFERN	BP Service Station	116 Regent STREET	Service Station	Regulation under CLM Act not required	-33.89367876	151.1995256
REDFERN	Former Printing Works	101a Marriott STREET	Other Industry	Regulation under CLM Act not required	-33.89512556	151.2113422
REDFERN	BP-branded Jasbe Surry Hills	411 Cleveland STREET	Service Station	Regulation under CLM Act not required	-33.89183974	151.2132466
REVESBY	Dorf Clark Industries	184-194 Milperra ROAD	Metal Industry	Regulation under CLM Act not required	-33.93387149	151.000553
REVESBY	Bituminous Products	33-35 Violet STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.93702092	151.0067896
REVESBY	Mirotone Pty Ltd	21 Marigold STREET	Chemical Industry	Contamination currently regulated under POEO Act	-33.93559608	151.0002207
REVESBY	Caltex Service Station Revesby	181 The River ROAD	Service Station	Regulation under CLM Act not required	-33.95573605	151.0171779
RHODES	adjoining the former UCAL and Allied Feeds sites	Homebush BAY	Chemical Industry	manage residual contamination (CLM Act)	-33.8263749	151.0839216


Map
Satellite
Alexandria Fire and Rescue NSW
189 Wyndham Street Alexandria
More information
Mrs Macquarie's Chair
The Rocks
Royal Botanic Gardens
Australian National Maritime Museum
Sydney
Rushcutters Bay Park
Darling Harbour
Hyde Park
Darlinghurst
Double Bay
Vaucluse
Dover Heights
Rose Bay
Rozelle
Annandale
Glebe
Ultimo
Paddington
Woollahra
North Bondi
Bondi Beach
Bondi
Tamarama
Bronte
Centennial Park
Royal Randwick Racecourse
UNSW Sydney
Bondi to Coogee Walk
Enmore
Erskineville
Sydney Park
Newtown
Rosebery
Kingsford
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Appendix D Heritage Records

Search Results

3 results found.

Centennial Park Oxford St	Centennial Park, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Centennial Park Oxford St	Centennial Park, NSW, Australia	(Listed place) National Heritage List
Centennial Parklands Anzac Pde	Centennial Park, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Report Produced: Tue Jul 23 10:50:59 2019

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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 1 record.

Item name	Address	Suburb	LGA	SHR
Centennial Park, Moore Park, Queens Park	Randwick, South Sydney and Waverley LGAs	Centennial Park	Randwick	01384

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

Your search did not return any matching results.

There was a total of 1 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.

Appendix E Section 10.7 Planning Certificates

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2&5) ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

WAVERLEY COUNCIL

Online Services
Waverley Council

Cert. No.42037
Date: 23 July 2019
Receipt No. 2111952
Your reference: 57079:35004

Property location	**Moriah College, 3 Queens Park Road, QUEENS PARK NSW 2022**
Parcel description:	**Lot 3 DP 701512**
Owner:	**Mr R N Simons and Mr R M Goot and Mr R B Gavshon and Mr D Goulburn and Mr G B Einfeld** **C/- Mr T Johnson** **PO Box 986** **BONDI JUNCTION NSW 1355**

[The next page is page 2]

The information in this certificate is provided under section 10.7(2) Environmental Planning & Assessment Act 1979 and the Environmental Planning & Assessment Regulation 2000, specifically Schedule 4.

The Council warns that:

- other authorities may hold information in respect of the land to which this certificate relates;
- the Council's records may not be complete or accurate in respect of the land; and
- the absence of a reference to any matter affecting the land does not imply that the land is not affected by any matter not referred to in this certificate.

Further information about this certificate may be available from Council's Duty Planner.

ITEM 1

Names of relevant planning instruments and DCPs

(1) The name of each environmental planning instrument that applies to the carrying out of development on the land.

The following environmental planning instruments apply to the carrying out of development on the land:

Waverley Local Environmental Plan 2012 *as published on the NSW Legislation website (www.legislation.nsw.gov.au) and updated from time to time.*

- SEPP No. 19 Bushland in Urban Areas
- SEPP No. 33 Hazardous and Offensive Development
- SEPP No. 50 Canal Estates
- SEPP No. 55 Remediation of Land
- SEPP No. 64 Advertising and Signage
- SEPP No. 65 Design Quality of Residential Flat Development
- SEPP No. 70 Affordable Housing (Revised Schemes)
- SEPP (Affordable Rental Housing) 2009
- SEPP (Building Sustainability Index: BASIX) 2004
- SEPP (Coastal Management) 2018
- SEPP (Educational Establishments and Child Care Facilities) 2017
- SEPP (Exempt and Complying Development Codes) 2008
- SEPP (Housing for Seniors or People with a Disability) 2004
- SEPP (Infrastructure) 2007
- SEPP (State and Regional Development) 2011
- SEPP (State Significant Precincts) 2005
- SEPP (Vegetation in Non-Rural Areas) 2017
- SREP (Sydney Harbour Catchment) 2005

Any enquiries regarding these SEPPs should be directed to the Department of Planning and Environment on: ***1300 305 695*** or http://www.planning.nsw.gov.au

(2) The name of each proposed environmental planning instrument that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Act (unless the Secretary

has notified the council that the making of the proposed instrument has been deferred indefinitely or has not been approved).

The following proposed environmental planning instruments apply to the carrying out of development on the land:

Draft Waverley Local Strategic Planning Statement

-
  - Infrastructure SEPP (Review)
  - SEPP 64 (Advertising and Signage) Amendment

Note: Any enquiries regarding these SEPPs should be directed to the Department of Planning and Environment on: ***1300 305 695*** or http://www.planning.nsw.gov.au

(3) The name of each development control plan that applies to the carrying out of development on the land.

The following development control plan (DCP) applies to the land:

- Waverley Development Control Plan 2012 (WDCP 2012)

Please note the WDCP 2012 is amended from time to time. It is the responsibility of the applicant to ensure that the correct version is applied.

-

(4) In this clause, proposed environmental planning instrument includes a planning proposal for a LEP or a draft environmental planning instrument.

ITEM 2

Zoning and land use under relevant LEPs

For each environmental planning instrument or proposed instrument referred to in clause 1 (other than a SEPP or proposed SEPP) that includes the land in any zone (however described):

(a) the identity of the zone, whether by reference to a name (such as "Residential Zone" or "Heritage Area") or by reference to a number (such as "Zone No 2(a)"),

(b) the purposes for which the instrument provides that development may be carried out within the zone without the need for development consent,

(c) the purposes for which the instrument provides that development may not be carried out within the zone except with development consent,

(d) the purposes for which the instrument provides that development is prohibited within the zone,

Waverley Local Environmental Plan 2012 *as published on the NSW Legislation website (www.legislation.nsw.gov.au) and updated from time to time.*

Zone SP2 Infrastructure

1 Objectives of zone

- To provide for infrastructure and related uses.
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.

2 Permitted without consent

Nil

3 Permitted with consent

Roads; The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose

4 Prohibited

Any development not specified in item 2 or 3.

(e) whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed,

The land is **not** subject to any development standards that fix minimum land dimensions for the erection of a dwelling house.

(f) whether the land includes or comprises critical habitat,

The land does **not** comprise critical habitat.

(g) whether the land is in a conservation area (however described),

The land **is** within a Heritage Conservation Area.

- The land is located within a Heritage Conservation Area - Landscape identified in Waverley Local Environmental Plan 2012.

▪

(h) whether an item of environmental heritage (however described) is situated on the land.

The land does **not** contain an Item of Environmental Heritage.

ITEM 2A

Zoning and land use under State Environmental Planning Policy (Sydney Region Growth Centres) 2006

To the extent that the land is within any zone (however described) under:

(a) Part 3 of the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006* **(the 2006 SEPP)**, or

(b) A Precinct Plan (within the meaning of the 2006 SEPP), or

(c) A proposed Precinct Plan that is or has been the subject of community consultation or on public exhibition under the Act,

the particulars referred to in clause 2(a)-(h) in relation to that land (with a reference to "the instrument" in any of those paragraphs being read as a reference to Part 3 of the 2006 SEPP, or the Precinct Plan or proposed Precinct Plan, as the case requires).

The land is **not** subject to the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006.*

ITEM 3

Complying development

(1) The extent to which the land is land on which complying development may be carried out under each of the codes for complying development because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

(2) The extent to which complying development may not be carried out on that land because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of that Policy and the reasons why it may not be carried out under those clauses.

(3) If the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement that a restriction applies to the land, but it may not apply to all of the land, and that council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Housing Code

Complying development under the Housing Code **may not** be carried out on the land. The land is affected by specific land exemption:

- land is located within a Heritage Conservation Area - development is excluded from SEPP (Exempt and Complying Development) 2008, unless the development is for a detached outbuilding or swimming pool.
- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

Rural Housing Code

There are no lands within the Waverley Council area that are affected by this Code.

Low Rise Medium Density Housing Code

Complying development under the Low Rise Medium Density Housing Code **may not** be carried out on the land. The land is affected by specific land exemption:

- land is located within a Heritage Conservation Area - development is excluded from SEPP (Exempt and Complying Development) 2008, unless the development is for a detached outbuilding or swimming pool.
- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

Greenfield Housing Code

There are no lands within the Waverley Council area that are affected by this Code.

Housing Alterations Code

Complying development under the Housing Alterations Code **may not** be carried out on the land. The land is affected by specific land exemption:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

▪

General Development Code

Complying development under the General Development Code **may not** be carried out on the land. The land is affected by specific land exemption:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

▪

Commercial and Industrial Alterations Code

Complying development under the Commercial and Industrial Alteration Code **may not** be carried out on the land. The land is affected by specific land exemptions:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

▪

Commercial and Industrial (New Buildings and Additions) Code

Complying development under the Commercial and Industrial (New Building and Additions) Code **may not** be carried out on the land. The land is affected by specific land exemptions:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.
- land is located within a Heritage Conservation Area.

▪

Container Recycling Facilities Code

Complying development under the Container Recycling Facilities Code **may not** be carried out on the land. The land is affected by specific land exemptions:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

▪

Subdivisions Code

Complying development under the Subdivisions Code **may not** be carried out on the land. The land is affected by specific land exemptions:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

▪

Demolition Code

Complying development under the Demolition Code **may not** be carried out on the land. The land is affected by specific land exemption:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

▪

Fire Safety Code

Complying development under the Fire Safety Code **may not** be carried out on the land. The land is affected by specific land exemptions:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.
-

Disclaimer: If a restriction applies to the land, the restriction may not apply to all of the land. Council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Complying development may be able to be carried out on the land provided it meets the requirements and standards of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

ITEM 4, 4A (Repealed)

ITEM 4B

Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works

In relation to a coastal council - whether the owner (or any previous owner) of the land has consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

No.

Note "Existing coastal protection works" are works to reduce the impact of coastal hazards on land (such as seawalls, revetments, groynes and beach nourishment) that existed before the commencement of section 553B of the *Local Government Act 1993.*

ITEM 5

Mine subsidence

Whether or not the land is proclaimed to be a mine subsidence district within the meaning of section 15 of the *Mine Subsidence Compensation Act 1961.*

The land is **not** proclaimed to be a mine subsidence district within the meaning of section 15 of the *Mine Subsidence Compensation Act 1961.*

ITEM 6

Road widening and road realignment

Whether or not the land is affected by any road widening or road realignment under:

(a) Division 2 of Part 3 of the *Roads Act 1993*, or

(b) any environmental planning instrument, or

(c) any resolution of the council.

The land is **not** affected by any road widening or road realignment under Division 2 of Part 3 of the Roads Act 1993, or any environmental planning instrument or any resolution of the Council.

ITEM 7

Council and other public authority policies on hazard risk restrictions

Whether or not the land is affected by a policy:

(a) adopted by the council, or

(b) adopted by any other public authority and notified to the council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the council,

that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

(a) The land is **not** affected by a policy adopted by Council that restricts the development of land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

(b) The land is **not** affected by a policy adopted by another public authority and notified to the Council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the Council, that restricts the development of land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

ITEM 7A

Flood related development controls information

(1) Whether or not development on that land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to flood related development controls.

The land is **not** subject to flood related development controls for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing).

(2) Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls.

The land is **not** subject to flood related development controls.

(3) Words and expressions in this clause have the same meanings as in the Standard Instrument.

ITEM 8

Land reserved for acquisition

Whether or not any environmental planning instrument or proposed environmental planning instrument referred to in clause 1 makes provision in relation to the acquisition of the land by a public authority, as referred to in section 27 of the Act.

The land is **not** affected by any environmental planning instrument or proposed environmental planning instrument referred to in clause 1 that provides for the acquisition of the land by a public authority, as referred to in section 27 of the Act.

ITEM 9

Contributions plans

The name of each contributions plan applying to the land.

Waverley Council Development Contribution Plan 2006

Please note the Development Contribution Plan is amended from time to time. It is the responsibility of the applicant to ensure that the correct version is applied.

ITEM 9A

Biodiversity certified land

If the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*, a statement to that effect.

Note. Biodiversity certified land includes land certified under Part 7AA of the *Threatened Species Conservation Act 1995* that is taken to be certified under Part 8 of the *Biodiversity Conservation Act 2016*.

The land is **not** biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*.

ITEM 10

Biodiversity stewardship sites

If the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016*, a statement to that effect (but only if the council has been notified of the existence of the agreement by the Chief Executive of the Office of Environment and Heritage).

Note. Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardship agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

Council has **not** been notified of any biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* relating to the land.

ITEM 10A

Native vegetation clearing set asides

If the land contains a set aside area under section 60ZC of the *Local Land Services Act 2013*, a statement to that effect (but only if the council has been notified of the existence of the set aside area by Local Land Services or it is registered in the public register under that section).

Council has **not** been notified of the existence of any set aside area by Local Land Services.

ITEM 11

Bush fire prone land

If any of the land is bush fire prone land (as defined in the Act), a statement that all or, as the case may be, some of the land is bush fire prone land.

If none of the land is bush fire prone land, a statement to that effect.

The land is **not** bush fire prone land (as defined in the Act).

ITEM 12

Property vegetation plans

If the land is land to which a property vegetation plan under the *Native Vegetation Act 2003* applies, a statement to that effect (but only if the council has been notified of the existence of the plan by the person or body that approved the plan under that Act).

Council has **not** been notified of any property vegetation plans under the *Native Vegetation Act 2003* applying to the land.

ITEM 13

Orders under Trees (Disputes Between Neighbours) Act 2006

Whether an order has been made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on the land (but only if the council has been notified of the order).

No.

ITEM 14

Directions under Part 3A

If there is a direction by the Minister in force under section 75P (2) (c1) of the Act that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect, a statement to that effect identifying the provision that does not have effect.

There is **no** direction under Part 3A.

ITEM 15

Site compatibility certificates and conditions for seniors housing

If the land is land to which *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* applies:

(a) a statement of whether there is a current site compatibility certificate (seniors housing), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:

(i) the period for which the certificate is current, and

(ii) that a copy may be obtained from the head office of the Department, and

Council is **not** aware of any Site Compatibility Certificate (Seniors Housing) for this property.

(b) a statement setting out any terms of a kind referred to in clause 18 (2) of that Policy that have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.

Council is **not** aware of any Site Compatibility Certificate (Seniors Housing) for this property.

ITEM 16

Site compatibility certificates for infrastructure, school or TAFE establishments

A statement of whether there is a valid site compatibility certificate (infrastructure) or site compatibility certificate (schools or TAFE establishments), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:

(a) the period for which the certificate is valid, and

(b) that a copy may be obtained from the head office of the Department.

Council is **not** aware of a site compatibility certificate (infrastructure) or site compatibility certificate (schools or TAFE establishments).

ITEM 17

Site compatibility certificates and conditions for affordable rental housing.

(1) A statement of whether there is a current site compatibility certificate (affordable rental housing), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:

(a) the period for which the certificate is current, and

(b) that a copy may be obtained from the head office of the Department.

Council has **not** been notified of any site compatibility certificate and condition for affordable rental housing.

(2) A statement setting out any terms of a kind referred to in clause 17(1) or 38 (1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* that have been

imposed as a condition of consent to a development application in respect of the land.

Council has **not** been notified of any site compatibility certificate and condition for affordable rental housing.

ITEM 18

Paper subdivision information

(1) The name of any development plan adopted by a relevant authority that applies to the land or that is proposed to be subject to a consent ballot.

Council is **not** aware of any development plan adopted by a relevant authority that applies to the land or that is proposed to be subject to a consent ballot.

(2) The date of any subdivision order that applies to the land.

There is **no** subdivision order applying to the land.

(3) Words and expressions used in this clause have the same meaning as they have in Part 16C of this Regulation.

ITEM 19

Site verification certificates

A statement of whether there is a current site verification certificate, of which the council is aware, in respect of the land and, if there is a certificate, the statement is to include:

(a) the matter certified by the certificate, and

Note. A site verification certificate sets out the Secretary's opinion as to whether the land concerned is or is not biophysical strategic agricultural land or critical industry cluster land—see Division 3 of Part 4AA *of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*.

(b) the date on which the certificate ceases to be current (if any), and

(c) that a copy may be obtained from the head office of the Department.

Council has **not** been notified of any site verification certificates.

ITEM 20

Loose-fill asbestos insulation

If the land includes any residential premises (within the meaning of Division 1A of Part 8 of the *Home Building Act 1989)* that are listed on the register that is required to be maintained under that Division, a statement to that effect

Council has **not** been notified of a residential dwelling erected on this land containing loose-fill asbestos ceiling insulation. Contact NSW Fair Trading for more information.

ITEM 21

Affected building notices and building product rectification orders

(1) A statement of whether there is any affected building notice of which the council is aware that is in force in respect of the land.

Council is **not** aware of any affected building notice that is in force in respect of the land.

(2) A statement of:

(a) whether there is any building product rectification order of which the council is aware that is in force in respect of the land and has not been fully complied with, and

Council is **not** aware of any building product rectification order that is in force in respect of the land and has not been fully complied with.

(b) whether any notice of intention to make a building product rectification order of which the council is aware has been given in respect of the land and is outstanding.

Council is **not** aware of any notice of intention to make a building product rectification order in respect of the land and is outstanding.

(3) In this clause:

affected building notice has the same meaning as in Part 4 of the *Building Products (Safety) Act 2017.*

building product rectification order has the same meaning as in the *Building Products (Safety) Act 2017*.

Note: The following matters are prescribed by section 59(2) of the *Contaminated Land Management Act 1997* as additional matters to be specified in a planning certificate:

(a) that the land to which the certificate relates is significantly contaminated land within the meaning of that Act-if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,

No.

(b) that the land to which the certificate relates is subject to a management order within the meaning of that Act-if it is subject to such an order at the date when the certificate is issued,

No.

(c) that the land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of that Act-if it is the subject of such an approved proposal at the date when the certificate is issued,

No.

(d) that the land to which the certificate relates is subject to an ongoing maintenance order within the meaning of that Act-if it is subject to such an order at the date when the certificate is issued,

No.

(e) that the land to which the certificate relates is the subject of a site audit statement within the meaning of that Act-if a copy of such a statement has been provided at any time to the local authority issuing the certificate.

No.

Additional information may be provided under section 10.7(5) of the Environmental Planning & Assessment Act 1979. The provision of any such additional information in this certificate is in good faith and subject to section 10.7(6) of the Environmental Planning & Assessment Act 1979.

- BOARDING HOUSES: State Environmental Planning Policy (Affordable Rental Housing) 2009 (ARHSEPP) includes provisions for Boarding Houses. The ARHSEPP is to be consulted if it is intended to demolish, alter or add to, or change the fabric or furnish of a boarding house or to change its use.

▪

View recent Development Applications relating to the land via the Development Application Tracking Tool available at Council's website *Track a Development Application.*

Further information about this certificate may be available from Council's Duty Planner.



…….
Ross McLeod
GENERAL MANAGER

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2&5) ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

WAVERLEY COUNCIL

L Luedecke
LEVEL1 / 50 Margaret Street
SYDNEY NSW 2000

Cert. No.42044
Date: 24 July 2019
Receipt No. 2112038
Your reference: 57079:35014

Property location	**Moriah College, York Road, QUEENS PARK NSW 2022**
Parcel description:	**Lot 22 DP 879582**
Owner:	**Mr R N Simons and Mr R M Goot and Mr R B Gavshon and Mr D Goulburn and Mr G B Einfeld** **C/- Mr T Johnson** **PO Box 986** **BONDI JUNCTION NSW 1355**

[The next page is page 2]

The information in this certificate is provided under section 10.7(2) Environmental Planning & Assessment Act 1979 and the Environmental Planning & Assessment Regulation 2000, specifically Schedule 4.

The Council warns that:

- other authorities may hold information in respect of the land to which this certificate relates;
- the Council's records may not be complete or accurate in respect of the land; and
- the absence of a reference to any matter affecting the land does not imply that the land is not affected by any matter not referred to in this certificate.

Further information about this certificate may be available from Council's Duty Planner.

ITEM 1

Names of relevant planning instruments and DCPs

(1) The name of each environmental planning instrument that applies to the carrying out of development on the land.

The following environmental planning instruments apply to the carrying out of development on the land:

Waverley Local Environmental Plan 2012 *as published on the NSW Legislation website (www.legislation.nsw.gov.au) and updated from time to time.*

- SEPP No. 19 Bushland in Urban Areas
- SEPP No. 33 Hazardous and Offensive Development
- SEPP No. 50 Canal Estates
- SEPP No. 55 Remediation of Land
- SEPP No. 64 Advertising and Signage
- SEPP No. 65 Design Quality of Residential Flat Development
- SEPP No. 70 Affordable Housing (Revised Schemes)
- SEPP (Affordable Rental Housing) 2009
- SEPP (Building Sustainability Index: BASIX) 2004
- SEPP (Coastal Management) 2018
- SEPP (Educational Establishments and Child Care Facilities) 2017
- SEPP (Exempt and Complying Development Codes) 2008
- SEPP (Housing for Seniors or People with a Disability) 2004
- SEPP (Infrastructure) 2007
- SEPP (State and Regional Development) 2011
- SEPP (State Significant Precincts) 2005
- SEPP (Vegetation in Non-Rural Areas) 2017
- SREP (Sydney Harbour Catchment) 2005

Any enquiries regarding these SEPPs should be directed to the Department of Planning and Environment on: ***1300 305 695*** or http://www.planning.nsw.gov.au

(2) The name of each proposed environmental planning instrument that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Act (unless the Secretary

has notified the council that the making of the proposed instrument has been deferred indefinitely or has not been approved).

The following proposed environmental planning instruments apply to the carrying out of development on the land:

Draft Waverley Local Strategic Planning Statement

-
  - Infrastructure SEPP (Review)
  - SEPP 64 (Advertising and Signage) Amendment

Note: Any enquiries regarding these SEPPs should be directed to the Department of Planning and Environment on: ***1300 305 695*** or http://www.planning.nsw.gov.au

(3) The name of each development control plan that applies to the carrying out of development on the land.

The following development control plan (DCP) applies to the land:

- Waverley Development Control Plan 2012 (WDCP 2012)

Please note the WDCP 2012 is amended from time to time. It is the responsibility of the applicant to ensure that the correct version is applied.

-

(4) In this clause, proposed environmental planning instrument includes a planning proposal for a LEP or a draft environmental planning instrument.

ITEM 2

Zoning and land use under relevant LEPs

For each environmental planning instrument or proposed instrument referred to in clause 1 (other than a SEPP or proposed SEPP) that includes the land in any zone (however described):

(a) the identity of the zone, whether by reference to a name (such as "Residential Zone" or "Heritage Area") or by reference to a number (such as "Zone No 2(a)"),

(b) the purposes for which the instrument provides that development may be carried out within the zone without the need for development consent,

(c) the purposes for which the instrument provides that development may not be carried out within the zone except with development consent,

(d) the purposes for which the instrument provides that development is prohibited within the zone,

Waverley Local Environmental Plan 2012 *as published on the NSW Legislation website (www.legislation.nsw.gov.au) and updated from time to time.*

Zone SP2 Infrastructure

1 Objectives of zone

- To provide for infrastructure and related uses.
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.

2 Permitted without consent

Nil

3 Permitted with consent

Roads; The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose

4 Prohibited

Any development not specified in item 2 or 3.

(e) whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed,

The land is **not** subject to any development standards that fix minimum land dimensions for the erection of a dwelling house.

(f) whether the land includes or comprises critical habitat,

The land does **not** comprise critical habitat.

(g) whether the land is in a conservation area (however described),

The land **is** within a Heritage Conservation Area.

- The land is located within a Heritage Conservation Area - Landscape identified in Waverley Local Environmental Plan 2012.

▪

(h) whether an item of environmental heritage (however described) is situated on the land.

The land does **not** contain an Item of Environmental Heritage.

ITEM 2A

Zoning and land use under State Environmental Planning Policy (Sydney Region Growth Centres) 2006

To the extent that the land is within any zone (however described) under:

(a) Part 3 of the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006* **(the 2006 SEPP)**, or

(b) A Precinct Plan (within the meaning of the 2006 SEPP), or

(c) A proposed Precinct Plan that is or has been the subject of community consultation or on public exhibition under the Act,

the particulars referred to in clause 2(a)-(h) in relation to that land (with a reference to "the instrument" in any of those paragraphs being read as a reference to Part 3 of the 2006 SEPP, or the Precinct Plan or proposed Precinct Plan, as the case requires).

The land is **not** subject to the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006.*

ITEM 3

Complying development

(1) The extent to which the land is land on which complying development may be carried out under each of the codes for complying development because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

(2) The extent to which complying development may not be carried out on that land because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of that Policy and the reasons why it may not be carried out under those clauses.

(3) If the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement that a restriction applies to the land, but it may not apply to all of the land, and that council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Housing Code

Complying development under the Housing Code **may not** be carried out on the land. The land is affected by specific land exemption:

- land is located within a Heritage Conservation Area - development is excluded from SEPP (Exempt and Complying Development) 2008, unless the development is for a detached outbuilding or swimming pool.
- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

Rural Housing Code

There are no lands within the Waverley Council area that are affected by this Code.

Low Rise Medium Density Housing Code

Complying development under the Low Rise Medium Density Housing Code **may not** be carried out on the land. The land is affected by specific land exemption:

- land is located within a Heritage Conservation Area - development is excluded from SEPP (Exempt and Complying Development) 2008, unless the development is for a detached outbuilding or swimming pool.
- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

Greenfield Housing Code

There are no lands within the Waverley Council area that are affected by this Code.

Housing Alterations Code

Complying development under the Housing Alterations Code **may not** be carried out on the land. The land is affected by specific land exemption:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

▪

General Development Code

Complying development under the General Development Code **may not** be carried out on the land. The land is affected by specific land exemption:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

▪

Commercial and Industrial Alterations Code

Complying development under the Commercial and Industrial Alteration Code **may not** be carried out on the land. The land is affected by specific land exemptions:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

▪

Commercial and Industrial (New Buildings and Additions) Code

Complying development under the Commercial and Industrial (New Building and Additions) Code **may not** be carried out on the land. The land is affected by specific land exemptions:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.
- land is located within a Heritage Conservation Area.

▪

Container Recycling Facilities Code

Complying development under the Container Recycling Facilities Code **may not** be carried out on the land. The land is affected by specific land exemptions:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

▪

Subdivisions Code

Complying development under the Subdivisions Code **may not** be carried out on the land. The land is affected by specific land exemptions:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

▪

Demolition Code

Complying development under the Demolition Code **may not** be carried out on the land. The land is affected by specific land exemption:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.

▪

Fire Safety Code

Complying development under the Fire Safety Code **may not** be carried out on the land. The land is affected by specific land exemptions:

- part of land is identified in an Environmental Planning Instrument as being high biodiversity.
-

Disclaimer: If a restriction applies to the land, the restriction may not apply to all of the land. Council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Complying development may be able to be carried out on the land provided it meets the requirements and standards of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

ITEM 4, 4A (Repealed)

ITEM 4B

Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works

In relation to a coastal council - whether the owner (or any previous owner) of the land has consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

No.

Note "Existing coastal protection works" are works to reduce the impact of coastal hazards on land (such as seawalls, revetments, groynes and beach nourishment) that existed before the commencement of section 553B of the *Local Government Act 1993.*

ITEM 5

Mine subsidence

Whether or not the land is proclaimed to be a mine subsidence district within the meaning of section 15 of the *Mine Subsidence Compensation Act 1961.*

The land is **not** proclaimed to be a mine subsidence district within the meaning of section 15 of the *Mine Subsidence Compensation Act 1961.*

ITEM 6

Road widening and road realignment

Whether or not the land is affected by any road widening or road realignment under:

(a) Division 2 of Part 3 of the *Roads Act 1993*, or

(b) any environmental planning instrument, or

(c) any resolution of the council.

The land is **not** affected by any road widening or road realignment under Division 2 of Part 3 of the Roads Act 1993, or any environmental planning instrument or any resolution of the Council.

ITEM 7

Council and other public authority policies on hazard risk restrictions

Whether or not the land is affected by a policy:

(a) adopted by the council, or

(b) adopted by any other public authority and notified to the council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the council,

that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

(a) The land is **not** affected by a policy adopted by Council that restricts the development of land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

(b) The land is **not** affected by a policy adopted by another public authority and notified to the Council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the Council, that restricts the development of land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

ITEM 7A

Flood related development controls information

(1) Whether or not development on that land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to flood related development controls.

The land is **not** subject to flood related development controls for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing).

(2) Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls.

The land is **not** subject to flood related development controls.

(3) Words and expressions in this clause have the same meanings as in the Standard Instrument.

ITEM 8

Land reserved for acquisition

Whether or not any environmental planning instrument or proposed environmental planning instrument referred to in clause 1 makes provision in relation to the acquisition of the land by a public authority, as referred to in section 27 of the Act.

The land is **not** affected by any environmental planning instrument or proposed environmental planning instrument referred to in clause 1 that provides for the acquisition of the land by a public authority, as referred to in section 27 of the Act.

ITEM 9

Contributions plans

The name of each contributions plan applying to the land.

Waverley Council Development Contribution Plan 2006

Please note the Development Contribution Plan is amended from time to time. It is the responsibility of the applicant to ensure that the correct version is applied.

ITEM 9A

Biodiversity certified land

If the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*, a statement to that effect.

Note. Biodiversity certified land includes land certified under Part 7AA of the *Threatened Species Conservation Act 1995* that is taken to be certified under Part 8 of the *Biodiversity Conservation Act 2016*.

The land is **not** biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*.

ITEM 10

Biodiversity stewardship sites

If the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016*, a statement to that effect (but only if the council has been notified of the existence of the agreement by the Chief Executive of the Office of Environment and Heritage).

Note. Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardship agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

Council has **not** been notified of any biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* relating to the land.

ITEM 10A

Native vegetation clearing set asides

If the land contains a set aside area under section 60ZC of the *Local Land Services Act 2013*, a statement to that effect (but only if the council has been notified of the existence of the set aside area by Local Land Services or it is registered in the public register under that section).

Council has **not** been notified of the existence of any set aside area by Local Land Services.

ITEM 11

Bush fire prone land

If any of the land is bush fire prone land (as defined in the Act), a statement that all or, as the case may be, some of the land is bush fire prone land.

If none of the land is bush fire prone land, a statement to that effect.

The land is **not** bush fire prone land (as defined in the Act).

ITEM 12

Property vegetation plans

If the land is land to which a property vegetation plan under the *Native Vegetation Act 2003* applies, a statement to that effect (but only if the council has been notified of the existence of the plan by the person or body that approved the plan under that Act).

Council has **not** been notified of any property vegetation plans under the *Native Vegetation Act 2003* applying to the land.

ITEM 13

Orders under Trees (Disputes Between Neighbours) Act 2006

Whether an order has been made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on the land (but only if the council has been notified of the order).

No.

ITEM 14

Directions under Part 3A

If there is a direction by the Minister in force under section 75P (2) (c1) of the Act that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect, a statement to that effect identifying the provision that does not have effect.

There is **no** direction under Part 3A.

ITEM 15

Site compatibility certificates and conditions for seniors housing

If the land is land to which *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* applies:

(a) a statement of whether there is a current site compatibility certificate (seniors housing), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:

(i) the period for which the certificate is current, and

(ii) that a copy may be obtained from the head office of the Department, and

Council is **not** aware of any Site Compatibility Certificate (Seniors Housing) for this property.

(b) a statement setting out any terms of a kind referred to in clause 18 (2) of that Policy that have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.

Council is **not** aware of any Site Compatibility Certificate (Seniors Housing) for this property.

ITEM 16

Site compatibility certificates for infrastructure, school or TAFE establishments

A statement of whether there is a valid site compatibility certificate (infrastructure) or site compatibility certificate (schools or TAFE establishments), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:

(a) the period for which the certificate is valid, and

(b) that a copy may be obtained from the head office of the Department.

Council is **not** aware of a site compatibility certificate (infrastructure) or site compatibility certificate (schools or TAFE establishments).

ITEM 17

Site compatibility certificates and conditions for affordable rental housing.

(1) A statement of whether there is a current site compatibility certificate (affordable rental housing), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:

(a) the period for which the certificate is current, and

(b) that a copy may be obtained from the head office of the Department.

Council has **not** been notified of any site compatibility certificate and condition for affordable rental housing.

(2) A statement setting out any terms of a kind referred to in clause 17(1) or 38 (1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* that have been

imposed as a condition of consent to a development application in respect of the land.

Council has **not** been notified of any site compatibility certificate and condition for affordable rental housing.

ITEM 18

Paper subdivision information

(1) The name of any development plan adopted by a relevant authority that applies to the land or that is proposed to be subject to a consent ballot.

Council is **not** aware of any development plan adopted by a relevant authority that applies to the land or that is proposed to be subject to a consent ballot.

(2) The date of any subdivision order that applies to the land.

There is **no** subdivision order applying to the land.

(3) Words and expressions used in this clause have the same meaning as they have in Part 16C of this Regulation.

ITEM 19

Site verification certificates

A statement of whether there is a current site verification certificate, of which the council is aware, in respect of the land and, if there is a certificate, the statement is to include:

(a) the matter certified by the certificate, and

Note. A site verification certificate sets out the Secretary's opinion as to whether the land concerned is or is not biophysical strategic agricultural land or critical industry cluster land—see Division 3 of Part 4AA *of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*.

(b) the date on which the certificate ceases to be current (if any), and

(c) that a copy may be obtained from the head office of the Department.

Council has **not** been notified of any site verification certificates.

ITEM 20

Loose-fill asbestos insulation

If the land includes any residential premises (within the meaning of Division 1A of Part 8 of the *Home Building Act 1989)* that are listed on the register that is required to be maintained under that Division, a statement to that effect

Council has **not** been notified of a residential dwelling erected on this land containing loose-fill asbestos ceiling insulation. Contact NSW Fair Trading for more information.

ITEM 21

Affected building notices and building product rectification orders

(1) A statement of whether there is any affected building notice of which the council is aware that is in force in respect of the land.

Council is **not** aware of any affected building notice that is in force in respect of the land.

(2) A statement of:

(a) whether there is any building product rectification order of which the council is aware that is in force in respect of the land and has not been fully complied with, and

Council is **not** aware of any building product rectification order that is in force in respect of the land and has not been fully complied with.

(b) whether any notice of intention to make a building product rectification order of which the council is aware has been given in respect of the land and is outstanding.

Council is **not** aware of any notice of intention to make a building product rectification order in respect of the land and is outstanding.

(3) In this clause:

affected building notice has the same meaning as in Part 4 of the *Building Products (Safety) Act 2017.*

building product rectification order has the same meaning as in the *Building Products (Safety) Act 2017*.

Note: The following matters are prescribed by section 59(2) of the *Contaminated Land Management Act 1997* as additional matters to be specified in a planning certificate:

(a) that the land to which the certificate relates is significantly contaminated land within the meaning of that Act-if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,

No.

(b) that the land to which the certificate relates is subject to a management order within the meaning of that Act-if it is subject to such an order at the date when the certificate is issued,

No.

