ISPT Pty Ltd
c/o
Aliro Management Pty Ltd

Phase 1 and Phase 2 Environmental Site Assessment

Prospect Logistics Estate
Pemulwuy, NSW

3 June 2020

58238/130144 (Rev 0)

JBS&G Australia Pty Ltd

www.jbsg.com.au

Table of Contents

Abbreviations vi

Executive Summary vii

1. Introduction 1
   - 1.1 Background 1
   - 1.2 Objectives 1
   - 1.3 Scope of Works 2
   - 1.4 Proposed Development 3

2. Site Condition and Surrounding Environment 4
   - 2.1 Site Identification 4
   - 2.2 Site Condition 4
     - 2.2.1 Lot 107 DP 1028208 4
     - 2.2.2 Lot 63 DP 752051 4
     - 2.2.3 Lot 10 DP 1022044 4
   - 2.3 Surrounding Land Use 5
   - 2.4 Topography 5
   - 2.5 Geology & Soils 6
   - 2.6 Acid Sulfate Soils 6
   - 2.7 Hydrology 6
   - 2.8 Hydrogeology 7
   - 2.9 Meteorology 8

3. Site History 9
   - 3.1 Aerial Photographs 9
   - 3.2 Historical Land Title Records 11
   - 3.3 EPA Records 11
   - 3.4 EPA Per- and Poly- Fluoroalkyl Substances (PFAS) Register 11
   - 3.5 Australian and NSW Heritage Register 11
   - 3.6 Council Records 12
     - 3.6.1 Council Planning Certificates 12
     - 3.6.2 Council Letter 12
   - 3.7 Boral Letter 13
   - 3.8 SafeWork NSW Dangerous Goods Records 13
   - 3.9 Integrity Assessment 13
   - 3.10 Summary 13

4. Previous Investigations 14
   - 4.1 Lot 10 DP 1022044 – Austral Masonry 14

4.1.1 Phase 1 and Phase 2 Environmental Site Assessment – Woodward-Clyde (2000) 14
4.1.2 Coffey Due Diligence Environmental Site Assessment (Coffey 2013) 16
4.1.3 Combined Phase 1 and Phase 2 Environmental Assessment (DLA 2017) 17
4.2 Lot 107 DP 1028208 – Boral House 18
4.2.1 JBS&G Preliminary Contaminated Land Assessment (JBS&G 2019a) 18
4.2.2 South East Boral House - Asbestos Clearance (JBS&G 2020) 19
4.3 Lot 63 DP 752051 – 615A Great Western Highway 19
4.3.1 Due Diligence Contamination Investigation, Douglas Partners (DP 2018) 20
4.3.2 Due Diligence Assessment (JBS&G 2018) 20
4.3.3 Detailed Site Investigation (JBS&G 2019b) 21
4.3.4 Remedial Action Plan (JBS&G 2019c) 23
5. Data Gaps 24
6. Conceptual Site Model 26
6.1 Areas of Environmental Concern 26
6.2 Potentially Contaminated Media 26
6.3 Potential for Migration 27
6.4 Potential Exposure Pathways 28
6.5 Potential Receptors 28
6.6 Preferential Pathways 29
7. Sampling and Analysis Plan 30
7.1 Data Quality Objectives 30
7.1.1 Identify the Decision 30
7.1.2 Identify Inputs to the Decision 31
7.1.3 Define the Study Boundaries 31
7.1.4 Develop a Decision Rule 31
7.1.5 Specific Limits on Decision Errors 32
7.2 Optimise the Design of Obtaining Data 34
7.2.1 Soil Sampling Methodology 34
7.2.2 Duplicate and Triplicate Sample Preparation 34
7.2.3 Laboratory Analysis 35
8. Assessment Criteria 36
8.1 Regulatory Guidelines 36
8.2 Assessment Criteria Selection 36
8.2.1 Soil and Sediment Assessment Criteria 36
8.2.2 Groundwater and Surface Water Assessment Criteria 37

9. Quality Assurance/Quality Control 39
10. Results 40
10.1 Soil Results 40
10.2 Soil Field Observations 40
10.3 Soil Analytical Results 40
10.3.1 Heavy Metals 40
10.3.2 PAHs 41
10.3.3 TRH/BTEX 41
10.3.4 OCPs/PCBs 41
10.3.5 Asbestos 41
11. Site Characterisation 42
11.1 Are there any unacceptable risks to future site users from soil/groundwater/surface water? 42
11.2 Are there any chemical mixtures? 44
11.3 Are there any aesthetic issues? 44
11.4 Is there any evidence of, or potential for, migration of contaminants from the site? 45
11.5 Is a site management strategy required? 45
11.6 Are there any data gaps? 45
12. Key Findings 46
13. Conclusions and Recommendations 49
14. Limitations 50

List of Tables

Table 1.1: Site Address, Cadastre and Area vii
Table 1.1: Site Address, Cadastre and Area 1
Table 2.1: Summary of Site Details 4
Table 2.2: Registered Groundwater Bore Search Summary 7
Table 3.1 Summary of Historical Aerial Imagery Review 9
Table 6.1 Areas of Environmental Concern and Associated Contaminants of Potential Concern 26
Table 6.2: Potentially Contaminated Media 27

List of Figures

Figure 1 Site Location
Figure 2a Site Layout
Figure 2b Site Features
Figure 3 Sample Locations

Figure 4 Areas of Environmental Concern
Figure 5 Soil Exceedances

Appendices

Appendix A Concept Design Plans
Appendix B Analytical Tables
Appendix C Groundwater Bore Search
Appendix D Aerial Photographs
Appendix E Land Title Records
Appendix F EPA Searches
Appendix G Heritage Records
Appendix H Council Records
Appendix I Boral Letter
Appendix J SafeWork NSW Dangerous Goods Search
Appendix K Woodward-Clyde (2000) Figure
Appendix L Detailed QA/QC Assessment
Appendix M Soil Borelogs
Appendix N Detailed Laboratory Certificates

Abbreviations

Term	Definition
ACM	Asbestos Containing Material
AEC	Area of Environmental Concern
AF/FA	Asbestos Fines/Fibrous Asbestos
AHD	Australian Height Datum
Aliro	Aliro Management Pty Ltd
ASS	Acid Sulfate Soils
AST	Aboveground Storage Tank
AQ	Asbestos Quantification
bgs	Below Ground Surface
BOM	Bureau of Meteorology
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
COPC	Contaminants of Potential Concern
Council	Cumberland Council
CSM	Conceptual Site Model
DGI	Data Gap Investigation
DLWC	Department of Land and Water Conservation
DP	Deposited Plan
DPI	Department of Primary Industry
DPIE	Department of Planning, Industry and the Environment
EPA	Environment Protection Authority
ESA	Environmental Site Assessment
ha	Hectare
ISPT	ISPT Pty Ltd
JBS&G	JBS&G Australia Pty Ltd
LEP	Local Environmental Plan
LOR	Limit of Reporting
LPI	Land and Property Information
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NSW	New South Wales
OCP	Organochlorine Pesticides
OEH	Office of Environment and Heritage
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PFAS	Per and Polyfluoroalkyl Substances
PSI	Preliminary Site Investigation
RAP	Remedial Action Plan
RPD	Relative Percent Difference
sVOC	Semi Volatile Organic Compounds
SSDA	State Significant Development Application
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
UCL	Upper Confidence Limit
UST	Underground Storage Tank
VOC	Volatile Organic Compounds

Executive Summary

JBS&G Australia Pty Ltd (JBS&G) has been engaged by ISPT Pty Ltd (ISPT, the client) care of Aliro Management Pty Ltd (Aliro) to prepare a combined Phase 1 and Phase 2 Environmental Site Assessment (ESA) for the Prospect Logistics Estate State (the site) Significant Development (SSD) project application. The proposed development comprises an 18.7-hectare (ha) parcel of land, the cadastral identifiers and approximate area of each are shown in **Table 1.1**. The site location, layout and cadastral boundaries are shown on **Figure 1**, **Figure 2a** and **Figure 2b** respectively.

Table 1.1: Site Address, Cadastre and Area

Address	Cadastre	Area (ha)
44 Clunies Ross Street, Pemulwuy, NSW, 2145	Lot 10 DP 1022044	12.58
Clunies Ross Street, Pemulwuy, NSW, 2145	Lot 107 DP 1028208	5.07
615A Great Western Highway, Pemulwuy, NSW 2145	Lot 63 DP 752051	0.81
Clunies Ross Street, Pemulwuy, NSW, 2145	Lot 216 DP 1030744	0.28
Clunies Ross Street, Pemulwuy NSW, 2145	Lot 601 DP 1047403	0.03
	Approximate Site Area	**18.77**

It is understood ISPT/Aliro have developed a Concept Proposal for submission to the NSW Department of Planning, Industry and Environment (DPIE) for a future commercial/industrial warehouse logistics estate. To address the key issues outlined in the Planning Secretary's Environmental Assessment Requirements (SEARs[1]) and to satisfy the requirements of *State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55), a Phase 1 and Phase 2 ESA of potential site-wide contamination, consistent with a detailed site investigations (DSI), is required to demonstrate the site is suitable or can be made suitable for its proposed uses.