(c) that the land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of that Act-if it is the subject of such an approved proposal at the date when the certificate is issued,

No.

(d) that the land to which the certificate relates is subject to an ongoing maintenance order within the meaning of that Act-if it is subject to such an order at the date when the certificate is issued,

No.

(e) that the land to which the certificate relates is the subject of a site audit statement within the meaning of that Act-if a copy of such a statement has been provided at any time to the local authority issuing the certificate.

No.

Additional information may be provided under section 10.7(5) of the Environmental Planning & Assessment Act 1979. The provision of any such additional information in this certificate is in good faith and subject to section 10.7(6) of the Environmental Planning & Assessment Act 1979.

- BOARDING HOUSES: State Environmental Planning Policy (Affordable Rental Housing) 2009 (ARHSEPP) includes provisions for Boarding Houses. The ARHSEPP is to be consulted if it is intended to demolish, alter or add to, or change the fabric or furnish of a boarding house or to change its use.

▪

View recent Development Applications relating to the land via the Development Application Tracking Tool available at Council's website *Track a Development Application.*

Further information about this certificate may be available from Council's Duty Planner.



…….
Ross McLeod
GENERAL MANAGER

Appendix F Historical Aerial Photographs



Legend

- Approximate Property Boundary
- Approximate Site Boundary

JBS&G

Job No: 57079	
Client: AVER	
Version: Aerial	Date 15/08/2019
Drawn By: CA	Checked By: LL
Scale 1:5,000	

0 40 80
metres

Coord. Sys. GDA 1994 MGA Zone 56

101 York Road,
Queens Park, NSW

HISTORICAL AERIAL IMAGERY - 1930

FIGURE 1930

File Name: \\JBSG-NSW-FS01\Company Data\Projects\AVER\57079 Moriah College PSI DSI\GIS\Maps\Aerials\57079_Aerials_1930.mxd
Reference: NSW LPI, 2019



Legend

- Approximate Property Boundary
- Approximate Site Boundary

JBS&G

Job No: 57079	
Client: AVER	
Version: Aerial	Date 15/08/2019
Drawn By: CA	Checked By: LL
Scale 1:5,000	

0 40 80

metres

Coord. Sys. GDA 1994 MGA Zone 56

101 York Road,
Queens Park, NSW

HISTORICAL AERIAL IMAGERY - 1943

FIGURE 1943

File Name: \\JBSG-NSW-FS01\Company Data\Projects\AVER\57079 Moriah College PSI DSI\GIS\Maps\Aerials\57079_Aerials_1943.mxd
Reference: NSW LPI, 2019



Legend

- Approximate Property Boundary
- Approximate Site Boundary

JBS&G

Job No: 57079	
Client: AVER	
Version: Aerial	Date 15/08/2019
Drawn By: CA	Checked By: LL
Scale 1:5,000	

0 40 80

metres

Coord. Sys. GDA 1994 MGA Zone 56

101 York Road,
Queens Park, NSW

HISTORICAL AERIAL IMAGERY - 1955

FIGURE 1955

File Name: \\JBSG-NSW-FS01\Company Data\Projects\AVER\57079 Moriah College PSI DSI\GIS\Maps\Aerials\57079_Aerials_1955.mxd
Reference: NSW LPI, 2019



Legend

- Approximate Property Boundary
- Approximate Site Boundary

JBS&G

Job No: 57079	
Client: AVER	
Version: Aerial	Date 15/08/2019
Drawn By: CA	Checked By: LL
Scale 1:5,000	

0 40 80

metres

Coord. Sys. GDA 1994 MGA Zone 56

101 York Road,
Queens Park, NSW

HISTORICAL AERIAL IMAGERY - 1965

FIGURE 1965

File Name: \\JBSG-NSW-FS01\Company Data\Projects\AVER\57079 Moriah College PSI DSI\GIS\Maps\Aerials\57079_Aerials_1965.mxd
Reference: NSW LPI, 2019



Legend

- Approximate Property Boundary
- Approximate Site Boundary

JBS&G

Job No: 57079	
Client: AVER	
Version: Aerial	Date 15/08/2019
Drawn By: CA	Checked By: LL
Scale 1:5,000	

0 40 80

metres

Coord. Sys. GDA 1994 MGA Zone 56

101 York Road,
Queens Park, NSW

HISTORICAL AERIAL IMAGERY - 1978

FIGURE 1978

File Name: \\JBSG-NSW-FS01\Company Data\Projects\AVER\57079 Moriah College PSI DSI\GIS\Maps\Aerials\57079_Aerials_1978.mxd
Reference: NSW LPI, 2019



Legend

- Approximate Property Boundary
- Approximate Site Boundary

JBS&G

Job No: 57079	
Client: AVER	
Version: Aerial	Date 15/08/2019
Drawn By: CA	Checked By: LL
Scale 1:5,000	

0 40 80

metres

Coord. Sys. GDA 1994 MGA Zone 56

101 York Road,
Queens Park, NSW

HISTORICAL AERIAL IMAGERY - 1986

FIGURE 1986

File Name: \\JBSG-NSW-FS01\Company Data\Projects\AVER\57079 Moriah College PSI DSI\GIS\Maps\Aerials\57079_Aerials_1986.mxd
Reference: NSW LPI, 2019



Legend

- Approximate Property Boundary
- Approximate Site Boundary

JBS&G

Job No: 57079	
Client: AVER	
Version: Aerial	Date 15/08/2019
Drawn By: CA	Checked By: LL
Scale 1:5,000	

0 40 80

metres

Coord. Sys. GDA 1994 MGA Zone 56

101 York Road,
Queens Park, NSW

HISTORICAL AERIAL IMAGERY - 1994

FIGURE 1994

File Name: \\JBSG-NSW-FS01\Company Data\Projects\AVER\57079 Moriah College PSI DSI\GIS\Maps\Aerials\57079_Aerials_1994.mxd
Reference: NSW LPI, 2019



Legend

- Approximate Property Boundary
- Approximate Site Boundary

JBS&G

Job No: 57079	
Client: AVER	
Version: Aerial	Date 15/08/2019
Drawn By: CA	Checked By: LL
Scale 1:5,000	

0 40 80

metres

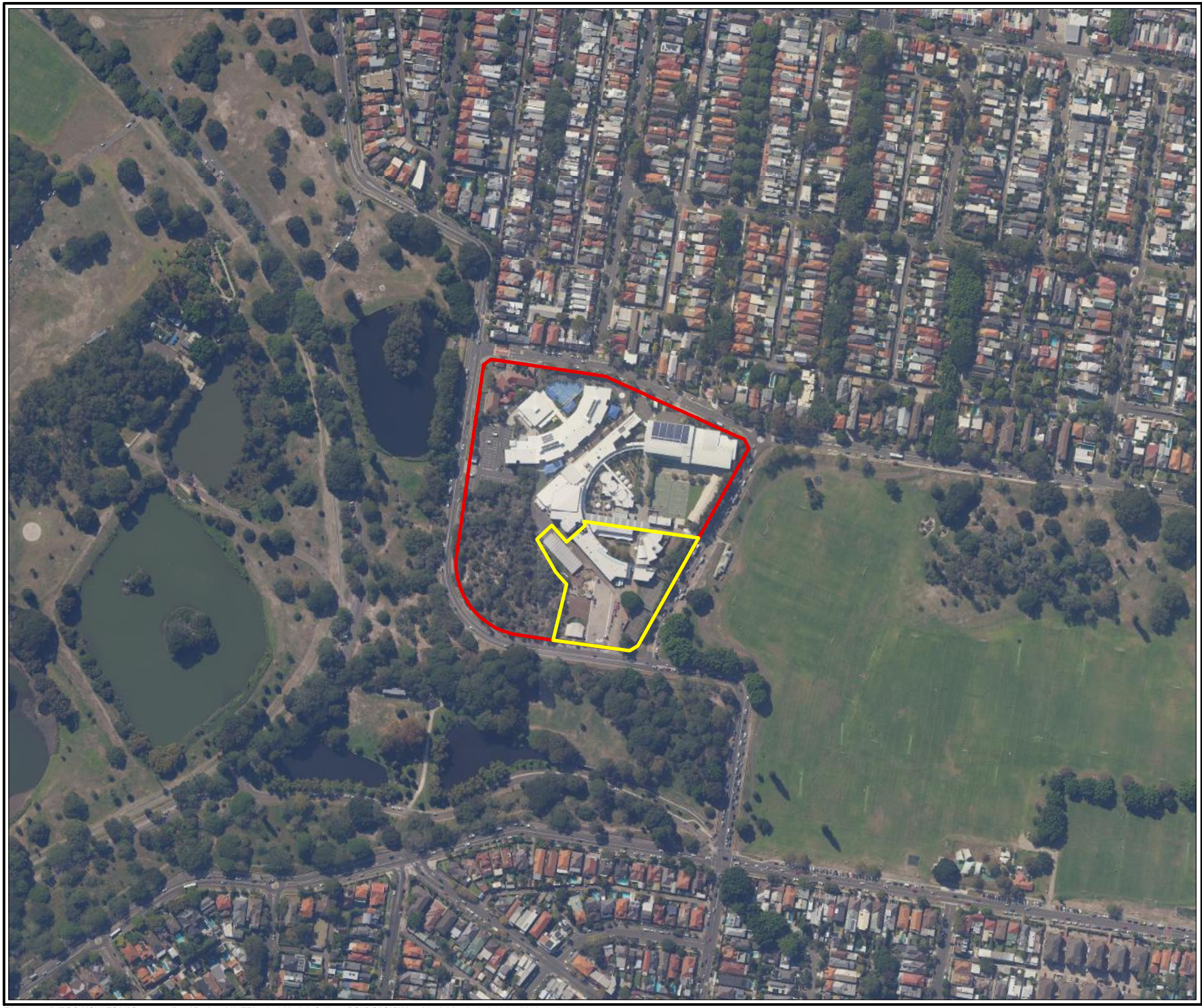
Coord. Sys. GDA 1994 MGA Zone 56

101 York Road,
Queens Park, NSW

HISTORICAL AERIAL IMAGERY - 2002

FIGURE 2002

File Name: \\JBSG-NSW-FS01\Company Data\Projects\AVER\57079 Moriah College PSI DSI\GIS\Maps\Aerials\57079_Aerials_2002.mxd
Reference: NSW LPI, 2019



Legend

- Approximate Property Boundary
- Approximate Site Boundary

JBS&G

Job No: 57079	
Client: AVER	
Version: Aerial	Date 15/08/2019
Drawn By: CA	Checked By: LL
Scale 1:5,000	

0 40 80

metres

Coord. Sys. GDA 1994 MGA Zone 56

101 York Road,
Queens Park, NSW

HISTORICAL AERIAL IMAGERY - 2019

FIGURE 2019

File Name: \\JBSG-NSW-FS01\Company Data\Projects\AVER\57079 Moriah College PSI DSI\GIS\Maps\Aerials\57079_Aerials_2019.mxd
Reference: NSW LPI, 2019

Appendix G Historical Land Title Records

ABN: 36 092 724 251
Ph: 02 9099 7400
(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

LRS NSW **Sydney**

Address: - 101 York Street and 3 Queens Park Road, Queens Park

Description: - Lot 22 in D.P. 879582 and Lot 3 in D.P. 701512

As regards Lot 22 in D.P. 879582

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
03.02.1936 (1936 to 1984)	The Eastern Suburbs Hospital	Vol 4740 Fol 56 Now 2/701512
09.04.1984 (1984 to 1985)	Minister for Public Works	2/701512
06.12.1985 (1986 to 2010)	Minister for Education Now Minister for Education and Training (Resumed for the purpose of a Technical College at Bondi Junction)	2/701512 Now 22/879582
25.08.2010 (2010 to 2014)	State Property Authority Now Government Property NSW	22/879582
17.02.2014 (2014 to date)	# Robert Nathan Simons # Robert Malcolm Goot # Robert Barry Gavshon # Daniel Goulburn # Graham Bruce Einfield	22/879582

# Denotes current registered proprietor

Easements: - Nil

Leases: -

- One Lease was found to have existed in 2005 that has since been removed or has expired due to an effluxion of time – this has not been investigated

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

As regards Lot 3 in D.P. 701512

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
03.02.1936 (1936 to 1984)	The Eastern Suburbs Hospital	Vol 4740 Fol 56 Now 3/701512
09.04.1984 (1984 to 2008)	Minister for Public Works	3/701512
23.09.2008 (2008 to 2014)	State Property Authority Now Government Property NSW	3/701512
17.02.2014 (2014 to date)	# Robert Nathan Simons # Robert Malcolm Goot # Robert Barry Gavshon # Daniel Goulburn # Graham Bruce Einfield	3/701512

# Denotes current registered proprietor

Easements: - Nil

Leases: -

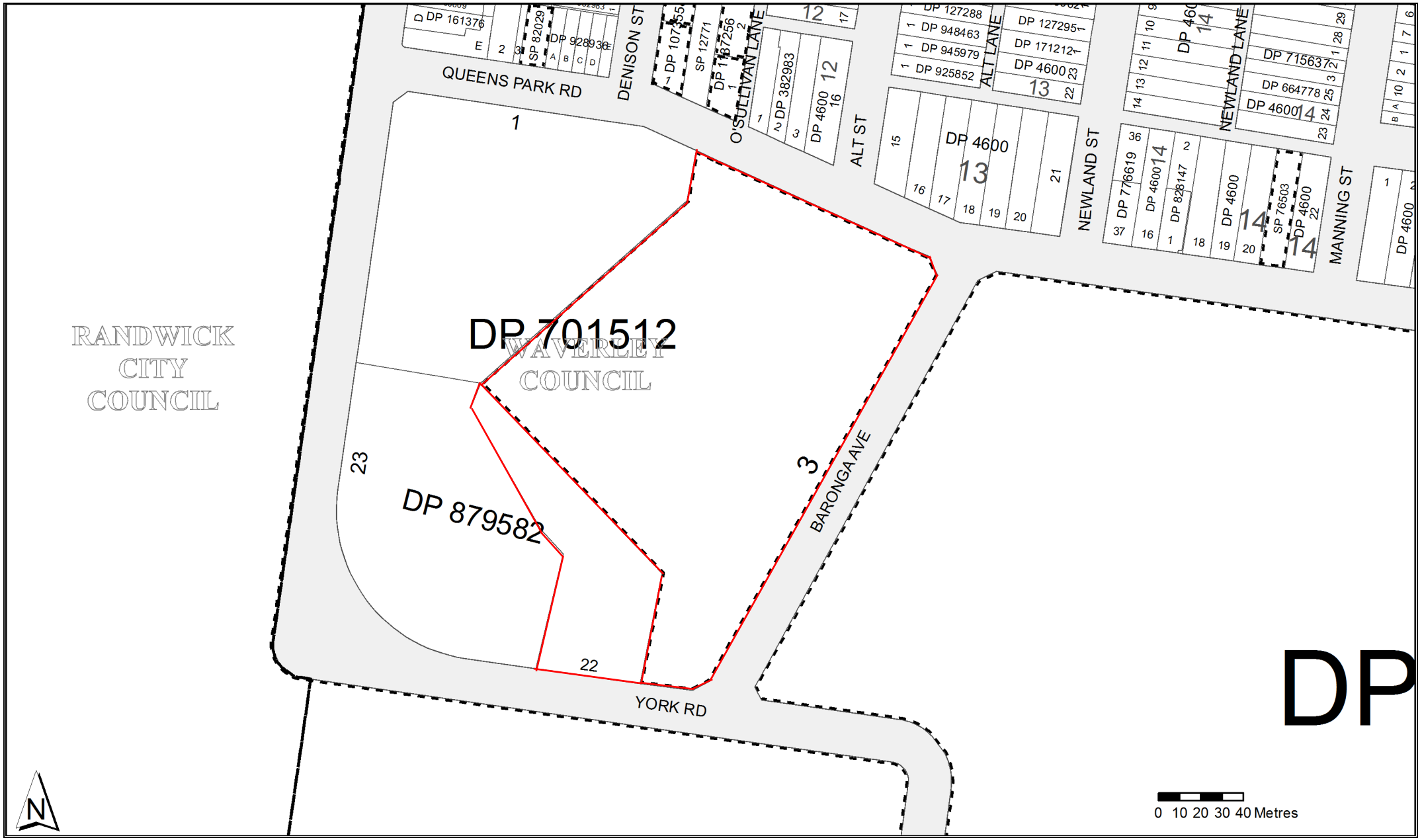
- One Lease was found to have existed in 1984 that has since been removed or has expired due to an effluxion of time – this has not been investigated

Yours Sincerely,
Matthew Hillerman
(Checked by Mark Groll)
30 July 2019

Cadastral Records Enquiry Report : Lot 3 DP 701512

Ref : queens park

Locality : QUEENS PARK
Parish : ALEXANDRIA
LGA : WAVERLEY
County : CUMBERLAND



Copyright © Crown in right of New South Wales, 2017

This information is provided as a searching aid only.Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For ALL ACTIVITY PRIOR TO SEPTEMBER 2002 you must refer to the RGs Charting and Reference Maps

Req:R691726 /Doc:CP 07809-3000 P /Rev:26-Nov-2012 /NSW LRS /Prt:23-Jul-2019 11:38 /Seq:1 of 1
© Office of the Registrar-General /Src:INFOTRACK /Ref:queens park

A-293

Papers LB 30.332

PLAN OF PORTION 26 (Adopted)

Parish of Alexandria County of Cumberland

LAND DISTRICT OF METROPOLITAN LAND BOARD DISTRICT OF SYDNEY

WAVERLEY MUNICIPALITY ~~SHIRE~~

Applied for under the Section of the Crown Lands Consolidation Act 1913 by

Part of (Queen's Park) Centennial Park.

proposed to be dedicated for Eastern Suburbs Hospital Site

① {Dedicated by Act of Parliament (Act No 41 1930) for Eastern Suburbs Hospital Site Ms 28-10146
Grant issued to The Eastern Suburbs Hospital vide Parks 35.8329

Por 26 Adopted
a27 20/10/67

PLAN MICROFILMED
NO ADDITIONS OR ALTERATIONS TO BE MADE



Azimuth taken from XY. true bearing used.

Field Book 450 Pages 18

Reference to Corners

Corner	Bearing	From	Links	No on Tree

Note: PMs are placed 3'6" off pegs and at right angles to the B.Ls

Reference to Traverse

Line	Bearing	Distance

I hereby certify that I in person made and on the 24th April 1930 completed the survey represented on this plan on which are written the bearings and lengths of the lines measured by me and I declare that the survey has been executed in accordance with the regulations published for the guidance of Licensed Surveyors and the practice of the Department of Lands.

Fred C. Dellaca
Licensed Surveyor

Transmitted to the District Surveyor with my letter of 28th April 1930. No 52.

Calculation Book No 30 Folio 33

Checked and Charted Francis J. Hell 2.5.30.

Examined Allen Feltham 1930

Plan approved 2nd May 1930

R.D. Mansell
Officer in Charge
2nd May 1930

Improvements Nil.

7809. 3000

Scale 200 Feet to an Inch. ~~20 Chains to an Inch.~~

Lithographed & Printed at the Department of Lands Sydney N.S.W.

Cat. No Ms 7809 Sy

Standard Tracing Prepared

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
30/7/2019 10:58AM

FOLIO: 2/701512

First Title(s): VOL 4740 FOL 56
Prior Title(s): VOL 4740 FOL 56

Recorded	Number	Type of Instrument	C.T. Issue
10/2/1984	DP701512	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
17/4/1984	V82612	TRANSFER	FOLIO CREATED EDITION 1
6/2/1986	W190882	DEPARTMENTAL DEALING	
25/6/1986	W349359	RESUMPTION APPLICATION	
8/8/1986	W452976	DEPARTMENTAL DEALING	EDITION 2
12/8/1998	5189186	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	EDITION 3
19/8/1998	DP879582	DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS

*** END OF SEARCH ***

queens park PRINTED ON 30/7/2019

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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Received: 30/07/2019 10:58:12

Req:R722739 /Doc:DL V082612 /Rev:29-Sep-2010 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 10:58 /Seq:1 of 3
© Office of the Registrar-General /Src:INFOTRACK /Ref:queens park

[redacted] payment of Registration or othe[redacted]
Department of Pub...
P. J. DAVENPORT,
Legal Officer
per

N.S.W. STAMP DUTIES 10 APR 1984 NO STAMP DUTY IS PAYABLE ON THIS INSTRUMENT

V082612

TRANSFER

REAL PROPERTY ACT, 1900

(See Instructions for Completion on back of form

3 | 2 of 2 | X

$ [illegible]

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Vol. 4740 Fol. 56	~~WHOLE~~ Part being Lots 2 and 3 D.P. 701512	BONDI JUNCTION

DESCRIPTION OF LAND Note (a)

TRANSFEROR Note (b)

THE EASTERN SUBURBS HOSPITAL

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $3,800,000-00 to be paid in accordance with an agreement between the Board and the Minister and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

MINISTER FOR PUBLIC WORKS (for and on behalf of Her Majesty Queen Elizabeth the Second)

OFFICE USE ONLY

OVER

TENANCY Note (e)

as joint tenants/tenants in common

PRIOR ENCUMBRANCES Note (f)

subject to the following PRIOR ENCUMBRANCES 1. Nil 2. ____ 3. ____

DATE 9th April 1984

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

EXECUTION Note (g)

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

Signature of Witness

W. G. LAWRENCE
Name of Witness (BLOCK LETTERS)

CHIEF EXECUTIVE OFFICER
THE PRINCE HENRY, THE PRINCESS OF WALES AND EASTERN SUBURBS HOSPITALS
Address and occupation of Witness

THE EASTERN SUBURBS HOSPITAL

Signature of Transferor

Note (g)

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

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

John Byrne
JOHN BYRNE
SOLICITOR FOR THE TRANSFEREE
Signature of Transferee

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

LODGED BY

Box 707D
Legal Officer
Dept. of Public Works
State Office Block
Phillip Street
Sydney
Ph.: 270-4718

Delivery Box Number 707D

LOCATION OF DOCUMENTS

CT	OTHER

Herewith.
In R.G.O. with
Produced by

OFFICE USE ONLY

Checked	Passed	REGISTERED 17-4-1984	OVER		Cert. of Title
EBIS	EF3				
Signed	Extra Fee				

Registrar General

Endorsed on
V477 of 56
17/7/87 DMC

RP 13

INSTRUCTIONS FOR COMPLETION

This dealing should be marked by the Commissioner of Stamp Duties before lodgment by hand at the Registrar General's Office.

Typewriting and handwriting should be clear, legible and in permanent non-copying ink.

Alterations are not to be made by erasure; the words rejected are to be ruled through and initialled by the parties to the dealing.

If the space provided is insufficient, additional sheets of the same size and quality of paper and having the same margins as this form should be used. Each additional sheet must be identified as an annexure and signed by the parties and the attesting witnesses.

If it is intended to create easements, covenants, &c., use forms RP13A, RP13B, RP13C as appropriate.

Rule up all blanks.

The following instructions relate to the SIDE NOTES on the form.

(a) Description of land:
- (i) TORRENS TITLE REFERENCE.—For a manual reference insert the Volume and Folio (e.g., Vol. 8514 Fol. 126)—For a computer folio insert the folio identifier (e.g., 12/701924). Title references should be listed in numerical sequence.
- (ii) PART/WHOLE.—If part only of the land in the folio of the Register is being transferred, delete the word "WHOLE" and insert the lot and plan number, portion, &c. See also sections 327 and 327AA of the Local Government Act, 1919.
- (iii) LOCATION.—Insert the locality shown on the Certificate of Title/Crown Grant, e.g., at Chullora. If the locality is not shown, insert the Parish and County, e.g., Ph. Lismore Co. Rous.

(b) Show the full name of the transferor(s).

(c) If the estate being transferred is a lesser estate than an estate in fee simple, delete "fee simple" and insert appropriate estate.

(d) Show the full name, address and occupation or description of the transferee(s).

(e) Delete if only one transferee. If more than one transferee, delete either "joint tenants" or "tenants in common", and, if the transferees hold as tenants in common, state the shares in which they hold.

(f) In the memorandum of prior encumbrances, state only the registered number of any mortgage, lease, charge or writ to which this dealing is subject.

(g) Execution:

GENERALLY
- (i) Should there by insufficient space for execution of this dealing, use an annexure sheet.
- (ii) The certificate of correctness under the Real Property Act, 1900, must be signed by all parties to the transfer, each party to execute the dealing in the presence of an adult witness, not being a party to the dealing, to whom he is personally known. The solicitor for the transferee may sign the certificate on behalf of the transferee, the solicitor's name (not that of his firm), to be typewritten or printed adjacent to his signature. Any person falsely or negligently certifying is liable to the penalties provided by section 117 of the Real Property Act, 1900.

ATTORNEY
- (iii) If the transfer is executed by an attorney for the transferor/transferee pursuant to a registered power of attorney, the form of attestation must set out the full name of the attorney, and the form of execution must indicate the source of his authority, e.g., "AB by his attorney (or receiver or delegate, as the case may be) XY pursuant to power of attorney registered Book No. , and I declare that I have no notice of the revocation of the said power of attorney".

AUTHORITY
- (iv) If the transfer is executed pursuant to an authority (other than specified in (iii)) the form of execution must indicate the statutory, judicial or other authority pursuant to which the transfer has been executed.

CORPORATION
- (v) If the transfer is executed by a corporation under seal, the form of execution should include a statement that the seal has been properly affixed, e.g., in accordance with the Articles of Association of the corporation. Each person attesting the affixing of the seal must state his position (e.g., director, secretary) in the corporation.

(h) Insert the name, postal address, Document Exchange reference, telephone number and delivery box number of the lodging party.

(i) The lodging party is to complete the LOCATION OF DOCUMENTS panel. Place a tick in the appropriate box to indicate the whereabouts of the Certificate of Title. List, in an abbreviated form, other documents lodged, e.g., stat. dec. for statutory declaration, pbte for probate, L/A. for letters of administration, &c.

OFFICE USE ONLY

FIRST SCHEDULE DIRECTIONS

(A) FOLIO IDENTIFIER	(B) DIRECTION	(C) NAME
4740-56	PROP	MINISTER FOR PUBLIC WORKS as to part of the land within described being lots 2 and 3 DP701512 by Transfer V 82612 2/B.

SECOND SCHEDULE AND OTHER DIRECTIONS

(D) FOLIO IDENTIFIER	(E) DIRECTION	(F) N OTFN TYPE	(G) DEALING NUMBER	(H) DETAILS
4740-56	ON	AA	V82612	This folio is cancelled upon creation of computer folios for lots 1, 2 & 3 in DP 701512. See V 82612

D. WEST, GOVERNMENT PRINTER

© Office of the Registrar-General /Src:INFOTRACK /Ref:queens park
Req:R722739 /Doc:DL V082612 /Rev:29-Sep-2010 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 10:58 /Seq:2 of 3

Req:R722739 /Doc:DL V082612 /Rev:29-Sep-2010 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 10:58 /Seq:3 of 3
© Office of the Registrar-General /Src:INFOTRACK /Ref:queens park

BIND WITH V82612

Minister for Health
New South Wales

C.12562(5)

16 APR 1984 Sydney

Mr. B. R. Davies,
Registrar General,
Prince Albert Road,
SYDNEY, 2000.

Dear Mr. Davies,

Transfer of Land - The Eastern Suburbs Hospital to Minister for Public Works

In accordance with the provisions of Section 20, Public Hospitals Act, 1929 I have approved of the sale and transfer of land known as lots 2 and 3 in DP701512 being plan of subdivision of portion 26 Parish of Alexandria County of Cumberland being the land comprised in Transfer No. V082612, by the Eastern Suburbs Hospital to the Minister for Public Works.

Yours sincerely,

R.J. MULOCK
Deputy Premier
and
Minister for Health

[redacted]

REGISTRAR GENERAL

10 APR 19

Req:R722978 /Doc:DL W349359 /Rev:28-Oct-2010 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 11:15 /Seq:1 of 2
© Office of the Registrar-General /Src:INFOTRACK /Ref:queens park

RP 44

Crown Instrument not liable to payment of Registration or other

H. K. ROBERTS
Crown Solicitor
per E.P. Meagher

W349359

RESUMPTION APPLICATION

C 1 of 1

RA

$ OHMS

B R 1/1

SECTION 31A (3), REAL PROPERTY ACT, 1900

(See Instructions for Completion on back of form)

DESCRIPTION OF LAND Note (a)

Torrens Title Reference	If part only, delete Whole and give details	Location
2/701512	~~WHOLE~~ Lot 2 D.P. 701512	PARISH: Alexandria COUNTY: Cumberland

D

APPLICANT Note (b)

MINISTER FOR EDUCATION.

OFFICE USE ONLY

S

Note (c) (the abovenamed Applicant) in consequence of the resumption notified in Government Gazette dated 6th December ,1985 ,folio 6348 ,

Note (d) a true copy whereof appears hereunder, hereby applies to the Registrar General (i) to make all such recordings in the Register as may be necessary to give effect to the resumption so far as it relates to the land above described and ~~(ii) [illegible]~~

Note (e) COPY OF GAZETTE NOTIFICATION

NO CT TO ISSUE

SEE ANNEXURE - HERETO.

DATE 15th May 1986

EXECUTION Note (f)

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

Signed in my presence by the authorised officer of the applicant

Signature of Witness

N. SEYMOUR
Name of Witness (BLOCK LETTERS)

C 172 STATE CROWN SOLICITOR
Address and occupation of Witness

H. K. ROBERTS
State Crown Solicitor

E P Meagher
Signature of authorised officer

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

LODGED BY
STATE CROWN SOLICITORS OFFICE
GOODSELL BUILDING
8-12 CHIFLEY SQUARE, SYDNEY. 2000
DX 19 PHONE: 238-7406
813E
Delivery Box Number

LOCATION OF DOCUMENTS

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Signed	Extra Fee	25 JUN 1986 Registrar General	NO CT

G

O.

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ANNEXURE TO RESUMPTION APPLICATION DATED 15th MAY 1986

by the State Crown Solicitor

TECHNICAL AND FURTHER EDUCATION ACT, 1974—
PUBLIC WORKS ACT, 1912

ACQUISITION OF LAND

Technical College at Bondi Junction

IN pursuance of the provisions of section 28 of the Technical and Further Education Act, 1974. It is hereby notified and declared by His Excellency the Governor, acting with the advice of the Executive Council, that so much of the land described in the Schedule hereto as is Crown land is hereby appropriated, and so much of the said land as is private property is hereby resumed under the Public Works Act, 1912, for the purpose of a Technical College at Bondi Junction, and that the said land is vested in the Minister for Education as Constructing Authority on behalf of Her Majesty the Queen.

Dated at Sydney, this 13th day of November, one thousand nine hundred and seventy.

J. A. ROWLAND, Governor.

By His Excellency's Command,

R. M. CAVALIER, Minister for Education.

THE SCHEDULE

All that piece or parcel of land situate in the Municipality of Waverley, Parish of Alexandria and County of Cumberland, being lot 2, Deposited Plan 701512, having an area of 1.668 hectares or thereabouts and said to be in the possession of the Crown. (82/S20/15110) (7489)

Authorised Officer: E P Meagher

Witness: D Seymour

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
30/7/2019 10:58AM

FOLIO: 22/879582

First Title(s): VOL 4740 FOL 56
Prior Title(s): 2/701512

Recorded	Number	Type of Instrument	C.T. Issue
19/8/1998	DP879582	DEPOSITED PLAN	FOLIO CREATED EDITION 1
22/4/2005	AB430527	LEASE	EDITION 2
29/3/2007	AD23091	MORTGAGE OF LEASE	
16/9/2010	AF725710	APPLICATION TO RECORD A NEW REGISTERED PROPRIETOR	EDITION 3
11/2/2011	AG59219	POSITIVE COVENANT	EDITION 4
~~10/1/2012~~	~~AG487332~~	~~APPLICATION TO RECORD A NEW REGISTERED PROPRIETOR~~	
12/2/2013	AH543571	CHANGE OF NAME	EDITION 5
29/8/2014	AI494413	DISCHARGE OF MORTGAGE	
~~29/8/2014~~	~~AI494414~~	~~APPLICATION TO RECORD A NEW REGISTERED PROPRIETOR~~	
29/8/2014	AI494415	SURRENDER OF LEASE	
29/8/2014	AI494416	TRANSFER	
29/8/2014	AI494417	MORTGAGE	EDITION 6
2/9/2018	AN678864	DEPARTMENTAL DEALING	EDITION 7 CORD ISSUED

relates to Lease

relates to Lease

*** END OF SEARCH ***

queens park PRINTED ON 30/7/2019

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Form: 04RP
Release: 3.0
www.lpma.nsw.gov.au

APPLICATION TO RECORD NEW REGISTERED PROPRIETOR

New South Wales
Section 46C Real Property Act 1900
Section 12(4) Trustee Act 1925

AF725710W

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the R[illegible] 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: CROWN INSTRUMENT NOT LIABLE TO STAMP DUTY. STATE PROPERTY AUTHORITY PER: [signature]

(A) **TORRENS TITLE**: SEE ANNEXURE 'A'

(B) **REGISTERED DEALING**: Number | Torrens Title

(C) **LODGED BY**: Document Collection Box: **707D** | Name, Address or DX, Telephone, and Customer Account Number if any: STATE PROPERTY AUTHORITY, LEVEL 5, BLIGH HOUSE, 4-6 BLIGH STREET, SYDNEY, NSW, 2000 1235195 | Reference: Moriah College | CODE: **RP**

(D) **APPLICANT**: STATE PROPERTY AUTHORITY

(E) **PRESENT REG'D PROPRIETOR**: SEE ANNEXURE 'A'

(F) **NEW REG'D PROPRIETOR**: STATE PROPERTY AUTHORITY,

(G) **APPLICATION UNDER SECTION 46C REAL PROPERTY ACT 1900**
In regard to the above land, the applicant requests the Registrar General to record the new registered proprietor on the above folio of the Register, the land having vested in the new registered proprietor pursuant to—

(H) State Property Auth. Order (No3) 2009 published in the Legislation Website 18 December 2009 p 1-18 true copies of which are attached at Annex. 'B'

(G) **APPLICATION UNDER SECTION 12(4) TRUSTEE ACT 1925** *NOT APPLICABLE*
In regard to the above ???, the applicant requests the Registrar General to record the new registered proprietor on the folio of the Register consequent on—

(I)

DATE 25 · 8 · 2010

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

Signature of witness: [signature]
Name of witness: ALAN ELBOZ
Address of witness: 4-6 BLIGH STREET SYDNEY

Certified correct for the purposes of the Real Property Act 1900 by the authorised officer named below.

Signature of authorised officer: [signature]
Authorised officer's name: Simon Furness
Authority of officer: Executive Director
Signing on behalf of: State Property Auth.

(K) *This section is to be completed where a notice of sale is required and the relevant data has been forwarded to LPMA through eNOS.*
The applicant certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 32397 Full name: Alan Elboz Signature: [signature]

1003

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Annexure **A** to APPLICATION TO RECORD NEW REGISTERED PROPRIETOR

Parties:

VARIOUS TO STATE PROPERTY AUTHORITY

Dated 25·8·2010

Real Property Land affected

Title Reference	Whole or Part	Present Registered Proprietor	Location
FI 1/701512	LOT 1 IN DP701512	MINISTER FOR DISABILITY SERVICES	BONDI JUNCTION
FI 22/879582	LOT 22 IN DP879582	MINISTER FOR EDUCATION AND TRAINING	BONDI JUNCTION

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ANNEXURE 'B'

2009 No 607

New South Wales

State Property Authority Order (No 3) 2009

under the

State Property Authority Act 2006

MARIE BASHIR, Governor

I, Professor Marie Bashir AC, CVO, Governor of the State of New South Wales, with the advice of the Executive Council, and in pursuance of section 19 of the *State Property Authority Act 2006*, make the following Order.

Dated, this 16th day of December 2009.

By Her Excellency's Command,

TONY KELLY, MLC
Minister for Lands

Explanatory note

The object of this Order is to include certain property in Schedule 1 to the *State Property Authority Act 2006* which will have the effect of transferring the property to the State Property Authority.