Based on client supplied conceptual design plans (**Appendix A**) it is understood ISPT/Aliro is seeking approval for a commercial/industrial precinct, including several large open plan warehouses and associated hardstand drives/loading dock and car park areas.

The site currently comprises two commercial/industrial properties (Austral Masonry and Boral House) historically utilised for manufacturing/light industrial and commercial uses (associated with the former Boral Brick facility and regional quarrying activities), and a vacant land parcel (former Cumberland Council depot/stockpile yard, Lot 63).

The site has been subject to a number of previous investigations which identified several areas of environmental concern (AEC) and isolated soil/sediment and surface/groundwater contamination associated with historic land use activities. Lot 63 DP 752051 (former Cumberland Council depot/stockpile yard) has been subject to detailed site investigations and preparation of a remedial action plan (RAP) and is currently being remediated for commercial/industrial land use to address identified soil contamination.

Review of previous investigation identified a range of data gaps in the current characterisation of potentially contaminating activities at the site. As part of the investigation herein, JBS&G conducted additional sampling/analysis on Lot 107 DP 1028208 to address identified data gaps where the site was accessible. Based on the intrusive investigation, fill material was identified to be generally consistent with that previously observed. With the exception of a chromium concentration at one location marginally exceeding the adopted ecological criterion, all other contaminants of potential concern (COPC) were reported below the adopted site criteria (pursuant to commercial/industrial land use).

[1] Planning Secretary's Environment Assessment Requirements. *Prospect Logistics Estate – Clunies Ross Street, Prospect.* SSD-10399 issued 16 December 2019 for Aliro Management Pty Ltd (SEARs)

As part of the Phase 1 and Phase 2 ESA/DSI, a detailed conceptual site model (CSM) of potential contamination sources, pathways and receptors was developed to guide the investigations.

Based on the assessment outlined herein and subject to the limitations (**Section 14**), the following was noted:

- The site has historically been utilised for a combination of commercial and light industrial activities associated with regional quarrying and manufacturing and has been subject to significant ground disturbance. Following cessation of large-scale quarrying activities, the northern portion of the site has continued to be utilised for masonry/manufacturing activities (Austral Masonry) with the southern portion utilised for commercial (Boral Offices) and vacant land (Council depot/stockpiling yard);
- The Phase 1 and Phase 2 ESA outlined herein identified potential AECs (**Figure 4**) and associated COPC related to current and/or former land uses including a range of commercial/industrial activities;
- Review of historic contamination assessments identified the following with regard to the current contamination status of the site:
    - Investigations across Lot 10 DP 1022044, when combined, have generally satisfied the sampling density requirements as per EPA (1995) and NEPC (2013);
    - A range of potentially contaminating land use activities, including the presence of current/former petroleum and chemical storage, hazardous building materials, waste material production and placement of fill of unknown origin were identified and targeted by previous investigations;
    - Fill is present across the majority of the site to depths of between 0.1 m and 4 m bgs and was noted to comprise a combination of sandy gravelly clays and reworked natural materials (shales/dolerite);
    - Lot 63 DP 752051 has been subject to extensive characterisation and is currently being remediated (as part of the sales contract between ISPT and Council) to make the site suitable for commercial/industrial land use without the requirement for ongoing management;
    - The same impacted fill profile identified on Lot 63 DP 752051 was identified extending beyond the Lot boundary to the south (Lot 107 DP 1028208), albeit to a limited extent. Approximately 300 m^2 of asbestos impacted soil surrounding Lot 63 in lot 107 are considered to represent an unacceptable health risk requiring remediation and/or management;
    - Potential remains for the same fill profile to be present adjacent to Lot 63 in other areas of the site;
    - Asbestos previously identified at the site surface in the southern portion of Lot 107 (JBS&G 2019a) was subsequently removed as part of make safe works (JBS&G 2019c), based on previous investigations the potential remained for further asbestos containing material (ACM) to be present within a former service easement within the southern portion of Lot 107;
    - Asbestos was identified at one location adjacent to current structures (identified to contain hazardous building materials) in Lot 10 DP 1022044;
    - Former underground petroleum storage systems (UPSS) and other petroleum storage (current/former) have been identified at the site which will require removal

(formal decommissioning[2]) and/or management including potentially impacted soils and/or groundwater relevant to the proposed land use in (NEPC 2013);

- Soil sampling did not identify the presence of chemical COPC above the adopted health criteria across the site;
- Copper and zinc concentrations exceeding the ecological criterial within Lot 107 at three locations (adjacent to Lot 63) were reported the distinct fill material noted to contain ACM and scrap metal (currently being remediated on Lot 63) and were considered likely associated with metal waste inclusions. The reported concentrations were not considered to represent an unacceptable ecological risk under the proposed redevelopment scenario;
- Low level chromium concentrations at several locations are considered representative of natural background conditions associated with the underlying geology (ultramafic and mafic igneous rock) and were not considered to represent an unacceptable ecological risk at the site;
- A single B(a)P concentration exceeding the ecological criteria was not considered to represent an unacceptable risk for the intended commercial/industrial use of at the site;
- Limited sediment assessment identified low level heavy metal concentrations exceeding the conservative ecological assessment criteria (ANZG 2019) for the 95% species protection in freshwater environments. Heavy metals were considered not to represent an unacceptable risk at the site, noting they were likely reflective of natural background conditions (associated with the underlying geology and/or conditions to be expected in urban environments); and
- Limited surface water and groundwater analysis at the site did not identify gross or widespread contamination. Low level heavy metal concentrations reported above the adopted ecological site criteria are considered reflective of regional background conditions as to be expected in urban/industrial environments and are not considered to represent an unacceptable risk at the site or to downgradient disturbed natural environments (Girraween Creek).

- Detailed review of previous investigation identified a range of data gaps (**Section 5**) based on the identified AECs and COPCs identified as part of the Phase 1 and Phase 2 ESA outlined herein;
- The implementation of an additional targeted sampling plan (12 additional sample locations) outlined herein indicated the following:
  - Fill material within the south western portion of the site is generally consistent with reworked natural material (shales and dolerite) as previously identified across the site and is considered to not represent an unacceptable risk at the site;
  - Chromium reported above the adopted ecological criterion at one location (TP07) was considered representative of the underlying igneous geology (subject to quarrying) and was not considered to represent an unacceptable risk to future ecological receptors; and

2 In accordance with Guidelines for Implementing the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008, Department of Environment, Climate Change and Water NSW, September 2009 (DECC 2009).

- No further ACM was identified within the former service easement. Noting detailed intrusive investigation was precluded by dense vegetation. Should further asbestos infrastructure (conduits) be present within this portion of the site then it is anticipated it can be dealt with under an unexpected finds protocol, to be implemented during future remedial/redevelopment works.

- Based on the findings of the intrusive investigation outlined herein, it is considered that data gaps identified for Lot 107 DP 1028208 have been adequately addressed.

Based on the results of the investigation and subject to the limitations in **Section 14**, JBS&G conclude the site can be made suitable for the proposed land use subject to remediation/management of identified contamination. The investigation outlined herein is considered to have generally satisfied the requirements of the SEARS. JBS&G note further investigation to address additional identified data gaps was not possible during the preparation of the SSDA due to COVID-19 safety precautions.

JBS&G recommend that a data gap investigation (DGI) be conducted prior to issue of a construction certificate to address identified potential areas of environmental concern and further define the extent of contamination at the site (**Section 5**) following which a Remedial Action Plan (RAP) be prepared to describe the required remediation and validation works to ensure the site is suitable for the proposed commercial industrial land use without ongoing management.

1. Introduction

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) has been engaged by ISPT Pty Ltd (ISPT, the client) care of Aliro Management Pty Ltd (Aliro) to prepare a combined Phase 1 and Phase 2 Environmental Site Assessment (ESA) for the Prospect Logistics Estate State (the site) Significant Development (SSD) project application. The proposed development comprises an 18.7 hectare (ha) parcel of land, the cadastral identifiers and approximate area of each are shown in **Table 1.1**. The site location, layout and cadastral boundaries and features are shown on **Figure 1**, **Figure 2a** and **2b,** respectively.

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Address	Cadastre	Area (ha)
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Based on client supplied conceptual design plans (**Appendix A**) it is understood ISPT/Aliro is seeking approval for a commercial/industrial precinct, including several large open plan warehouses and associated hardstand drives/loading dock and car park areas.

The site currently comprises two commercial/industrial properties (Austral Masonry and Boral House) historically utilised for manufacturing/light industrial and commercial uses (associated with the former Boral Brick facility and regional quarrying activities), and a vacant land parcel (former Cumberland Council depot/stockpile yard, Lot 63).

The site has been subject to a number of previous investigations which identified several areas of environmental concern (AEC) and isolated soil/sediment and surface/groundwater contamination associated with historic land use activities. Lot 63 DP 752051 (former Cumberland Council depot/stockpile yard) has been subject to detailed site investigations and preparation of a remedial action plan (RAP) and is currently being remediated for commercial/industrial land use to address identified soil contamination.

The investigation was developed in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards.

1.2 Objectives

The objectives of the Phase 1 and Phase 2 ESA are to:

[3] Planning Secretary's Environment Assessment Requirements. *Prospect Logistics Estate – Clunies Ross Street, Prospect.* SSD-10399 issued 16 December 2019 for Aliro Management Pty Ltd (SEARs)

- Collate and review available data, including previous investigations, and supplement this with current information to identify areas of potential AECs and associated contaminants of potential concern (COPCs) as may be present at the site;
- Review and document regional geological, hydrogeological, topographical and services infrastructure information to identify site media and potential contaminant transportation pathways at the site;
- Develop and document a conceptual site model (CSM) of potential contamination sources, pathways and receptors to guide the investigations;
- Identify potential data gaps across the site and assess the potential for contamination as a result of current/former land use activities; and
- Address the key contamination issues in the SEARs and the requirements of SEPP 55 to demonstrate the suitability of the site for development or provide recommendations that will enable the site to be considered suitable prior to commencement of future use(s).

1.3 Scope of Works

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

- A review of previous investigations as made available by the client including:
  - *Phase 1 and Phase 2 ESA (Lot 10 DP 1022044)* – Woodward-Clyde Pty Ltd dated (Woodward-Clyde, 2000[4]);
  - *Due Diligence ESA, Former Boral Prospect Clunies Ross Street, Prospect NSW 2148.* Coffey Environments Australia Pty Ltd dated 2 May 2013 (Coffey 2013[5]);
  - *Combined Phase 1 and Phase 2 ESA, Prospect Mansonry, 44 Clunies Ross Street, Prospect*. DLA Environmental Services Pty Ltd dated 2 March 2017 (DLA 2017[6]);
  - *Clunies Ross Street Preliminary Contaminated Land Assessment*. JBS&G Australia Pty Ltd dated 17 June 2019 (JBS&G 2019a[7]);
  - *South East Boral House – Visual Asbestos Clearance.* JBS&G Australia Pty Ltd dated 11 February 2020 (JBS&G 2020[8]);
  - *Due Diligence Contamination Investigation*, *615A Great Western Highway, Pemulwuy*. Douglas Partners Pty Ltd dated 7 December 2018 (DP 2018[9]);
  - *Additional Land Contamination Assessment – 615A Great Western Highway*. JBS&G Australia Pty Ltd dated 18 December 2018 (JBS&G 2018[10]);
  - *Detailed Site Investigation, 615 A Great Western Highway, Pemulwuy*. JBS&G Australia Pty Ltd dated 1 April 2019 (JBS&G 2019b[11]); and

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4 *Phase 1 and Phase 2 Environmental Site Assessment – Boral Block and Paving Facility, Greystanes, NSW.* Woodward-Clyde Pty Limited

5 *Due Diligence Environmental Site Assessment – Clunies Ross Street, Prospect, NSW.* Coffey Environments Pty Ltd dated 2 May 2013 reference ENAURHOD04463AA (Coffey 2013).

6 *Combined Phase 1 and Phase 2 Environmental Assessment, Prospect Masonry, 44 Clunies Ross Street, Prospect NSW 2148.* DLA Environmental Services Pty Ltd, dated 2 March 2017, Ref: DL4032_S006335. DLA (2017)

7 *Preliminary Contaminated Land Assessment – Lot 107 DP 1028208, Clunies Ross Street, Pemulwuy, NSW (Rev 1)*. JBS&G Australia Pty Ltd dated 17 June 2019 (JBS&G 2019a)

8 *South East Boral House – Asbestos Clearance (Rev 1).* JBS&G Australia Pty document 56425/127379 Ltd dated 11 February 2020 (JBS&G 2020)

9 *Report on Due Diligence Contamination Investigation - Proposed Commercial Development 615A Great Western Highway, Pemulwuy*. Douglas Partners Pty Ltd dated 7 December 2018, DP (2018);

10 *Additional Land Contamination Assessment – 615A Great Western Highway, Pemulwuy, NSW*. JBS&G Australia Pty Ltd dated 18 December 2018 reference 55756/119840 Revision 1 (JBS&G 2018)

11 *Detailed Site Investigation – 615A Great Western Highway, Pemulwuy, NSW*. JBS&G Australia Pty Ltd, reference 56047/121406 Rev 1 dated 1 April 2019 (JBS&G 2019b)

- *Remedial Action Plan, 615A Great Western Highway.* JBS&G Australia Pty Ltd dated 16 July 2019 (2019c[12]).

- An updated review of available site history and background information to identify potential areas of environmental concern and associated contaminants of concern including:
  - Records of publicly available information held by NSW EPA, where readily available;
  - Records of publicly available information regarding heritage, where readily available; and
  - Update licensed groundwater bores data present within a 1 km radius of the assessment area available on the online NSW Office of Water.
- Review of the environmental setting including topography, geology and hydrogeology of the site and surrounding areas;
- Review of historic aerial photographs and land title records;
- Development and documentation of a CSM based on available information;
- Development of the sampling, analytical and quality plan (SAQP) and associated data quality objectives (DQOs) in accordance with relevant EPA guidelines;
- A detailed inspection of the site to confirm the desktop findings and identify the presence of additional AECs;
- Advancement of 12 testpit locations and sampling and analysis of soil for COPC within the south western portion of Lot 107 DP1028208 provide adequate characterisation of materials within this accessible portion of the site;
- Comparison of collected and relevant historic data against EPA published and/or relevant endorsed criteria to facilitate an assessment of land use suitability; and
- Collation of a representative site data set and preparation of this combined Phase 1 and Phase 2 ESA report, consistent with a DSI, in general accordance with the requirements of EPA and NEPC (2013) guidelines presenting the outcomes of the assessment and associated conclusions.

1.4 Proposed Development

Review of architectural design plans (**Appendix A**) indicates that the site is proposed to be developed to accommodate seven large warehouses with attached office space and surrounding paved areas to accommodate truck and car parking with minor landscaped garden beds covering approximately 50 % of the site developable area.

[12] *Remedial Action Plan – 615A Great Western Highway, Pemulwuy, NSW*. JBS&G Australia Pty Ltd, reference 56047/123106 Rev 1 dated 16 July 2019 (JBS&G 2019c)

2. Site Condition and Surrounding Environment

2.1 Site Identification

The location of the site and surrounds is shown in **Figure 1.** The current layout is shown in **Figure 2b** and the proposed site development layout is shown in **Appendix A**. Site details are summarised in **Table 2.1** and discussed in detail in the following section.

Table 2.1: Summary of Site Details

Site Legal Identifier (as shown on **Figure 2a**)	Lot 10 DP 1022044 Lot 107 DP 1028208 Lot 63 DP 752051 Lot 216 DP 1030744 Lot 601 DP 1047403
Site Address	Lot 10 DP 1022044 - 44 Clunies Ross Street, Pemulwuy, NSW, 2145 Lot 107 DP 1028208 - Clunies Ross Street, Pemulwuy, NSW, 2145 Lot 63 DP 752051 - 615A Great Western Highway, Pemulwuy, NSW 2145 Lot 216 DP 1030744 - Clunies Ross Street, Pemulwuy, NSW, 2145 Lot 601 DP 1047403 - Clunies Ross Street, Pemulwuy NSW, 2145
Site Area	Approximately 18.77 ha
Approximate Relative Level (RL) m Australian Height Datum (AHD)	106 m AHD – south eastern site extent 52 m AHD – north eastern site extent
Local Government Authority	Cumberland City Council Blacktown City Council
Site Geographic Coordinates (MGA 56)	Refer to **Figure 2a**
Current Zoning	Zone IN1 General Industrial
Proposed Zoning	Zone IN1 General Industrial
Previous Land Uses	Agricultural and commercial/industrial (offices, quarrying, manufacturing)
Current Land Uses	Vacant land and commercial/industrial (offices, masonry)
Proposed Land Uses	Commercial/industrial Precinct with warehousing, concrete hardstand carpark areas, drives with minor landscaped areas.

2.2 Site Condition

The site currently comprises two commercial/industrial properties (Austral Masonry and Boral House) and a vacant land parcel (former Cumberland Council depot/stockpile yard currently being remediated for commercial/industrial land use). Key features are shown on **Figure 2b**.

2.2.1 Lot 107 DP 1028208

The southern portion of the site (Lot 107 DP 1028208) was noted to contain two rectangular multi-storey office buildings of glass, sheet metal and concrete construction. Significant cutting into the natural hillslope was observed along the south eastern building extent to facilitate current site levels. The area surrounding the structures comprised a combination of asphaltic pavement (car park areas), concrete footpaths, gravelled structural base coarse (within the immediate vicinity of the buildings) and landscaped garden beds/turfed lawns. The south western portion of the lot contained well established vegetation and the south eastern portion comprised part of “Prospect Hill” and was notably vacant grassed land. Two pad mounted electrical transformers were observed to the east of the buildings.