This Order is made under section 19 of the *State Property Authority Act 2006*.

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State Property Authority Order (No 3) 2009

under the

State Property Authority Act 2006

1 Name of Order

This Order is the *State Property Authority Order (No 3) 2009*.

2 Commencement

(1) Except as provided by subclause (2), this Order commences on the day on which it is published on the NSW legislation website.

(2) Schedule 1 [4]–[6] commence on 1 April 2010.

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Schedule 1 Amendment of State Property Authority Act 2006 No 40

[1] Schedule 1 Property transferred to Authority

Insert at the end of the matter appearing under the heading "**Miscellaneous properties**":

- Lot 1 in Deposited Plan 701512
- Lot 22 in Deposited Plan 879582

[2] Schedule 1

Insert at the end of the matter appearing under the heading "**Leases**":

Sublease of part of the ground floor and levels 1–6 inclusive, being the area shown hatched on the plan annexed to the lease, SRA House, 18 Lee Street, Sydney registered as dealing number AA989654

[3] Schedule 1

Insert at the end of the matter appearing under the heading "**Licences**":

Unregistered licence dated 28 May 2002 to The State Rail Authority of New South Wales of 90 car parking spaces marked 1–90 on the plan at annexure A to the licence, SRA House, 18 Lee Street, Sydney

[4] Schedule 1

Insert at the end of the matter appearing under the heading "**Miscellaneous properties**":

Lot 1 in Deposited Plan 589610

Lot 110 in Deposited Plan 1112885

Lot 1 in Deposited Plan 830420

Lot 2 in Deposited Plan 830420

Lot 1 in Deposited Plan 103609

Lot A in Deposited Plan 159402

Lot B in Deposited Plan 159402

Lot 1 in Deposited Plan 724160

Lot 1 in Deposited Plan 1122794

Lot 1 in Deposited Plan 795083

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Lot 1 in Deposited Plan 905016

Lot 2 in Deposited Plan 864013

Lot 3 in Deposited Plan 864013

Lot 2 in Deposited Plan 46697

Lot 3263 in Deposited Plan 822183

Lot 2 in Deposited Plan 521850

Lot 3 in Deposited Plan 806398

[5] Schedule 1

Insert at the end of the matter appearing under the heading "**Leases**":

Lease of Lot 1 in Deposited Plan 733146, 315 Victoria Street, Deniliquin registered as dealing number AC909062

Lease of Lot 1 in Deposited Plan 1012368, 32 Marina Drive, Coffs Harbour registered as dealing number 6975859

Lease of Lot 70 in Deposited Plan 7496, 5 Chamberlain Street, Campbelltown registered as dealing number AE684953

Lease of Suite 2 and 2 secure car parking spaces known as "A" and "B", 38 Park Avenue, Coffs Harbour registered as dealing number AE755110

Unregistered lease (undated) to Minister Administering the National Parks and Wildlife Act of Lots 10–12 in Strata Plan 58250, 75 Main Street, Alstonville

Lease of suite 6 and 6 car parking spaces in the caged area on the north east side of the underground parking station, Reliance Centre, 203–209 Russell Street, Bathurst registered as dealing number AE391623

Lease of shop and 2 uncovered car parking spaces numbered 1 and 2, 153 Maybe Street, Bombala registered as dealing number AB637477

Unregistered lease (undated) to Her Most Gracious Majesty Queen Elizabeth II of part of the building together with the annex building as shown in the plan annexed to the lease as annexure "C", corner Barton and Broomfield Streets, Cobar

Lease of Lot A in Deposited Plan 383857, 30 Timor Street, Coonabarabran registered as dealing number AC947796

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Lease of first floor, storage shed, 3 undercover and 4 open air car parking spaces at the rear of the building, 48–56 Wingewarra Street, Dubbo registered as dealing number AE682681

Lease of Lot 1 in Deposited Plan 726705 and Lot 9 in Deposited Plan 40398, 92–96 Macquarie Street, Dubbo registered as dealing number AC252360

Unregistered lease (undated) to Minister Administering the National Parks and Wildlife Act of Lot 1 Section 2 in Deposited Plan 758447, 68–70 Church Street, Glen Innes

Lease of Lot 13 in Deposited Plan 620602, 59 Church Street, Gloucester registered as dealing number 7215961

Lease of suites 35–38, 207 Albany Street, Gosford registered as dealing number AC995257

Lease of shops 7–8, first floor, 130–140 Banna Avenue, Griffith registered as dealing number AE506422

Lease of Lot 38, Section 5 in Deposited Plan 758476, 200 Yambil Street, Griffith registered as dealing number 7529527

Lease of suites 5, 8, 11, 12, 13 and 14 first floor, 41 Belgrave Street, Kempsey registered as dealing number AD336703

Lease of Lot 2 in Deposited Plan 508115, 136 Summerland Way, Kyogle registered as dealing number AB681313

Lease of Lot 110 in Deposited Plan 873120, Merimbula and Sapphire Coast Drives, Merimbula registered as dealing number AC525665

Lease of suites 7A and 8A, first floor, Narrabri Arcade, 100 Maitland Street, Narrabri registered as dealing number AC911646

Lease of shops 9A, 10A & 11A, Narrabri Arcade, 100 Maitland Street, Narrabri registered as dealing number AD738368

Sublease of suite 1, first floor and 12 car parking spaces on ground level Corporation Compound, 12B Teramby Road, Nelson Bay registered as dealing number AA40818

Lease of office A and 5 car parking spaces, 136–138 Fitzroy Street, Grafton registered as dealing number AE474641

Lease of Lot 103 in Deposited Plan 810787, 55 Graham Street, Nowra registered as dealing number AC9691

Lease of level 7, 79 George Street, Parramatta registered as dealing number AE107527

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Lease of office B and 21 car parking spaces, 136–138 Fitzroy Street, Grafton registered as dealing number AC497988

Lease of suite 1, ground floor, suite 1, first floor, 8 undercover car parking spaces and 2 open car parking spaces, 47–51 Darby Street, Newcastle registered as dealing number AE644341

Lease of suite 2, level 1, and 5 car parking spaces, 47–51 Darby Street, Newcastle registered as dealing number AE644342

Lease of level 5 and 5 car parking spaces, 11 Argyle Street, Newcastle registered as dealing number AE728448

Unregistered sublease (undated) to Department of Environment and Conservation National Parks and Wildlife Division of downstairs office, whole of the upstairs area, first bay of workshop including storage shed, as shown hatched on the sketch annexed to the sublease, 78 Hargreaves Drive, Taree

Lease of the office space adjoining the retail area and the storage space adjoining the gallery forming part of the Old Butter Factory complex, Snowy Mountains Highway, Tumut registered as dealing number 8977563

Lease of suite 2, the Old Butter Factory complex, Snowy Mountains Highway, Tumut registered as dealing number AB904124

Lease of suite 1 and storage area 1, the Old Butter Factory complex, Snowy Mountains Highway, Tumut registered as dealing number AE253853

Lease of part of the premises as shown hatched on the plan (page 48) with dealing number AB250976, the 20 general car parking spaces, the 4 visitor car parking spaces and the 2 disabled car parking spaces located on the land within the Car Parking Area and the additional visitor/disabled car parking spaces, 30 Warne Street, Wellington registered as dealing number AB250976

Lease of level 3, 27–31 Argyle Street, Parramatta registered as dealing number AD838267

Lease of level 4, 27–31 Argyle Street, Parramatta registered as dealing number AD838268

Lease of level 5, 27–31 Argyle Street, Parramatta registered as dealing number AD838269

Lease of level 6, 27–31 Argyle Street, Parramatta registered as dealing number AD838270

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Lease of level 7, 27–31 Argyle Street, Parramatta registered as dealing number AD838271

Lease of level 8, 27–31 Argyle Street, Parramatta registered as dealing number AD838272

Lease of level 9, 27–31 Argyle Street, Parramatta registered as dealing number AD838273

Lease of level 10, 27–31 Argyle Street, Parramatta registered as dealing number AD838274

Lease of level 11, 27–31 Argyle Street, Parramatta registered as dealing number AD838275

Lease of suite 6.3, level 6 and 8 car parking spaces in level B2 as shown in the plan with dealing number AB549210, 90 Crown Street, Wollongong registered as dealing number AB549210

Lease of level 4 and 26 car parking spaces in level B1 as shown in the plan with dealing number AB549211, 90 Crown Street, Wollongong registered as dealing number AB549211

Lease of level 5, 20 car parking spaces in level B1 and 6 car parking spaces in level B2 as shown in the plan with dealing number AB598330, 90 Crown Street, Wollongong registered as dealing number AB598330

Lease of pods A and B on level 4, pods A–H on level 5 and pods A, B, C, D, E, and H on level 6, The Octagon, 110 George Street Parramatta registered as dealing number AC376411 variation of lease registered as dealing number AE629266

Lease of pod 4C, level 4, The Octagon, 110 George Street, Parramatta registered as dealing number AC376412 variation of lease registered as dealing number AE629266

Lease of pod 6F, level 6, The Octagon, 110 George Street, Parramatta registered as dealing number AC376413 variation of lease registered as dealing number AE629266

Lease of pod 6G, level 6, The Octagon, 110 George Street, Parramatta registered as dealing number AC376414 variation of lease registered as dealing number AE629266

Lease of pods B and C, level 2, The Octagon, 110 George Street, Parramatta registered as dealing number AC376415 variation of lease registered as dealing number AE629267

Lease of pod D, level 1, pods A–D, level 3, The Octagon, 110 George Street, Parramatta registered as dealing number

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AC376416 variation of lease registered as dealing number AE629267

Lease of pod D, level 4, The Octagon, 110 George Street, Parramatta registered as dealing number AC77796 variation of lease registered as dealing number AE629266

Lease of suite 5, level 1 and basement car parking spaces numbered 15, 16, 53 and 71, 429 Swift Street, Albury registered as dealing number 9683960 variation of lease registered as dealing number AD703753

Lease of Lot 22 in Deposited Plan 703102, 5A Pioneer Avenue, Thornleigh registered as dealing number AC423760

Lease of ground floor and dedicated car parking spaces identified with WorkCover NSW signage, 126A Marius Street, Tamworth registered as dealing number AC861964

Lease of level 10, Centennial Plaza, Building C, 300 Elizabeth Street, Sydney registered as dealing number 9992729 variation of lease registered as dealing number AA816556

Lease of suite 5 and 3 dedicated car parking spaces identified with WorkCover NSW signage, 53 Lord Street, Port Macquarie registered as dealing number AD348520

Lease of levels 4 and 7 and 45 car parking spaces numbered 16, 18 and 19, level 1, 6–16, level 2 and 1–31, level 3, 128 Marsden Street, Parramatta registered as dealing number 8067108 variation of lease registered as dealing number AD549662

Lease of office suite, 74 McNamara Street, Orange and car parking spaces numbered 1, 2 and 3 at rear of 150 Byng Street, Orange registered as dealing number AC288291

Lease of suite 2, level 4, 33 Moore Street, Liverpool registered as dealing number AE40851

Lease of Lots 18 and 19 in Strata Plan 60561, 8 Corporation Circuit, Tweed Heads South registered as dealing number AB552418

Lease of office/suite 6, first floor, Narrabri Arcade, 100 Maitland Street, Narrabri registered as dealing number AC52229

Lease of suite 2.02, level 2, 12 Butler Road, Hurstville registered as dealing number AC645731

Lease of warehouse premises unit 2, 264–266 Manns Road, West Gosford registered as dealing number AD866452

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Lease of ground floor and levels 2–5, corner Baker and Donnison Streets, Gosford registered as dealing number 9127842

Lease of Lot 1 in Strata Plan 33388, 248 Carp Street, Bega registered as dealing number AD729184

Lease of suite 33, Jetty Village Shopping Centre, 361 Harbour Drive, Coffs Harbour registered as dealing number AE815273

Lease of level 2 and the 10 car parking spaces on the ground level, 1 Church Street, Dubbo registered as dealing number AA127899 variation of lease registered as dealing number AE44965

Lease of shop 7C, 19 Mitchell Drive, Greenhills registered as dealing number 9721847

Lease of suite 9, upstairs, Bega Centre Building, 106 Auckland Street, Bega registered as dealing number AE709093

Lease of space 101, 13 Kildare Road, Blacktown registered as dealing number AE524745

Lease of ground floor, 22 Castlereagh Street, Coonamble registered as dealing number 9910970

Lease of suite 2, 286–288 George Street, Deniliquin registered as dealing number AE746690

Lease of ground floor, 56 Clinton Street, Goulburn registered as dealing number AE478462

Lease of Level 8 (but excluding the Common Areas) in the building known as BT Tower, 1 Market Street, Sydney registered as dealing number AD764123

Lease of ground floor and 3 car parking spaces located in the car park at the rear of the building, 43 Main Street, Lithgow registered as dealing number AE600382

Lease of tenancy A, shown hatched in the plan with AE510951 and 15 car parking spaces, 48–52 Scott Street, Liverpool registered as dealing number AE510951

Unregistered lease (undated) to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Corrective Services) of suite 1, ground floor, 22 Minto Road, Minto

Lease of level 3 and level 4, 111 Crown Street, Wollongong registered as dealing number AA544713

Lease of suite 5, level 1, City Square, 76 Harbour Drive, Coffs Harbour registered as dealing number AC971748 and 5 car

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parking spaces as described in variation of lease registered as dealing number AC971749

Lease of shop 2, 177 Lachlan Street, Hay registered as dealing number AE440853

Lease of Lot 2 in Deposited Plan 1051969, 510–516 High Street, Maitland registered as dealing number AB159997

Lease of shop 2, 66A Cobar Street, Nyngan registered as dealing number AE182386

Lease of Lot 814 in Deposited Plan 813348, 161 Kite Street, Orange registered as dealing number E59327

Lease of bay 3, 20 Acacia Avenue, Port Macquarie registered as dealing number AE253501

Lease of first floor, 28 Morisset Street, Queanbeyan registered as dealing number AC802764 variation of lease registered as dealing number AE255886

Lease of Lot 22 in Deposited Plan 1034386, 8 Hartley Drive, Thornton registered as dealing number AA927577

Lease of Lot 81 in Deposited Plan 996298, 64 Fitzroy Street, Tumut registered as dealing number AB833422 variation of lease registered as dealing number AE595406

Lease of 95 Dubbo Street, Warren registered as dealing number AA51489 variation of lease registered as dealing number AD972148

Lease of the area shown crosshatched in the plan with dealing number AE349653 and 5 car parking spaces, 30 Warne Street, Wellington registered as dealing number AE349653

Lease of 40 Church Street, West Wyalong registered as dealing number AE453228

Lease of suite 1, 119 Rusden Street, Armidale registered as dealing number AE669812

Lease of level 2, 168 Liverpool Road, Ashfield registered as dealing number AC969662

Lease of Lot 2 in Strata Plan 33607, 90 Keppel Street, Bathurst registered as dealing number AE845726

Lease of shop 9 and 2 car parking spaces numbered 18 and 19, Auckland Street Plaza, Bega registered as dealing number AE877684

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Lease of ground floor and 4 undercover car parking spaces located at the rear of the ground floor offices, 106–108 Erina Street, Gosford registered as dealing number AE654938

Lease of shop 2, 180 Yambil Street, Griffith, shown hatched in plan with dealing number AE555274 registered as dealing number AE555274

Lease of tenancy 4 and 1 secured car parking space, Inverell Retail Centre, corner of Byron and Vivian Streets, Inverell registered as dealing number AA14888

Lease of suite G2 and 6 car parking spaces numbered 7–12 inclusive, 44 Bulwer Street, Maitland registered as dealing number AE763418

Lease of suites G1 and G2, ground floor and 4 dedicated secure car parking spaces, 56 Brook Street, Muswellbrook registered as dealing number 7787195

Lease of Lot 10 in Deposited Plan 708505 and 6 car parking spaces, 615 Hunter Street, Newcastle registered as dealing number AE595528

Lease of 23 Ranken Court, corner of Alison Road and Ranken Court, Wyong and shop 2, 11 Alison Road, Wyong registered as dealing number AE770392

Lease of suite 3, level 4, 168 Liverpool Road, Ashfield registered as dealing number AD918594

Lease of level 5, 168 Liverpool Road, Ashfield registered as dealing number AD495327 variation of lease registered as dealing number AE23541

Lease of level 6, 168 Liverpool Road, Ashfield registered as dealing number AD495328 variation of lease registered as dealing number AE23542

Unregistered lease dated 17 July 2009 to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Community Services) of suite 113, AMP Centre, 24 Gordon Street, Coffs Harbour and 16 car parking spaces at 218 Harbour Drive, Coffs Harbour

Unregistered lease dated 17 July 2009 to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Community Services) of offices 2 and 4 and 5 car parking spaces, 73 Albany Street, Coffs Harbour

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Unregistered lease dated 24 July 2009 to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Community Services) of unit 1 and 4 car parking spaces, 21 June Street, Coffs Harbour

Sublease of part lease AA891383 of suite 1, ground floor, building A, Cambridge Office Park, corner Cambridge and Chester Streets, Epping registered as dealing number AB183194

Lease of ground floor offices and basement car parking spaces numbered 1 to 17 inclusive, 9 Hely Street, Wyong registered as dealing number AC98119

Unregistered lease (undated) to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Corrective Services) of the area shown hatched black on the plan annexed to the lease and marked "A" together with 7 designated car parking spaces, 24–26 Clyde Street, Kempsey

Unregistered lease (undated) to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Corrective Services) of first floor, 7–9 Kelton Street, Cardiff

Unregistered sublease dated 30 September 2008 to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Corrective Services) of Lot 1 in Deposited Plan 1006205 and 6 bay car park being part of adjacent core Lot 20467933 located on the downside of the Rail Corridor as shown on plan A of schedule C of the sublease, 144 Talbragar Street, Dubbo

Unregistered lease (undated) to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Corrective Services) of Lot 4 in Strata Plan 81857 and 5 secured car parking spaces and 3 unsecured car parking spaces as shown on the plan annexed to the lease, 558 Kiewa Street, Albury

Unregistered lease (undated) to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Community Services) of Lots 3, 13 and 14 in Strata Plan 80857, 1 Secant Street, Liverpool

Unregistered sublease (undated) to The Workcover Authority of NSW of suite 1101, level 11, 67 Albert Street, Chatswood

Unregistered lease (undated) to Workcover New South Wales of suite C, level 1 and 27 car parking spaces numbered 1–27, corner Cowper and Fitzroy Streets, Carrington

Lease of Lot C in Deposited Plan 414198, 11 Grant Street, Ballina registered as dealing number AD113289

Req:R723205 /Doc:DL AF725710 /Rev:22-Sep-2010 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 11:31 /Seq:15 of 20
© Office of the Registrar-General /Src:INFOTRACK /Ref:queens park

Unregistered lease dated 1 November 1996 to New South Wales Department of Agriculture of part of premises know as Old Animal Science University of New England having a total area of 450.6 square metres, Trevenna Road, University of New England

Lease of suite 5, The Arcade, 158–162 Carp Street, Bega registered as dealing number AA909117

Lease of Lot 3 Section 85 in Deposited Plan 758144, 27 Mitchell Street, Bourke registered as dealing number AC78620

Unregistered lease (undated) to NSW Department of Primary Industries of suite B, 56 Cassilis Street, Coonabarabran

Lease of office 1, Lot 60 Morilla Street, Lightning Ridge registered as dealing number 7012887

Unregistered lease (undated) and variation of lease (undated) to New South Wales Department of Primary Industries of shop 1, storage area and 5 car parking spaces at the rear of the building, 87–89 Balo Street, Moree

Lease of office 1 and 2 car parking spaces at the rear of the property, 28 Market Street, Mudgee registered as dealing number AD249505

Unregistered lease (undated) to NSW Minister for Primary Industries of Lot 6 Section 11 in Deposited Plan 758827, corner Kurrajong and Court Streets, Parkes

Lease of suites 1, 2 and 3, first floor and 9 car parking spaces in the basement of the building, 1 Civic Avenue, Singleton registered as dealing number AE983712

Unregistered lease dated 13 October 2008 to NSW Department of Primary Industries of factory showroom 10, 12 Greenway Drive, Tweed Heads

Lease of shop 1, Sydney Markets Plaza, Sydney Markets, Parramatta Road, Flemington registered as dealing number AD859268

Lease of suites 1301, 1301A and 1303, level 13, 12 Help Street, Chatswood registered as dealing number AE602591

Lease of suite 7, 56 Brook Street, Muswellbrook registered as dealing number AB745373

Unregistered lease (undated) to New South Wales Department of Education and Training of suite 501, level 5, 13–15 Lyon Park Road, North Ryde

Req:R723205 /Doc:DL AF725710 /Rev:22-Sep-2010 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 11:31 /Seq:16 of 20
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Lease of office unit 13, first floor, office units 1 and 2, ground floor and 5 covered security car parking spaces, 235 Lords Place, Orange registered as dealing number AD175830

Lease of first floor, 60–62 McNamara Street, Orange registered as dealing number 9687880

Lease of suite 1, shown hatched on the plan annexed "C" to the lease, 11–15 Josephson Street, Swansea registered as dealing number AE232903

Unregistered sublease (undated) to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Education and Training) of level 10, 151 Clarence Street, Sydney

Unregistered lease (undated) to New South Wales Land and Housing Corporation of suite 1, ground floor, 168 Liverpool Road, Ashfield

Unregistered lease (undated) to New South Wales Land and Housing Corporation of Lot 1 in Strata Plan 32071 and 8 open car parking spaces attaching to that lot, 818 Pittwater Road, Dee Why

Lease of Lot 3 in Deposited Plan 876823, 3–5 White Street, Tamworth registered as dealing number AA320797

Unregistered lease (undated) to New South Wales Land and Housing Corporation of shops 6, 6A, 6B and 7 and 2 secure car parking spaces in the carports, 69 Wharf Street, Tweed Heads

Unregistered lease (undated) to New South Wales Land and Housing Corporation of Lot 89 in Deposited Plan 776943, 16–20 Bentley Street, Wetherill Park

Lease of Lot 6 in Deposited Plan 1105423 and not less than 24 exclusive use single self park secure car parking spaces in a totally secure area on the ground floor of the building with no access by the public and direct access to the first floor of the building, 29 Port Stephens Street, Raymond Terrace registered as dealing number AE612501

Lease of level 5 and 83 secure basement car parking spaces and 3 on-grade car parking spaces as shown on the plan attached to the lease, 2 Burbank Place, Norwest Business Park, Baulkham Hills registered as dealing number AE261525, variation of lease registered as dealing number AE833609

Lease of suite 402, level 4 and 37 secure basement car parking spaces and 2 on-grade car parking spaces as shown on the plan attached to the lease, 2 Burbank Place, Norwest Business Park,

Req:R723205 /Doc:DL AF725710 /Rev:22-Sep-2010 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 11:31 /Seq:17 of 20
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Baulkham Hills registered as dealing number AE261526, variation of lease registered as dealing number AE833610

Unregistered lease dated 27 October 2008 to Director-General of the Department of Commerce on behalf of the Crown in the right of NSW of storeroom CP 1/5 Burbank Corporate Centre, 2 Burbank Place, Norwest Business Park, Baulkham Hills

Lease of suite 6 and 7 car parking spaces marked 49–55 inclusive, 620 Macauley Street, Albury registered as dealing number AD765170

Lease of suite 4, first floor and 4 security car parking spaces numbered 26, 27, 28 and 29 in the basement and 1 unsecured car parking space numbered 17 on the ground level, 47–59 Wingewarra Street, Dubbo registered as dealing number AD245531

Unregistered lease dated 11 March 2008 to Her Most Gracious Majesty Queen Elizabeth II for the Department of State and Regional Development of Lot 14 in Deposited Plan 263274 and Lot 11 in Deposited Plan 533659, 39 Goldsmith Street, Goulburn

Lease of suite 2, level 3 and 6 car parking spaces in the car park, 251 Wharf Road, Newcastle registered as dealing number AE26120

Lease of level 2, 470–474 Church Street, Parramatta registered as dealing number AD875853

Lease of Lot 1 in Strata Plan 31997, 133–137 Gordon Street, Port Macquarie registered as dealing number AD967977

Lease of level 47, MLC Centre, 19–29 Martin Place, Sydney registered as dealing number AC316319

Lease of level 48, MLC Centre, 19–29 Martin Place, Sydney registered as dealing number AC316320

Lease of level 49, MLC Centre, 19–29 Martin Place, Sydney registered as dealing number AC316321

Lease of level 43, MLC Centre, 19–29 Martin Place, Sydney registered as dealing number AE118646

Lease of suite 1, first floor and 2 car parking spaces, 11–15 Dowe Street, Tamworth registered as dealing number AD391570

Lease of ground floor and suite 1, first floor, 48 Fitzmaurice Street, Wagga Wagga registered as dealing number AB173282, variation of lease registered as dealing number AD476864

Req:R723205 /Doc:DL AF725710 /Rev:22-Sep-2010 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 11:31 /Seq:18 of 20
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Sublease of levels 2 and 6, 35–75 Harrington Street, Sydney registered as dealing number AD421704

Lease of shop 2, 91 Pangee Street, Nyngan registered as dealing number AE233452

Lease of lock up shop unit 13, Old Woollen Mills, 179 Byng Street, Orange registered as dealing number AC34834

Lease of level 2 and the 12 car parking spaces identified by the numeral 2 within a circle on the plan marked 160 Bridge Street—Car Park annexed to the lease, 160 Bridge Street, Muswellbrook registered as dealing number AD820702

Lease of unit 1, 2 Sherriff Street, Forbes registered as dealing number AB584074

Lease of Lot 3 in Deposited Plan 545268, 421 Swift Street, Albury registered as dealing number AC58137

Lease of shop 7, ground floor and suites 1, 2 and 10, first floor, 41 Belgrave Street, Kempsey registered as dealing number AD336705

[6] Schedule 1

Insert at the end of the matter appearing under the heading "**Licences**":

Unregistered licence (undated) to Workcover Authority of New South Wales of 12 car parking spaces, 12 Butler Road, Hurstville

Unregistered licence dated 27 August 2002 to Her Most Gracious Majesty Queen Elizabeth II of 146 car parking spaces in the car park and 20 bicycle spaces in the bicycle racks in the car park, corner Baker and Donnison Streets, Gosford

Unregistered licence dated 19 June 2003 to Workcover Authority of NSW of 21 car parking spaces, 67 Albert Avenue, Chatswood

Unregistered licence dated 5 September 2007 to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Corrective Services) of 5 car parking spaces as shown hatched on the plan attached to the licence, 13 Kildare Road, Blacktown

Unregistered licence dated 29 March 2007 to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Corrective Services) of 9 car parking spaces as shown on the plan attached to the licence, 13 Kildare Road, Blacktown

Unregistered licence dated 9 January 2007 to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Corrective

Req:R723205 /Doc:DL AF725710 /Rev:22-Sep-2010 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 11:31 /Seq:19 of 20
© Office of the Registrar-General /Src:INFOTRACK /Ref:queens park

Services) of 5 car parking spaces as shown on the plan attached to the licence, 138 Talbragar Street, Dubbo

Unregistered licence dated 3 July 2006 to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Corrective Services) of 8 single self-park, car parking spaces and 3 tandem 2 car, car parking spaces, 13–15 Wentworth Avenue, East Sydney

Unregistered licence dated 28 August 2008 to Her Most Gracious Majesty Queen Elizabeth II (Department of Corrective Services) of 6 car parking spaces, 2 Woodville Street, Hurstville

Unregistered licence (undated) to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Community Services) of 10 secure self park car parking spaces as shown on the plan attached to the licence, associated with the lease of level 5, 168 Liverpool Road, Ashfield

Unregistered licence (undated) to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Community Services) of 10 secure self park car parking spaces as shown on the plan attached to the licence, associated with the lease of level 6, 168 Liverpool Road, Ashfield

Unregistered Licence (undated) to Her Most Gracious Majesty Queen Elizabeth II (New South Wales Department of Community Services) of 16 self-park car parking spaces in the underground secure car parking area and 24 car parking spaces in the uncovered car parking area, 11 Bridge Street, Coniston

Unregistered licence dated 8 September 2006 to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Community Services) of 6 secure single self-park car parking spaces on level 1 car park level, 31–39 Macquarie Street, Parramatta

Unregistered licence (undated) to Her Most Gracious Majesty Queen Elizabeth II for the Department of Community Services of 4 car parking spaces in the basement car parking area shown on the plan attached to the licence, 1 Rawson Street, Wollongong

Unregistered licence dated 16th August 2004 to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Community Services) of 12 car parking spaces in the upper level and 8 car parking spaces in the basement on the lower level, 9 Deane Street, Burwood

Unregistered licence (undated) to Her Most Gracious Majesty Queen Elizabeth the Second on behalf of Department of

Req:R723205 /Doc:DL AF725710 /Rev:22-Sep-2010 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 11:31 /Seq:20 of 20
© office of the Registrar-General /Src:INFOTRACK /Ref:queens park

Education and Training (NSW) of suite 201, No 1 Central Avenue Building, Australian Technology Park, Eveleigh

Unregistered licence (undated) to New South Wales Department of Education and Training of 20 car parking spaces, 13–15 Lyon Park Road, North Ryde

Unregistered licence (undated) to New South Wales Land and Housing Corporation of 13 car parking spaces, 168 Liverpool Road, Ashfield

Unregistered licence dated 24 September 2007 to Her Most Gracious Majesty Queen Elizabeth II (New South Wales Department of State and Regional Development) of 8 car parking spaces, 470–474 Church Street, Parramatta

Unregistered Licence (undated) to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Community Services) of 4 car parking spaces, 25–27 Tompson Street, Wagga Wagga

Unregistered Licence (undated) to Her Most Gracious Majesty Queen Elizabeth II (NSW Department of Community Services) of 15 car parking spaces, 25–27 Tompson Street, Wagga Wagga

Unregistered licence dated 11 March 2004 to Her Most Gracious Majesty Queen Elizabeth II (NSW Audit Office) of 8 car parking spaces, 1 Margaret Street, Sydney

Unregistered licence dated 7 October 2008 to Director-General of the Department of Commerce on behalf of the Crown in the right of New South Wales of 56 car parking spaces in the car parking area, 2 Burbank Place, Norwest Business Park, Baulkham Hills

Req:R722791 /Doc:DL AI494416 /Rev:03-Sep-2014 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 11:02 /Seq:1 of 2
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(3)

Form: 01T
Release: 6·1

TRANSFER

New South Wales
Real Property Act 1900

AI494416E

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

STAMP DUTY Office of State Revenue use only

NEW SOUTH WALES DUTY
11-02-2014 0006172518-001
SECTION 275(3)(A)-TRANSFER
NO DUTY PAYABLE

(A) **TORRENS TITLE** Folio Identifiers 1/701512, 3/701512, and 22/879582

(B) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODES
24J	LLPN: 123836E CTB Reference: 3689804	T TW

(C) **TRANSFEROR** Government Property NSW ABN 91 840 597 406

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 27,000,000 and as regards

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

(F) **SHARE TRANSFERRED** 100%

(G) Encumbrances (if applicable):

(H) **TRANSFEREE** Robert Nathan Simons, Robert Malcolm Goot, Robert Barry Gavshon, Daniel Goulburn and Graham Bruce Einfeld

(I) **TENANCY:** Joint Tenants

DATE 17/02/2014

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

Signature of witness: Refer to Annexure 'A'

Name of witness:
Address of witness:

Certified correct for the purposes of the Real Property Act 1900 by the authorised officer named below.

Signature of authorised officer:

Authorised officer's name:
Authority of officer:
Signing on behalf of:

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

Signature:

Signatory's name: Jonathan Caplan
Signatory's capacity: solicitor for the Transferee

(K) The transferee's solicitor certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 559295 Full name: Jonathan Caplan Signature:

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

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

1303

Req:R722791 /Doc:DL AI494416 /Rev:03-Sep-2014 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 11:02 /Seq:2 of 2
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ABN 91 840 597 406

Annexure 'A' to the Transfer
from Government Property NSW to Daniel Goulburn, Graham Bruce Einfeld, Robert Nathan Simons, Robert Malcolm Goot and Robert Barry Gavshon
of the land contained in Folio Identifiers 1/701512, 3/701512 and 22/879582

Executed by Brett Newman as duly authorised officer of **GOVERNMENT PROPERTY NSW** ABN 91 840 597 406 and for the purpose of rendering liable the Government of New South Wales but not so as to incur any personal liability in the presence of:

.....
Signature of witness

STEPHANIE BURGESS
.....
Name of witness (print)

27/501 GLEBE POINT RD. GLEBE NSW 2037
.....
Address of witness (print)

Certified correct for the purposes of the Real Property Act 1900 by the authorised officer named below.

.....
Signature of Brett Newman

Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 22/879582

SEARCH DATE	TIME	EDITION NO	DATE
30/7/2019	11:01 AM	7	2/9/2018

NO CERTIFICATE OF TITLE HAS ISSUED FOR THE CURRENT EDITION OF THIS FOLIO.
CONTROL OF THE RIGHT TO DEAL IS HELD BY COMMONWEALTH BANK OF AUSTRALIA.

LAND

LOT 22 IN DEPOSITED PLAN 879582
AT BONDI JUNCTION
LOCAL GOVERNMENT AREA WAVERLEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP879582

FIRST SCHEDULE

ROBERT NATHAN SIMONS
ROBERT MALCOLM GOOT
ROBERT BARRY GAVSHON
DANIEL GOULBURN
GRAHAM BRUCE EINFELD
AS JOINT TENANTS (T AI494416)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)
2 AG59219 POSITIVE COVENANT
3 AI494417 MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

queens park PRINTED ON 30/7/2019

* 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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Received: 30/07/2019 11:01:37

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
30/7/2019 10:58AM

FOLIO: 3/701512

First Title(s): VOL 4740 FOL 56
Prior Title(s): VOL 4740 FOL 56

Recorded	Number	Type of Instrument	C.T. Issue
10/2/1984	DP701512	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
17/4/1984	V82612	TRANSFER	FOLIO CREATED EDITION 1
8/5/1984	V115880	LEASE	EDITION 2
27/8/1986	W466744	NOTICE OF DEATH	
27/8/1986	W265720	SUB-LEASE	EDITION 3
1/2/1991	Z427497	NOTICE OF DEATH	
1/2/1991	Z427499	APPLICATION	EDITION 4
21/6/1991	Z616263	CAVEAT	
21/6/1991	Z728193	WITHDRAWAL OF CAVEAT	
21/6/1991	Z725126	MORTGAGE OF LEASE	
17/12/2001	8149554	CAVEAT	
19/10/2006	AC609971	NOTICE OF DEATH	
19/10/2006	AC609972	NOTICE OF DEATH	
19/10/2006	AC609973	APPLICATION	
28/11/2008	AE242541	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	
28/11/2008	AE242542	APPLICATION	EDITION 5
11/2/2011	AG59219	POSITIVE COVENANT	EDITION 6
10/1/2012	AG487216	APPLICATION TO RECORD A NEW REGISTERED PROPRIETOR	
19/11/2012	DP1180260	DEPOSITED PLAN	
8/2/2013	AH120672	SUB-LEASE	
12/2/2013	AH543571	CHANGE OF NAME	EDITION 7
29/8/2014	AI494410	DISCHARGE OF MORTGAGE	

relates to Lease

relates to Lease

relates to Lease

relates to Lease

END OF PAGE 1 - CONTINUED OVER

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
30/7/2019 10:58AM

FOLIO: 3/701512 PAGE 2

Recorded	Number	Type of Instrument	C.T. Issue
29/8/2014	AI494411	APPLICATION TO RECORD A NEW REGISTERED PROPRIETOR	
29/8/2014	AI494412	SURRENDER OF LEASE	
29/8/2014	AI494416	TRANSFER	
29/8/2014	AI494418	MORTGAGE	EDITION 8
2/9/2018	AN678864	DEPARTMENTAL DEALING	EDITION 9 CORD ISSUED

relates to Lease

*** END OF SEARCH ***

queens park PRINTED ON 30/7/2019

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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Received: 30/07/2019 10:58:12

Req:R722739 /Doc:DL V082612 /Rev:29-Sep-2010 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 10:58 /Seq:1 of 3
© Office of the Registrar-General /Src:INFOTRACK /Ref:queens park

[redacted]

payment of Registration or othe[redacted]

Department of Pub...