2.2.2 Lot 63 DP 752051

The central eastern portion of the site (Lot 63 DP 752051) was notably undergoing remediation works, with several stockpiles of impacted fill material stockpiled and covered with orange geofabric.

2.2.3 Lot 10 DP 1022044

As reported by DLA (2017), Lot 10 DP 1022044 contained two large warehouse buildings (Plant 1 and Plant 2, **Figure 2b**) surrounded by hardstand pavement material storage yards, asphaltic car parks

and concrete/asphaltic loading docks/driveways. An office building was situated in the central north east, with a smaller (former brickworks office) situated in the central east. Several settling ponds (both earthen and concrete lined) and a recycled water treatment wetland were present in the north west of the site. Petroleum and chemical storage areas were observed (**Figure 2b**), including a series of oxide and LPG above ground storage tanks (ASTs) and a single Diesel AST. Several hydraulic oil stores were observed, with minor surface staining noted. DLA (2017) reported the presence of a disused vent pipe affixed to the central brickworks office, associated with a formerly identified petroleum underground storage tank (UST).

Waste and/or raw material storage was observed within the western portion of the site and surrounding a shed in the central portion of the site (south of Plant 2, **Figure 2b**). Material storage included manufacturing by-products (slag/ash). Existing structures were noted to contain hazardous building materials (asbestos).

Review of the description for Lot 10 DP 1022044 as presented by DLA (2017) was generally consistent with the current site configuration as observed by JBS&G on 9 March 2020.

2.3 Surrounding Land Use

The current land use of adjacent properties or properties across adjacent roads is summarised below.

- North – The site is bound to the north by a vacant vegetated parcel of land which is dissected by Girraween Creek;
- South – The site is bound to the south by vacant land then commercial/industrial allotments (large open plan warehouses);
- East – The southern portion of the site is bound to the east by an earthen road and a vacant parcel of land associated with Prospect Hill. The remainder of the site is bound to the east by Clunies Ross Street across which there are low density residential allotments and commercial/industrial warehouses; and
- West – The site is primarily bound to the west by commercial/industrial allotments (large open plan warehouses).Girraween Creek meanders to the west and a single large setting pit (which extends within the site boundary) was present to the north west.

The closest environmental receptor is Girraween Creek located approximately 35 m north west of the site to the south of The Great Western Highway.

2.4 Topography

A review of topographical information available on SIX Maps[13] indicates that the site is located within a gently undulating regional topography. The south of the site is situated atop a regional high point (Prospect Hill, **Figure 2b**). Site levels were noted to fall slightly to the south and west of the crest, with the majority of the site falling towards the north/northwest, towards Girraween Creek.

Ground levels of approximately 106 m AHD are present atop Prospect Hill, falling to 52 m AHD along the northern site boundary, in close proximity to Girraween Creek.

As discussed in **Section 2.2** the site inspection indicated that portions of Prospect Hill toward the north and east of Boral House (Lot 107 DP 1028208) had been subject to cutting activities to facilitate the development of site buildings and hardstand pavements. Other areas of the site appear to have been subject to minor cut and fill activities to facilitate the levelled construction of the built form (particularly surrounding Plant 1 and Plant 2 within Lot 10 DP 1022044). It is considered that as part of historic redevelopment activities there is the potential for substantial

[13] http://maps.six.nsw.gov.au/ *Six Maps* accessed by JBS&G on 4 March 2020.

quantities of fill to have been imported to the site to establish site levels or as may have been associated with regional historic quarrying activities.

2.5 Geology & Soils

Reference to the online ESPADE 2.0 tool hosted by the Office of Environment and Heritage (OEH 2019[14]) and the 1:100 000 Geological Series Penrith Geological Survey of NSW Sheet 9030 (DMR 1991[15]) indicates that the site is present within the following natural geological and soil landscapes:

- **Geology**: Northern portion of site is situated on Bringelly Shale – comprising shale, carbonaceous claystone, laminate and fine to medium grained lithic sandstone, rare coal tuff of the Wianamatta Group; the southern portion of site lies on Jurassic Prospect Picrite – comprising picrite, dolerite and minor basalt;
- **Landscape**: Topography varies from level plains to undulating terrain, and has been disturbed by human activity to a depth of at least 100 cm. Most of these areas have been levelled to slopes of <5 %;
- **Soils**: Northern portion of site is situated on Blacktown soil horizon – comprising red and brown podzols on crests, yellow podzols on lower slopes and drainage lines; the southern portion of the site contains Disturbed Terrain - the original soil has been removed, greatly disturbed or buried. Landfill includes soil, rock, building and waste material; and
    - **Limitations**: Blacktown – moderately reactive highly plastic subsoil, localised seasonal waterlogging and water erosion hazard, localised surface movement potential. Disturbed Terrain – dependent on the nature of fill material – often includes subsidence resulting in a mass, movement hazard, soil impermeability leading to poor drainage, and low fertility.

The above geology is noted to be generally consistent with those documented in previous investigations as discussed in **Section 4.**

Past assessment activities as discussed in **Section 4** have identified fill material (reclamation) to variable depths underlying the site.

2.6 Acid Sulfate Soils

Review of the Acid Sulfate Soil Risk Map from Australian Soil Resource Information System (ASRIS[16]) indicates that the site is located within an area of *'no known occurrence of Acid Sulfate Soils*'.

With consideration to the site setting and geological and soil characteristics of the site, management of development activities is not required to address the potential for impact on ASS.

2.7 Hydrology

Girraween Creek, a tributary of Toongabbie Creek and in turn the Parramatta River, is located approximately 35 m north of the north western site boundary. The Girraween Creek sub-catchment covers an area of 936 ha extending from the eastern edge of Prospect Reservoir through Fox Hills Golf Course, Girraween Park and a linear recreation reserve in Toongabbie until its confluence with Toongabbie Creek in McCoy Park.

As discussed in **Section 2.2**, the site comprises a combination of unpaved (aggregate covered) storage yards/vegetated surfaces, sealed (buildings/hardstand pavement) surfaces and contains a series of settling ponds (within the north western portion of site). As such, precipitation falling onto the site in unsealed areas is expected to infiltrate surface soils at a rate reflective of the permeability

[14] *ESPADE 2.0*. NSW Office of Environment and Heritage, Accessed 4 March 2020, OEH 2019
[15] *Penrith Geological Series Sheet 9030 (Edition 1) 1983*. Geological Survey of NSW, Department of Mineral and Resources (DMR 1991)
[16] *Australian Soil Resource Information System,* http://www.asris.csiro.au/, accessed 4 March 2020 (ASRIS)

of the underlying site soils (**Section 2.5**) and be directed toward engineered settling ponds and subsequently discharged to Girraween Creek to the north of the site and subsequently to a flood retention basin constructed within the Girraween Creek alignment as discussed in **Section 3.7**.

In sealed areas of the site surface waters are anticipated to be redirected into the site stormwater infrastructure and directed to the municipal stormwater network. In periods of heavy or prolonged rainfall, following surface soil saturation, excess water movement is expected to follow the topographic gradient and be collected by downgradient neighbouring stormwater drainage networks and transferred to the regional stormwater network and/or discharged to Girraween Creek.

2.8 Hydrogeology

Registered bore information obtained from the Water NSW online database (WNSW[17]) is included as **Attachment C**. The search identified 10 groundwater bores to be located within a 1 km radius of the site, with information summarised in **Table 2.2** following.

Table 2.2: Registered Groundwater Bore Search Summary

Bore Number	Approximate distance from site	Intended Use	Drilled depth (m below ground surface (bgs))	Standing Water Level (m bgs)	Geological Material
GW101177	0.70 km west	Industrial	150	14.00 Water bearing zones from 25-30m, 56-60m and 125-140m	Overburden to 2.50 m, weathered sandstone to 15.00, shale to 60 m and sandstone to 150 m.
GW113201	0.10 km east	Monitoring	21.30	13.84	-[1]
GW113202	0.20 km southeast	Monitoring	21.5	16.30	-[1]
GW113203	0.30 km southeast	Monitoring	19.20	14.98	-[1]
GW107831	0.70 km southeast	Monitoring	7.40	-[1]	Fill to 1.60 m, gravelly clay to 2.90 m, clay to 4.70, shale to 6.00 and hard clay to 7.40.
GW107832	0.350 km east	Monitoring	4.00	-[1]	Brown soil to 0.20 m, red brown clay to 1.3 m, brown and grey shale to 4.0 m.
GW112893	0.36 km north	Exploration	16.00	-[1]	-[1]
GW112894	0.35 km north	Exploration	20.00	-[1]	-[1]
GW112895	0.33 km north	Exploration	27.00	-[1]	-[1]
GW112896	0.33 km north	Exploration	21.30	-[1]	-[1]

1. No information presented

Given the majority of the site is underlain by disturbed terrain overlying a dolerite/picrite formation and Bringelly Shale, there is a potential for perched water at the fill/natural and soil/rock interface. Three groundwater monitoring wells were installed to a depth of 8 m bgs within Lot 107 DP 1028208 (MW01 to MW03) as part of JBS&G (2019). Groundwater was not encountered at these locations up to 8 m bgs. DLA (2017) reported groundwater in one well installed on Lot 10 DP 1022044, the depth of which was not reported. Notwithstanding, groundwater was sampled from this well indicating the presence of shallower groundwater toward the north of the site (< 6 m bgs). Coffey (2013) reported groundwater seepage at 3.3 m bgs indicating the potential for perched groundwater at the fill/natural interface.

Based on the reported geology, topography and site observations, the permanent groundwater table is likely to be variable across the site and is expected to be encountered at depth (greater than 13 m

[17] Water New South Wales, http://realtimedate.waternsw.com.au accessed 4 March 2020.

bgs) within the southern portion of the site and located within zones of higher permeability associated with bedrock faults, joints and weathered zones. Groundwater is anticipated to be encountered at shallower depths toward the north of the site and is expected to flow northwest towards Girraween Creek

2.9 Meteorology

A review of average climatic data for the nearest Bureau of Meteorology monitoring location (Prospect Reservoir[18]) indicates the site is located within the following meteorological setting:

- Average minimum temperatures vary from 6.1 ^{o}C in July to 17.8 ^{o}C in February;
- Average maximum temperatures vary from 16.9 ^{o}C in July to 28.6 ^{o}C in January;
- The average annual rainfall is approximately 873.7 mm with rainfall greater than 1 mm occurring on an average of 83.9 days per year; and
- Monthly rainfall varies from 46.5 mm in September to 98.8 mm in February.

[18] http://www.bom.gov.au/climate/averages/tables/cw_066062.shtml, Commonwealth of Australia, 2013 Bureau of Meteorology, Product IDCJCM0028 accessed by JBS&G on 12 March 2020.

3. Site History

3.1 Aerial Photographs

Copies of historical aerial photographs from regular intervals were obtained from the NSW Department of Finance, Services and Innovation in addition to recent aerial imagery from NearMap. Imagery is presented in relation to the site boundaries in **Appendix D**. Relevant information from the aerial imagery review is summarised in **Table 3.1.**

Table 3.1 Summary of Historical Aerial Imagery Review

Year	Observations
1930	• The site comprised a vacant parcel of land which was free of notable vegetation. The image quality precluded a detailed review of the site and surrounding area, however, the majority of the site appeared to be utilised as agricultural land with a small earthen road traversing the north western portion. • A small patch of trees was present to the east of the site and there was evidence of an elevated ridgeline and gully erosion to the south east. Girraween Creek was present to the north west, beyond which appeared to be agricultural plots and several small associated structures (rural residential/agricultural buildings)
1943	• A "U" shaped earthen access road had been established dissecting the northern portion of the site which appeared to have been cut into the hillslope. Several small rectangular buildings had been constructed adjacent to the roadway and ground disturbance was evident toward the southern portion of the site. The road, buildings and ground disturbance observed were presumably associated with smaller scale blue metal production likely occurring at the time, as indicated by the historic land titles (**Section 3.2**) • The surrounding area appeared similar to the previous aerial photograph with further roadway construction and several new warehouse sheds having been built to the east and west.
1961	• The accessway and small sheds had been de-established and the construction of a large warehouse (Plant 2, **Figure 2b**) in the central portion of the site was evident. The footprint of the warehouse area had been levelled and the importation of material was apparent to establish site levels. A large stockpile of rock/potential waste was present within the central northern portion of the site (within the "U" of the former road) and a small drainage easement was noted in the north extending beyond the site to Girraween Creek. Some minor erosional features were present in the south east. The remainder of the site remained unchanged. • The surrounding area appeared generally similar to the previous aerial photograph. Demolition of the small shed structures and construction of several large warehouses to the north east of the site had occurred. Land to the east appeared to have been subdivided into rectangular lots (presumably for agriculture/livestock) and a large water retention basin established further east. Land to the south and south west contained large stockpiles of material and evident ground disturbance activities, presumably associated with regional quarrying activities further south (Prospect Quarry).
1970	• The construction of the large warehouse in the central portion of the site had been completed. Several small storage sheds, stored products and vehicles were identified surrounding the warehouse. Several rectangular structures noted to the immediate south of the central portion of the warehouse are possibly petroleum storage tanks which were reported to be present at the site during this time (Woodward-Clyde (2000), as discussed in **Section 4.1.1**). A material processing yard was evident to the south west of the warehouse and comprised several large stockpiles of material and a single small square warehouse. An access road had been established through the centre of the southern portion of the site. Ground disturbance was apparent along the south eastern boundary. • Several large stockpiles of material were apparent to the west of the site and several roadways had been better established providing access to the south (toward the former Prospect Quarry).
1982	• The material storage yard to the north of the warehouse had been extended including an area of radial soil dumping to the north west. Further finished product storage was evident. Large

Year	Observations
	stockpiles of material were present across the majority of the central southern portion of the site surfaces either side of the shed in the material processing area, and extended beyond the western site boundary. Ground disturbance/potential quarrying was occurring in the south west of the site. Dense vegetation had been established in the south east and north east of the site. • The surrounding area appeared similar to the previous aerial photograph with the exception of thick vegetation to the south west of the site.
1991	• The majority of stockpiled material appeared to have been removed and/or levelled across the southern portion of the site and several temporary roadways were present. Ground disturbance was apparent in the northern portion of the site including the presence of a large bank of soil extending beyond the northern site boundary (in an area formerly covered by vegetation) associated with civil works being undertaken to construct a flood retention basin within the alignment of Girraween Creek. The aerial photograph indicates the works appeared to be generally consistent with those described by Boral Bricks and Blacktown City Council (**Section 3.7**). Stockpiling of material was observed along the north east extent of the material holding yard (central north of the site). . • With the exception of ground disturbance to the north of the site, the surrounding area appeared similar to the previous aerial photograph. The alignment of Girraweek Creek had been altered (channelised), presumably as part of the flood retention basin works.
2002	• The northern portion of the site had undergone significant redevelopment, comprising newly constructed warehouse/office buildings, hardstand material storage yards and carparking areas in the northeast. Several minor additions to the central warehouse were noted. The southern portion of the site was undergoing redevelopment and contained two newly constructed commercial buildings where the current Boral House exists and associated bituminous car park areas which were still under construction. Two temporary structures (e.g. construction sheds) are present at the southeast boundary. • Clunies Ross Street had been constructed adjacent to the east of the site. The land to the west appeared to be being redeveloped and had been stripped and levelled with two warehouses constructed further west, and Foundation Place almost completed. A retention basin associated with the adjacent redevelopment was apparent and extended to within the north western portion of the site.
2016	• The majority of the site remained unchanged other than construction of the southern portion of the site had been completed. Some felling of trees and establishment of grassed areas to the south of Boral House had occurred. • Clunies Ross Street to the east had been paved. Redevelopment of large commercial warehouse properties to the south and west of the site had been completed. A large residential subdivision had been constructed to the east of Clunies Ross Street. Warehouse buildings to the north east had been demolished and construction of a new large open plan warehouse had occurred.
2020	• The site appeared similar to the previous aerial photograph with the notable exception of remediation works being undertaken in Lot 63 DP 752051 within the central eastern portion of the site adjacent. • Additional construction had been undertaken on the residential subdivision to the east of Clunies Ross Street.

In summary, the site appeared to have been vacant pastoral/agricultural land and subject to minor quarrying activities prior to being utilised for bulk material storage associated with regional quarrying activities and manufacturing (Boral Bricks) and was subject to ground disturbance (stockpiling/filling) from the 1960s to the late 1990s. Manufacturing has been ongoing in the northern portion of the site (Austral Masonry) and the southern portion has been utilised for a combination of commercial land use (Boral/Greystanes House) with adjacent vacant land utilised as a carpark (minor occupancy).

3.2 Historical Land Title Records

Detailed historical land title records are included in **Appendix E**. A summary of the historical title documentation records as obtained by JBS&G and as provided reviewed in previous investigations (**Section 4**) for the site is provided below.

The historical land title records indicate that Lot 107 DP 1028208 has historically been utilised for agricultural purposes (owned by dairy farmers) prior to its use for regional quarrying/manufacturing activities. Following cessation of quarrying activities, the land title records indicate the property was utilised for commercial purposes (Boral Brick head offices). It is understood ISPT have acquired the property which is currently vacant.

Historical title records for Lot 63 DP 752051 indicate that the lot was Crown Land prior to 1963 and the proprietor of the site was the Council of the Municipality of Holroyd from 1963. An amalgamation of the Municipality of Holroyd, now Cumberland Council occurred in 2016 and it is understood Cumberland Council has been the owner of the property and is currently under acquisition by ISPT.

Historical title records included in DLA (2017) for Lot 10 DP 1022044 (included in **Appendix E**) indicate the lot was historically utilised for regional quarrying (blue metal) and agricultural (dairy farming) activities prior to large scale manufacturing associated with regional quarrying activities (Boral Bricks). It is understood the site has continued to be used for masonry manufacturing activities under occupation by Austral Masonry and is owned by IPST.