P. J. DAVENPORT,
Legal Officer

per

N.S.W. STAMP DUTIES 10 [illegible] NO STAMP DUTY IS PAYABLE ON THIS INSTRUMENT

V082612

TRANSFER

REAL PROPERTY ACT, 1900

(See Instructions for Completion on back of form

3 | 2 of 2 | X

$ [illegible]

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Vol. 4740 Fol. 56	~~WHOLE~~ Part being Lots 2 and 3 D.P. 701512	BONDI JUNCTION

DESCRIPTION OF LAND
Note (a)

TRANSFEROR
Note (b)

THE EASTERN SUBURBS HOSPITAL

ESTATE
Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $3,800,000-00 to be paid in accordance with an agreement between the Board and the Minister and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE
Note (d)

MINISTER FOR PUBLIC WORKS (for and on behalf of Her Majesty Queen Elizabeth the Second)

OFFICE USE ONLY

OVER

TENANCY
Note (e)

as joint tenants/tenants in common

PRIOR ENCUMBRANCES
Note (f)

subject to the following PRIOR ENCUMBRANCES 1. Nil 2. ____ 3. ____

DATE 9th April 1984

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

EXECUTION
Note (g)

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

[signature]
Signature of Witness

W. G. LAWRENCE
Name of Witness (BLOCK LETTERS)

CHIEF EXECUTIVE OFFICER
THE PRINCE HENRY, THE PRINCESS OF WALES AND EASTERN SUBURBS HOSPITALS
Address and occupation of Witness

THE EASTERN SUBURBS HOSPITAL [signature]
Signature of Transferor

Note (g)

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

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

John Byrne
JOHN BYRNE
SOLICITOR FOR THE TRANSFEREE
Signature of Transferee

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

LODGED BY
Box 707D Legal Officer
Dept. of Public Works
State Office Block
Phillip Street
Sydney
Ph.: 270-4718

Delivery Box Number 707D

LOCATION OF DOCUMENTS

CT	OTHER

Herewith.
In R.G.O. with
Produced by

OFFICE USE ONLY

Checked	Passed	REGISTERED 17-4-1984		Cert. of Title
EBIS	EF3	OVER		
Signed	Extra Fee			

Registrar General

Endorsed on
V477 of 56
17/7/87 DMC

RP 13

INSTRUCTIONS FOR COMPLETION

This dealing should be marked by the Commissioner of Stamp Duties before lodgment by hand at the Registrar General's Office.

Typewriting and handwriting should be clear, legible and in permanent non-copying ink.

Alterations are not to be made by erasure; the words rejected are to be ruled through and initialled by the parties to the dealing.

If the space provided is insufficient, additional sheets of the same size and quality of paper and having the same margins as this form should be used. Each additional sheet must be identified as an annexure and signed by the parties and the attesting witnesses.

If it is intended to create easements, covenants, &c., use forms RP13A, RP13B, RP13C as appropriate.

Rule up all blanks.

The following instructions relate to the SIDE NOTES on the form.

(a) Description of land:
- (i) TORRENS TITLE REFERENCE.—For a manual reference insert the Volume and Folio (e.g., Vol. 8514 Fol. 126)—For a computer folio insert the folio identifier (e.g., 12/701924). Title references should be listed in numerical sequence.
- (ii) PART/WHOLE.—If part only of the land in the folio of the Register is being transferred, delete the word "WHOLE" and insert the lot and plan number, portion, &c. See also sections 327 and 327AA of the Local Government Act, 1919.
- (iii) LOCATION.—Insert the locality shown on the Certificate of Title/Crown Grant, e.g., at Chullora. If the locality is not shown, insert the Parish and County, e.g., Ph. Lismore Co. Rous.

(b) Show the full name of the transferor(s).

(c) If the estate being transferred is a lesser estate than an estate in fee simple, delete "fee simple" and insert appropriate estate.

(d) Show the full name, address and occupation or description of the transferee(s).

(e) Delete if only one transferee. If more than one transferee, delete either "joint tenants" or "tenants in common", and, if the transferees hold as tenants in common, state the shares in which they hold.

(f) In the memorandum of prior encumbrances, state only the registered number of any mortgage, lease, charge or writ to which this dealing is subject.

(g) Execution:

GENERALLY
- (i) Should there by insufficient space for execution of this dealing, use an annexure sheet.
- (ii) The certificate of correctness under the Real Property Act, 1900, must be signed by all parties to the transfer, each party to execute the dealing in the presence of an adult witness, not being a party to the dealing, to whom he is personally known. The solicitor for the transferee may sign the certificate on behalf of the transferee, the solicitor's name (not that of his firm), to be typewritten or printed adjacent to his signature. Any person falsely or negligently certifying is liable to the penalties provided by section 117 of the Real Property Act, 1900.

ATTORNEY
- (iii) If the transfer is executed by an attorney for the transferor/transferee pursuant to a registered power of attorney, the form of attestation must set out the full name of the attorney, and the form of execution must indicate the source of his authority, e.g., "AB by his attorney (or receiver or delegate, as the case may be) XY pursuant to power of attorney registered Book No. , and I declare that I have no notice of the revocation of the said power of attorney".

AUTHORITY
- (iv) If the transfer is executed pursuant to an authority (other than specified in (iii)) the form of execution must indicate the statutory, judicial or other authority pursuant to which the transfer has been executed.

CORPORATION
- (v) If the transfer is executed by a corporation under seal, the form of execution should include a statement that the seal has been properly affixed, e.g., in accordance with the Articles of Association of the corporation. Each person attesting the affixing of the seal must state his position (e.g., director, secretary) in the corporation.

(h) Insert the name, postal address, Document Exchange reference, telephone number and delivery box number of the lodging party.

(i) The lodging party is to complete the LOCATION OF DOCUMENTS panel. Place a tick in the appropriate box to indicate the whereabouts of the Certificate of Title. List, in an abbreviated form, other documents lodged, e.g., stat. dec. for statutory declaration, pbte for probate, L/A. for letters of administration, &c.

OFFICE USE ONLY

FIRST SCHEDULE DIRECTIONS

(A) FOLIO IDENTIFIER	(B) DIRECTION	(C) NAME
4740-56	PROP	MINISTER FOR PUBLIC WORKS as to part of the land within described being lots 2 and 3 DP701512 by Transfer V 82612 2/B.

SECOND SCHEDULE AND OTHER DIRECTIONS

(D) FOLIO IDENTIFIER	(E) DIRECTION	(F) N OTFN TYPE	(G) DEALING NUMBER	(H) DETAILS
4740-56	ON	AA	V82612	This folio is cancelled upon creation of computer folios for lots 1, 2 & 3 in DP 701512. See V 82612

D. WEST, GOVERNMENT PRINTER

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Req:R722739 /Doc:DL V082612 /Rev:29-Sep-2010 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 10:58 /Seq:2 of 3

Req:R722739 /Doc:DL V082612 /Rev:29-Sep-2010 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 10:58 /Seq:3 of 3
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BIND WITH V82612

Minister for Health
New South Wales

C.12562(5)

16 APR 1984 Sydney

Mr. B. R. Davies,
Registrar General,
Prince Albert Road,
SYDNEY, 2000.

Dear Mr. Davies,

Transfer of Land - The Eastern Suburbs Hospital to Minister for Public Works

In accordance with the provisions of Section 20, Public Hospitals Act, 1929 I have approved of the sale and transfer of land known as lots 2 and 3 in DP701512 being plan of subdivision of portion 26 Parish of Alexandria County of Cumberland being the land comprised in Transfer No. V082612, by the Eastern Suburbs Hospital to the Minister for Public Works.

Yours sincerely,

R.J. MULOCK
Deputy Premier
and
Minister for Health

[redacted]

REGISTRAR GENERAL

10 APR 19

Req:R723120 /Doc:DL AE242542 /Rev:01-Dec-2008 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 11:26 /Seq:1 of 11
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Form: 04RP
Release: 2.2
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APPLICATION TO R
NEW REGISTERED PR(

New South Wales
Section 46C Real Property
Section 12(4) Trustee Ac

ial

AE242542H

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: CROWN INSTRUMENT NOT LIABLE TO STAMP DUTY. STATE PROPERTY AUTHORITY
PER: RBrodie

(A) **LAND** — Torrens Title: SEE ANNEXURE 'A'

(B) **REGISTERED DEALING** — Number: | Torrens Title:

(C) **LODGED BY** — Document Collection Box: 707D
Name, Address or DX, Telephone, and LLPN if any: STATE PROPERTY AUTHORITY, LEVEL 5, BLIGH HOUSE, 4-6 BLIGH STREET, SYDNEY, NSW, 2000
Reference: 24180 Conv841
CODE: AP

(D) **APPLICANT** — STATE PROPERTY AUTHORITY

(E) **PRESENT REG'D PROPRIETOR** — VARIOUS SEE ANNEXURE 'A'

(F) **NEW REG'D PROPRIETOR** — STATE PROPERTY AUTHORITY

(G) **APPLICATION UNDER SECTION 46C REAL PROPERTY ACT 1900**

In regard to the above land , the applicant requests the Registrar General to record the new registered proprietor on the relevant folio of the Register, the land having vested in the new registered proprietor pursuant to—

(H) State Property Authority Order (No2) 2007 Gov. Gaz. No.83, 29 June 2007 p1-9 true copies of which are attached at Annex. 'B'

(G) **APPLICATION UNDER SECTION 12(4) TRUSTEE ACT 1925** *NOT APPLICABLE*

In regard to the above ~~CLICK & PICK →→>~~ , the applicant requests the Registrar General to record the new registered registered proprietor on the folio of the Register consequent on—

(I)

DATE 23 SEPTEMBER 2008

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

Certified correct for the purposes of the Real Property Act 1900 by the authorised officer named below.

Signature of witness: RBrodie

Name of witness: ROBERT BRODIE
Address of witness: 4-6 BLIGH ST. SYDNEY

Signature of authorised officer:

Authorised officer's name: K Ridge
Authority of officer: A/GM D. A. and D. *
Signing on behalf of: State Property Auth.

* Acting General Manager Disposals, Acquisitions & Development.

ALL HANDWRITING MUST BE IN BLOCK CAPITALS.
0612

DEPARTMENT OF LANDS
LAND AND PROPERTY INFORMATION DIVISION

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Annexure A to Application to Record new Registered Proprietor

Parties : from Various to State Property Authority

Dated

Real Property Land affected

Title Reference	Whole or Part	Present Registered Proprietor	Location
FI 3/701512	Lot 3 DP701512	Minister for Public Works	Bondi Junction
CT Vol.138 Fol.1	Lot 32 Sec 107 DP984186	The Minister for Public Works	Sydney
FI 1/1076148	Lot 1 DP1076148	The Minister Administering the Public Works Act 1912 (on behalf of the Treasury Crown Property Portfolio)	Parramatta
FI 1/1080235	Lot 1 DP1080235	The Minister Administering the Public Works Act 1912 (on behalf of the Treasury Crown Property Portfolio)	Parramatta
FI 6/820360	Lot 6 DP820360	The Minister Administering the Public Works Act 1912 (Treasury, Crown Property Portfolio)	Sydney
FI 101/1011617	Lot 101 DP1011617	Minister for Public Works and Services	Sydney
FI 1022/1011618	Lot 1022 DP1011618	Minister for Public Works and Services	Sydney
FI 32/1031471	Lot 32 DP1031471	Minister for Public Works and Services	Armidale
FI 100/1098632	Lot 100 DP1098632	The Minister Administering the Public Works Act (on behalf of Treasury Crown Property Portfolio)	Dubbo

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ANNEXURE 'B'

New South Wales

State Property Authority Order (No 2) 2007

under the

State Property Authority Act 2006

MARIE BASHIR, Governor

I, Professor Marie Bashir AC, CVO, Governor of the State of New South Wales, with the advice of the Executive Council, and in pursuance of section 19 of the *State Property Authority Act 2006*, make the following Order.
Dated, this 27th day of June 2007.

By Her Excellency's Command,

JOHN WATKINS, M.P.,
Minister for Finance

Explanatory note

The object of this Order is to include certain property in Schedule 1 to the *State Property Authority Act 2006* which will have the effect of transferring the property to the State Property Authority.

This Order is made under section 19 of the *State Property Authority Act 2006*.

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State Property Authority Order (No 2) 2007

under the

State Property Authority Act 2006

1 Name of Order

This Order is the *State Property Authority Order (No 2) 2007*.

2 Commencement

This Order commences on 1 July 2007.

3 Amendment of the State Property Authority Act 2006 No 40

Schedule 1 to the *State Property Authority Act 2006* is amended as set out in Schedule 1 to this Order.

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Schedule 1 Amendments

(Clause 3)

[1] Schedule 1 Property transferred to Authority

Insert after "Lot 2 in Deposited Plan 581473" under the heading Kooragang:

Lot 1 in Deposited Plan 608317

Lot 2 in Deposited Plan 608317

Lot 3 in Deposited Plan 608317

[2] Schedule 1

Insert after "Lot 2 in Deposited Plan 771501" under the heading Kooragang:

Lot 12 in Deposited Plan 775773

[3] Schedule 1

Insert after "Lot 44 in Deposited Plan 775777" under the heading Kooragang:

Lot 45 in Deposited Plan 775777

[4] Schedule 1

Insert after "Lot 47 in Deposited Plan 775777" under the heading Kooragang:

Lot 50 in Deposited Plan 775777

[5] Schedule 1

Insert after "Lot 3 in Deposited Plan 858206" under the heading Kooragang:

Lot 4 in Deposited Plan 858206

[6] Schedule 1

Insert after "Lot 7 in Deposited Plan 1015754" under the heading Kooragang:

Lot 210 in Deposited Plan 1018949

Lot 520 in Deposited Plan 1018950

Lot 108 in Deposited Plan 1018951

[7] Schedule 1

Insert after "Lot 110 in Deposited Plan 1018951" under the heading Kooragang:

Lot 112 in Deposited Plan 1018951

Lot 132 in Deposited Plan 1018952

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State Property Authority Order (No 2) 2007

Schedule 1 Amendments

[8] Schedule 1

Insert at the end of the Schedule:

Miscellaneous properties

Lot 1 in Deposited Plan 34388
Lot 12 in Deposited Plan 40571
Lot 3186 in Deposited Plan 41542
Lot 2 in Deposited Plan 41851
Lot 112 in Deposited Plan 48439
Lot 113 in Deposited Plan 48439
Lot 1 in Deposited Plan 74155
Lot 2 in Deposited Plan 88516
Lot 701 in Deposited Plan 96508
Lot 1 in Deposited Plan 104452
Part Lot 1 in Deposited Plan 115700 shown hatched on the plan annexed to Book 4298 No 655
Lot 1 in Deposited Plan 125720
Lot 2 in Deposited Plan 125720
Lot 2 in Deposited Plan 129516
Lot 3 in Deposited Plan 129516
Lot 1 in Deposited Plan 134866
Lot 2 in Deposited Plan 134866
Lot 1 in Deposited Plan 155926
Lot A in Deposited Plan 184770
Lot 2 in Deposited Plan 214122
Lot 1 in Deposited Plan 244444
Lot 1 in Deposited Plan 258013
Lot 2 in Deposited Plan 258013
Lot 3 in Deposited Plan 258013
Lot 1 in Deposited Plan 258052
Lot 4 in Deposited Plan 258791
Lot 2 in Deposited Plan 328797
Lot 4 in Deposited Plan 510295
Lot 11 in Deposited Plan 551408
Lot 21 in Deposited Plan 565246
Lot 22 in Deposited Plan 565246
Lot 1 in Deposited Plan 578981

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Lot 2 in Deposited Plan 578981
Lot 1 in Deposited Plan 580564
Lot 2 in Deposited Plan 589610
Lot 12 in Deposited Plan 602763
Lot 1 in Deposited Plan 633736
Lot 1 in Deposited Plan 665969
Lot 3 in Deposited Plan 701512
Lot 1 in Deposited Plan 706046
Lot 2 in Deposited Plan 706046
Lot 1 in Deposited Plan 711968
Lot 101 in Deposited Plan 715520
Lot 56 in Deposited Plan 729620
Lot 1 in Deposited Plan 734622
Lot 1 in Deposited Plan 738477
Lot 10 in Deposited Plan 752057
Lot 1205 in Deposited Plan 752067
Lot 6, Section 85 in Deposited Plan 758144
Lot 7, Section 2 in Deposited Plan 758144
Part Lot 6, Section 1 in Deposited Plan 758271 within Reserve No 82,767 for Soil Conservation Service Depot Site, notified in Government Gazette on 30 September 1960 on pages 3147 and 3148
Part Lot 7, Section 1 in Deposited Plan 758271 within Reserve No 82,767 for Soil Conservation Service Depot Site, notified in Government Gazette on 30 September 1960 on pages 3147 and 3148
Lot 8, Section 1 in Deposited Plan 758271
Lot 2, Section 33 in Deposited Plan 758287
Lot 4, Section 33 in Deposited Plan 758287
Part Lot 5, Section 33 in Deposited Plan 758287 within Reserve 87136 for Public Buildings, notified in Government Gazette of 11 April 1969 on page 1374
Part Lane in Deposited Plan 758287 within Reserve 87136 for Public Buildings, notified in Government Gazette of 11 April 1969 on page 1374
Part Lot 3, Section 11 in Deposited Plan 758361 shown coloured red on plan registered number SB55730 in the office of the Department of Commerce
Lot 3, Section 12 in Deposited Plan 758418
Lot 4, Section 12 in Deposited Plan 758418

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State Property Authority Order (No 2) 2007

Schedule 1 Amendments

Lot 6, Section 2 in Deposited Plan 758468
Lot 4, Section 79 in Deposited Plan 758536
Lot 14, Section 1 in Deposited Plan 758739
Lot 3, Section 56 in Deposited Plan 758862
Lot 5, Section 56 in Deposited Plan 758862
Easement for Access to Broken Hill Government Offices within Lot 5, Section 35 in Deposited Plan 759092 shown on plan registered number SB 27017 in the office of the Department of Commerce and resumed by notification in Government Gazette of 19 November 1976 on page 5115
Lot 2 in Deposited Plan 775772
Lot 6 in Deposited Plan 775772
Lot 7 in Deposited Plan 775772
Lot 8 in Deposited Plan 775772
Lot 9 in Deposited Plan 775772
Lot 11 in Deposited Plan 775773
Lot 13 in Deposited Plan 775773
Lot 14 in Deposited Plan 775773
Lot 17 in Deposited Plan 775773
Lot 18 in Deposited Plan 775773
Lot 19 in Deposited Plan 775773
Lot 20 in Deposited Plan 775773
Lot 22 in Deposited Plan 775773
Lot 23 in Deposited Plan 775773
Lot 5 in Deposited Plan 775775
Lot 7 in Deposited Plan 775775
Lot 8 in Deposited Plan 775775
Lot 10 in Deposited Plan 775775
Lot 39 in Deposited Plan 775776
Lot 41 in Deposited Plan 775776
Lot 48 in Deposited Plan 775777
Lot 49 in Deposited Plan 775777
Lot 51 in Deposited Plan 775777
Lot 53 in Deposited Plan 775777
Lot 55 in Deposited Plan 775777
Lot 6 in Deposited Plan 820360
Lot 103 in Deposited Plan 826775
Lot 2 in Deposited Plan 827434

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Lot 101 in Deposited Plan 828946
Lot 102 in Deposited Plan 828946
Lot 1 in Deposited Plan 836351
Lot 1 in Deposited Plan 839564
Lot 1 in Deposited Plan 857627
Lot 111 in Deposited Plan 872752
Lot 112 in Deposited Plan 872752
Lot 1 in Deposited Plan 877598
Lot 2 in Deposited Plan 877598
Lot 1 in Deposited Plan 919932
Lot 2 in Deposited Plan 954766
Lot 1 in Deposited Plan 966841
Part Lot 21, Section 12 in Deposited Plan 976280 within Reserve No 89132 for Public Buildings, notified in Government Gazette of 18 January 1974 on pages 161 and 162
Lot 22, Section 12 in Deposited Plan 976280
Lot 23, Section 12 in Deposited Plan 976280
Lot 24, Section 12 in Deposited Plan 976280
Part Lane in Deposited Plan 976280 within Reserve 89132 for Public Buildings, notified in Government Gazette of 18 January 1974 on pages 161 and 162
Lot 33, in Deposited Plan 980134
Lot 31, Section 107 in Deposited Plan 984186
Lot 32, Section 107 in Deposited Plan 984186
Lot 33, Section 107 in Deposited Plan 984186
Part Lot 34, Section 107 in Deposited Plan 984186 resumed by notification in Government Gazette of 22 August 1892 and described in Book 461 No 315
Part Lane within Section 107 in Deposited Plan 984186 resumed by notification in Government Gazette of 3 April 1890
Lot 101 in Deposited Plan 1011617
Lot 1021 in Deposited Plan 1011618
Lot 1022 in Deposited Plan 1011618
Lot 1 in Deposited Plan 1015754
Lot 201 in Deposited Plan 1017038
Lot 202 in Deposited Plan 1017038
Lot 203 in Deposited Plan 1017038
Lot 204 in Deposited Plan 1017038

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Lot 205 in Deposited Plan 1017038
Lot 206 in Deposited Plan 1017038
Lot 208 in Deposited Plan 1017038
Lot 210 in Deposited Plan 1017038
Lot 211 in Deposited Plan 1018949
Lot 521 in Deposited Plan 1018950
Lot 101 in Deposited Plan 1018951
Lot 102 in Deposited Plan 1018951
Lot 103 in Deposited Plan 1018951
Lot 104 in Deposited Plan 1018951
Lot 105 in Deposited Plan 1018951
Lot 106 in Deposited Plan 1018951
Lot 107 in Deposited Plan 1018951
Lot 109 in Deposited Plan 1018951
Lot 111 in Deposited Plan 1018951
Lot 131 in Deposited Plan 1018952
Lot 32 in Deposited Plan 1031471
Lot 11 in Deposited Plan 1043086
Lot 11 in Deposited Plan 1048486
Lot 98 in Deposited Plan 1048930
Part Lot 100 in Deposited Plan 1048930 shown coloured red and marked "A" on plan registered number SB55729 in the office of the Department of Commerce
Part Lot 100 in Deposited Plan 1048930 shown coloured red and marked "B" on plan registered number SB55729 in the office of the Department of Commerce
Lot 21 in Deposited Plan 1048933
Lot 1 in Deposited Plan 1076148
Lot 1 in Deposited Plan 1080235
Lot 100 in Deposited Plan 1098632
Lot 1121 in Deposited Plan 1106979
Lot 1 in Deposited Plan 1112822
Lot 2 in Deposited Plan 1112822
Lots 6 and 13 and Part Lot 5, Section 35 at Broken Hill resumed by notification in Government Gazette of 13 August 1976 on page 3419 and shown on plan registered number SB 26831 in the office of the Department of Commerce

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State Property Authority Order (No 2) 2007

Amendments Schedule 1

Part Lot 5, Section 35 at Broken Hill resumed by notification in Government Gazette of 19 November 1976 on page 5115 and shown on plan registered number SB 27017 in the office of the Department of Commerce

Req:R722791 /Doc:DL AI494416 /Rev:03-Sep-2014 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 11:02 /Seq:1 of 2
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(3)

Form: 01T
Release: 6·1

TRANSFER

New South Wales
Real Property Act 1900

AI494416E

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STAMP DUTY Office of State Revenue use only

NEW SOUTH WALES DUTY
11-02-2014 0006172518-001
SECTION 275(3)(A)-TRANSFER
NO DUTY PAYABLE

(A) **TORRENS TITLE** Folio Identifiers 1/701512, 3/701512, and 22/879582

(B) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODES
24J	LLPN: 123836E CTB Reference: 3689804	T TW

(C) **TRANSFEROR** Government Property NSW ABN 91 840 597 406

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 27,000,000 and as regards

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

(F) **SHARE TRANSFERRED** 100%

(G) Encumbrances (if applicable):

(H) **TRANSFEREE** Robert Nathan Simons, Robert Malcolm Goot, Robert Barry Gavshon, Daniel Goulburn and Graham Bruce Einfeld

(I) **TENANCY:** Joint Tenants

DATE 17/02/2014

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

Signature of witness: Refer to Annexure 'A'

Name of witness:
Address of witness:

Certified correct for the purposes of the Real Property Act 1900 by the authorised officer named below.

Signature of authorised officer:

Authorised officer's name:
Authority of officer:
Signing on behalf of:

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

Signature:

Signatory's name: Jonathan Caplan
Signatory's capacity: solicitor for the Transferee

(K) The transferee's solicitor certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 559295 Full name: Jonathan Caplan Signature:

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

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

1303

Req:R722791 /Doc:DL AI494416 /Rev:03-Sep-2014 /NSW LRS /Pgs:ALL /Prt:30-Jul-2019 11:02 /Seq:2 of 2
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ABN 91 840 597 406

Annexure 'A' to the Transfer
from Government Property NSW to Daniel Goulburn, Graham Bruce Einfeld, Robert Nathan Simons, Robert Malcolm Goot and Robert Barry Gavshon
of the land contained in Folio Identifiers 1/701512, 3/701512 and 22/879582

Executed by Brett Newman as duly authorised officer of **GOVERNMENT PROPERTY NSW** ABN 91 840 597 406 and for the purpose of rendering liable the Government of New South Wales but not so as to incur any personal liability in the presence of:

.....
Signature of witness

STEPHANIE BURGESS
.....
Name of witness (print)

27/501 GLEBE POINT RD. GLEBE NSW 2037
.....
Address of witness (print)

Certified correct for the purposes of the Real Property Act 1900 by the authorised officer named below.

.....
Signature of Brett Newman

Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 3/701512

SEARCH DATE	TIME	EDITION NO	DATE
30/7/2019	11:01 AM	9	2/9/2018

NO CERTIFICATE OF TITLE HAS ISSUED FOR THE CURRENT EDITION OF THIS FOLIO.
CONTROL OF THE RIGHT TO DEAL IS HELD BY COMMONWEALTH BANK OF AUSTRALIA.

LAND

LOT 3 IN DEPOSITED PLAN 701512
AT BONDI JUNCTION
LOCAL GOVERNMENT AREA WAVERLEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP701512

FIRST SCHEDULE

ROBERT NATHAN SIMONS
ROBERT MALCOLM GOOT
ROBERT BARRY GAVSHON
DANIEL GOULBURN
GRAHAM BRUCE EINFELD
AS JOINT TENANTS (T AI494416)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)
2 AG59219 POSITIVE COVENANT
3 AI494418 MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

queens park PRINTED ON 30/7/2019

* 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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Received: 30/07/2019 11:01:37

Appendix H Dangerous Goods Search

NSW GOVERNMENT | SafeWork NSW

Locked Bag 2906, Lisarow NSW 2252
Customer Experience 13 10 50
ABN 81 913 830 179 | www.safework.nsw.gov.au

Our Ref: D19/168707

2 August 2019

JBS&G
Ms Lillian Beevors
1/50 Margaret St
SYDNEY NSW 2000

Dear Ms Beevors

RE SITE: 101 York Rd, Queens Park NSW 2022

I refer to your site search request received by SafeWork NSW on 01 August 2019 requesting information on Storage of Hazardous Chemicals for the above site.

A search of the records held by SafeWork NSW has not located any records pertaining to the above-mentioned premises.

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

Yours sincerely

Customer Service Officer
Customer Experience - Operations
SafeWork NSW



NSW GOVERNMENT | SafeWork NSW

Locked Bag 2906, Lisarow NSW 2252
Customer Experience 13 10 50
ABN 81 913 830 179 | www.safework.nsw.gov.au

Our Ref: D19/168707

2 August 2019

JBS&G
Ms Lillian Beevors
1/50 Margaret St
SYDNEY NSW 2000

Dear Ms Beevors

RE SITE: 3 Queens Park Rd, Queens Park NSW 2022

I refer to your site search request received by SafeWork NSW on 01 August 2019 requesting information on Storage of Hazardous Chemicals for the above site.

A search of the records held by SafeWork NSW has not located any records pertaining to the above-mentioned premises.

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

Yours sincerely

G. Dunn

Customer Service Officer
Customer Experience - Operations
SafeWork NSW



Appendix I Decontamination and Calibration Record

Field Equipment Calibration and Decontamination

PROJECT NAME:	Queens park.	**PROJECT NO:**	57079.
FIELDWORK DATES:	4.8.19.	**SAMPLERS:**	M.S
TYPE OF INVESTIGATION:	Soil Sampling	**PROJECT MANAGER:**	LL

CALIBRATION SUMMARY

EQUIPMENT:	PID.
CALIBRATION STANDARD:	100 ppm Isobutylene

DATE	TIME	READING (ppm)	COMMENTS
4.8.19	0755	Zero 0	Zero cal
	0756	100.2	100 ppm isobutylene

DECONTAMINATION SUMMARY

EQUIPMENT: Hand Auger.

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	(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

RINSATE TAKEN. New pair of gloves used between each sample.

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Appendix J Bore Hole Logs

BH01

Project Number: 57079
Client: AVER
Project Name: Moriah College PSI DSI
Site Address: Queens Park Road, Queens Park

Date: 4/08/2019
Logged By: Michael Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 2
Bore Diameter (mm): 300

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Solid Flight Auger				Fill	Silty SAND - brown, heterogeneous, damp, loose, poorly sorted with inclusions of trace rootlets, gravels and brick.	BH01 - 0-0.1 PID = 2.4 ppm	No asbestos, odours or staining observed
						BH01 - 0.2-0.3 PID = 1.7 ppm	No asbestos, odours or staining observed
		0.40		SW	SAND - brown, homogeneous, damp, very loose, well sorted.	BH01 - 0.4-0.5 PID = 1.4 ppm	No asbestos, odours or staining observed
	0.5				Colour grading to dark grey at 0.7m.		
						BH01 - 0.9-1.0 PID = 0.6 ppm	No asbestos, odours or staining observed
	1.0						
						BH01 - 1.4-1.5 PID = 0.5 ppm	No asbestos, odours or staining observed
	1.5				Colour grading to light grey at 1.6m.		
						BH01 - 1.9-2.0 PID = 0.3 ppm	No asbestos, odours or staining observed
	2.0						
		2.00			Borehole BH01 terminated at 2m		

BH02

Project Number: 57079
Client: AVER
Project Name: Moriah College PSI DSI
Site Address: Queens Park Road, Queens Park

Date: 4/08/2019
Logged By: Michael Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.2
Bore Diameter (mm): 300

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Solid Flight Auger				Fill	Sandy SILT - dark brown, heterogeneous, damp, soft, non-plastic with inclusions of trace gravels, rootlets/roots.	BH02 - 0-0.1 PID = 0.7 ppm	No asbestos, odours or staining observed. QAQC 20190804 - 02
						BH02 - 0.2-0.3 PID = 1.5 ppm	No asbestos, odours or staining observed
		0.40		Fill	Sandy SILT - dark brown, heterogeneous, damp, soft, non-plastic with inclusions of trace gravels, rootlets/roots and approximately 20% sandstone cobbles/concrete cobbles.	BH02 - 0.4-0.5 PID = 0.1 ppm	No asbestos, odours or staining observed
	0.5						
	1.0					BH02 - 0.9-1.0 PID = 1 ppm	No asbestos, odours or staining observed
	1.5					BH02 - 1.4-1.5 PID = 1.1 ppm	No asbestos, odours or staining observed
		1.50		SW	SAND - white/orange/brown, homogeneous, damp, very loose, well sorted.		
	2.0					BH02 - 1.9-2.0 PID = 0.6 ppm	No asbestos, odours or staining observed
		2.20			Borehole BH02 terminated at 2.2m		

BH03

Project Number: 57079
Client: AVER
Project Name: Moriah College PSI DSI
Site Address: Queens Park Road, Queens Park

Date: 4/08/2019
Logged By: Michael Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 2
Bore Diameter (mm): 300

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Solid Flight Auger				Fill	Sandy SILT - dark brown, heterogeneous, damp, soft, non-plastic with inclusions of trace rootlets and gravels.	BH03 - 0-0.1 PID = 1 ppm	No asbestos, odours or staining observed
		0.20		Fill	Silty SAND - light brown, heterogeneous, damp, loose, poorly sorted with inclusions of trace gravels.	BH03 - 0.2-0.3 PID = 1.3 ppm	No asbestos, odours or staining observed
		0.30		SW	SAND - light brown, homogeneous, damp, very loose, well sorted.		
	0.5					BH03 - 0.4-0.5 PID = 1.1 ppm	No asbestos, odours or staining observed
	1.0					BH03 - 0.9-1.0 PID = 0.9 ppm	No asbestos, odours or staining observed
	1.5				Colour grading to white/orange/brown at 1.5m.	BH03 - 1.4-1.5 PID = 0.5 ppm	No asbestos, odours or staining observed
	2.0					BH03 - 1.9-2.0 PID = 0.3 ppm	No asbestos, odours or staining observed
		2.00			Borehole BH03 terminated at 2m		

BH04

Project Number: 57079
Client: AVER
Project Name: Moriah College PSI DSI
Site Address: Queens Park Road, Queens Park

Date: 4/08/2019
Logged By: Michael Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.1
Bore Diameter (mm): 300

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Solid Flight Auger				Fill	Sandy SILT - dark brown, heterogeneous, damp, soft, non-plastic with inclusions of trace rootlets, gravels and plastic.	BH04 - 0-0.1 PID = 0.8 ppm	No asbestos, odours or staining observed
		0.15		Fill	Silty SAND - light brown, heterogeneous, damp, poorly sorted, loose with inclusions of trace concrete.	BH04 - 0.2-0.3 PID = 0.6 ppm	No asbestos, odours or staining observed
	0.5					BH04 - 0.4-0.5 PID = 0.5 ppm	No asbestos, odours or staining observed. QAQC 20190804 - 01
		0.80		SW	SAND - light brown, homogeneous, damp, very loose, well sorted with trace inclusions of wood.	BH04 - 0.9-1.0 PID = 0.2 ppm	No asbestos, odours or staining observed
	1.0						
	1.5					BH04 - 1.4-1.5 PID = 0.3 ppm	No asbestos, odours or staining observed
					Colour grading to white/orange/brown at 1.7m.		
	2.0					BH04 - 1.9-2.0 PID = 0.1 ppm	No asbestos, odours or staining observed
		2.10			Borehole BH04 terminated at 2.1m		

BH05

Project Number: 57079
Client: AVER
Project Name: Moriah College PSI DSI
Site Address: Queens Park Road, Queens Park

Date: 4/08/2019
Logged By: Michael Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 2
Bore Diameter (mm): 300

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Solid Flight Auger				Fill	Silty SAND - greyish brown, heterogeneous, damp, poorly sorted, loose with inclusions of trace wood, gravels.	BH05 - 0-0.1 PID = 2.3 ppm	No asbestos, odours or staining observed
						BH05 - 0.2-0.3 PID = 2.2 ppm	No asbestos, odours or staining observed
					Two pieces of slag identified at 0.4m.	BH05 - 0.4-0.5 PID = 2.2 ppm	No asbestos, odours or staining observed
	0.5						
		0.90		SW	SAND - yellowish brown, homogeneous, damp, very loose.	BH05 - 0.9-1.0 PID = 1 ppm	No asbestos, odours or staining observed
	1.0						
		1.20		SW	SAND - yellow/orange/orange brown, homogeneous, damp, very loose.	BH05 - 1.4-1.5 PID = 1.2 ppm	No asbestos, odours or staining observed
	1.5						
						BH05 - 1.9-2.0 PID = 1.7 ppm	No asbestos, odours or staining observed
	2.0						
		2.00			Borehole BH05 terminated at 2m		