3.3 EPA Records

A search of the NSW EPA's public register maintained under the *Protection of the Environment Operations Act 1997* (POEO Act) was undertaken and is included as **Appendix F**.

The search identified that, for the site, there were:

- No prevention, clean up or prohibition notices; and
- No transfer, variation, suspension, surrender or revocation of an environmental protection licence.

The search indicated Austral Masonry (NSW) Pty Ltd previously owned by Boral Recycling Pty Ltd holds an Environmental Protection Licence (EPL 4664) for concrete works. JBS&G note manufacturing activities conducted under this licence are generally low risk and are not considered to represent a significant potential for contamination.

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

The site has not been notified to the EPA under section 60 of the CLM Act with regards to contamination. An excerpt of the list of properties notified to the EPA is included in **Appendix F**. Review of the list of properties notified to the EPA did not identify any nearby properties that may represent a contamination migration risk to the site.

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

A search was undertaken through the EPA PFAS register of contaminated sites and is included in **Appendix F**. The search identified that there are no sites in the Pemulwuy, Prospect or Greystanes area notified to the EPA with regards to PFAS contamination.

3.5 Australian and NSW Heritage Register

With the exception of a large body of igneous rock (Prospect Hil), a search of the Australian Heritage Trust database and the NSW Heritage Inventory did not reveal any heritage listed items at the site or

on immediately adjoining properties. Heritage information covers Aboriginal as well as European heritage and is included in **Appendix G**.

Prospect Hill, which forms part of the site's south eastern portion, is listed as a Historic Landmark by the NSW OEH. The search indicates Prospect Hill has state significance due to a combination of its unique landscape feature as Sydney's largest body of igneous rock and association with historical records.

3.6 Council Records

3.6.1 Council Planning Certificates

Planning Certificates issued under Section 10.7 (2 & 5) of the *Environmental Planning and Assessment Act 1979* (EP&A Act)) were obtained for the site from Cumberland Council for Lot 63 and Lot 107 and are included in **Appendix H**. The planning certificates included the following information regarding to the site:

- The site is located within Zone IN1 – General Industrial;
- The site is subject to Holroyd Development Control Plan (DCP, 2013);
- The site is part of the Western Sydney Employment Area (2009) SEPP;
- The site is not affected by coastal protection, mine subsidence, road widening and road realignment, flood related development controls or land reserved for acquisition;
- The site does not have an adopted policy in relation to bush fire, tidal inundation, subsidence or acid sulfate soil (ASS);
- The site is affected by Council's adopted policy on contaminated land, however there are no matters under s59(2) of the CLM Act applying to the site, and Council is not aware of any site verification certificates for the site;
- With regard to contamination, Council's records indicated that the site has been used for the dumping of waste and fill;
- Council is not aware that the site is affected by loose-fill asbestos insulation; and
- The Department of Land and Water Conservation indicates that the site is subject to potential salinity issues.

Records procured by JBS&G are consistent with those reported by others for the broader site including Lot 10 DP 1022044 (DLA 2017).

3.6.2 Council Letter

A copy of a letter of correspondence from then Holroyd City Council (dated 6 June 2008), provided in DP (2018), indicated that a historic letter issued to Boral Bricks, dated 20 September 1995 specified that there was the use of Council's land (Lot 63 DP 752051) for the "dumping of waste and fill" material.

Whilst the exact location referred to was not reported an attached hand drawn map indicated it likely referred to the Council lot (Lot 63 DP 752051) which forms part of the site as defined herein. The letter indicated the northern portion of the lot contained stockpiles of "waste brick, rubbish and aggregate". This is consistent with observations made by Woodward-Cyde (2000). The letter indicated southern portion of the Lot 63 comprised a relatively flat area of soft soils with isolated stockpiles of timber palates and waste material. Copies of the Council letter are provided in **Appendix H**. JBS&G note this property is currently undergoing remediation to remove identified asbestos, heavy metal and aesthetic issues such that the land is suitable for ongoing commercial/industrial land use (unencumbered by management).

3.7 Boral Letter

A copy of letter dated 9 November 1989 outlining discussions between Boral Quarries and the then Water Resource Commission (Blacktown City Council) regarding the construction of a flood retention basin associated with Girraween Creek catchment was provided to JBS&G for review. A copy of the letter is provided in **Appendix I**. The letter provided design plans for a retention basin to the north of the site, which was proposed to extend to within the site (Boral Quarry). Review of the letter indicated that as part of the construction of the flood retention basin, Boral would accept 10,000m^3 of fill material to batter the basin from 30 m within the site boundary, to above the 55.2 m flood levels. The discussion indicated site levels would be filled westward approximately 300 m. Review of aerial photographs (specifically the 1991 image, **Section 3.1** and **Appendix D**) indicates the proposed design and construction of the flood retention basin likely occurred, as generally outlined.

3.8 SafeWork NSW Dangerous Goods Records

DLA (2017) conducted a search of the Storage of Hazardous Chemicals database from SafeWork NSW for Lot 10 DP 1022044. Detailed records are provided in **Appendix J**. Review of the search indicated that dangerous goods licences have formerly been held within Lot 10 DP 1022044 including:

- Liquified Petroleum Gas (LPG);
- Dissolved acetylene;
- Compressed oxygen;
- Argon shield universal; and
- Compressed argon.

Woodward-Clyde (2000) reported the presence of a UST in the central east of the site, adjacent to the former brickworks office (**Figure 2b**). The UST was reported to provide fuel to adjacent kilns (and potentially fuel for truck fuelling) and was subsequently decommissioned (filled with water) in 1983. Relevant records/details as to decommissioning of the UST were not provided. Further, anecdotal evidence indicates several diesel ASTs were present within the central portion of the site (**Figure 2b**).

In addition to the above, the detailed site inspection indicated a 2,500 L diesel AST and small LPG AST were present on Lot 107 DP 1028208.These tanks were noted to be relatively new, appropriately bunded and without evidence of spills/leaks (JBS&G 2019a).

3.9 Integrity Assessment

Based on the range of sources and the consistency of the historical information as provided in **Section 3**, it is considered that the historical assessments undertaken at the site, outlined in **Section 4** provide an acceptable level of accuracy with respect to identifying potentially contaminating activities historically occurring at the site.

3.10 Summary

In summary, the site appeared to have been vacant pastoral/agricultural land and subject to minor quarrying activities prior to being utilised for bulk material storage associated with regional quarrying activities and manufacturing (Boral Bricks). The site was subject to ground disturbance (stockpiling/filling) from the 1960s to the late 1990s. Manufacturing has been ongoing in the northern portion of the site (Austral Masonry) and the southern portion has been utilised for a combination of commercial land use (Boral/Greystanes House) with adjacent vacant land utilised as a carpark (minor occupancy).

There are no notices or other information on state and local government records (other than the Council letter, **Section 3.6.2**) and data bases pertaining to contamination matters at the site.

4. Previous Investigations

The following sections provide a summary of the information and site characterisation data presented within assessment reports prepared by JBS&G and by others which have been made available for review by JBS&G. These reports include both historical and information relating to investigations conducted at that time.

Comments in relation to COPC are provided in the following text in relation to assessment criteria adopted by the author at the time of report preparation. This comprises the range of health investigation levels presented in NEPC (1999[19]) and EPA (1994[20]) for investigation results generally up to and including the end of 2012, and later guidelines provided by ANZECC (2000[21]) for groundwater thresholds and NEPC (2013[22]) for results from 2012.

Exceedances of currently adopted assessment criteria at the site are shown in accompanying summary results tables (**Appendix B**) and **Figure 5**. This is considered appropriate to assess the nature and distribution of contaminants as part of the Phase 1 and Phase 2 ESA (DSI) outlined herein and identify any contamination issues requiring further consideration in relation to proposed development of the site.

4.1 Lot 10 DP 1022044 – Austral Masonry

4.1.1 Phase 1 and Phase 2 Environmental Site Assessment – Woodward-Clyde (2000)

The following is a summary of information presented in an excerpt of Woodward-Clyde (2000) (as provided in Coffey (2013)). Detailed analytical results were not cited by JBS&G. As such the information has been summarised to provide broad site background information and supplement more recent environmental data at the site. A detailed map of the site features and AECs as identified and prepared by Woodward-Clyde (2000) is provided in **Appendix K** and as relevant on **Figure 2b** and **Figure 4**. JBS&G note there are discrepancies between site features as described in the report and that shown on the provided site diagram (**Appendix K**) (notable transcript errors regarding geographic reference points and locations) which have been resolved as part of the summary below.

Woodward-Clyde (2000) conducted a Phase 1 and Phase 2 ESA for the Boral Block and Paving Facility (now Austral Masonry). As part of the site history review the following was noted based on site observations and anecdotal evidence (discussions with site personnel at the time):

- One disused 10,000 L petrol and/or diesel UST (installed in 1962) was identified beneath brick pavers near the brickworks office (understood to have been drained and water filled in 1983). A bunded heavy fuel oil tank farm was noted to have been present at the site (removed prior to 1984) comprising 4 x 45,000 L ASTs in the south-eastern corner of the former brick works factory building (kiln firing);
- Various operating facilities were present on the site including one fuel oil AST outside the north western wall of the besser block factory, two in-ground (concrete) oxide effluent tanks connected to the settling pits, minor hydraulic oil spills, two above ground LPG tanks (7,500 L) near the former tank farm, 8 steel ASTs - storing oxides, a first flush pit and disused machinery area outside the western wall of the former brickworks factory;

[19] National Environment Protection (Assessment of Site Contamination) Measure, 1999. National Environment Protection Council, 1999 (NEPC 1999)

[20] Contaminated Sites: Guidelines for Assessing Service Station Sites. NSW EPA December 1994 (EPA 1994)

[21] *Australian and New Zealand Guidelines for Fresh and Marine Waste Quality, Volume 1.* Australian and New Zealand Environment and Conservation Council (ANZECC) and Agriculture and Resource Management Council of Australia and New Zealand, October 2000 (ANZECC 2000)

[22] *National Environment Protection (Assessment of Site Contamination) Measure, 1999 Amendment No. 1*. National Environment Protection Council 2013 (NEPC 2013)

- Asbestos building materials were noted in structures, including fuel lines to kilns. An area of buried asbestos in plastic bags (lagging from a portion of the kiln fuel oil lines) was reported to a depth of 3 m in an area fringing a disused shed to the west[23] of the former factory building in 1978 (**Figure 2b**). The buried asbestos was noted to have been backfilled with "waste material", the nature of which was unable to be ascertained. In addition, the following is noted:
    - Buried asbestos was subsequently believed to have been disposed off-site in 1996 based on an internal audit report prepared in 1999 by Boral (not cited). Based on anecdotal evidence, an asbestos survey was carried out at the site. Documentation was not provided by Woodward-Clyde (2000); and
    - JBS&G consider the reported location of the buried waste (**Appendix K**) to be incorrectly inferred around the existing shed to the south of the warehouse and was more likely present in vicinity of a former shed identified to the south west of the current shed (as evidenced in the 1991 aerial photograph (**Section 3.1**)) which was subsequently demolished.
- Two former oil (drum) stores were identified to the northern end of the former factory building which contained various oils, grease and solvents (**Figure 2b**). An internal audit by Boral in 1996 (not cited by Woodward-Clyde or JBS&G) noted that the surface soils in the area were contaminated with oil;
- It was noted that ash was deployed in manufacturing Besser bricks. The ash was noted to have been stockpiled on unsealed ground 100 m west of the former factory building. The exact location of stockpiled ash was unable to be ascertained by JBS&G;
- Woodward-Clyde cited an internal audit report by prepared by Boral (1996) (a copy of which was not provided) indicated the following:
    - Various polychlorinated biphenyl (PCB) containing equipment (transformers and capacitors) were present on the site in various locations including outside the south-western wall of the factory building (**Figure 2b**). The capacitors were reportedly disposed off-site when Boral vacated the site.; and
    - A large stockpile of waste (bricks and raw materials) was present to the south east of the Plant 1 (consistent with **Section 3.6.2**).
- Wastewater from the colouring machines (oxides) and polishers was identified to be pumped via underground lines to two settling pits prior to being direct to an overland wastewater recycling system;
- Localised staining was observed underlying large manufacturing equipment (besser block presses) within the factory building; and
- Disused machinery was being stored outside the western wall of the former brickworks factory building on sealed and unsealed ground.

Woodward-Clyde (2000) undertook a program of soil, sediment and surface water sampling and analysis to assess the potential impacts from the identified land uses. The investigation included the advancement of 87 soil bores (**Figure 3**) across the site. Analytical data was not cited by JBS&G. Woodward-Clyde reported:

[23] Note, the figure (**Appendix ***) shows this to be to the south of the factory building.

- Generally low levels of contaminants with most analytes below the criteria for industrial land use (compared against NEPC 1999). Traces of TPH were detected in three soil samples below the relevant criteria (maximum concentration of 665 mg/kg in SB73); and
- Water and sediment samples showed low levels of contamination, all of which were within the relevant human health criteria for industrial land use, although some of the latter exceeded the (then) interim sediment quality guidelines for chromium, copper, nickel, lead and zinc.

JBS&G note the investigation involved the collection of composite samples to target AECs and provide broad site coverage. Sampling and analysis for COPCs was considered to be generally appropriate. Noting the lapse in time since the investigation was conducted, Woodward-Clyde (2000) is generally considered to provide a reasonable baseline understanding of the site setting and potential contamination sources under occupation by Boral Bricks, prior to occupation of the lot by Austral Masonry.

4.1.2 Coffey Due Diligence Environmental Site Assessment (Coffey 2013)

Coffey conducted a due diligence assessment within Lot 10 DP 1022044 and Lot 216 DP 1030744, with the objective to identify existing contamination status at the site and determine the suitability of the area for ongoing commercia/industrial land use.

The scope of work undertaken by Coffey (2013) the following:

- Review of previous environmental site assessment conducted by Woodward-Clyde (2000);
- Targeted soil, sediment and surface water investigation program at selected AECs, supplemented by a limited sampling program in low risk areas to provide broad site coverage which involved the collection of:
    - Soil samples from 40 borehole locations (BH1 – BH40) and sediment samples from 3 locations (SED1 – SED3) (**Figure 3**), with selected samples analysed for heavy metals, polycyclic aromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene, toluene, xylene (BTEX), total petroleum hydrocarbons (TPHs), organochlorine pesticides (OCPs), PCBs and asbestos. Laboratory results were then compared against the Health-based Investigation Level (HIL-F), Table 5-A of NEPC (1999) pursuant to commercial/industrial land use; and
    - Surface water samples from 3 locations (SW1 – SW3), with selected sampled analysed for heavy metals, PAHs, BTEX, and TPHs and compared against ANZECC (2000) 95% species protection for freshwater aquatic ecosystems.

Data as presented by Coffey (2013) is provided in **Table A** (**Appendix B**). The following was reported by Coffey (2013):

- Laboratory analysis of selected soil and sediment samples returned concentrations below the respective laboratory limit of reporting (LOR);
- Laboratory analysis of surface water samples returned concentrations below the respective LOR with the exception of sample SW2, where heavy metal concentrations returned minor exceedances of the adopted criteria for arsenic, cadmium, chromium, cobalt, copper, lead, nickel, and zinc. The surface water sample was collected from a concrete lined settling pit located to the west of Plant 1 (**Figure 3**);
- Groundwater seepage was reported at a depth of 3.3 m bgs at one borehole location (BH17). JBS&G note this may indicate the potential for perched groundwater at the site; and

- Asbestos was identified at sample BH8/0.0-0.2m. Coffey inferred that the asbestos was potentially sourced from fall-out from asbestos roofing which was adjacent the sample location.

In summary, Coffey (2013) concluded that no gross or widespread contamination existed for the portion of the site and deemed the property was suitable for a continued commercial/industrial land use scenario.

JBS&G note given the due diligence nature of the assessment, laboratory analysis was conducted for a limited suite of contaminants and did not address all COPC for identified AECs. No PCB or semi/volatile organic compound (s/VOC) analysis was conducted in vicinity of waste oil and petroleum storage and handing areas. The investigation did not address potential contamination associated with known former petroleum storage infrastructure, including a former UST identified by Woodward-Clyde. Groundwater was not assessed as part of the investigation.

Coffey (2013) did not conduct further investigation in an area noted by Woodward-Clyde (2000) to contain buried asbestos waste (**Figure 2b**). Noting Woodward-Clyde (2000) reported the asbestos waste to have been removed in 1996 (based on anecdotal evidence only), JBS&G consider the potential for residual asbestos impacts within this area to remain.

Coffey (2013) reported that the thickness of the fill material could not be determined during the investigation, however the maximum recorded depth of 4 m was encountered at BH22. Noting this, no sampling and analysis of fill material was conducted at depth (predominate fill analysis was conducted within the top 0.5 m bgs).

4.1.3 Combined Phase 1 and Phase 2 Environmental Assessment (DLA 2017)

This report prepared for a Lot 10 DP 1022044 documents a Phase 1 and 2 ESA to provide an overview of the potential impacts of past and current land use activities on the site since the initial assessment was conducted by Woodward-Clyde (2000). The scope of works undertaken for DLA (2017) is outlined below. Historic sampling locations are shown in **Figure 3**. The investigation included the following:

- Detailed site inspection and identification of 15 AECs;
- The collection soil samples from 32 borehole locations and two sediment samples; and
- Collection of surface water samples from two locations and the installation and sampling of a single groundwater monitoring well.