BH06

Project Number: 57079
Client: AVER
Project Name: Moriah College PSI DSI
Site Address: Queens Park Road, Queens Park

Date: 4/08/2019
Logged By: Michael Swinfield
Contractor:
Total Hole Depth (mbgs): 2
Bore Diameter (mm): 200

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Silty SAND - dark brown, heterogeneous, damp, loose, poorly sorted with inclusions of trace gravels, roots, plastics and 2 small fragments of metal with bituminous coating.	BH06 - 0-0.1 PID = 0.7 ppm	No asbestos, odours or staining observed
						BH06 - 0.2-0.3 PID = 0.8 ppm	No asbestos, odours or staining observed
	0.5					BH06 - 0.4-0.5 PID = 0.5 ppm	No asbestos, odours or staining observed
		0.80		SW	SAND - grey, homogeneous, damp, very loose, well sorted.		
	1.0					BH06 - 0.9-1.0 PID = 1.1 ppm	No asbestos, odours or staining observed
						BH06 - 1.4-1.5 PID = 1.4 ppm	No asbestos, odours or staining observed
	1.5				Colour grading to light grey and brown at 1.5m.		
	2.0					BH06 - 1.9-2.0 PID = 1.7 ppm	No asbestos, odours or staining observed
		2.00			Borehole BH06 terminated at 2m		

BH07

Project Number: 57079
Client: AVER
Project Name: Moriah College PSI DSI
Site Address: Queens Park Road, Queens Park

Date: 4/08/2019
Logged By: Michael Swinfield
Contractor:
Total Hole Depth (mbgs): 2
Bore Diameter (mm): 200

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Silty SAND - dark brown, heterogeneous, damp, poorly sorted with inclusions of trace gravels and concrete.	BH07 - 0-0.1 PID = 1.2 ppm	No asbestos, odours or staining observed
						BH07 - 0.2-0.3 PID = 0.2 ppm	No asbestos, odours or staining observed
	0.5					BH07 - 0.4-0.5 PID = 0.4 ppm	No asbestos, odours or staining observed
		0.80		SW	SAND - yellow and orange, homogeneous, damp, very loose, well sorted.		
	1.0					BH07 - 0.9-1.0 PID = 0.6 ppm	No asbestos, odours or staining observed
						BH07 - 1.4-1.5 PID = 1.5 ppm	No asbestos, odours or staining observed
	1.5				Colour grading to yellow/orange/dark brown at 1.5m.		
	2.0					BH07 - 1.9-2.0 PID = 0.7 ppm	No asbestos, odours or staining observed
		2.00			Borehole BH07 terminated at 2m		

Appendix K Tables

Table A: Soil Analytical Data Summary
Project Number: 57079
Project Name: Moriah College PSI DSI

	Heavy Metal								TPH				TRH									BTEX					
	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	C6-C9 Fraction	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	C6-C10 Fraction	C6-C10 less BTEX (F1)	Naphthalene	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
EQL	2	0.4	5	5	5	0.1	5	5	20	50	50	50	20	50	100	100	100	50	20	20	0.5	0.1	0.1	0.1	0.1	0.2	0.3
NEPC 2013 EIL, EILs Aged Sediment	100			35	1100		6	140													170						
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil															300	2800		120		180		50	70	85			105
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A																											
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																											
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse														1000	2500	10000			700								
NEPM 2013 Soil HIL A	100	20	100	6000	300	40	400	7400																160			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																		110		45	3	0.5	55	160			40
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																		240		70	NL	0.5	NL	220			60
Sample Name	**Date**	**Lab Report Number**																									
BH01_0-0.1	4/08/2019	669601	<2	<0.4	16	20	29	<0.1	13	55	<20	<50	<50	<50	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH01_0.2-0.3	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0-0.1	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.2-0.3	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.9-1.0	4/08/2019	669601	2.5	<0.4	6.3	22	55	<0.1	5.6	300	<20	<50	<50	<50	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH02_1.4-1.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_1.9-2.0	4/08/2019	669601	<2	<0.4	<5	<5	<5	<0.1	<5	19	<20	210	<50	210	<20	<50	180	<100	180	<50	<20	<20	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH03_0.2-0.3	4/08/2019	669601	<2	<0.4	6	12	9.7	<0.1	6.4	28	<20	<50	<50	<50	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH03_1.4-1.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0-0.1	4/08/2019	669601	<2	<0.4	9.2	13	24	<0.1	10	37	<20	<50	100	100	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH04_0.4-0.5	4/08/2019	669601	<2	<0.4	<5	7	11	<0.1	7.5	18	<20	<50	<50	<50	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
QA20190804-01	4/08/2019	223152	<4	<0.4	4	9	11	<0.1	9	19	<50	<100	<100	-	<25	<50	<100	<100	<50	<50	<25	<25	<1	<0.2	<1	<0.5	<1	<2	<3
QC20190804-01	4/08/2019	669601	<2	<0.4	<5	11	16	<0.1	9.3	24	<20	<50	<50	<50	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH05_0-0.1	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.4-0.5	4/08/2019	669601	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<20	<50	<50	<50	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH05_0.9-1.0	4/08/2019	669601	<2	<0.4	<5	<5	5	<0.1	<5	6.2	<20	<50	<50	<50	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH06_0-0.1	4/08/2019	669601	<2	<0.4	7.9	40	230	<0.1	<5	210	<20	280	330	610	<20	<50	480	120	600	<50	<20	<20	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH06_1.9-2.0	4/08/2019	669601	<2	<0.4	<5	14	53	<0.1	<5	81	<20	<50	<50	<50	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH07_0.2-0.3	4/08/2019	669601	<2	<0.4	5.8	8.2	33	<0.1	<5	38	<20	<50	<50	<50	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH07_0.4-0.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1 ESDAT Combined with Non-Detect Multiplier of 0.5.
#4 ESDAT Combined

Table A: Soil Analytical Data Summary
Project Number: 57079
Project Name: Moriah College PSI DSI

			OCP																											
			Hexachlorobenzene	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene	Organochlorine Pesticides EPAVic	Other Organochlorine Pesticides EPAVic
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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			0.05	0.05	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05		0.05	0.05	0.05	0.05	1	0.1	0.1
NEPC 2013 EIL, EILs Aged Sediment												180																		
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																														
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A																														
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																														
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																														
NEPM 2013 Soil HIL A			10			6				50				240					10				6			300	20		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																														
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																														
Sample Name	**Date**	**Lab Report Number**																												
BH01_0-0.1	4/08/2019	669601	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
BH01_0.2-0.3	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0-0.1	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.2-0.3	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.9-1.0	4/08/2019	669601	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
BH02_1.4-1.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_1.9-2.0	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_0.2-0.3	4/08/2019	669601	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
BH03_1.4-1.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0-0.1	4/08/2019	669601	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
BH04_0.4-0.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA20190804-01	4/08/2019	223152	<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	-	-	-
QC20190804-01	4/08/2019	669601	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
BH05_0-0.1	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.4-0.5	4/08/2019	669601	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
BH05_0.9-1.0	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0-0.1	4/08/2019	669601	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
BH06_1.9-2.0	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.2-0.3	4/08/2019	669601	<0.05	<0.05	<0.05	0.09	<0.05	-	<0.05	<0.1	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
BH07_0.4-0.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1 ESDAT Combined with Non-Detect Multiplier of 0.5.
#4 ESDAT Combined

Table A: Soil Analytical Data Summary
Project Number: 57079
Project Name: Moriah College PSI DSI

			PAH																					
			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(b,j+k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	PAHs (Total)	Pyrene	Carcinogenic PAHs as B(a)P TEQ
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
NEPC 2013 EIL, EILs Aged Sediment																				170				
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil							0.7																	
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A																								
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																								
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																								
NEPM 2013 Soil HIL A								3	3	3												300		3
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																				3				
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																				NL				
Sample Name	**Date**	**Lab Report Number**																						
BH01_0-0.1	4/08/2019	669601	<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	<0.5	<0.5	<0.5	<1.21[#4]
BH01_0.2-0.3	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0-0.1	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.2-0.3	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.9-1.0	4/08/2019	669601	<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	<0.5	<0.5	<0.5	<1.21[#4]
BH02_1.4-1.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_1.9-2.0	4/08/2019	669601	<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	<0.5	<0.5	<0.5	<1.21[#4]
BH03_0.2-0.3	4/08/2019	669601	<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	<0.5	<0.5	<0.5	<1.21[#4]
BH03_1.4-1.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0-0.1	4/08/2019	669601	<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	<0.5	<0.5	<0.5	<1.21[#4]
BH04_0.4-0.5	4/08/2019	669601	<0.5	<0.5	<0.5	1	0.8	1	1.3	1.6	0.6	-	<0.5	0.7	0.9	<0.5	1.9	<0.5	<0.5	<0.5	0.6	8.6	2.1	1.317[#1]
QA20190804-01	4/08/2019	223152	<0.1	<0.1	<0.1	<0.1	0.06	<0.5	<0.5	<0.5	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.06	<0.1	-
QC20190804-01	4/08/2019	669601	<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	<0.5	<0.5	<0.5	<1.21[#4]
BH05_0-0.1	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.4-0.5	4/08/2019	669601	<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	<0.5	<0.5	<0.5	<1.21[#4]
BH05_0.9-1.0	4/08/2019	669601	<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	<0.5	<0.5	<0.5	<1.21[#4]
BH06_0-0.1	4/08/2019	669601	<0.5	0.8	1.4	5	5.5	8.8	8.8	8.8	4.2	-	3.3	4.1	4.4	1.4	12	<0.5	4.6	<0.5	4.8	64.5	13	8.767[#1]
BH06_1.9-2.0	4/08/2019	669601	<0.5	<0.5	<0.5	0.5	0.5	0.6	0.9	1.2	<0.5	-	<0.5	0.5	0.7	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	4.6	1.2	0.9095[#1]
BH07_0.2-0.3	4/08/2019	669601	<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	<0.5	<0.5	<0.5	<1.21[#4]
BH07_0.4-0.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1 ESDAT Combined with Non-Detect Multiplier of 0.5.
#4 ESDAT Combined

Table A: Soil Analytical Data Summary
Project Number: 57079
Project Name: Moriah College PSI DSI

	PCB								Asbestos															
	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	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	g	%w/w	%w/w	g	g	g	g	g	g	g	Comment	Comment	Comment	Comment	Comment	Comment
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1																
NEPC 2013 EIL, EILs Aged Sediment																								
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																								
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A										0.01														
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL											0.001													
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																								
NEPM 2013 Soil HIL A								1																
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																								
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																								
Sample Name	**Date**	**Lab Report Number**																						
BH01_0-0.1	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	586	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil
BH01_0.2-0.3	4/08/2019	669601	-	-	-	-	-	-	-	-	617	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil
BH02_0-0.1	4/08/2019	669601	-	-	-	-	-	-	-	-	457	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil
BH02_0.2-0.3	4/08/2019	669601	-	-	-	-	-	-	-	-	696	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil
BH02_0.9-1.0	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	695	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil
BH02_1.4-1.5	4/08/2019	669601	-	-	-	-	-	-	-	-	710	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil
BH02_1.9-2.0	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_0.2-0.3	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	735	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil
BH03_1.4-1.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0-0.1	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	582	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil
BH04_0.4-0.5	4/08/2019	669601	-	-	-	-	-	-	-	-	696	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil
QA20190804-01	4/08/2019	223152	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20190804-01	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	841	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil
BH05_0-0.1	4/08/2019	669601	-	-	-	-	-	-	-	-	642	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil
BH05_0.4-0.5	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	550	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil
BH05_0.9-1.0	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0-0.1	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	472	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil
BH06_1.9-2.0	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.2-0.3	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	702	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil
BH07_0.4-0.5	4/08/2019	669601	-	-	-	-	-	-	-	-	587	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres detected	No respirable fibres detected	Nil

Data Comments
#1 ESDAT Combined with Non-Detect Multiplier of 0.5.
#4 ESDAT Combined

Table B: Waste Classification Data
Project Number: 57079
Project Name: Moriah College PSI DSI

	Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)							BTEXN						
	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	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-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	C6-C10 Fraction	C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	0.4	1	1	1	0.1	1	1	20	20	50	50	50	50	100	100	50	50	20	20	0.1	0.1	0.1	0.1	0.2	0.3	0.1
NSW EPA 2014 General Solid Waste (No Leaching)	100	20			100	4	40		650				10000								10	600	288	0.1	0.2	1000	
NSW EPA 2014 General Solid Waste (with leached)	500	100			1500	50	1050		650				10000								18	1080	518			1800	
NSW EPA 2014 Restricted Solid Waste (No Leaching)	400	80			400	16	160		2600				40000								40	2400	1152			4000	
NSW EPA 2014 Restricted Solid Waste (with leached)	2000	400			6000	200	4200		2600				40000								72	4320	2073			7200	
Sample Name	**Date**	**Lab Report Number**																										
BH01_0-0.1	4/08/2019	669601	<2	<0.4	16	20	29	<0.1	13	55	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
BH01_0.2-0.3	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0-0.1	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.2-0.3	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.9-1.0	4/08/2019	669601	2.5	<0.4	6.3	22	55	<0.1	5.6	300	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
BH02_1.4-1.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_1.9-2.0	4/08/2019	669601	<2	<0.4	<5	<5	<5	<0.1	<5	19	<20	<20	210	<50	210	<50	180	<100	180	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
BH03_0.2-0.3	4/08/2019	669601	<2	<0.4	6	12	9.7	<0.1	6.4	28	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
BH03_1.4-1.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0-0.1	4/08/2019	669601	<2	<0.4	9.2	13	24	<0.1	10	37	<20	<20	<50	100	100	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
BH04_0.4-0.5	4/08/2019	669601	<2	<0.4	<5	7	11	<0.1	7.5	18	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
QA20190804-01	4/08/2019	223152	<4	<0.4	4	9	11	<0.1	9	19	<25	<50	<100	<100	-	<50	<100	<100	<50	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3	<0.1
QC20190804-01	4/08/2019	669601	<2	<0.4	<5	11	16	<0.1	9.3	24	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
BH05_0-0.1	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.4-0.5	4/08/2019	669601	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
BH05_0.9-1.0	4/08/2019	669601	<2	<0.4	<5	<5	5	<0.1	<5	6.2	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
BH06_0-0.1	4/08/2019	669601	<2	<0.4	7.9	40	230	<0.1	<5	210	<20	<20	280	330	610	<50	480	120	600	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
BH06_1.9-2.0	4/08/2019	669601	<2	<0.4	<5	14	53	<0.1	<5	81	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
BH07_0.2-0.3	4/08/2019	669601	<2	<0.4	5.8	8.2	33	<0.1	<5	38	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
BH07_0.4-0.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1 ESDAT Combined with Non-Detect Multiplier of 0.5.
#4 ESDAT Combined.

Table B: Waste Classification Data

Project Number: 57079

Project Name: Moriah College PSI DSI

				Polycyclic Aromatic Hydrocarbons																			
				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	Benzo(b,j+k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Carcinogenic PAHs as B(a)P TEQ	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	PAHs (Total)	Pyrene	Total Positive PAHs
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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				0.1	0.1	0.1	0.1	0.05	0.5	0.5	0.5	0.5	0.1	0.5		0.1	0.1		0.1	0.1	0.1	0.1	0.5	0.1	
NSW EPA 2014 General Solid Waste (No Leaching)								0.8																
NSW EPA 2014 General Solid Waste (with leached)								10																
NSW EPA 2014 Restricted Solid Waste (No Leaching)								3.2																
NSW EPA 2014 Restricted Solid Waste (with leached)								23																
Sample Name	**Date**	**Lab Report Number**																						
BH01_0-0.1	4/08/2019	669601		<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	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH01_0.2-0.3	4/08/2019	669601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0-0.1	4/08/2019	669601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.2-0.3	4/08/2019	669601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.9-1.0	4/08/2019	669601		<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	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH02_1.4-1.5	4/08/2019	669601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_1.9-2.0	4/08/2019	669601		<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	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH03_0.2-0.3	4/08/2019	669601		<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	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH03_1.4-1.5	4/08/2019	669601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0-0.1	4/08/2019	669601		<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	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH04_0.4-0.5	4/08/2019	669601		<0.5	<0.5	<0.5	1	0.8	1	1.3	1.6	0.6	<0.5	0.7	-	0.9	<0.5	1.317[#1]	1.9	<0.5	<0.5	0.6	8.6	2.1	-
QA20190804-01	4/08/2019	223152		<0.1	<0.1	<0.1	<0.1	0.06	<0.5	<0.5	<0.5	-	<0.1	-	<0.2	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	0.06
QC20190804-01	4/08/2019	669601		<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	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH05_0-0.1	4/08/2019	669601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.4-0.5	4/08/2019	669601		<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	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH05_0.9-1.0	4/08/2019	669601		<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	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH06_0-0.1	4/08/2019	669601		<0.5	0.8	1.4	5	5.5	8.8	8.8	8.8	4.2	3.3	4.1	-	4.4	1.4	8.767[#1]	12	<0.5	4.6	4.8	64.5	13	-
BH06_1.9-2.0	4/08/2019	669601		<0.5	<0.5	<0.5	0.5	0.5	0.6	0.9	1.2	<0.5	<0.5	0.5	-	0.7	<0.5	0.9095[#1]	1.2	<0.5	<0.5	<0.5	4.6	1.2	-
BH07_0.2-0.3	4/08/2019	669601		<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	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH07_0.4-0.5	4/08/2019	669601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments

#1 ESDAT Combined with Non-Detect Multiplier of 0.5.

#4 ESDAT Combined.

Table B: Waste Classification Data
Project Number: 57079
Project Name: Moriah College PSI DSI

	Organochlorine Pesticides																								
	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	gamma-Chlordane	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05		0.05	0.05	0.05	0.05	0.05	1
NSW EPA 2014 General Solid Waste (No Leaching)													60	60	60									
NSW EPA 2014 General Solid Waste (with leached)													108	108	108									
NSW EPA 2014 Restricted Solid Waste (No Leaching)													240	240	240									
NSW EPA 2014 Restricted Solid Waste (with leached)													432	432	432									
Sample Name	**Date**	**Lab Report Number**																							
BH01_0-0.1	4/08/2019	669601	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH01_0.2-0.3	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0-0.1	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.2-0.3	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.9-1.0	4/08/2019	669601	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH02_1.4-1.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_1.9-2.0	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_0.2-0.3	4/08/2019	669601	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH03_1.4-1.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0-0.1	4/08/2019	669601	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH04_0.4-0.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA20190804-01	4/08/2019	223152	<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	-
QC20190804-01	4/08/2019	669601	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH05_0-0.1	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.4-0.5	4/08/2019	669601	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH05_0.9-1.0	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0-0.1	4/08/2019	669601	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH06_1.9-2.0	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.2-0.3	4/08/2019	669601	<0.05	<0.05	0.09	<0.05	-	<0.05	<0.1	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH07_0.4-0.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1 ESDAT Combined with Non-Detect Multiplier of 0.5.
#4 ESDAT Combined.

Table B: Waste Classification Data

Project Number: 57079

Project Name: Moriah College PSI DSI

	Polychlorinated Biphenyls								Chlorinated Benzenes	Asbestos									Asbestos - Trace Analysis						PA VIC - IWRG62	
	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	Hexachlorobenzene	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	Organochlorine Pesticides EPAVic	Other Organochlorine Pesticides EPAVic
	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	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05																	0.1	0.1
NSW EPA 2014 General Solid Waste (No Leaching)								50-0																			
NSW EPA 2014 General Solid Waste (with leached)								50-0																			
NSW EPA 2014 Restricted Solid Waste (No Leaching)								50-0																			
NSW EPA 2014 Restricted Solid Waste (with leached)								50-0																			

Sample Name	Date	Lab Report Number																										
BH01_0-0.1	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	586	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	<0.1	<0.1
BH01_0.2-0.3	4/08/2019	669601	-	-	-	-	-	-	-	-	-	617	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	-	-
BH02_0-0.1	4/08/2019	669601	-	-	-	-	-	-	-	-	-	457	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	-	-
BH02_0.2-0.3	4/08/2019	669601	-	-	-	-	-	-	-	-	-	696	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	-	-
BH02_0.9-1.0	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	695	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	<0.1	<0.1
BH02_1.4-1.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	710	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	-	-
BH02_1.9-2.0	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_0.2-0.3	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	735	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	<0.1	<0.1
BH03_1.4-1.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0-0.1	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	582	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	<0.1	<0.1
BH04_0.4-0.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	696	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	-	-
QA20190804-01	4/08/2019	223152	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20190804-01	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	841	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	<0.1	<0.1
BH05_0-0.1	4/08/2019	669601	-	-	-	-	-	-	-	-	-	642	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	-	-
BH05_0.4-0.5	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	550	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	<0.1	<0.1
BH05_0.9-1.0	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0-0.1	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	472	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	<0.1	<0.1
BH06_1.9-2.0	4/08/2019	669601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.2-0.3	4/08/2019	669601	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	702	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	<0.1	<0.1
BH07_0.4-0.5	4/08/2019	669601	-	-	-	-	-	-	-	-	-	587	0	0	0	0	0	0	0	0	0	Nil	Nil	Nil	Organic fibres	No respirable	Nil	-	-

Data Comments

#1 ESDAT Combined with Non-Detect Multiplier of 0.5.

#4 ESDAT Combined.

Table C: TCLP Data

Project Number: 57079

Project Name: Moriah College PSI DSI

	Metals & Metalloids	BTEXN	Polycyclic Aromatic Hydrocarbons																	Ionic Balance			
	Lead	Naphthalene	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	Phenanthrene	PAHs (Total)	Pyrene	pH (TCLP - HCl addition)	pH (TCLP - initial)	pH (TCLP - off)	pH (Leachate fluid)
	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	ph Units	ph Units	ph Units	ph Units
EQL	0.01	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	0.001	0.001	0.001	0.1	0.1	0.1	0.1
NSW EPA 2014 General Solid Waste (leached)	5						0.04															
NSW EPA 2014 Restricted Solid Waste (leached)	20						0.16															
Field ID	**Sample Date**	**Report Number**																					
BH06_0-0.1	4/08/2019	671660	0.09	<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	<0.001	<0.001	1.5	6.8	4.9	5

Appendix L Quality Assurance / Quality Control

QA/QC Results Summary

Data Quality Indicator	Frequency	DQI Met?
Precision		
Blind duplicates	Asbestos – 1/14 samples Heavy metals, PAHs, and TRH/BTEX – 1/11 samples OCPs/PCBs – 1/7 samples	Chemical samples 0-178% RPD[1] All asbestos results in agreement
Blind triplicates	Asbestos – 1/14 samples Heavy metals, PAHs, and TRH/BTEX – 1/11 samples OCPs/PCBs – 1/7 samples	Chemical samples 0-182% RPD[1] All asbestos results in agreement
Laboratory duplicates	5/11 samples	0-39% RPD
Accuracy		
Surrogate spikes	All organic samples	50-127%[1]
Laboratory control samples	1 per lab batch	73-127%
Matrix spikes	1 per lab batch	71-123%
Representativeness		
Sampling appropriate for media and analytes	All samples	Yes
Samples extracted and analysed within holding times	All samples	Yes
Method blank	1 per laboratory batch	<LOR
Trip spike	1 per sampling event (volatile or semi-volatile COPCs)	86-120% recovery
Trip blank	1 per sampling event (volatile or semi-volatile COPCs)	<LOR
Rinsate	1 per sampling event (where reusable sampling equipment is used)	Yes
Comparability		
Standard operating procedures for sample collection & handling	All samples	Yes
Standard analytical methods used for all analyses	All samples	Yes
Consistent field conditions, sampling staff and laboratory analysis	All works	Yes
Limits of reporting appropriate and consistent	All samples	Yes
Completeness		
Soil description and COCs completed and appropriate	All samples	Yes
Appropriate documentation	All works	Yes
Satisfactory frequency and result for QC samples	All samples	Yes
Data from critical samples is considered valid	-	Yes
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted site assessment criteria	All samples	Yes

[1] See Discussion of QA/QC results

Discussion of QA/QC Results

Precision

Blind Duplicates/Triplicates

The rates of blind duplicate and triplicate sampling are considered appropriate.

Blind duplicate samples were generally within the range of 0-50% RPD, with the exception of:

- Benz(a)anthracene with an RPD of 67% between the primary (BH04_0.4-0.5) and duplicate (QC20190804-01) samples;
- Benzo(a)pyrene TEQ (lower bound) with an RPD of 67% between the primary (BH04_0.4-0.5) and duplicate (QC20190804-01) samples;
- Benzo(a)pyrene TEQ (medium bound) with an RPD of 74% between the primary (BH04_0.4-0.5) and duplicate (QC20190804-01) samples;
- Chrysene with an RPD of 57% between the primary (BH04_0.4-0.5) and duplicate (QC20190804-01) samples;
- Fluoranthene with an RPD of 117% between the primary (BH04_0.4-0.5) and duplicate (QC20190804-01) samples;
- PAHs (total) with an RPD of 178% between the primary (BH04_0.4-0.5) and duplicate (QC20190804-01) samples; and
- Pyrene with an RPD of 123% between the primary (BH04_0.4-0.5) and duplicate (QC20190804-01) samples.

Blind triplicate samples were generally within the range of 0-50% RPD, with the exception of the following:

- Benz(a)anthracene with an RPD of 164% between the primary (BH04_0.4-0.5) and triplicate (QA20190804-01) samples;
- Benzo(a)pyrene with an RPD of 172% between the primary (BH04_0.4-0.5) and triplicate (QA20190804-01) samples;
- Benzo(a)pyrene TEQ (lower bound) with an RPD of 67% between the primary (BH04_0.4-0.5) and triplicate (QA20190804-01) samples;
- Benzo(a)pyrene TEQ (medium bound) with an RPD of 89% between the primary (BH04_0.4-0.5) and triplicate (QA20190804-01) samples;
- Benzo(a)pyrene TEQ (upper bound) with an RPD of 105% between the primary (BH04_0.4-0.5) and triplicate (QA20190804-01) samples;
- Chrysene with an RPD of 160% between the primary (BH04_0.4-0.5) and triplicate (QA20190804-01) samples;
- Fluoranthene with an RPD of 180% between the primary (BH04_0.4-0.5) and triplicate (QA20190804-01) samples;
- Phenanthrene with an RPD of 143% between the primary (BH04_0.4-0.5) and triplicate (QA20190804-01) samples; and
- Pyrene with an RPD of 182% between the primary (BH04_0.4-0.5) and triplicate (QA20190804-01) samples.

Most analytical results with high RPDs were reported at levels below the adopted criteria and less than 10 times the limit of reporting (LOR). Sample results less than 10 times the limit of reporting (LOR) do not have RPD limits, but nevertheless the elevated RPDs are within the laboratory quality control acceptance criteria. Additionally, benzo(a)pyrene TEQs between the primary and triplicate results are attributed to different detection limits between the laboratories, and not due to variation in the reported soil results.

Where RPDs exceeded the JBS&G and laboratory criteria, it is considered that the elevated RPDs are due to the heterogeneous nature of the fill materials encountered. As a conservative measure, the highest result obtained was adopted for assessment purposes.

Based on this, the RPDs above the DQI are not considered to affect the precision of the data set.

Laboratory Duplicates

Laboratory duplicate RPDs were within the acceptable range of 0-50% RPD.

Accuracy

Surrogate Spikes

Surrogate spikes were used for all required organic analyses. Some surrogate spike recoveries were outside the acceptable range of 70-130% recovery. However, the analytes associated with low recoveries were still within laboratory acceptable limits of 50-150%, and are therefore considered to be within an acceptable range.

Laboratory Control Samples

Laboratory control sample (LCS) recoveries were within the acceptable range of 70-130%.

Matrix Spikes

Matrix spike recoveries were within the acceptable range of 70-130% recovery.

Representativeness

Sampling appropriate for media and analytes

Sampling was conducted via auger and hand tools in accordance with NEPC 2013 guidance.

Holding times

All chemical samples were analysed within holding times.

Given the particulate structure of asbestos, no published holding times are available for the analysis of asbestos. As such, all samples were analysed within an adequate time frame.

Comparability

Eurofins|mgt and Envirolab Services Pty Ltd were used as the primary and secondary laboratories for the duration of the assessment. The laboratories implemented standard analytical procedures as detailed in the laboratory reports provided in **Appendix M**, and are NATA accredited for all methods.

Experienced JBS&G personnel undertook all sampling in accordance with standard JBS&G sampling methods.

Completeness

Documentation

All field documentation including field screening forms and COCs were completed to a satisfactory standard. All documentation is complete and correct.

Frequency for QC Samples

Duplicate and triplicate samples were collected at a rate greater than 1 per 20 primary samples, therefore the frequency is considered acceptable for the assessment.

Sensitivity

Chemical Analysis

Limits of reporting were below the adopted site assessment criteria.

Asbestos Analysis

Laboratories utilised the large sample size provided by JBS&G (approximately 500 ml) to conduct asbestos analysis in accordance with WA DoH 2009 and NEPC 2013 site investigation / health screening levels. The nominal detection limit of the AS4964-2004: Method for the Qualitative Identification of Asbestos in Bulk Samples is 0.01% w/w (i.e. 0.1 g/kg). This detection limit is consistent with the adopted site criteria. Furthermore, the larger 500 ml samples submitted to the laboratories are considered to result in a substantially lower detection limit being achieved in practice as examination of a large sample size may improve the likelihood of identifying asbestos material in the greater than 2 mm fraction. On this basis, the sensitivity and comparability of the analytical methods employed by the laboratories is considered to be appropriate for the purpose of this assessment.

Assessment of QA/QC

The field sampling and handling procedures produced QA/QC results which indicate the soil data are of an acceptable quality and suitable for use in the characterisation of the nature and degree of soil impacts on the site.

The laboratory results indicate that the project laboratories were achieving required levels of sensitivity for the purposes of this assessment.

On the basis of the field and laboratory QA/QC program, the soil data are of an acceptable quality upon which to draw conclusions regarding the nature and extent of soil impacts on the site.

ESDAT QA Checker
Project:57079
Filter: ALL

Overview Summary
- Count of Samples
- Summary By Compound
- Count of Results

Holding Times
- Holding Time Errors (0)

Blanks
- Field Blanks
- Detects in Lab Blanks (0)
- SDG's without Storage Blanks (2)
- 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 (11)

Lab Control Samples
- SDG's without a Laboratory Control Sample (0)
- Laboratory Control Samples, Error > 30% (0)

Certified and Standard Reference Materials
- Certified Reference Materials - Error > 10% (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 (2)
- Matrix Spike Recoveries less than 70% or greater than 130% or outside lab LCL or UCL (0)
- Trip Spike Recoveries (70% - 130% is acceptable) (9)

Inorganic
- Na + CL > TDS (0)
- BOD > COD (0)
- BOD > COD (0)

Other
- Unit Conversion Problems (0)
- OriginalChemNames Requiring Validation (2)
- 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	Soil	WATER
First Sample Date	4/08/2019	4/08/2019
Last Sample Date	4/08/2019	4/08/2019
Sampling Period (days)	1	1
Number of Samples Submitted	62	2
Number of Non QA Samples Submitted	60	0
Number of Field Blanks	0	0
Number of Trip Blanks	0	1
Number of Rinsates	0	1
Number of Field Duplicates	1	0
Number of Trip Spikes	0	1
Number of Lab Duplicates	5	0
Number of LCSs	8	7
Number of CRMs	0	0
Number of Method Blanks	7	4
Number of Storage Blanks	0	0
Number of Matrix Spikes	7	4
Number of Matrix Spike Dupes	0	0

			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
Asbestos	Approx. Sample Mass		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
	Asbestos from ACM in Soil		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
	Asbestos from FA & AF in Soil		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
Asbestos	Asbestos ID in Soil		0	Other	2	2	Y		0			0			0	N		0			0			0			0	N
Asbestos	Mass ACM		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
	Mass AF		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
	Mass Asbestos in ACM		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
	Mass Asbestos in AF		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
	Mass Asbestos in FA		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
	Mass Asbestos in FA & AF		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
	Mass FA		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
Asbestos - Trace Analysis	ACM - Comment		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
	AF - Comment		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
	FA - Comment		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
	Organic Fibres - Comment		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
	Respirable Fibres - Comment		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
	Synthetic Fibres - Comment		14	Other	1 to 2	8	Y		0			0			0	N		0			0			0			1	Y
Asbestos ID - soils NEPM - AS	ACM >7mm Estimatio[n*]		0	Other	2	2	Y		0			0			0	N		0			0			0			0	N
	FA and AF Estimatio[n*#2]		0	Other	2	2	Y		0			0			0	N		0			0			0			0	N
	Total Asbestos#1		0	Other	2	2	Y		0			0			0	N		0			0			0			0	N
BTEXN	Benzene	0.1 mg/kg	11	VOC	2 to 8	3 to 8	Y	93 to 116	2	Y	ND	2	Y		0	N		0		81 to 84	2	Y		0			1	Y
	Ethylbenzene	0.1 mg/kg	11	VOC	2 to 8	3 to 8	Y	93 to 115	2	Y	ND	2	Y		0	N		0		86 to 89	2	Y		0			1	Y
	Naphthalene	0.5 mg/kg	22	VOC	2 to 8	3 to 8	Y	83 to 123	3	Y	ND	4	Y		1	Y		0		78 to 91	3	Y		0			2	Y
	Toluene	0.1 mg/kg	11	VOC	2 to 8	3 to 8	Y	92 to 115	2	Y	ND	2	Y		0	N		0		88 to 89	2	Y		0			1	Y
	Xylene (m & p)	0.2 mg/kg	11	VOC	2 to 8	3 to 8	Y	93 to 115	2	Y	ND	2	Y		0	N		0		91 to 91	2	Y		0			1	Y
	Xylene (o)	0.1 mg/kg	11	VOC	2 to 8	3 to 8	Y	93 to 93	1	Y	ND	2	Y		0	N		0		91 to 96	2	Y		0			1	Y
	Xylene (Total)	0.3 mg/kg	11	VOC	2 to 8	3 to 8	Y	115 to 115	1	Y	ND	1	Y		0	N		0		91 to 93	2	Y		0			1	Y
Chlorinated Benzenes	Hexachlorobenzene	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	87 to 87	1	Y	ND	2	Y		1	Y		0		72 to 72	1	Y		0			0	N
EPA VIC - IWRG621	Organochlorine Pesticides EPAVic	0.1 mg/kg	7	SVOC	1	8	Y		0			0			0	N		0			0			0			0	N
	Other Organochlorine Pesticides EPAVic	0.1 mg/kg	7	SVOC	1	8	Y		0			0			0	N		0			0			0			0	N
Ionic Balance	Cation Exchange Capacity	0.05 meq/100g	1	Other	5	8	Y		0			0			0	N		0			0			0			0	N
	EC 1:5 soil:water	10 µS/cm	1	Other	4	8	Y		0		ND	1	Y		1	Y		0			0			0			0	N
	pH 1:5 soil:water	0.1 ph Units	1	Other	4	8	Y		0			0		1	1	Y		0			0			0			0	N
Metals & Metalloids	Arsenic (Total)	2 mg/kg	11	Other	2 to 8	2 to 8	Y	107 to 111	2	Y	ND	2	Y		2	Y		0		99 to 99	1	Y		0			1	Y
	Cadmium	0.4 mg/kg	11	Other	2 to 8	2 to 8	Y	104 to 111	2	Y	ND	2	Y		2	Y		0		108 to 108	1	Y		0			1	Y
	Chromium (Total)	5 mg/kg	11	Other	2 to 8	2 to 8	Y	111 to 119	2	Y	ND	2	Y		2	Y		0		105 to 105	1	Y		0			1	Y
	Copper	5 mg/kg	11	Other	2 to 8	2 to 8	Y	104 to 115	2	Y	ND	2	Y	8	2	Y		0		104 to 104	1	Y		0		44	1	Y
	Lead	5 mg/kg	11	Other	2 to 8	2 to 8	Y	105 to 117	2	Y	ND	2	Y	9	2	Y		0		105 to 105	1	Y		0		37	1	Y
	Mercury (Inorganic)	0.1 mg/kg	11	Other	2 to 8	2 to 8	Y	100 to 105	2	Y	ND	2	Y		2	Y		0		99 to 99	1	Y		0			1	Y
	Nickel	5 mg/kg	11	Other	2 to 8	2 to 8	Y	106 to 114	2	Y	ND	2	Y	3	2	Y		0		101 to 101	1	Y		0		21	1	Y
	Zinc	5 mg/kg	11	Other	2 to 8	2 to 8	Y	108 to 115	2	Y	ND	2	Y	0	2	Y		0		105 to 105	1	Y		0		29	1	Y
Organochlorine Pesticides	4,4-DDE	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	85 to 90	2	Y	ND	2	Y		1	Y		0		94 to 94	1	Y		0			0	N
	Aldrin	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	84 to 87	2	Y	ND	2	Y		1	Y		0		96 to 96	1	Y		0			0	N
	Aldrin + Dieldrin (Sum of Total)	0.05 mg/kg	7	SVOC	1	8	Y		0			0			0	N		0			0			0			0	N
	alpha-BHC	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	81 to 84	2	Y	ND	2	Y		1	Y		0		79 to 79	1	Y		0			0	N
	alpha-Chlordane		0	SVOC	2	2	Y		0		ND	1	Y		0	N		0			0			0			0	N
	beta-BHC	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	76 to 83	2	Y	ND	2	Y		1	Y		0		71 to 71	1	Y		0			0	N
	Chlordane	0.1 mg/kg	7	SVOC	4 to 8	8	Y	79 to 79	1	Y	ND	1	Y		1	Y		0		101 to 101	1	Y		0			0	N
	DDD	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	82 to 90	2	Y	ND	2	Y		1	Y		0		113 to 113	1	Y		0			0	N
	DDT	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	92 to 92	1	Y	ND	2	Y		1	Y		0		81 to 81	1	Y		0			0	N
	DDT+DDE+DDD (Sum of Total)	0.05 mg/kg	7	SVOC	1 to 2	2 to 8	Y		0			0			0	N		0			0			0			0	N
	delta-BHC	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	95 to 95	1	Y	ND	2	Y		1	Y		0		71 to 71	1	Y		0			0	N
	Dieldrin	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	82 to 101	2	Y	ND	2	Y		1	Y		0		102 to 102	1	Y		0			0	N
	Endosulfan alpha	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	100 to 100	1	Y	ND	2	Y		1	Y		0		89 to 89	1	Y		0			0	N
	Endosulfan beta	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	82 to 82	1	Y	ND	2	Y		1	Y		0		85 to 85	1	Y		0			0	N
	Endosulfan sulphate	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	85 to 127	2	Y	ND	2	Y		1	Y		0		88 to 88	1	Y		0			0	N
	Endrin	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	84 to 96	2	Y	ND	2	Y		1	Y		0		71 to 71	1	Y		0			0	N
	Endrin aldehyde	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	70 to 70	1	N	ND	2	Y		1	Y		0		104 to 104	1	Y		0			0	N
	Endrin ketone	0.05 mg/kg	7	SVOC	4 to 8	8	Y	120 to 120	1	Y	ND	1	Y		1	Y		0		90 to 90	1	Y		0			0	N
	gamma-Chlordane		0	SVOC	2	2	Y		0		ND	1	Y		0	N		0			0			0			0	N
	Heptachlor	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	77 to 79	2	Y	ND	2	Y		1	Y		0		71 to 71	1	Y		0			0	N
	Heptachlor Epoxide	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	80 to 85	2	Y	ND	2	Y		1	Y		0		87 to 87	1	Y		0			0	N
	Lindane	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	81 to 81	1	Y	ND	2	Y		1	Y		0		81 to 81	1	Y		0			0	N
	Methoxychlor	0.05 mg/kg	7	SVOC	2 to 8	2 to 8	Y	111 to 111	1	Y	ND	2	Y		1	Y		0		80 to 80	1	Y		0			0	N
	Toxaphene	1 mg/kg	7	SVOC	4 to 8	8	Y		0		ND	1	Y		0	N		0			0			0			0	N
Other	% Clay	1 %	1	Other	3	8	Y	121 to 121	1	Y	ND	1	Y		0	N		0			0			0			0	N
	% Moisture 103oC	1 %	12	Other	1	8	Y		0			0		13	1	Y		0			0			0		14	1	Y
	Moisture		0	Other	2	3	Y		0			0			0	N		0			0			0			0	N
PAHs in Soil	Benzo(b,j+k)fluoranthene		0	Other	2	3	Y		0		ND	1	Y		0	N		0			0			0			0	N
Polychlorinated Biphenyls	Aroclor 1016	0.1 mg/kg	7	SVOC	2 to 8	2 to 8	Y		0		ND	2	Y		0	N		0		79 to 79	1	Y		0			0	N
	Aroclor 1221	0.1 mg/kg	7	SVOC	2 to 8	2 to 8	Y		0		ND	2	Y		0	N		0			0			0			0	N
	Aroclor 1232	0.1 mg/kg	7	SVOC	2 to 8	2 to 8	Y		0		ND	2	Y		0	N		0			0			0			0	N
	Aroclor 1242	0.1 mg/kg	7	SVOC	2 to 8	2 to 8	Y		0		ND	2	Y		0	N		0			0			0			0	N
	Aroclor 1248	0.1 mg/kg	7	SVOC	2 to 8	2 to 8	Y		0		ND	2	Y		0	N		0			0			0			0	N
	Aroclor 1254	0.1 mg/kg	7	SVOC	2 to 8	2 to 8	Y	99 to 99	1	Y	ND	2	Y		0	N		0			0			0			0	N
	Aroclor 1260	0.1 mg/kg	7	SVOC	2 to 8	2 to 8	Y	82 to 82	1	Y	ND	2	Y		0	N		0		109 to 109	1	Y		0			0	N
	PCBs (Total)	0.1 mg/kg	7	SVOC	2 to 8	2 to 8	Y		0		ND	1	Y		0	N		0			0			0			0	N
Polycyclic Aromatic Hydrocarbons	Acenaphthene	0.5 mg/kg	11	SVOC	2 to 8	3 to 8	Y	87 to 87	1	Y	ND	2	Y		1	Y		0		85 to 85	1	Y		0			1	Y
	Acenaphthylene	0.5 mg/kg	11	SVOC	2 to 8	3 to 8	Y	88 to 88	1	Y	ND	2	Y		1	Y		0		83 to 83	1	Y		0			1	Y
	Anthracene	0.5 mg/kg	11	SVOC	2 to 8	3 to 8	Y	84 to 84	1	Y	ND	2	Y		1	Y		0		86 to 86	1	Y		0			1	Y
	Benz(a)anthracene	0.5 mg/kg	11	SVOC	2 to 8	3 to 8	Y	87 to 87	1	Y	ND	2	Y		1	Y		0		73 to 73	1	Y		0		67	1	N
	Benzo(a)pyrene	0.5 mg/kg	11	SVOC	2 to 8	3 to 8	Y	77 to 106	2	Y	ND	2	Y		1	Y		0		81 to 81	1	Y		0		46	1	Y
	Benzo(a)pyrene TEQ (lower bound)[*]	0.5 mg/kg	11	SVOC	1 to 2	3 to 8	Y		0			0			0	N		0			0			0		67	1	N

			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
	Benzo(a)pyrene TEQ (medium bound)*	0.5 mg/kg	11	SVOC	1 to 2	3 to 8	Y		0			0			0	N		0			0			0		74	1	N
	Benzo(a)pyrene TEQ (upper bound)*	0.5 mg/kg	11	SVOC	1 to 2	3 to 8	Y		0			0			0	N		0			0			0		29	1	Y
	Benzo(b,j)fluoranthene	0.5 mg/kg	11	SVOC	4 to 8	8	Y	83 to 83	1	Y	ND	1	Y		1	Y		0		78 to 78	1	Y		0		18	1	Y
	Benzo(g,h,i)perylene	0.5 mg/kg	11	SVOC	2 to 8	3 to 8	Y	88 to 88	1	Y	ND	2	Y		1	Y		0		73 to 73	1	Y		0			1	Y
	Benzo(k)fluoranthene	0.5 mg/kg	11	SVOC	4 to 8	8	Y	82 to 82	1	Y	ND	1	Y		1	Y		0		92 to 92	1	Y		0		33	1	Y
	Chrysene	0.5 mg/kg	11	SVOC	2 to 8	3 to 8	Y	92 to 108	2	Y	ND	2	Y		1	Y		0		86 to 86	1	Y		0		57	1	N
	Dibenz(a,h)anthracene	0.5 mg/kg	11	SVOC	2 to 8	3 to 8	Y	94 to 94	1	Y	ND	2	Y		1	Y		0		75 to 75	1	Y		0			1	Y
	Fluoranthene	0.5 mg/kg	11	SVOC	2 to 8	3 to 8	Y	95 to 104	2	Y	ND	2	Y		1	Y		0		91 to 91	1	Y		0		117	1	N
	Fluorene	0.5 mg/kg	11	SVOC	2 to 8	3 to 8	Y	94 to 104	2	Y	ND	2	Y		1	Y		0		87 to 87	1	Y		0			1	Y
	Indeno(1,2,3-c,d)pyrene	0.5 mg/kg	11	SVOC	2 to 8	3 to 8	Y	91 to 91	1	Y	ND	2	Y		1	Y		0		82 to 82	1	Y		0			1	Y
	PAHs (Total)	0.5 mg/kg	11	SVOC	1	8	Y		0			0			0	N		0			0			0		178	1	N
	Phenanthrene	0.5 mg/kg	11	SVOC	2 to 8	3 to 8	Y	90 to 104	2	Y	ND	2	Y		1	Y		0		77 to 77	1	Y		0		18	1	Y
	Pyrene	0.5 mg/kg	11	SVOC	2 to 8	3 to 8	Y	94 to 108	2	Y	ND	2	Y		1	Y		0		94 to 94	1	Y		0		123	1	N
	Total Positive PAHs		0	SVOC	2	3	Y		0			0			0	N		0			0			0			0	N
Surrogate	4-Terphenyl-d14		0	SVOC			Y	91 to 91	1	Y		0			0	N	64 to 102	15	N		0			0			0	N
	Surrogate 2-fluorobiphenyl		0	SVOC			Y		0			0			0	N	52 to 93	12	N		0			0			0	N
	Surrogate 4-BFB		0	VOC			Y		0			0			0	N	59 to 126	12	N		0			0			0	N
	Surrogate aaa-Trifluorotoluene		0	SVOC			Y	97 to 97	1	Y		0			0	N	92 to 100	3	Y		0			0			0	N
	Surrogate Dibutylchlorendate		0	SVOC			Y		0			0			0	N	50 to 98	8	N		0			0			0	N
	Surrogate o-Terphenyl		0	SVOC			Y	109 to 109	1	Y		0			0	N	81 to 109	3	Y		0			0			0	N
	Surrogate TCMX		0	SVOC			Y	94 to 94	2	Y		0			0	N	52 to 99	14	N		0			0			0	N
TPHs (NEPC 1999)	C10-C14 Fraction	20 mg/kg	11	SVOC	2 to 8	3 to 8	Y	104 to 106	2	Y	ND	2	Y		1	Y		0		102 to 102	1	Y		0			1	Y
	C10-C36 Fraction (Total)	50 mg/kg	11	SVOC	1	8	Y		0			0			0	N		0			0			0			1	Y
	C15-C28 Fraction	50 mg/kg	11	SVOC	2 to 8	3 to 8	Y	97 to 97	1	Y	ND	2	Y	25	1	Y		0			0			0			1	Y
	C29-C36 Fraction	50 mg/kg	11	SVOC	2 to 8	3 to 8	Y	100 to 100	1	Y	ND	2	Y	22	1	Y		0			0			0			1	Y
	C6-C9 Fraction	20 mg/kg	11	VOC	2 to 8	3 to 8	Y	93 to 106	2	Y	ND	2	Y		0	N		0		87 to 96	2	Y		0			1	Y
TRHs (NEPC 2013)	>C10-C16 Fraction	50 mg/kg	11	SVOC	2 to 8	3 to 8	Y	99 to 104	2	Y	ND	2	Y		1	Y		0		95 to 95	1	Y		0			1	Y
	>C10-C16 less Naphthalene (F2)	50 mg/kg	11	SVOC	1 to 2	3 to 8	Y		0			0			0	N		0			0			0			1	Y
	>C10-C40 Fraction (Total)	100 mg/kg	11	SVOC	2 to 8	3 to 8	Y		0			0			0	N		0			0			0			1	Y
	>C16-C34 Fraction	100 mg/kg	11	SVOC	2 to 8	3 to 8	Y	97 to 97	1	Y	ND	2	Y	24	1	Y		0			0			0			1	Y
	>C34-C40 Fraction	100 mg/kg	11	SVOC	2 to 8	3 to 8	Y	100 to 100	1	Y	ND	2	Y	40	1	Y		0			0			0			1	Y
	C6-C10 Fraction	20 mg/kg	11	VOC	2 to 8	3 to 8	Y	93 to 124	2	Y	ND	2	Y		0	N		0		85 to 87	2	Y		0			1	Y
	C6-C10 less BTEX (F1)	20 mg/kg	11	VOC	1 to 2	3 to 8	Y		0			0			0	N		0			0			0			1	Y
BTEXN	Benzene		0	VOC	3	8	Y	117 to 117	1	Y	ND	1	Y		0	N		0		110 to 116	2	Y	ND	2	Y		0	N
	Ethylbenzene		0	VOC	3	8	Y	104 to 104	1	Y	ND	1	Y		0	N		0		118 to 120	2	Y	ND	2	Y		0	N
	Naphthalene		0	VOC	3 to 8	8	Y	109 to 114	2	Y	ND	2	Y		0	N		0		102 to 121	3	Y	ND	3	Y		0	N
	Toluene		0	VOC	3	8	Y	102 to 102	1	Y	ND	1	Y		0	N		0		120 to 120	2	Y	ND	2	Y		0	N
	Xylene (m & p)		0	VOC	3	8	Y	100 to 100	1	Y	ND	1	Y		0	N		0		106 to 110	2	Y	ND	2	Y		0	N
	Xylene (o)		0	VOC	3	8	Y		0		ND	1	Y		0	N		0		120 to 120	2	Y	ND	2	Y		0	N
	Xylene (Total)		0	VOC	3	8	Y	101 to 101	1	Y	ND	1	Y		0	N		0		111 to 120	2	Y	ND	2	Y		0	N
Chlorinated Benzenes	Hexachlorobenzene		0	SVOC	8	8	Y	91 to 91	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
EPA VIC - IWRG621	Organochlorine Pesticides EPAVic		0	SVOC	1	8	Y		0			0			0	N		0			0		ND	1	Y		0	N
	Other Organochlorine Pesticides EPAVic		0	SVOC	1	8	Y		0			0			0	N		0			0		ND	1	Y		0	N
Metals & Metalloids	Arsenic (Total)		0	Other	3	8	Y	96 to 96	1	Y	ND	1	Y		0	N		0		97 to 97	1	Y	ND	1	Y		0	N
	Cadmium		0	Other	3	8	Y	95 to 95	1	Y	ND	1	Y		0	N		0		95 to 95	1	Y	ND	1	Y		0	N
	Chromium (Total)		0	Other	3	8	Y	95 to 95	1	Y	ND	1	Y		0	N		0		99 to 99	1	Y	ND	1	Y		0	N
	Copper		0	Other	3	8	Y		0		ND	1	Y		0	N		0		84 to 84	1	Y	ND	1	Y		0	N
	Lead		0	Other	3	8	Y	96 to 96	1	Y	ND	1	Y		0	N		0		99 to 99	1	Y	ND	1	Y		0	N
	Mercury (Inorganic)		0	Other	3	8	Y	89 to 89	1	Y	ND	1	Y		0	N		0		108 to 108	1	Y	ND	1	Y		0	N
	Nickel		0	Other	3	8	Y	96 to 96	1	Y	ND	1	Y		0	N		0		97 to 97	1	Y	ND	1	Y		0	N
	Zinc		0	Other	3	8	Y	97 to 97	1	Y	ND	1	Y		0	N		0		98 to 98	1	Y	ND	1	Y		0	N
Organochlorine Pesticides	4,4-DDE		0	SVOC	8	8	Y	105 to 105	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Aldrin		0	SVOC	8	8	Y	90 to 90	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Aldrin + Dieldrin (Sum of Total)		0	SVOC	1	8	Y		0			0			0	N		0			0		ND	1	Y		0	N
	alpha-BHC		0	SVOC	8	8	Y	74 to 74	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	beta-BHC		0	SVOC	8	8	Y	75 to 75	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Chlordane		0	SVOC	8	8	Y	95 to 95	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	DDD		0	SVOC	8	8	Y	91 to 91	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	DDT		0	SVOC	8	8	Y	91 to 91	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	DDT+DDE+DDD (Sum of Total)		0	SVOC	1	8	Y		0			0			0	N		0			0		ND	1	Y		0	N
	delta-BHC		0	SVOC	8	8	Y	73 to 73	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Dieldrin		0	SVOC	8	8	Y	96 to 96	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Endosulfan alpha		0	SVOC	8	8	Y	84 to 84	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Endosulfan beta		0	SVOC	8	8	Y	117 to 117	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Endosulfan sulphate		0	SVOC	8	8	Y	79 to 79	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Endrin		0	SVOC	8	8	Y	92 to 92	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Endrin aldehyde		0	SVOC	8	8	Y	119 to 119	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Endrin ketone		0	SVOC	8	8	Y	81 to 81	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Heptachlor		0	SVOC	8	8	Y	79 to 79	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Heptachlor Epoxide		0	SVOC	8	8	Y	101 to 101	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Lindane		0	SVOC	8	8	Y	87 to 87	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Methoxychlor		0	SVOC	8	8	Y	93 to 93	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Toxaphene		0	SVOC	8	8	Y		0		ND	1	Y		0	N		0			0		ND	1	Y		0	N
Polychlorinated Biphenyls	Aroclor 1016		0	SVOC	8	8	Y		0		ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Aroclor 1221		0	SVOC	8	8	Y		0		ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Aroclor 1232		0	SVOC	8	8	Y		0		ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Aroclor 1242		0	SVOC	8	8	Y		0		ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Aroclor 1248		0	SVOC	8	8	Y		0		ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Aroclor 1254		0	SVOC	8	8	Y		0		ND	1	Y		0	N		0			0		ND	1	Y		0	N
	Aroclor 1260		0	SVOC	8	8	Y	91 to 91	1	Y	ND	1	Y		0	N		0			0		ND	1	Y		0	N
	PCBs (Total)		0	SVOC	8	8	Y		0		ND	1	Y		0	N		0			0		ND	1	Y		0	N
Polycyclic Aromatic Hydrocarbons	Acenaphthene		0	SVOC	8	8	Y	98 to 98	1	Y	ND	1	Y		0	N		0		96 to 96	1	Y	ND	1	Y		0	N
	Acenaphthylene		0	SVOC	8	8	Y	88 to 88	1	Y	ND	1	Y		0	N		0		91 to 91	1	Y	ND	1	Y		0	N
	Anthracene		0	SVOC	8	8	Y	90 to 90	1	Y	ND	1	Y		0	N		0		86 to 86	1	Y	ND	1	Y		0	N
	Benz(a)anthracene		0	SVOC	8	8	Y	82 to 82	1	Y	ND	1	Y		0	N		0		87 to 87	1	Y	ND	1	Y		0	N
	Benzo(a)pyrene		0	SVOC	8	8	Y	71 to 71	1	Y	ND	1	Y		0	N		0		87 to 87	1	Y	ND	1	Y		0	N
	Benzo(b,j)fluoranthene		0	SVOC	8	8	Y	106 to 106	1	Y	ND	1	Y		0	N		0		123 to 123	1	Y	ND	1	Y		0	N
	Benzo(g,h,i)perylene		0	SVOC	8	8	Y	75 to 75	1	Y	ND	1	Y		0	N		0		72 to 72	1	Y	ND	1	Y		0	N

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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
	Benzo(k)fluoranthene		0	SVOC	8	8	Y	110 to 110	1	Y	ND	1	Y		0	N		0		112 to 112	1	Y	ND	1	Y		0	N
	Chrysene		0	SVOC	8	8	Y	114 to 114	1	Y	ND	1	Y		0	N		0		104 to 104	1	Y	ND	1	Y		0	N
	Dibenz(a,h)anthracene		0	SVOC	8	8	Y	81 to 81	1	Y	ND	1	Y		0	N		0		81 to 81	1	Y	ND	1	Y		0	N
	Fluoranthene		0	SVOC	8	8	Y	99 to 99	1	Y	ND	1	Y		0	N		0		91 to 91	1	Y	ND	1	Y		0	N
	Fluorene		0	SVOC	8	8	Y	95 to 95	1	Y	ND	1	Y		0	N		0		96 to 96	1	Y	ND	1	Y		0	N
	Indeno(1,2,3-c,d)pyrene		0	SVOC	8	8	Y	110 to 110	1	Y	ND	1	Y		0	N		0		71 to 71	1	Y	ND	1	Y		0	N
	PAHs (Total)		0	SVOC	1	8	Y		0			0			0	N		0			0		ND	1	Y		0	N
	Phenanthrene		0	SVOC	8	8	Y	98 to 98	1	Y	ND	1	Y		0	N		0		94 to 94	1	Y	ND	1	Y		0	N
	Pyrene		0	SVOC	8	8	Y	97 to 97	1	Y	ND	1	Y		0	N		0		93 to 93	1	Y	ND	1	Y		0	N
Surrogate	4-Terphenyl-d14		0	SVOC			Y		0			0			0	N	97 to 97	1	Y		0			0			0	N
	Surrogate 2-fluorobiphenyl		0	SVOC			Y		0			0			0	N	91 to 91	1	Y		0			0			0	N
	Surrogate 4-BFB		0	VOC			Y		0			0			0	N	122 to 127	3	Y		0			0			0	N
	Surrogate Dibutylchlorendate		0	SVOC			Y		0			0			0	N	112 to 112	1	Y		0			0			0	N
	Surrogate TCMX		0	SVOC			Y		0			0			0	N	96 to 96	1	Y		0			0			0	N
TPHs (NEPC 1999)	C10-C14 Fraction		0	SVOC	8	8	Y	82 to 82	1	Y	ND	1	Y		0	N		0		93 to 93	1	Y	ND	1	Y		0	N
	C10-C36 Fraction (Total)		0	SVOC	1	8	Y		0			0			0	N		0			0		ND	1	Y		0	N
	C15-C28 Fraction		0	SVOC	8	8	Y		0		ND	1	Y		0	N		0			0		ND	1	Y		0	N
	C29-C36 Fraction		0	SVOC	8	8	Y		0		ND	1	Y		0	N		0			0		ND	1	Y		0	N
	C6-C9 Fraction		0	VOC	3	8	Y	111 to 111	1	Y	ND	1	Y		0	N		0		87 to 108	2	Y	ND	2	Y		0	N
TRHs (NEPC 2013)	>C10-C16 Fraction		0	SVOC	8	8	Y	77 to 77	1	Y	ND	1	Y		0	N		0		88 to 88	1	Y	ND	1	Y		0	N
	>C10-C16 less Naphthalene (F2)		0	SVOC	1	8	Y		0			0			0	N		0			0		ND	1	Y		0	N
	>C10-C40 Fraction (Total)		0	SVOC	3	8	Y		0			0			0	N		0			0		ND	1	Y		0	N
	>C16-C34 Fraction		0	SVOC	8	8	Y		0		ND	1	Y		0	N		0			0		ND	1	Y		0	N
	>C34-C40 Fraction		0	SVOC	8	8	Y		0		ND	1	Y		0	N		0			0		ND	1	Y		0	N
	C6-C10 Fraction		0	VOC	3	8	Y	115 to 115	1	Y	ND	1	Y		0	N		0		86 to 112	2	Y	ND	2	Y		0	N
	C6-C10 less BTEX (F1)		0	VOC	1	8	Y		0			0			0	N		0			0		ND	2	Y		0	N

Contents

Count of Results

Matrix_Type	Sample_Type	Reg	Leached	Spike_Compounds	Surrogate
SOIL	Normal	999	0	0	47
SOIL	MB	134	0	0	5
SOIL	Field_D	98	0	0	5
SOIL	LCS	95	0	0	5
SOIL	Interlab_D	79	0	0	5
SOIL	MS	0	0	66	0
SOIL	LAB_D	61	0	0	0
WATER	Rinsate	77	0	0	5
WATER	MB	68	0	0	0
WATER	LCS	54	0	0	0
WATER	MS	0	0	35	0
WATER	Trip_B	10	0	0	1
WATER	Trip_S	9	0	0	1

Field Blanks (WATER)
Filter: ALL

SDG	669601	669601
Field ID	RINSATE	TB
Sampled_Date/Time	4/08/2019	4/08/2019
Sample Type	Rinsate	Trip_B

Chem_Group	ChemName	Units	EQL		
BTEXN	Benzene	mg/l	0.001	<0.001	<0.001
	Ethylbenzene	mg/l	0.001	<0.001	<0.001
	Toluene	mg/l	0.001	<0.001	<0.001
	Xylene (o)	mg/l	0.001	<0.001	<0.001
	Xylene (m & p)	mg/l	0.002	<0.002	<0.002
	Xylene (Total)	mg/l	0.003	<0.003	<0.003
	Naphthalene	mg/l	0.001	<0.01	<0.01
Chlorinated Benzenes	Hexachlorobenzene	mg/l	0.0001	<0.0001	
EPA VIC - IWRG621	Organochlorine Pesticides EPAVic	µg/l	1	<1	
	Other Organochlorine Pesticides EPAVic	µg/l	1	<1	
Metals & Metalloids	Arsenic (Total)	mg/l	0.001	<0.001	
	Cadmium	mg/l	0.0002	<0.0002	
	Chromium (Total)	mg/l	0.001	<0.001	
	Copper	mg/l	0.001	<0.001	
	Lead	mg/l	0.001	<0.001	
	Mercury (Inorganic)	mg/l	0.0001	<0.0001	
	Nickel	mg/l	0.001	<0.001	
	Zinc	mg/l	0.005	<0.005	
Organochlorine Pesticides	4,4-DDE	µg/l	0.1	<0.1	
	Aldrin	mg/l	0.0001	<0.0001	
	Aldrin + Dieldrin (Sum of Total)	mg/l	0.0001	<0.0001	
	alpha-BHC	mg/l	0.0001	<0.0001	
	beta-BHC	mg/l	0.0001	<0.0001	
	Chlordane	mg/l	0.001	<0.001	
	DDD	mg/l	0.0001	<0.0001	
	DDT	mg/l	0.0001	<0.0001	
	Dieldrin	mg/l	0.0001	<0.0001	
	DDT+DDE+DDD (Sum of Total)	mg/l	0.0001	<0.0001	
	delta-BHC	mg/l	0.0001	<0.0001	
	Endosulfan alpha	mg/l	0.0001	<0.0001	
	Endosulfan beta	mg/l	0.0001	<0.0001	
	Endosulfan sulphate	mg/l	0.0001	<0.0001	
	Endrin	mg/l	0.0001	<0.0001	
	Endrin aldehyde	mg/l	0.0001	<0.0001	
	Endrin ketone	mg/l	0.0001	<0.0001	
	Heptachlor	mg/l	0.0001	<0.0001	
	Heptachlor Epoxide	mg/l	0.0001	<0.0001	
	Lindane	mg/l	0.0001	<0.0001	
	Methoxychlor	mg/l	0.0001	<0.0001	
	Toxaphene	mg/l	0.01	<0.01	
Polychlorinated Biphenyls	Aroclor 1016	mg/l	0.001	<0.001	
	Aroclor 1221	mg/l	0.001	<0.001	
	Aroclor 1232	mg/l	0.001	<0.001	
	Aroclor 1242	mg/l	0.001	<0.001	
	Aroclor 1248	mg/l	0.001	<0.001	
	Aroclor 1254	mg/l	0.001	<0.001	
	Aroclor 1260	mg/l	0.001	<0.001	
	PCBs (Total)	mg/l	0.001	<0.001	
Polycyclic Aromatic Hydrocarbons	Acenaphthene	mg/l	0.001	<0.001	
	Acenaphthylene	mg/l	0.001	<0.001	
	Anthracene	mg/l	0.001	<0.001	
	Benz(a)anthracene	mg/l	0.001	<0.001	
	Benzo(a)pyrene	mg/l	0.001	<0.001	
	Benzo(b,j)fluoranthene	mg/l	0.001	<0.001	
	Benzo(g,h,i)perylene	mg/l	0.001	<0.001	
	Benzo(k)fluoranthene	mg/l	0.001	<0.001	
	Chrysene	mg/l	0.001	<0.001	
	Dibenz(a,h)anthracene	mg/l	0.001	<0.001	
	Fluoranthene	mg/l	0.001	<0.001	
	Fluorene	mg/l	0.001	<0.001	
	Indeno(1,2,3-c,d)pyrene	mg/l	0.001	<0.001	
	Phenanthrene	mg/l	0.001	<0.001	
	PAHs (Total)	mg/l	0.001	<0.001	
	Pyrene	mg/l	0.001	<0.001	
TPHs (NEPC 1999)	C6-C9 Fraction	mg/l	0.02	<0.02	<0.02
	C10-C14 Fraction	mg/l	0.05	<0.05	
	C15-C28 Fraction	mg/l	0.1	<0.1	
	C29-C36 Fraction	mg/l	0.1	<0.1	
	C10-C36 Fraction (Total)	mg/l	0.1	<0.1	

Field Blanks (WATER)
Filter: ALL

SDG	669601	669601
Field ID	RINSATE	TB
Sampled_Date/Time	4/08/2019	4/08/2019
Sample Type	Rinsate	Trip_B

Chem_Group	ChemName	Units	EQL		
TRHs (NEPC 2013)	>C10-C16 Fraction	mg/l	0.05	<0.05	
	>C16-C34 Fraction	mg/l	0.1	<0.1	
	>C34-C40 Fraction	mg/l	0.1	<0.1	
	>C10-C40 Fraction (Total)	mg/l	0.1	<0.1	
	>C10-C16 less Naphthalene (F2)	mg/l	0.05	<0.05	
	C6-C10 Fraction	mg/l	0.02	<0.02	<0.02
	C6-C10 less BTEX (F1)	mg/l	0.02	<0.02	<0.02

Contents
SDG's without Storage Blanks

SDG
669601
ENVIROLAB 2019-08-05T00:00:00

Field Duplicates (SOIL)
Filter: ALL

SDG	669601	669601		669601	223152	
Field ID	BH04_0.4-0.5	QC20190804-01	**RPD**	BH04_0.4-0.5	QA20190804-01	**RPD**
Sampled Date/Time	4/08/2019	4/08/2019		4/08/2019	4/08/2019	

Chem_Group	**ChemName**	**Units**	**EQL**						
Metals & Metalloids	Arsenic (Total)	mg/kg	2 (Primary): 4 (Interlab)	<2.0	<2.0	0	<2.0	<4.0	0
	Cadmium	mg/kg	0.4	<0.4	<0.4	0	<0.4	<0.4	0
	Chromium (Total)	mg/kg	5 (Primary): 1 (Interlab)	<5.0	<5.0	0	<5.0	4.0	0
	Copper	mg/kg	5 (Primary): 1 (Interlab)	7.0	11.0	44	7.0	9.0	25
	Lead	mg/kg	5 (Primary): 1 (Interlab)	11.0	16.0	37	11.0	11.0	0
	Mercury (Inorganic)	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
	Nickel	mg/kg	5 (Primary): 1 (Interlab)	7.5	9.3	21	7.5	9.0	18
	Zinc	mg/kg	5 (Primary): 1 (Interlab)	18.0	24.0	29	18.0	19.0	5
TPHs (NEPC 1999)	C6-C9 Fraction	mg/kg	20 (Primary): 25 (Interlab)	<20.0	<20.0	0	<20.0	<25.0	0
	C10-C14 Fraction	mg/kg	20 (Primary): 50 (Interlab)	<20.0	<20.0	0	<20.0	<50.0	0
	C15-C28 Fraction	mg/kg	50 (Primary): 100 (Interlab)	<50.0	<50.0	0	<50.0	<100.0	0
	C29-C36 Fraction	mg/kg	50 (Primary): 100 (Interlab)	<50.0	<50.0	0	<50.0	<100.0	0
	C10-C36 Fraction (Total)	mg/kg	50	<50.0	<50.0	0	<50.0		
TRHs (NEPC 2013)	>C10-C16 Fraction	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0
	>C16-C34 Fraction	mg/kg	100	<100.0	<100.0	0	<100.0	<100.0	0
	>C34-C40 Fraction	mg/kg	100	<100.0	<100.0	0	<100.0	<100.0	0
	>C10-C40 Fraction (Total)	mg/kg	100 (Primary): 50 (Interlab)	<100.0	<100.0	0	<100.0	<50.0	0
	>C10-C16 less Naphthalene (F2)	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0
	C6-C10 Fraction	mg/kg	20 (Primary): 25 (Interlab)	<20.0	<20.0	0	<20.0	<25.0	0
	C6-C10 less BTEX (F1)	mg/kg	20 (Primary): 25 (Interlab)	<20.0	<20.0	0	<20.0	<25.0	0
BTEXN	Benzene	mg/kg	0.1 (Primary): 0.2 (Interlab)	<0.1	<0.1	0	<0.1	<0.2	0
	Ethylbenzene	mg/kg	0.1 (Primary): 1 (Interlab)	<0.1	<0.1	0	<0.1	<1.0	0
	Toluene	mg/kg	0.1 (Primary): 0.5 (Interlab)	<0.1	<0.1	0	<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 & p)	mg/kg	0.2 (Primary): 2 (Interlab)	<0.2	<0.2	0	<0.2	<2.0	0
	Xylene (Total)	mg/kg	0.3 (Primary): 3 (Interlab)	<0.3	<0.3	0	<0.3	<3.0	0
	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
Polycyclic Aromatic Hydrocarbons	Acenaphthene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
	Acenaphthylene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
	Anthracene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
	Benz(a)anthracene	mg/kg	0.5 (Primary): 0.1 (Interlab)	**1.0**	**<0.5**	**67**	**1.0**	**<0.1**	**164**
	Benzo(a)pyrene	mg/kg	0.5 (Primary): 0.05 (Interlab)	0.8	<0.5	46	**0.8**	**0.06**	**172**
	Benzo(a)pyrene TEQ (lower bound)*	mg/kg	0.5	**1.0**	**<0.5**	**67**	**1.0**	**<0.5**	**67**
	Benzo(a)pyrene TEQ (medium bound)*	mg/kg	0.5	**1.3**	**0.6**	**74**	**1.3**	**<0.5**	**89**
	Benzo(a)pyrene TEQ (upper bound)*	mg/kg	0.5	1.6	1.2	29	**1.6**	**<0.5**	**105**
	Benzo(b,j)fluoranthene	mg/kg	0.5	0.6	<0.5	18	0.6		
	Benzo(g,h,i)perylene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
	Benzo(k)fluoranthene	mg/kg	0.5	0.7	<0.5	33	0.7		
	Chrysene	mg/kg	0.5 (Primary): 0.1 (Interlab)	**0.9**	**<0.5**	**57**	**0.9**	**<0.1**	**160**
	Dibenz(a,h)anthracene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
	Fluoranthene	mg/kg	0.5 (Primary): 0.1 (Interlab)	**1.9**	**<0.5**	**117**	**1.9**	**<0.1**	**180**
	Fluorene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
	Phenanthrene	mg/kg	0.5 (Primary): 0.1 (Interlab)	0.6	<0.5	18	**0.6**	**<0.1**	**143**
	PAHs (Total)	mg/kg	0.5	**8.6**	**<0.5**	**178**	8.6		
	Pyrene	mg/kg	0.5 (Primary): 0.1 (Interlab)	**2.1**	**<0.5**	**123**	**2.1**	**<0.1**	**182**
Asbestos	Approx. Sample Mass	G		696.0	841.0	19	696.0		
	Asbestos from ACM in Soil	%w/w		0.0	0.0	0	0.0		
	Asbestos from FA & AF in Soil	%w/w		0.0	0.0	0	0.0		
	Mass ACM	G		0.0	0.0	0	0.0		
	Mass Asbestos in ACM	G		0.0	0.0	0	0.0		
	Mass FA	G		0.0	0.0	0	0.0		
	Mass Asbestos in FA	G		0.0	0.0	0	0.0		
	Mass AF	G		0.0	0.0	0	0.0		
	Mass Asbestos in AF	G		0.0	0.0	0	0.0		
	Mass Asbestos in FA & AF	G		0.0	0.0	0	0.0		
Asbestos - Trace Analysis	ACM - Comment	COMMENT		1.0	1.0	0	1.0		
	AF - Comment	COMMENT		1.0	1.0	0	1.0		
	FA - Comment	COMMENT		1.0	1.0	0	1.0		
	Organic Fibres - Comment	COMMENT		1.0	1.0	0	1.0		
	Respirable Fibres - Comment	COMMENT		1.0	1.0	0	1.0		
	Synthetic Fibres - Comment	COMMENT		1.0	1.0	0	1.0		
Other	% Moisture 103oC	%	1	6.2	7.1	14	6.2		

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 50 (1-10 x EQL); 50 (10-30 x EQL); 50 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Contents

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
669601	669601	669601	Normal	SOIL	S19-Au05801	BH01_0-0.1		4/08/2019	2-Fluorobiphenyl (surr.)	59	%	50	150
669601	669601	669601	Normal	SOIL	S19-Au05808	BH03_0.2-0.3		4/08/2019	Dibutylchlorendate (surr.)	58	%	50	150
669601	669601	669601	Normal	SOIL	S19-Au05808	BH03_0.2-0.3		4/08/2019	p-Terphenyl-d14 (surr.)	64	%	50	150
669601	669601	669601	Normal	SOIL	S19-Au05808	BH03_0.2-0.3		4/08/2019	Tetrachloro-m-xylene (surr.)	52	%	50	150
669601	669601	669601	Normal	SOIL	S19-Au05810	BH04_0-0.1		4/08/2019	2-Fluorobiphenyl (surr.)	56	%	50	150
669601	669601	669601	Normal	SOIL	S19-Au05810	BH04_0-0.1		4/08/2019	4-Bromofluorobenzene (surr.)	59	%	50	150
669601	669601	669601	Normal	SOIL	S19-Au05810	BH04_0-0.1		4/08/2019	Dibutylchlorendate (surr.)	50	%	50	150
669601	669601	669601	Normal	SOIL	S19-Au05812	BH05_0.4-0.5		4/08/2019	2-Fluorobiphenyl (surr.)	52	%	50	150
669601	669601	669601	Normal	SOIL	S19-Au05814	BH06_0-0.1		4/08/2019	Dibutylchlorendate (surr.)	52	%	50	150
669601	669601	669601	Normal	SOIL	S19-Au05814	BH06_0-0.1		4/08/2019	2-Fluorobiphenyl (surr.)	57	%	50	150
669601	669601	669601	Normal	SOIL	S19-Au05815	BH06_1.9-2.0		4/08/2019	p-Terphenyl-d14 (surr.)	68	%	50	150

Contents

Less than 1 matrix spike in 20 samples, or less than 1 matrix duplicate in 20 samples

Matrix_Type	Number_of_Samples	Number_of_Matrix_Spike_Samples	Number_of_Matrix_Spike_Dupe_Samples	
Soil	89	7	0	
WATER	18	4	0	

Contents

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
669601	669601	WATER	S19-Au05820	TS	LTM-ORG-2010 TRH C6-C40	Benzene	NA	NA	NA	110	Y	REG
669601	669601	WATER	S19-Au05820	TS	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	NA	NA	NA	120	Y	REG
669601	669601	WATER	S19-Au05820	TS	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	NA	NA	NA	110	Y	REG
669601	669601	WATER	S19-Au05820	TS	LTM-ORG-2010 TRH C6-C40	o-Xylene	NA	NA	NA	120	Y	REG
669601	669601	WATER	S19-Au05820	TS	LTM-ORG-2010 TRH C6-C40	Toluene	NA	NA	NA	120	Y	REG
669601	669601	WATER	S19-Au05820	TS	LTM-ORG-2010 TRH C6-C40	TRH C6-C10	NA	NA	NA	86	Y	REG
669601	669601	WATER	S19-Au05820	TS	LTM-ORG-2010 TRH C6-C40	TRH C6-C9	NA	NA	NA	87	Y	REG
669601	669601	WATER	S19-Au05820	TS	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	NA	NA	NA	120	Y	REG
669601	669601	WATER	S19-Au05820	TS	LTM-ORG-2150 VOCs in Soils L	Naphthalene	NA	NA	NA	110	Y	REG

Contents

OriginalChemNames Requiring Validation

OriginalChemName	ChemCode	ChemName	AlternativeName1
4.4-DDE	72-55-9	4,4-DDE	4,4'-DDE
pp-DDE	72-55-9	4,4-DDE	4,4'-DDE

*This listing indicates results where the OriginalChemName may not be the equivalent of the ChemName. This means that the ChemName as output may be incorrect for the relevant result and is caused by an incorrectly assigned ChemCode.

This has been detected because A) the OriginalChemName does not match either the ChemName or an Alternative Name for the ChemCode and 2)the Validate_OriginalChemName check is specified in the[Chemistry_Results]Lookup Table.

If the OriginalChemName is the equivalent of the ChemName then no further action is required.

If the OriginalChemName isn't the equivalent of the ChemName the wrong ChemCode has been assigned and will need to be fixed. To fix an incorrect ChemCode do the following: Find the correct ChemCode by looking through the[Chemistry_Results]Lookup Table (Data Tables - [Chemistry_Results]Lookup); Select the[Chemistry_Results]Results table (Data Tables - Chemistry/Chemistry Results); filter for the incorrect OriginalChemName; correct the ChemCode.

Appendix M Laboratory Certificates and Chain of Custody Documentation

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smolinari@JBSG.com.au

07689

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 57079	LABORATORY BATCH NO.:
PROJECT NAME: Moriah College PSI	SAMPLERS: M. Smolinari
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) msmolinari@jbsg.com.au; (3) Sgraham@jbsg.com.au LLudecke@JBSG.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	H. Metals	TRH/BTEX	PAHs	OCPs/PCBs	PH	CEC	% clay	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
BH01_0-0.1	SOIL	4.8		Jar + bag + ice		X	X	X	X					X	
_0.2-0.3														X	
_0.4-0.5															
_0.9-1.0															
_1.4-1.5															
_1.9-2.0															
BH02_0-0.1														X	
_0.2-0.3														X	
_0.4-0.5															
_0.9-1.0						X	X	X	X					X	
_1.4-1.5														X	
_1.9-2.0						X	X	X							
BH03_0-0.1															
_0.2-0.3						X	X	X	X					X	
_0.4-0.5															
_0.9-1.0															
_1.4-1.5										X	X	X			
_1.9-2.0															
BH04_0-0.1						X	X	X	X					X	

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: DATE: 5-8-19	CONSIGNMENT NOTE NO.	NAME: Suzanne Ferguson DATE: 7/8/19 5:38PM	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF: Eurofins	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

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CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 57079	LABORATORY BATCH NO.:
PROJECT NAME: Marich College	SAMPLERS: M. Swan
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) .....@jbsg.com.au; (3) .....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	H. Metals	TRH/BTEX	PAHs	OCPs/PCBs	PH	CEC	% Clay	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
BH04_0.2-0.3	Soil	4.8		Jar + Bag + Ice											
_0.4-0.5						X	X	X						X	
_0.9-1.0															
_1.4-1.5															
_1.9-2.0															
BH05_0-0.1															
_0.2-0.3															
_0.4-0.5						X	X	X	X					X	
_0.9-1.0						X	X	X							
_1.4-1.5															
_1.9-2.0															
BH06_0-0.1						X	X	X	X					X	
_0.2-0.3															
_0.4-0.5														X	
_0.9-1.0															
_1.4-1.5															
_1.9-2.0						X	X	X							
BH07_0-0.1															
_0.2-0.3						X	X	X	X					X	

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: DATE: 5.8.19.	CONSIGNMENT NOTE NO.	NAME: DATE: 5.38pm	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF: Eurofins	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

07691

3 of 3

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 57079	LABORATORY BATCH NO.:
PROJECT NAME: Moriah College.	SAMPLERS: M. Sa-
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) .....@jbsg.com.au; (3) .....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	H. Metals	TRH/BTEX	PAHs	OCPs/PCBs	PH	CEC & % clay	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
BH07_0.4-0.5	Soil	4-8		Jar + bag + ice									X	
-0.9-1.0	↓	↓		↓										
-1.4-1.5														
-1.9-2.0														
QC20190804-01						X	X	X	X				X	
QC20190804-02														
RINSATE20190804	water					X	X	X	X					
~~QA~~ TS/TB	water			vials + ice			X							
~~QA20190804-01~~	~~Soil~~			~~Jar + Bag + ice~~		~~X~~	~~X~~	~~X~~	~~X~~				~~X~~	
~~QA20190804-02~~	~~Soil~~													

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: DATE: 5.8.19	CONSIGNMENT NOTE NO.	NAME: DATE: 9/8/19 5:35PM	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF: Eurofins	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

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NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

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

Contact name: Michael Swinfield
Project name: MORIAH COLLEGE PSI
Project ID: 57079
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Aug 5, 2019 5:38 PM
Eurofins reference: **669601**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 3.9 degrees Celsius.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☑ Sample containers for volatile analysis received with zero headspace.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

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

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

Results will be delivered electronically via e.mail to Michael Swinfield - mswinfield@jbsg.com.au.

Note: A copy of these results will also be delivered to the general JBS & G Australia (NSW) P/L email address.

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:	Michael Swinfield
Report	669601-AID
Project Name	MORIAH COLLEGE PSI
Project ID	57079
Received Date	Aug 05, 2019
Date Reported	Aug 12, 2019

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

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

Project Name MORIAH COLLEGE PSI
Project ID 57079
Date Sampled Aug 04, 2019
Report 669601-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH01_0-0.1	19-Au05801	Aug 04, 2019	Approximate Sample 586g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH01_0.2-0.3	19-Au05802	Aug 04, 2019	Approximate Sample 617g Sample consisted of: Brown fine-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH02_0-0.1	19-Au05803	Aug 04, 2019	Approximate Sample 457g Sample consisted of: Brown fine-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH02_0.2-0.3	19-Au05804	Aug 04, 2019	Approximate Sample 696g Sample consisted of: Brown fine-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH02_0.9-1.0	19-Au05805	Aug 04, 2019	Approximate Sample 695g Sample consisted of: Brown fine-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH02_1.4-1.5	19-Au05806	Aug 04, 2019	Approximate Sample 710g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH03_0.2-0.3	19-Au05808	Aug 04, 2019	Approximate Sample 735g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH04_0-0.1	19-Au05810	Aug 04, 2019	Approximate Sample 582g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH04_0.4-0.5	19-Au05811	Aug 04, 2019	Approximate Sample 696g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH05_0.4-0.5	19-Au05812	Aug 04, 2019	Approximate Sample 550g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH06_0-0.1	19-Au05814	Aug 04, 2019	Approximate Sample 472g Sample consisted of: Dark brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH07_0.2-0.3	19-Au05816	Aug 04, 2019	Approximate Sample 702g Sample consisted of: Brown fine-grained sandy soil, fragments of ceramic tile and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH07_0.4-0.5	19-Au05817	Aug 04, 2019	Approximate Sample 587g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
QC20190804-01	19-Au05818	Aug 04, 2019	Approximate Sample 841g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH05_0-0.1	19-Au05835	Aug 04, 2019	Approximate Sample 642g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Aug 06, 2019	Indefinite

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Site # 23736

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

Project Name: MORIAH COLLEGE PSI
Project ID: 57079

Order No.:
Report #: 669601
Phone: 02 8245 0300
Fax:

Received: Aug 5, 2019 5:38 PM
Due: Aug 12, 2019
Priority: 5 Day
Contact Name: Michael Swinfield

Eurofins Analytical Services Manager : Ursula Long

Sample Detail	% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Eurofins | mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271			X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217		X							
Brisbane Laboratory - NATA Site # 20794	X								
Perth Laboratory - NATA Site # 23736									
External Laboratory									

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID								
1	BH01_0-0.1	Aug 04, 2019		Soil	S19-Au05801		X			X	X		X	
2	BH01_0.2-0.3	Aug 04, 2019		Soil	S19-Au05802		X							
3	BH02_0-0.1	Aug 04, 2019		Soil	S19-Au05803		X							
4	BH02_0.2-0.3	Aug 04, 2019		Soil	S19-Au05804		X							
5	BH02_0.9-1.0	Aug 04, 2019		Soil	S19-Au05805		X			X	X		X	
6	BH02_1.4-1.5	Aug 04, 2019		Soil	S19-Au05806		X							
7	BH02_1.9-2.0	Aug 04, 2019		Soil	S19-Au05807						X		X	
8	BH03_0.2-0.3	Aug 04, 2019		Soil	S19-Au05808		X			X	X		X	
9	BH03_1.4-1.5	Aug 04, 2019		Soil	S19-Au05809	X			X		X	X		

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Fax:

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Due: Aug 12, 2019
Priority: 5 Day
Contact Name: Michael Swinfield

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Eurofins | mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217							X							
Brisbane Laboratory - NATA Site # 20794						X								
Perth Laboratory - NATA Site # 23736														
10	BH04_0-0.1	Aug 04, 2019		Soil	S19-Au05810		X			X	X		X	
11	BH04_0.4-0.5	Aug 04, 2019		Soil	S19-Au05811		X				X		X	
12	BH05_0.4-0.5	Aug 04, 2019		Soil	S19-Au05812		X			X	X		X	
13	BH05_0.9-1.0	Aug 04, 2019		Soil	S19-Au05813						X		X	
14	BH06_0-0.1	Aug 04, 2019		Soil	S19-Au05814		X			X	X		X	
15	BH06_1.9-2.0	Aug 04, 2019		Soil	S19-Au05815						X		X	
16	BH07_0.2-0.3	Aug 04, 2019		Soil	S19-Au05816		X			X	X		X	
17	BH07_0.4-0.5	Aug 04, 2019		Soil	S19-Au05817		X							
18	QC20190804-01	Aug 04, 2019		Soil	S19-Au05818		X			X	X		X	
19	RINSATE	Aug 04, 2019		Water	S19-Au05819					X			X	
20	TS	Aug 04, 2019		Water	S19-Au05820									X

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Received: Aug 5, 2019 5:38 PM
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Eurofins Analytical Services Manager : Ursula Long

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Eurofins | mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217							X							
Brisbane Laboratory - NATA Site # 20794						X								
Perth Laboratory - NATA Site # 23736														
21	TB	Aug 04, 2019		Water	S19-Au05821									X
22	BH01_0.4-0.5	Aug 04, 2019		Soil	S19-Au05822			X						
23	BH01_0.9-1.0	Aug 04, 2019		Soil	S19-Au05823			X						
24	BH01_1.4-1.5	Aug 04, 2019		Soil	S19-Au05824			X						
25	BH01_1.9-2.0	Aug 04, 2019		Soil	S19-Au05825			X						
26	BH02_0.4-0.5	Aug 04, 2019		Soil	S19-Au05826			X						
27	BH03_0-0.1	Aug 04, 2019		Soil	S19-Au05827			X						
28	BH03_0.4-0.5	Aug 04, 2019		Soil	S19-Au05828			X						
29	BH03_0.9-1.0	Aug 04, 2019		Soil	S19-Au05829			X						
30	BH03_1.9-2.0	Aug 04, 2019		Soil	S19-Au05830			X						
31	BH04_0.2-0.3	Aug 04, 2019		Soil	S19-Au05831			X						
32	BH04_0.9-1.0	Aug 04, 2019		Soil	S19-Au05832			X						

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Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Eurofins | mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217							X							
Brisbane Laboratory - NATA Site # 20794						X								
Perth Laboratory - NATA Site # 23736														
33	BH04_1.4-1.5	Aug 04, 2019		Soil	S19-Au05833			X						
34	BH04_1.9-2.0	Aug 04, 2019		Soil	S19-Au05834			X						
35	BH05_0-0.1	Aug 04, 2019		Soil	S19-Au05835		X							
36	BH05_0.2-0.3	Aug 04, 2019		Soil	S19-Au05836			X						
37	BH05_1.4-1.5	Aug 04, 2019		Soil	S19-Au05837			X						
38	BH05_1.9-2.0	Aug 04, 2019		Soil	S19-Au05838			X						
39	BH06_0.2-0.3	Aug 04, 2019		Soil	S19-Au05839			X						
40	BH06_0.4-0.5	Aug 04, 2019		Soil	S19-Au05840			X						
41	BH06_0.9-1.0	Aug 04, 2019		Soil	S19-Au05841			X						
42	BH06_1.4-1.5	Aug 04, 2019		Soil	S19-Au05842			X						
43	BH07_0-0.1	Aug 04, 2019		Soil	S19-Au05843			X						
44	BH07_0.9-1.0	Aug 04, 2019		Soil	S19-Au05844			X						

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Site # 1254 & 14271

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NATA # 1261 Site # 18217

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NATA # 1261
Site # 23736

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

Project Name: MORIAH COLLEGE PSI
Project ID: 57079

Order No.:
Report #: 669601
Phone: 02 8245 0300
Fax:

Received: Aug 5, 2019 5:38 PM
Due: Aug 12, 2019
Priority: 5 Day
Contact Name: Michael Swinfield

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Eurofins | mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217							X							
Brisbane Laboratory - NATA Site # 20794						X								
Perth Laboratory - NATA Site # 23736														
45	BH07_1.4-1.5	Aug 04, 2019		Soil	S19-Au05845			X						
46	BH07_1.9-2.0	Aug 04, 2019		Soil	S19-Au05846			X						
47	QC20190804-02	Aug 04, 2019		Soil	S19-Au05847			X						
Test Counts						1	15	25	1	9	13	1	13	2

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

S19-Au05803, S19-Au05814: Samples received were 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

Asbestos Counter/Identifier:

Karthik Surisetty	Senior Analyst-Asbestos (NSW)

Authorised by:

Laxman Dias	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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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: **Michael Swinfield**

Report **669601-S**
Project name MORIAH COLLEGE PSI
Project ID 57079
Received Date Aug 05, 2019

Client Sample ID			**BH01_0-0.1**	**BH02_0.9-1.0**	**BH02_1.9-2.0**	**BH03_0.2-0.3**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S19-Au05801**	**S19-Au05805**	**S19-Au05807**	**S19-Au05808**
Date Sampled			**Aug 04, 2019**	**Aug 04, 2019**	**Aug 04, 2019**	**Aug 04, 2019**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	210	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	210	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	102	72	79	71
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	180	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	180	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH01_0-0.1	BH02_0.9-1.0	BH02_1.9-2.0	BH03_0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Au05801	S19-Au05805	S19-Au05807	S19-Au05808
Date Sampled			Aug 04, 2019	Aug 04, 2019	Aug 04, 2019	Aug 04, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	59	83	78	74
p-Terphenyl-d14 (surr.)	1	%	102	102	97	64
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	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Dibutylchlorendate (surr.)	1	%	98	98	-	58
Tetrachloro-m-xylene (surr.)	1	%	83	89	-	52
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Dibutylchlorendate (surr.)	1	%	98	98	-	58
Tetrachloro-m-xylene (surr.)	1	%	83	89	-	52

Client Sample ID			BH01_0-0.1	BH02_0.9-1.0	BH02_1.9-2.0	BH03_0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Au05801	S19-Au05805	S19-Au05807	S19-Au05808
Date Sampled			Aug 04, 2019	Aug 04, 2019	Aug 04, 2019	Aug 04, 2019
Test/Reference	LOR	Unit				
% Moisture	1	%	10	8.0	7.9	7.3
Heavy Metals						
Arsenic	2	mg/kg	< 2	2.5	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	16	6.3	< 5	6.0
Copper	5	mg/kg	20	22	< 5	12
Lead	5	mg/kg	29	55	< 5	9.7
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	5.6	< 5	6.4
Zinc	5	mg/kg	55	300	19	28

Client Sample ID			BH03_1.4-1.5	BH04_0-0.1	BH04_0.4-0.5	BH05_0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Au05809	S19-Au05810	S19-Au05811	S19-Au05812
Date Sampled			Aug 04, 2019	Aug 04, 2019	Aug 04, 2019	Aug 04, 2019
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	-	100	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	-	100	< 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	%	-	59	115	126
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	-	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	1.0	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	1.3	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	1.6	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	1.0	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	0.8	< 0.5

Client Sample ID			BH03_1.4-1.5	BH04_0-0.1	BH04_0.4-0.5	BH05_0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Au05809	S19-Au05810	S19-Au05811	S19-Au05812
Date Sampled			Aug 04, 2019	Aug 04, 2019	Aug 04, 2019	Aug 04, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	0.6	< 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	0.7	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5	0.9	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	1.9	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5	0.6	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	2.1	< 0.5
Total PAH*	0.5	mg/kg	-	< 0.5	8.6	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	56	85	52
p-Terphenyl-d14 (surr.)	1	%	-	99	78	86
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	0.05	mg/kg	-	< 0.05	-	< 0.05
Toxaphene	1	mg/kg	-	< 1	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	50	-	77
Tetrachloro-m-xylene (surr.)	1	%	-	82	-	72
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	< 0.1	-	< 0.1

Client Sample ID			BH03_1.4-1.5	BH04_0-0.1	BH04_0.4-0.5	BH05_0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Au05809	S19-Au05810	S19-Au05811	S19-Au05812
Date Sampled			Aug 04, 2019	Aug 04, 2019	Aug 04, 2019	Aug 04, 2019
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1260	0.1	mg/kg	-	< 0.1	-	< 0.1
Total PCB*	0.1	mg/kg	-	< 0.1	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	50	-	77
Tetrachloro-m-xylene (surr.)	1	%	-	82	-	72
% Clay	1	%	5.0	-	-	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	< 10	-	-	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	7.8	-	-	-
% Moisture	1	%	4.9	11	6.2	3.2
Heavy Metals						
Arsenic	2	mg/kg	-	< 2	< 2	< 2
Cadmium	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	-	9.2	< 5	< 5
Copper	5	mg/kg	-	13	7.0	< 5
Lead	5	mg/kg	-	24	11	< 5
Mercury	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	-	10	7.5	< 5
Zinc	5	mg/kg	-	37	18	< 5
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	0.96	-	-	-

Client Sample ID			BH05_0.9-1.0	BH06_0-0.1	BH06_1.9-2.0	BH07_0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Au05813	S19-Au05814	S19-Au05815	S19-Au05816
Date Sampled			Aug 04, 2019	Aug 04, 2019	Aug 04, 2019	Aug 04, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	280	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	330	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	610	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	115	104	121	111
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	480	< 100	< 100

Client Sample ID			BH05_0.9-1.0	BH06_0-0.1	BH06_1.9-2.0	BH07_0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Au05813	S19-Au05814	S19-Au05815	S19-Au05816
Date Sampled			Aug 04, 2019	Aug 04, 2019	Aug 04, 2019	Aug 04, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C34-C40	100	mg/kg	< 100	120	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	600	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	8.8	0.6	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	8.8	0.9	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	8.8	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	0.8	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	1.4	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	5.0	0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	5.5	0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	4.2	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	3.3	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	4.1	0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	4.4	0.7	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	1.4	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	12	1.2	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	4.6	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	4.8	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	13	1.2	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	64.5	4.6	< 0.5
2-Fluorobiphenyl (surr.)	1	%	74	57	71	83
p-Terphenyl-d14 (surr.)	1	%	85	98	68	85
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	-	0.09
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	0.05	mg/kg	-	< 0.05	-	< 0.05
Toxaphene	1	mg/kg	-	< 1	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-	0.09
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	-	< 0.05

Client Sample ID			BH05_0.9-1.0	BH06_0-0.1	BH06_1.9-2.0	BH07_0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Au05813	S19-Au05814	S19-Au05815	S19-Au05816
Date Sampled			Aug 04, 2019	Aug 04, 2019	Aug 04, 2019	Aug 04, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	52	-	75
Tetrachloro-m-xylene (surr.)	1	%	-	79	-	86
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	< 0.1	-	< 0.1
Total PCB*	0.1	mg/kg	-	< 0.1	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	52	-	75
Tetrachloro-m-xylene (surr.)	1	%	-	79	-	86
% Moisture	1	%	3.5	10	4.9	5.8
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	7.9	< 5	5.8
Copper	5	mg/kg	< 5	40	14	8.2
Lead	5	mg/kg	5.0	230	53	33
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	6.2	210	81	38

Client Sample ID			QC20190804-01
Sample Matrix			Soil
Eurofins Sample No.			S19-Au05818
Date Sampled			Aug 04, 2019
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-C36 (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	%	83

Client Sample ID			QC20190804-01
Sample Matrix			**Soil**
Eurofins Sample No.			**S19-Au05818**
Date Sampled			**Aug 04, 2019**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100
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	%	93
p-Terphenyl-d14 (surr.)	1	%	101
Organochlorine Pesticides			
Chlordanes - Total	0.1	mg/kg	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05
a-BHC	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-BHC	0.05	mg/kg	< 0.05
d-BHC	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05

Client Sample ID			QC20190804-01
Sample Matrix			**Soil**
Eurofins Sample No.			**S19-Au05818**
Date Sampled			**Aug 04, 2019**
Test/Reference	LOR	Unit	
Organochlorine Pesticides			
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxaphene	1	mg/kg	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	92
Tetrachloro-m-xylene (surr.)	1	%	89
Polychlorinated Biphenyls			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1
Total PCB*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	92
Tetrachloro-m-xylene (surr.)	1	%	89
% Moisture	1	%	7.1
Heavy Metals			
Arsenic	2	mg/kg	< 2
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	< 5
Copper	5	mg/kg	11
Lead	5	mg/kg	16
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	9.3
Zinc	5	mg/kg	24

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Aug 12, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Aug 12, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Aug 12, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins | mgt Suite B7			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Aug 12, 2019	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Melbourne	Aug 12, 2019	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Melbourne	Aug 12, 2019	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B13			
Organochlorine Pesticides	Melbourne	Aug 12, 2019	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Polychlorinated Biphenyls	Melbourne	Aug 12, 2019	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			
% Clay	Brisbane	Aug 07, 2019	0 Days
- Method: LTM-GEN-7040			
pH (1:5 Aqueous extract at 25°C as rec.)	Melbourne	Aug 08, 2019	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Aug 08, 2019	7 Days
- Method: LTM-INO-4030 Conductivity			
Cation Exchange Capacity	Melbourne	Aug 09, 2019	180 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
% Moisture	Melbourne	Aug 05, 2019	14 Days
- Method: LTM-GEN-7080 Moisture			

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Project Name: MORIAH COLLEGE PSI
Project ID: 57079

Order No.:
Report #: 669601
Phone: 02 8245 0300
Fax:

Received: Aug 5, 2019 5:38 PM
Due: Aug 12, 2019
Priority: 5 Day
Contact Name: Michael Swinfield

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Eurofins | mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217							X							
Brisbane Laboratory - NATA Site # 20794						X								
Perth Laboratory - NATA Site # 23736														
External Laboratory														
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**									
1	BH01_0-0.1	Aug 04, 2019		Soil	S19-Au05801		X			X	X		X	
2	BH01_0.2-0.3	Aug 04, 2019		Soil	S19-Au05802		X							
3	BH02_0-0.1	Aug 04, 2019		Soil	S19-Au05803		X							
4	BH02_0.2-0.3	Aug 04, 2019		Soil	S19-Au05804		X							
5	BH02_0.9-1.0	Aug 04, 2019		Soil	S19-Au05805		X			X	X		X	
6	BH02_1.4-1.5	Aug 04, 2019		Soil	S19-Au05806		X							
7	BH02_1.9-2.0	Aug 04, 2019		Soil	S19-Au05807						X		X	
8	BH03_0.2-0.3	Aug 04, 2019		Soil	S19-Au05808		X			X	X		X	
9	BH03_1.4-1.5	Aug 04, 2019		Soil	S19-Au05809	X			X		X	X		

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Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: MORIAH COLLEGE PSI
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Order No.:
Report #: 669601
Phone: 02 8245 0300
Fax:

Received: Aug 5, 2019 5:38 PM
Due: Aug 12, 2019
Priority: 5 Day
Contact Name: Michael Swinfield

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Eurofins | mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217							X							
Brisbane Laboratory - NATA Site # 20794						X								
Perth Laboratory - NATA Site # 23736														
10	BH04_0-0.1	Aug 04, 2019		Soil	S19-Au05810		X			X	X		X	
11	BH04_0.4-0.5	Aug 04, 2019		Soil	S19-Au05811		X				X		X	
12	BH05_0.4-0.5	Aug 04, 2019		Soil	S19-Au05812		X			X	X		X	
13	BH05_0.9-1.0	Aug 04, 2019		Soil	S19-Au05813						X		X	
14	BH06_0-0.1	Aug 04, 2019		Soil	S19-Au05814		X			X	X		X	
15	BH06_1.9-2.0	Aug 04, 2019		Soil	S19-Au05815						X		X	
16	BH07_0.2-0.3	Aug 04, 2019		Soil	S19-Au05816		X			X	X		X	
17	BH07_0.4-0.5	Aug 04, 2019		Soil	S19-Au05817		X							
18	QC20190804-01	Aug 04, 2019		Soil	S19-Au05818		X			X	X		X	
19	RINSATE	Aug 04, 2019		Water	S19-Au05819					X			X	
20	TS	Aug 04, 2019		Water	S19-Au05820									X

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Site # 1254 & 14271

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16 Mars Road
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NATA # 1261 Site # 18217

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

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

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

Project Name: MORIAH COLLEGE PSI
Project ID: 57079

Order No.:
Report #: 669601
Phone: 02 8245 0300
Fax:

Received: Aug 5, 2019 5:38 PM
Due: Aug 12, 2019
Priority: 5 Day
Contact Name: Michael Swinfield

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						% Clay	Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Eurofins | mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217							X							
Brisbane Laboratory - NATA Site # 20794						X								
Perth Laboratory - NATA Site # 23736														
21	TB	Aug 04, 2019		Water	S19-Au05821									X
22	BH01_0.4-0.5	Aug 04, 2019		Soil	S19-Au05822			X						
23	BH01_0.9-1.0	Aug 04, 2019		Soil	S19-Au05823			X						
24	BH01_1.4-1.5	Aug 04, 2019		Soil	S19-Au05824			X						
25	BH01_1.9-2.0	Aug 04, 2019		Soil	S19-Au05825			X						
26	BH02_0.4-0.5	Aug 04, 2019		Soil	S19-Au05826			X						
27	BH03_0-0.1	Aug 04, 2019		Soil	S19-Au05827			X						
28	BH03_0.4-0.5	Aug 04, 2019		Soil	S19-Au05828			X						
29	BH03_0.9-1.0	Aug 04, 2019		Soil	S19-Au05829			X						
30	BH03_1.9-2.0	Aug 04, 2019		Soil	S19-Au05830			X						
31	BH04_0.2-0.3	Aug 04, 2019		Soil	S19-Au05831			X						
32	BH04_0.9-1.0	Aug 04, 2019		Soil	S19-Au05832			X						

eurofins | Environment Testing

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Site # 1254 & 14271

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Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217							X							
Brisbane Laboratory - NATA Site # 20794						X								
Perth Laboratory - NATA Site # 23736														
33	BH04_1.4-1.5	Aug 04, 2019		Soil	S19-Au05833			X						
34	BH04_1.9-2.0	Aug 04, 2019		Soil	S19-Au05834			X						
35	BH05_0-0.1	Aug 04, 2019		Soil	S19-Au05835		X							
36	BH05_0.2-0.3	Aug 04, 2019		Soil	S19-Au05836			X						
37	BH05_1.4-1.5	Aug 04, 2019		Soil	S19-Au05837			X						
38	BH05_1.9-2.0	Aug 04, 2019		Soil	S19-Au05838			X						
39	BH06_0.2-0.3	Aug 04, 2019		Soil	S19-Au05839			X						
40	BH06_0.4-0.5	Aug 04, 2019		Soil	S19-Au05840			X						
41	BH06_0.9-1.0	Aug 04, 2019		Soil	S19-Au05841			X						
42	BH06_1.4-1.5	Aug 04, 2019		Soil	S19-Au05842			X						
43	BH07_0-0.1	Aug 04, 2019		Soil	S19-Au05843			X						
44	BH07_0.9-1.0	Aug 04, 2019		Soil	S19-Au05844			X						

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Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217							X							
Brisbane Laboratory - NATA Site # 20794						X								
Perth Laboratory - NATA Site # 23736														
45	BH07_1.4-1.5	Aug 04, 2019		Soil	S19-Au05845			X						
46	BH07_1.9-2.0	Aug 04, 2019		Soil	S19-Au05846			X						
47	QC20190804-02	Aug 04, 2019		Soil	S19-Au05847			X						
Test Counts						1	15	25	1	9	13	1	13	2

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
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 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
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							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
% Clay	%	< 1			1	Pass	
Conductivity (1:5 aqueous extract at 25°C as rec.)	uS/cm	< 10			10	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	%	106			70-130	Pass	
TRH C10-C14	%	106			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	116			70-130	Pass	
Toluene	%	115			70-130	Pass	
Ethylbenzene	%	115			70-130	Pass	
m&p-Xylenes	%	115			70-130	Pass	
Xylenes - Total	%	115			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	123			70-130	Pass	
TRH C6-C10	%	124			70-130	Pass	
TRH >C10-C16	%	99			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	87			70-130	Pass	
Acenaphthylene	%	88			70-130	Pass	
Anthracene	%	84			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benz(a)anthracene	%	87			70-130	Pass	
Benzo(a)pyrene	%	77			70-130	Pass	
Benzo(b&j)fluoranthene	%	83			70-130	Pass	
Benzo(g.h.i)perylene	%	88			70-130	Pass	
Benzo(k)fluoranthene	%	82			70-130	Pass	
Chrysene	%	92			70-130	Pass	
Dibenz(a.h)anthracene	%	94			70-130	Pass	
Fluoranthene	%	95			70-130	Pass	
Fluorene	%	94			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	91			70-130	Pass	
Naphthalene	%	83			70-130	Pass	
Phenanthrene	%	90			70-130	Pass	
Pyrene	%	94			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	79			70-130	Pass	
4.4'-DDD	%	90			70-130	Pass	
4.4'-DDE	%	90			70-130	Pass	
4.4'-DDT	%	92			70-130	Pass	
a-BHC	%	81			70-130	Pass	
Aldrin	%	84			70-130	Pass	
b-BHC	%	76			70-130	Pass	
d-BHC	%	95			70-130	Pass	
Dieldrin	%	82			70-130	Pass	
Endosulfan I	%	100			70-130	Pass	
Endosulfan II	%	82			70-130	Pass	
Endosulfan sulphate	%	127			70-130	Pass	
Endrin	%	96			70-130	Pass	
Endrin aldehyde	%	70			70-130	Pass	
Endrin ketone	%	120			70-130	Pass	
g-BHC (Lindane)	%	81			70-130	Pass	
Heptachlor	%	79			70-130	Pass	
Heptachlor epoxide	%	80			70-130	Pass	
Hexachlorobenzene	%	87			70-130	Pass	
Methoxychlor	%	111			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	82			70-130	Pass	
LCS - % Recovery							
% Clay	%	121			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	111			80-120	Pass	
Cadmium	%	111			80-120	Pass	
Chromium	%	119			80-120	Pass	
Copper	%	115			80-120	Pass	
Lead	%	117			80-120	Pass	
Mercury	%	100			75-125	Pass	
Nickel	%	114			80-120	Pass	
Zinc	%	115			80-120	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	S19-Au05801	CP	%	87			70-130	Pass	
TRH C10-C14	M19-Au09538	NCP	%	102			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S19-Au05801	CP	%	81			70-130	Pass	
Toluene	S19-Au05801	CP	%	88			70-130	Pass	
Ethylbenzene	S19-Au05801	CP	%	89			70-130	Pass	
m&p-Xylenes	S19-Au05801	CP	%	91			70-130	Pass	
o-Xylene	S19-Au05801	CP	%	96			70-130	Pass	
Xylenes - Total	S19-Au05801	CP	%	93			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S19-Au05801	CP	%	91			70-130	Pass	
TRH C6-C10	S19-Au05801	CP	%	87			70-130	Pass	
TRH >C10-C16	M19-Au09538	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Benzo(b&j)fluoranthene	M19-Au09538	NCP	%	78			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M19-Au07570	NCP	%	101			70-130	Pass	
4.4'-DDD	M19-Au07570	NCP	%	113			70-130	Pass	
4.4'-DDE	M19-Au07570	NCP	%	94			70-130	Pass	
a-BHC	M19-Au07570	NCP	%	79			70-130	Pass	
Aldrin	M19-Au07570	NCP	%	96			70-130	Pass	
b-BHC	M19-Au07570	NCP	%	71			70-130	Pass	
d-BHC	M19-Au07570	NCP	%	71			70-130	Pass	
Dieldrin	M19-Au07570	NCP	%	102			70-130	Pass	
Endosulfan I	M19-Au07570	NCP	%	89			70-130	Pass	
Endosulfan II	M19-Au07570	NCP	%	85			70-130	Pass	
Endosulfan sulphate	M19-Au07570	NCP	%	88			70-130	Pass	
Endrin	M19-Au07570	NCP	%	71			70-130	Pass	
Endrin aldehyde	M19-Au07570	NCP	%	104			70-130	Pass	
Endrin ketone	M19-Au07570	NCP	%	90			70-130	Pass	
g-BHC (Lindane)	M19-Au07570	NCP	%	81			70-130	Pass	
Heptachlor	M19-Au07570	NCP	%	71			70-130	Pass	
Heptachlor epoxide	M19-Au07570	NCP	%	87			70-130	Pass	
Hexachlorobenzene	M19-Au07570	NCP	%	72			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	M19-Au09538	NCP	%	79			70-130	Pass	
Aroclor-1260	M19-Au09538	NCP	%	109			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDT	Z19-Au03703	NCP	%	81			70-130	Pass	
Methoxychlor	Z19-Au03703	NCP	%	80			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S19-Au05808	CP	%	96			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S19-Au05808	CP	%	84			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Toluene	S19-Au05808	CP	%	89			70-130	Pass	
Ethylbenzene	S19-Au05808	CP	%	86			70-130	Pass	
m&p-Xylenes	S19-Au05808	CP	%	91			70-130	Pass	
o-Xylene	S19-Au05808	CP	%	91			70-130	Pass	
Xylenes - Total	S19-Au05808	CP	%	91			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S19-Au05808	CP	%	91			70-130	Pass	
TRH C6-C10	S19-Au05808	CP	%	85			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-Au05812	CP	%	99			75-125	Pass	
Cadmium	S19-Au05812	CP	%	108			75-125	Pass	
Chromium	S19-Au05812	CP	%	105			75-125	Pass	
Copper	S19-Au05812	CP	%	104			75-125	Pass	
Lead	S19-Au05812	CP	%	105			75-125	Pass	
Mercury	S19-Au05812	CP	%	99			70-130	Pass	
Nickel	S19-Au05812	CP	%	101			75-125	Pass	
Zinc	S19-Au05812	CP	%	105			75-125	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S19-Au05813	CP	%	85			70-130	Pass	
Acenaphthylene	S19-Au05813	CP	%	83			70-130	Pass	
Anthracene	S19-Au05813	CP	%	86			70-130	Pass	
Benz(a)anthracene	S19-Au05813	CP	%	73			70-130	Pass	
Benzo(a)pyrene	S19-Au05813	CP	%	81			70-130	Pass	
Benzo(g.h.i)perylene	S19-Au05813	CP	%	73			70-130	Pass	
Benzo(k)fluoranthene	S19-Au05813	CP	%	92			70-130	Pass	
Chrysene	S19-Au05813	CP	%	86			70-130	Pass	
Dibenz(a.h)anthracene	S19-Au05813	CP	%	75			70-130	Pass	
Fluoranthene	S19-Au05813	CP	%	91			70-130	Pass	
Fluorene	S19-Au05813	CP	%	87			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S19-Au05813	CP	%	82			70-130	Pass	
Naphthalene	S19-Au05813	CP	%	78			70-130	Pass	
Phenanthrene	S19-Au05813	CP	%	77			70-130	Pass	
Pyrene	S19-Au05813	CP	%	94			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	M19-Au11869	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M19-Au11869	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M19-Au11869	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M19-Au11869	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M19-Au11869	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M19-Au11869	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	M19-Au11869	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M19-Au11869	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M19-Au11869	NCP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1254	M19-Au05307	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Aroclor-1260	M19-Au05307	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-Au05808	CP	%	7.3	6.4	13	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Clay	M19-Jn06233	NCP	%	8.8	8.8	<1	30%	Pass	
Conductivity (1:5 aqueous extract at 25°C as rec.)	S19-Au05809	CP	uS/cm	< 10	< 10	<1	30%	Pass	
pH (1:5 Aqueous extract at 25°C as rec.)	S19-Au05809	CP	pH Units	7.8	7.7	pass	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Au05811	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S19-Au05811	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-Au05811	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S19-Au05811	CP	mg/kg	7.0	7.6	8.0	30%	Pass	
Lead	S19-Au05811	CP	mg/kg	11	12	10	30%	Pass	
Mercury	S19-Au05811	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-Au05811	CP	mg/kg	7.5	7.3	4.0	30%	Pass	
Zinc	S19-Au05811	CP	mg/kg	18	18	1.0	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-Au05812	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-Au05812	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endrin aldehyde	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-Au05812	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Au05812	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S19-Au05812	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-Au05812	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S19-Au05812	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	S19-Au05812	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Mercury	S19-Au05812	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-Au05812	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S19-Au05812	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S19-Au05814	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S19-Au05814	CP	mg/kg	280	360	25	30%	Pass	
TRH C29-C36	S19-Au05814	CP	mg/kg	330	410	23	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S19-Au05814	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S19-Au05814	CP	mg/kg	480	610	24	30%	Pass	
TRH >C34-C40	S19-Au05814	CP	mg/kg	120	180	39	30%	Fail	Q15
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Toxaphene	S19-Au07055	NCP	mg/kg	< 1	< 1	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
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

Ursula Long	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Jonathon Angell	Senior Analyst-Inorganic (QLD)
Joseph Edouard	Senior Analyst-Organic (VIC)
Julie Kay	Senior Analyst-Inorganic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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07692 Enviro lab. lludecke@JBSG.com.au 1 of 1

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 57079	LABORATORY BATCH NO.:
PROJECT NAME: Moorebank College.	SAMPLERS: R. Sul
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) [illegible]@jbsg.com.au; (3) sgray@jbsg.com.au smolinar@JBSG.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	A. Metals	TRH/BTEX	PAH's	OCP's/PCB's	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
QA20190804-01	Soil	4.8		Jar + Bag + Ice		X	X	X	X		X	
" -02	"	"	"	"	"	"						

ENVIROLAB GROUP
Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 223152

Date Received: 05/08/19
Time Received: 15:37
Received by: SB
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: DATE: 5.8.19 OF: JBS&G	CONSIGNMENT NOTE NO. TRANSPORT CO.	NAME: J. Bolton DATE: 05/08/19 OF: ELS Syd.	COOLER SEAL – Yes ✓ No ..... Intact ✓ Broken ..... 129 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

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	JBS & G (NSW & WA) Pty Ltd
Attention	M Swinfield

Sample Login Details

Your reference	57079, Moriah College
Envirolab Reference	223152
Date Sample Received	05/08/2019
Date Instructions Received	05/08/2019
Date Results Expected to be Reported	12/08/2019

Sample Condition

Samples received in appropriate condition for analysis	
No. of Samples Provided	2 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12.9
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils NEPM - ASB-001	On Hold
QA20190804-01	✓	✓	✓	✓	✓	✓	✓	
QA20190804-02								✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Envirolab Services Pty Ltd
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12 Ashley St Chatswood NSW 2067
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customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 223152

Client Details

Client	JBS & G (NSW & WA) Pty Ltd
Attention	M Swinfield
Address	Level 1, 50 Margaret St, Sydney, NSW, 2000

Sample Details

Your Reference	**57079, Moriah College**
Number of Samples	2 Soil
Date samples received	05/08/2019
Date completed instructions received	05/08/2019

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	12/08/2019
Date of Issue	07/08/2019

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

Asbestos Approved By
Analysed by Asbestos Approved Identifier: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Jaimie Loa-Kum-Cheung, Metals Supervisor
Lucy Zhu, Senior Asbestos Analyst
Steven Luong, Organics Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		223152-1
Your Reference	UNITS	QA20190804-01
Date Sampled		04/08/2019
Type of sample		Soil
Date extracted	-	06/08/2019
Date analysed	-	07/08/2019
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<3
Surrogate aaa-Trifluorotoluene	%	92

svTRH (C10-C40) in Soil		
Our Reference		223152-1
Your Reference	UNITS	QA20190804-01
Date Sampled		04/08/2019
Type of sample		Soil
Date extracted	-	06/08/2019
Date analysed	-	07/08/2019
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{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	%	85

PAHs in Soil		
Our Reference		223152-1
Your Reference	UNITS	QA20190804-01
Date Sampled		04/08/2019
Type of sample		Soil
Date extracted	-	06/08/2019
Date analysed	-	07/08/2019
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	0.06
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	0.06
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	80

Organochlorine Pesticides in soil		
Our Reference		223152-1
Your Reference	UNITS	QA20190804-01
Date Sampled		04/08/2019
Type of sample		Soil
Date extracted	-	06/08/2019
Date analysed	-	06/08/2019
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	%	96

PCBs in Soil		
Our Reference		223152-1
Your Reference	UNITS	QA20190804-01
Date Sampled		04/08/2019
Type of sample		Soil
Date extracted	-	06/08/2019
Date analysed	-	06/08/2019
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 TCMX	%	96

Acid Extractable metals in soil		
Our Reference		223152-1
Your Reference	UNITS	QA20190804-01
Date Sampled		04/08/2019
Type of sample		Soil
Date prepared	-	06/08/2019
Date analysed	-	06/08/2019
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	4
Copper	mg/kg	9
Lead	mg/kg	11
Mercury	mg/kg	<0.1
Nickel	mg/kg	9
Zinc	mg/kg	19

Moisture		
Our Reference		223152-1
Your Reference	UNITS	QA20190804-01
Date Sampled		04/08/2019
Type of sample		Soil
Date prepared	-	06/08/2019
Date analysed	-	07/08/2019
Moisture	%	6.7

Asbestos ID - soils NEPM - ASB-001		
Our Reference		223152-1
Your Reference	UNITS	QA20190804-01
Date Sampled		04/08/2019
Type of sample		Soil
Date analysed	-	06/08/2019
Sample mass tested	g	595.43
Sample Description	-	Brown fine-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

Method ID	Methodology Summary
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.
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.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-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-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.

Method ID	Methodology Summary
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.
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. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-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.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			06/08/2019	[NT]	[NT]	[NT]	[NT]	06/08/2019	[NT]
Date analysed	-			07/08/2019	[NT]	[NT]	[NT]	[NT]	07/08/2019	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	93	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	93	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	[NT]	[NT]	93	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	[NT]	[NT]	92	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	93	[NT]
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	100	[NT]	[NT]	[NT]	[NT]	97	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			06/08/2019	[NT]	[NT]	[NT]	[NT]	06/08/2019	[NT]
Date analysed	-			06/08/2019	[NT]	[NT]	[NT]	[NT]	06/08/2019	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	104	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	97	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	104	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	97	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate o-Terphenyl	%		Org-003	81	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			06/08/2019	[NT]	[NT]	[NT]	[NT]	06/08/2019	[NT]
Date analysed	-			07/08/2019	[NT]	[NT]	[NT]	[NT]	07/08/2019	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	[NT]	[NT]	[NT]	[NT]	106	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	84	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			06/08/2019	[NT]	[NT]	[NT]	[NT]	06/08/2019	[NT]
Date analysed	-			06/08/2019	[NT]	[NT]	[NT]	[NT]	06/08/2019	[NT]
HCB	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	83	[NT]
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	77	[NT]
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	87	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	85	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	85	[NT]
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	85	[NT]
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-005	99	[NT]	[NT]	[NT]	[NT]	94	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			06/08/2019	[NT]	[NT]	[NT]	[NT]	06/08/2019	[NT]
Date analysed	-			06/08/2019	[NT]	[NT]	[NT]	[NT]	06/08/2019	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-006	99	[NT]	[NT]	[NT]	[NT]	94	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			06/08/2019	[NT]	[NT]	[NT]	[NT]	06/08/2019	[NT]
Date analysed	-			06/08/2019	[NT]	[NT]	[NT]	[NT]	06/08/2019	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	107	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	104	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 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.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

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.

JBS & G Australia (NSW) P/L
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NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 1254

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: **Sarah Gray**

Report **671660-L**
Project name MORIAH COLLEGE PSI
Project ID 57079
Received Date Aug 15, 2019

Client Sample ID			**BH06_0-0.1**
Sample Matrix			**US Leachate**
Eurofins Sample No.			**M19-Au23306**
Date Sampled			**Aug 04, 2019**
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.001	mg/L	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001
Anthracene	0.001	mg/L	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001
Chrysene	0.001	mg/L	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001
Fluoranthene	0.001	mg/L	< 0.001
Fluorene	0.001	mg/L	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001
Naphthalene	0.001	mg/L	< 0.001
Phenanthrene	0.001	mg/L	< 0.001
Pyrene	0.001	mg/L	< 0.001
Total PAH*	0.001	mg/L	< 0.001
2-Fluorobiphenyl (surr.)	1	%	77
p-Terphenyl-d14 (surr.)	1	%	60
Heavy Metals			
Lead	0.01	mg/L	0.09
USA Leaching Procedure			
Leachate Fluid[C01]		comment	1.0
pH (initial)	0.1	pH Units	6.8
pH (Leachate fluid)	0.1	pH Units	5.0
pH (off)	0.1	pH Units	4.9
pH (USA HCl addition)	0.1	pH Units	1.5

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.

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

Description	Testing Site	Extracted	Holding Time
Polycyclic Aromatic Hydrocarbons	Melbourne	Aug 19, 2019	7 Days
- Method:			
Heavy Metals	Melbourne	Aug 18, 2019	180 Days
- Method:			

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

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

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

Project Name: MORIAH COLLEGE PSI
Project ID: 57079

Order No.:
Report #: 671660
Phone: 02 8245 0300
Fax:

Received: Aug 15, 2019 6:34 PM
Due: Aug 19, 2019
Priority: 1 Day
Contact Name: Sarah Gray

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Lead	Polycyclic Aromatic Hydrocarbons	USA Leaching Procedure
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	BH06_0-0.1	Aug 04, 2019		US Leachate	M19-Au23306	X	X	X
Test Counts						1	1	1

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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 follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

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

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
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 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	M19-Au22825	NCP	mg/L	0.02	0.02	1.0	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
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Ursula Long	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)



Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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eurofins | Environment Testing

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Site # 1254 & 14271

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NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**JBS & G Australia (NSW) P/L**
Contact name:	Sarah Gray
Project name:	MORIAH COLLEGE PSI
Project ID:	57079
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Aug 15, 2019 6:34 PM
Eurofins reference:	**671660**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

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

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

Results will be delivered electronically via e.mail to Sarah Gray - sgray@jbsg.com.au.

Note: A copy of these results will also be delivered to the general JBS & G Australia (NSW) P/L email address.

eurofins | Environment Testing

ABN – 50 005 085 521
e.mail : EnviroSales@eurofins.com
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2/91 Leach Highway
Kewdale WA 6105
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NATA # 1261
Site # 23736

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

Project Name: MORIAH COLLEGE PSI
Project ID: 57079

Order No.:
Report #: 671660
Phone: 02 8245 0300
Fax:

Received: Aug 15, 2019 6:34 PM
Due: Aug 19, 2019
Priority: 1 Day
Contact Name: Sarah Gray

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Lead	Polycyclic Aromatic Hydrocarbons	USA Leaching Procedure
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	BH06_0-0.1	Aug 04, 2019		US Leachate	M19-Au23306	X	X	X
Test Counts						1	1	1

Enviro Sample Vic

From: Ursula Long
Sent: Thursday, 15 August 2019 7:32 PM
To: Enviro Sample Vic; Enviro Sample Vic Transit; Catherine Wilson
Cc: Nibha Vaidya
Subject: FW: Eurofins Test Results - Report 669601 : Site MORIAH COLLEGE PSI (57079)

1 day TAT additional please

Kind regards,

Ursula Long

Eurofins | Environment Testing
Unit F3, Parkview Building
16 Mars Road
LANE COVE WEST NSW 2066
AUSTRALIA
Phone : +61 2 9900 8420
Mobile: +61 428 845 495

Email : UrsulaLong@eurofins.com
Website: www.eurofins.com.au/environmental-testing

Catherine
EF
15/8 6.34 pm
671660

From: Sarah Gray [mailto:SGray@jbsg.com.au]
Sent: Thursday, 15 August 2019 6:34 PM
To: Ursula Long
Cc: Lauren Luedecke; Michael Swinfield
Subject: RE: Eurofins Test Results - Report 669601 : Site MORIAH COLLEGE PSI (57079)

EXTERNAL EMAIL*

D.S 04/08

AU05814-4845.

Hey Ursula,

Can we please get sample BH06_0-0.1 analysed for PAH TCLP on 24 hr TAT.

Kind regards,

Sarah Gray |Environmental Consultant| JBS&G
Sydney | Melbourne | Adelaide | Perth | Brisbane | Canberra | Darwin | Wollongong | Bunbury
Level 1, 50 Margaret Street Sydney NSW 2000
T: 02 8245 0300 | M: 0405 625 748| W: www.jbsg.com.au
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From: UrsulaLong@eurofins.com <UrsulaLong@eurofins.com>
Sent: Monday, 12 August 2019 7:03 PM
To: Michael Swinfield <mswinfield@jbsg.com.au>
Cc: Lauren Luedecke <LLuedecke@jbsg.com.au>; Sarah Gray <SGray@jbsg.com.au>
Subject: Eurofins Test Results - Report 669601 : Site MORIAH COLLEGE PSI (57079)

Catherine Wilson

From: Sarah Gray <SGray@jbsg.com.au>
Sent: Friday, 16 August 2019 10:31 AM
To: Ursula Long
Cc: Lauren Luedecke; Michael Swinfield; Nibha Vaidya
Subject: RE: Eurofins Test Results - Report 669601 : Site MORIAH COLLEGE PSI (57079)

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL EMAIL*

Hey Ursula. Can we also please get the sample (BH06_0-0.1) analysed for Lead TCLP on 24 hr TAT?

Sarah Gray |Environmental Consultant| JBS&G
Sydney | Melbourne | Adelaide | Perth | Brisbane | Canberra | Darwin | Wollongong | Bunbury
Level 1, 50 Margaret Street Sydney NSW 2000
T: 02 8245 0300 | M: 0405 625 748| W: www.jbsg.com.au
Contaminated Land | Groundwater Remediation | Approvals and Assessments | Auditing and Compliance | Hygiene and Hazardous Materials | Due Diligence and Liability | Fire Management Planning | Stakeholder and Risk Management
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From: UrsulaLong@eurofins.com <UrsulaLong@eurofins.com>
Sent: Thursday, 15 August 2019 7:37 PM
To: Sarah Gray <SGray@jbsg.com.au>
Cc: Lauren Luedecke <LLuedecke@jbsg.com.au>; Michael Swinfield <mswinfield@jbsg.com.au>; Nibha Vaidya <NibhaVaidya@eurofins.com>
Subject: RE: Eurofins Test Results - Report 669601 : Site MORIAH COLLEGE PSI (57079)

Hi Sarah,

I've sent this request through to our lab.

We've been having some issues accessing our LIMS system so there is a high chance that we won't be able to enter this into our system.

If this is the case, we will get this started as soon as possible tomorrow morning when our system is back online.

However the tumbling time required for the leachate will mean that the final result won't be available until the next day.

I will need to confirm if we can possibly get this completed by Saturday or Sunday – I will let you know as soon as I can.

Kind regards,

Ursula Long

Eurofins | Environment Testing
Unit F3, Parkview Building

16 Mars Road
LANE COVE WEST NSW 2066
AUSTRALIA
Phone : +61 2 9900 8420
Mobile: +61 428 845 495

Email : UrsulaLong@eurofins.com
Website: www.eurofins.com.au/environmental-testing

From: Sarah Gray [mailto:SGray@jbsg.com.au]
Sent: Thursday, 15 August 2019 6:34 PM
To: Ursula Long
Cc: Lauren Luedecke; Michael Swinfield
Subject: RE: Eurofins Test Results - Report 669601 : Site MORIAH COLLEGE PSI (57079)

EXTERNAL EMAIL*

Hey Ursula,

Can we please get sample BH06_0-0.1 analysed for PAH TCLP on 24 hr TAT.

Kind regards,

Sarah Gray |Environmental Consultant| JBS&G
Sydney | Melbourne | Adelaide | Perth | Brisbane | Canberra | Darwin | Wollongong | Bunbury
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From: UrsulaLong@eurofins.com <UrsulaLong@eurofins.com>
Sent: Monday, 12 August 2019 7:03 PM
To: Michael Swinfield <mswinfield@jbsg.com.au>
Cc: Lauren Luedecke <LLuedecke@jbsg.com.au>; Sarah Gray <SGray@jbsg.com.au>
Subject: Eurofins Test Results - Report 669601 : Site MORIAH COLLEGE PSI (57079)

Dear Michael,

Please find attached results for your project in the subject header.

Regards

Ursula Long

Eurofins
Unit F3, Parkview Building
16 Mars Road
LANE COVE WEST NSW 2066
AUSTRALIA
Phone: +61 299 008 420
Email: UrsulaLong@eurofins.com
Website:environment.eurofins.com.au

EnviroNote 1079 - PFAS Fingerprinting
EnviroNote 1080 - Total Organofluorine Analysis & PFAS Investigations

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Appendix N UCL Calculations

	Copper
	mg/kg
EQL	5
NEPC 2013 EIL, EILs Aged Sediment	35

Sample Name	
BH01_0-0.1	20
BH02_0.9-1.0	22
BH02_1.9-2.0	2.5
BH03_0.2-0.3	12
BH04_0-0.1	13
QC20190804-01 (BH04_0.4-0.5)	11
BH05_0.4-0.5	2.5
BH05_0.9-1.0	2.5
BH06_0-0.1	40
BH06_1.9-2.0	14
BH07_0.2-0.3	8.2

UCL Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.115/08/2019 6:47:44 PM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

General Statistics

Total Number of Observations	11	Number of Distinct Observations	9
		Number of Missing Observations	0
Minimum	2.5	Mean	13.43
Maximum	40	Median	12
SD	**11.03**	Std. Error of Mean	3.326
Coefficient of Variation	0.822	Skewness	1.421

Normal GOF Test

Shapiro Wilk Test Statistic	0.862	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.85	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.207	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.251	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	19.46	95% Adjusted-CLT UCL (Chen-1995)	20.42
		95% Modified-t UCL (Johnson-1978)	19.69

Gamma GOF Test

A-D Test Statistic	0.412	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.186	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.26	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.573	k star (bias corrected MLE)	1.204
Theta hat (MLE)	8.537	Theta star (bias corrected MLE)	11.15
nu hat (MLE)	34.6	nu star (bias corrected)	26.5
MLE Mean (bias corrected)	13.43	MLE Sd (bias corrected)	12.23
		Approximate Chi Square Value (0.05)	15.76
Adjusted Level of Significance	0.0278	Adjusted Chi Square Value	14.43

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	22.57	95% Adjusted Gamma UCL (use when n<50)	24.66

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.889	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.85	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.2	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.251	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	0.916	Mean of logged Data	2.247
Maximum of Logged Data	3.689	SD of logged Data	0.95

Assuming Lognormal Distribution

95% H-UCL	35.49	90% Chebyshev (MVUE) UCL	26.83
95% Chebyshev (MVUE) UCL	32.61	97.5% Chebyshev (MVUE) UCL	40.63
99% Chebyshev (MVUE) UCL	56.4		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	18.9	95% Jackknife UCL	19.46
95% Standard Bootstrap UCL	18.67	95% Bootstrap-t UCL	22.14
95% Hall's Bootstrap UCL	26.95	95% Percentile Bootstrap UCL	19.28
95% BCA Bootstrap UCL	20.09		
90% Chebyshev(Mean, Sd) UCL	23.4	95% Chebyshev(Mean, Sd) UCL	27.92
97.5% Chebyshev(Mean, Sd) UCL	34.2	99% Chebyshev(Mean, Sd) UCL	46.52

Suggested UCL to Use

95% Student's-t UCL **19.46**

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

	Nickel
	mg/kg
EQL	5
NEPC 2013 EIL	6

Sample Name	
BH01_0-0.1	13
BH02_0.9-1.0	5.6
BH02_1.9-2.0	2.5
BH03_0.2-0.3	6.4
BH04_0-0.1	10
QC20190804-01 (BH04_0.4-0.5)	9.3
BH05_0.4-0.5	2.5
BH05_0.9-1.0	2.5
BH06_0-0.1	2.5
BH06_1.9-2.0	2.5
BH07_0.2-0.3	2.5

UCL Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.120/08/2019 2:20:26 PM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

C0

General Statistics

Total Number of Observations	11	Number of Distinct Observations	6
		Number of Missing Observations	0
Minimum	2.5	Mean	5.391
Maximum	13	Median	2.5
SD	**3.816**	Std. Error of Mean	1.151
Coefficient of Variation	0.708	Skewness	0.999

Normal GOF Test

Shapiro Wilk Test Statistic	0.783	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.85	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.321	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.251	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	7.476	95% Adjusted-CLT UCL (Chen-1995)	7.654
		95% Modified-t UCL (Johnson-1978)	7.534

Gamma GOF Test

A-D Test Statistic	1.169	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.736	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.348	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.258	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.487	k star (bias corrected MLE)	1.869
Theta hat (MLE)	2.168	Theta star (bias corrected MLE)	2.884
nu hat (MLE)	54.71	nu star (bias corrected)	41.12
MLE Mean (bias corrected)	5.391	MLE Sd (bias corrected)	3.943
		Approximate Chi Square Value (0.05)	27.43
Adjusted Level of Significance	0.0278	Adjusted Chi Square Value	25.62

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	8.083	95% Adjusted Gamma UCL (use when n<50)	8.655

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.773	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.85	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.34	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.251	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	0.916	Mean of logged Data	1.47
Maximum of Logged Data	2.565	SD of logged Data	0.672

Assuming Lognormal Distribution

95% H-UCL	9.132	90% Chebyshev (MVUE) UCL	8.678
95% Chebyshev (MVUE) UCL	10.2	97.5% Chebyshev (MVUE) UCL	12.3
99% Chebyshev (MVUE) UCL	16.44		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	7.283	95% Jackknife UCL	7.476
95% Standard Bootstrap UCL	7.161	95% Bootstrap-t UCL	8.084
95% Hall's Bootstrap UCL	7.368	95% Percentile Bootstrap UCL	7.236
95% BCA Bootstrap UCL	7.391		
90% Chebyshev(Mean, Sd) UCL	8.843	95% Chebyshev(Mean, Sd) UCL	10.41
97.5% Chebyshev(Mean, Sd) UCL	12.58	99% Chebyshev(Mean, Sd) UCL	16.84

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	**10.41**

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
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However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

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	Zinc
	mg/kg
EQL	5
NEPC 2013 EIL	140

Sample Name	
BH01_0-0.1	55
BH02_0.9-1.0	300
BH02_1.9-2.0	19
BH03_0.2-0.3	28
BH04_0-0.1	37
QC20190804-01 (BH04_0.4-0.5)	24
BH05_0.4-0.5	2.5
BH05_0.9-1.0	6.2
BH06_0-0.1	210
BH06_1.9-2.0	81
BH07_0.2-0.3	38

UCL Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.120/08/2019 2:22:46 PM
From File	WorkSheet_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

C0

General Statistics

Total Number of Observations	11	Number of Distinct Observations	11
		Number of Missing Observations	0
Minimum	2.5	Mean	72.79
Maximum	300	Median	37
SD	**94.86**	Std. Error of Mean	28.6
Coefficient of Variation	1.303	Skewness	1.892

Normal GOF Test

Shapiro Wilk Test Statistic	0.713	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.85	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.302	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.251	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	124.6	95% Adjusted-CLT UCL (Chen-1995)	137.3
		95% Modified-t UCL (Johnson-1978)	127.3

Gamma GOF Test

A-D Test Statistic	0.372	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.761	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.187	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.265	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			

Gamma Statistics

k hat (MLE)	0.791	k star (bias corrected MLE)	0.636
Theta hat (MLE)	92.03	Theta star (bias corrected MLE)	114.5
nu hat (MLE)	17.4	nu star (bias corrected)	13.99
MLE Mean (bias corrected)	72.79	MLE Sd (bias corrected)	91.29
		Approximate Chi Square Value (0.05)	6.563
Adjusted Level of Significance	0.0278	Adjusted Chi Square Value	5.754

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	155.1	95% Adjusted Gamma UCL (use when n<50)	177

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.967	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.85	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.153	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.251	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			

Lognormal Statistics

Minimum of Logged Data	0.916	Mean of logged Data	3.536
Maximum of Logged Data	5.704	SD of logged Data	1.388

Assuming Lognormal Distribution

95% H-UCL	474.9	90% Chebyshev (MVUE) UCL	183.4
95% Chebyshev (MVUE) UCL	231.1	97.5% Chebyshev (MVUE) UCL	297.4
99% Chebyshev (MVUE) UCL	427.5		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	119.8	95% Jackknife UCL	124.6
95% Standard Bootstrap UCL	116.9	95% Bootstrap-t UCL	251.5
95% Hall's Bootstrap UCL	376.9	95% Percentile Bootstrap UCL	121.4
95% BCA Bootstrap UCL	135.5		
90% Chebyshev(Mean, Sd) UCL	158.6	95% Chebyshev(Mean, Sd) UCL	197.5
97.5% Chebyshev(Mean, Sd) UCL	251.4	99% Chebyshev(Mean, Sd) UCL	357.4

Suggested UCL to Use

95% Adjusted Gamma UCL **177**

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

	>C16-C34 Fraction
	mg/kg
EQL	100
NEPM 2013 ESL	300

Sample Name	
BH01_0-0.1	50
BH02_0.9-1.0	50
BH02_1.9-2.0	180
BH03_0.2-0.3	50
BH04_0-0.1	50
BH04_0.4-0.5	50
BH05_0.4-0.5	50
BH05_0.9-1.0	50
BH06_0-0.1	480
BH06_1.9-2.0	50
BH07_0.2-0.3	50

UCL Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.115/08/2019 6:54:55 PM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

General Statistics

Total Number of Observations	11	Number of Distinct Observations	3
		Number of Missing Observations	0
Minimum	50	Mean	100.9
Maximum	480	Median	50
SD	**131.6**	Std. Error of Mean	39.69
Coefficient of Variation	1.305	Skewness	2.882

Normal GOF Test

Shapiro Wilk Test Statistic	0.465	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.85	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.469	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.251	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	172.8	95% Adjusted-CLT UCL (Chen-1995)	203
		95% Modified-t UCL (Johnson-1978)	178.6

Gamma GOF Test

A-D Test Statistic	2.831	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.743	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.498	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.26	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamma Distributed at 5% Significance Level			

Gamma Statistics

k hat (MLE)	1.46	k star (bias corrected MLE)	1.122
Theta hat (MLE)	69.14	Theta star (bias corrected MLE)	89.93
nu hat (MLE)	32.11	nu star (bias corrected)	24.69
MLE Mean (bias corrected)	100.9	MLE Sd (bias corrected)	95.26
		Approximate Chi Square Value (0.05)	14.37
Adjusted Level of Significance	0.0278	Adjusted Chi Square Value	13.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	173.3	95% Adjusted Gamma UCL (use when n<50)	190.1

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.509	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.85	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.485	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.251	Data Not Lognormal at 5% Significance Level	
Data Not Lognormal at 5% Significance Level			

Lognormal Statistics

Minimum of Logged Data	3.912	Mean of logged Data	4.234
Maximum of Logged Data	6.174	SD of logged Data	0.749

Assuming Lognormal Distribution

95% H-UCL	167	90% Chebyshev (MVUE) UCL	151.1
95% Chebyshev (MVUE) UCL	179.4	97.5% Chebyshev (MVUE) UCL	218.7
99% Chebyshev (MVUE) UCL	295.9		

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	166.2	95% Jackknife UCL	172.8
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	220	95% Chebyshev(Mean, Sd) UCL	273.9
97.5% Chebyshev(Mean, Sd) UCL	348.8	99% Chebyshev(Mean, Sd) UCL	495.8

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	**273.9**

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
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These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
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	Benzo(a)pyrene
	mg/kg
EQL	0.5
NEPM 2013 ESL	0.7

Sample Name	
BH01_0-0.1	0.25
BH02_0.9-1.0	0.25
BH02_1.9-2.0	0.25
BH03_0.2-0.3	0.25
BH04_0-0.1	0.25
BH04_0.4-0.5	0.8
BH05_0.4-0.5	0.25
BH05_0.9-1.0	0.25
BH06_0-0.1	5.5
BH06_1.9-2.0	0.5
BH07_0.2-0.3	0.25

UCL Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.120/08/2019 2:25:07 PM
From File	WorkSheet_b.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

C0

General Statistics

Total Number of Observations	11	Number of Distinct Observations	4
		Number of Missing Observations	0
Minimum	0.25	Mean	0.8
Maximum	5.5	Median	0.25
SD	**1.568**	Std. Error of Mean	0.473
Coefficient of Variation	1.961	Skewness	3.246

Normal GOF Test

Shapiro Wilk Test Statistic	0.411	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.85	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.409	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.251	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	1.657	95% Adjusted-CLT UCL (Chen-1995)	2.072
		95% Modified-t UCL (Johnson-1978)	1.734

Gamma GOF Test

A-D Test Statistic	2.595	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.759	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.417	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.264	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamma Distributed at 5% Significance Level			

Gamma Statistics

k hat (MLE)	0.828	k star (bias corrected MLE)	0.663
Theta hat (MLE)	0.966	Theta star (bias corrected MLE)	1.207
nu hat (MLE)	18.22	nu star (bias corrected)	14.58
MLE Mean (bias corrected)	0.8	MLE Sd (bias corrected)	0.983
		Approximate Chi Square Value (0.05)	6.973
Adjusted Level of Significance	0.0278	Adjusted Chi Square Value	6.135

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1.673	95% Adjusted Gamma UCL (use when n<50)	1.902

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.564	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.85	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.408	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.251	Data Not Lognormal at 5% Significance Level	
Data Not Lognormal at 5% Significance Level			

Lognormal Statistics

Minimum of Logged Data	-1.386	Mean of logged Data	-0.937
Maximum of Logged Data	1.705	SD of logged Data	0.957

Assuming Lognormal Distribution

95% H-UCL	1.498	90% Chebyshev (MVUE) UCL	1.123
95% Chebyshev (MVUE) UCL	1.366	97.5% Chebyshev (MVUE) UCL	1.704
99% Chebyshev (MVUE) UCL	2.367		

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	1.578	95% Jackknife UCL	1.657
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	2.219	95% Chebyshev(Mean, Sd) UCL	2.861
97.5% Chebyshev(Mean, Sd) UCL	3.753	99% Chebyshev(Mean, Sd) UCL	5.505

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	**2.861**

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
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Document Status

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		Name	Name	Signature	Date
A	Sarah Gray	Seth Molinari	*Draft for client review*		20/08/2019
0	Sarah Gray	Seth Molinari			10/10/2019



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