Data as presented by DLA (2019) is provided in **Table A** (**Appendix B**). Based on the environmental program, the following was presented:

- Various anthropogenic wastes (ash, building rubble and other filling) were noted in soil, albeit to a limited extent.
- Analysis of collected soil and sediment samples indicated that all concentrations were below the relevant NEPC (2013) health criteria (HIL-D) and ecological screening levels (ESLs) for a commercial/industrial land use scenario;
- Low level copper concentrations were reported to exceed the adopted ecological criteria for 95% species protection for freshwater in two surface water samples collected from settling ponds (SP2 and SP3) and in groundwater from one monitoring well (MW30);
- Hazardous building materials (asbestos, PCBs) were identified within current/former site structures;
- DLA indicated that previous investigations reported the existence of ACM burial at ‘AEC10’, however no sample locations were made available to JBS&G; and

- In the present state DLA consider the site to be suitable for continuing commercial/industrial land use.

JBS&G note DLA (2017) did not compare analytical results against relevant Ecological Investigation Levels (EILs) pursuant to the requirements of NEPC (2013). DLA (2017) did not conduct further investigation in an area noted by Woodward-Clyde (2000) to contain buried asbestos waste (**Figure 2b**). Noting Woodward-Clyde (2000) reported the asbestos waste to have been removed in 1996 (based on anecdotal evidence only), JBS&G consider the potential for residual asbestos impacts within this area to remain.

DLA (2017) conducted a broad suite of analysis to target identified AECs. JBS&G note samples were not collected nor analysed from surface soils (or directly underlying hardstand pavement). Samples were collected at a depth of 0.5-0.6 m bgs. As such, JBS&G consider that should localised contamination be present in surface soils (including potential leaks/spills associated with hydrocarbon/chemical storage and/or asbestos contamination from known hazardous building materials etc.) they may not have been captured as part of the investigation.

JBS&G note that only one groundwater well was investigated (BH/MW30), whereas a minimum of three wells should be installed to determine flow direction and to determine baseline groundwater conditions around former petroleum storage locations, particularly underground petroleum storage systems (UPSS) as identified at the site (**Figure 2bb**).

4.2 Lot 107 DP 1028208 – Boral House

4.2.1 JBS&G Preliminary Contaminated Land Assessment (JBS&G 2019a[24])

JBS&G conducted a preliminary contaminated land assessment within Lot 107 in DP 1028208, with the objective to assess the contamination status of the site and feasibility of proposed future developments.

JBS&G (2019a) conducted a detailed site inspection which identified the presence of fill materials associated with historic land use (significant ground disturbance), two electrical transformers and general site activities associated with more recent land use (vehicle storage) which may pose potential sources of contamination. JBS&G (2019a) noted petroleum storage within this portion of the site including a single 2,500 L diesel AST and small LPG AST, which were observed to be in good condition, appropriately bunded with no evidence of leaks or spills. Given the age and condition of the ASTs, JBSG did not consider the ASTs to pose a potential risk of soil, soil vapour or groundwater contamination nor a risk to current/future site receptors. As such no further consideration was warranted

The scope of works comprised the following:

- Review of environmental setting, planning certificates, EPA licences and environmental incidents, historical photographs, as well as heritage records pertaining to the site and immediate surrounds;
- Advancement of 43 soil sampling locations (27 test pits), eight surface samples, four hand augers and three boreholes to depths between 0.1 and 8 m bgs and collection of representative soil samples;
- Conversion of three boreholes to groundwater monitoring wells to 8 m bgs, however collection of groundwater samples was not undertaken as the wells remained dry during the investigation; and

[24] *Preliminary Contaminated Land Assessment – Lot 107 DP 1028208, Clunies Ross Street, Pemulwuy, NSW (Rev 1)*, dated 17 June 2019

- Comparison of laboratory results against commercial/industrial land use criteria (HIL-D), as derived from NEPC (2013).

Based on the investigation the following was reported:

- Laboratory results returned concentrations of heavy metals and PAHs above the adopted ecological criteria, however JBS&G (2019) did not consider the minor exceedances to represent an unacceptable risk under a proposed commercial/industrial land use scenario, and given the existence of established and healthy site vegetation;
- The three installed groundwater wells were reported to be dry at the time of investigation, as such no groundwater samples were collected. Groundwater was therefore inferred to be present at depths greater than 8 m bgs;
- Approximately 300 m^3 of asbestos impacted in-situ fill material was identified adjacent to the north eastern portion of the lot;
- Asbestos fragments were observed in an embankment, associated with former service infrastructure (conduit/service pit);
- Approximately 50m^3 of scattered anthropogenic material including building and demolition waste (brick, concrete, scrap metal) and general rubbish (discarded fencing, tyres etc) were identified in the south western portion of the site; and
- In summary, JBSG (2019) concluded that remediation/management of asbestos impacted soil was required in ensure the site was suitable for commercial/industrial site suitability.

4.2.2 South East Boral House - Asbestos Clearance (JBS&G 2020[25])

JBS&G conducted an asbestos clearance following make-safe works (by others) to remove previously identified (JBS&G 2019a) bonded ACM at the sites surface within the southern portion of the site (associated with former site service infrastructure). JBS&G (2020) concluded that, following make-safe works, bonded ACM at the site surface had been adequately removed and that the area was safe for re-occupation under normal controls. JBS&G (2020) noted the potential remained for further ACM infrastructure to be potentially present within the adjacent embankment/service easement.

4.3 Lot 63 DP 752051 – 615A Great Western Highway

Lot 63 in DP 752051 (615A Great Western Highway) is currently being remediated in accordance with the Remedial Action Plan (RAP) (JBS&G 2019c, **Section 4.3.4**) prepared for this portion of the site as part of the contract of sale between the Cumberland Council and ISPT. Lot 63 in DP 752051 is currently being remediated for commercial/industrial land use, unencumbered by any environmental planning instrument (i.e. environmental management plan (EMP)).

The following summary of previous investigations for Lot 63 has been presented, noting that, given the site is currently being remediated and is subject to NSW EPA accredited Site Auditor review (to ensure the site is suitable for commercial/industrial land use) no further evaluation of the lot specific data set for was warranted as part of the investigation outlined herein (beyond the summary presented below) and as such has been excluded from the evaluation of the current contamination status of the site as discussed in **Section 11**.

[25] *South East Boral House – Asbestos Clearance (Rev 1).* JBS&G Australia Pty document 56425/127379 Ltd dated 11 February 2020 (JBS&G 2020)

4.3.1 Due Diligence Contamination Investigation, Douglas Partners (DP 2018[26])

Douglas Partners (DP) completed a due diligence investigation for a portion of the site (Lot 63 DP 752051) in December 2018 to assess potential contamination and draw conclusions regarding the site suitability for the proposed redevelopment.

The due diligence comprised a combined desktop study and limited soil sampling across accessible portions of the site. DP (2018) reviewed and included two earlier reports relating to the site:

- Alliance Geotechnical Pty Ltd, Supplementary Stage 1 Preliminary Site Investigation, 615A Great Western Highway, Pemulwuy, NSW, Lot 63 in DP752051, reference 8068-ER-1-1 dated 10 October 2018 (Alliance 2018; and
- Geotechnique Pty Ltd, Preliminary Contamination Assessment (Revised), Lot 63 in DP752051, Clunies Ross Street, Pemulwuy, NSW, reference 11762/1-AAR1, dated 28 July 2008 (Geotechnique 2008).

The intrusive investigation was limited to the advancement of seven (7) test pits via excavator within accessible areas of the site.

Key findings of the DP due diligence are summarised below:

- The site comprised a generally vacant vegetated parcel of land which had been subject to significant ground disturbance (filling) between 1965 and 1982.
- Potential sources of contamination at the site were identified as:
    - Imported fill; and
    - Fly tipped waste.
- Soil analysis undertaken on collected samples indicated that chemicals of concern were generally within the adopted site assessment criteria (NEPC (2013) HIL D – Commercial/Industrial land use);
- Field works reported fill containing anthropogenic material (glass, brick, tyre, plastic, concrete etc.) to a maximum depth of 1.5 m below ground level. Weathered dolomite was encountered underlying fill materials at three locations;
- Fill was noted to contain elevated heavy metal concentrations;
- Surface anthropogenic materials were identified and require removal prior to commencement of earthworks. It was estimated 20 to 40 m^3 of waste will require to be removed; and
- Bonded ACM was identified at three of the seven advanced locations (TP1, TP4 and TP5).

The findings from the limited intrusive investigation supported Douglas Partners' conclusion following the desk top study of a low potential for contamination across the this portion of the site.

JBS&G note the number of sampling locations advanced in DP (2018) was not acquiescent with EPA (1995[27]) *Sampling Design Guidelines* for an area of 8 114 m^2.

4.3.2 Due Diligence Assessment (JBS&G 2018)

JBS&G (2018) conducted a due diligence assessment to further characterise the extent of potential asbestos impacts at the site. The investigation included a review of DP (2018) and the

[26] *Report on Due Diligence Contamination Investigation - Proposed Commercial Development 615A Great Western Highway, Pemulwuy*. Douglas Partners Pty Ltd dated 7 December 2018, DP (2018);

[27] *Contaminated Sites: Sampling Design Guidelines*. NSW EPA 1995 (EPA 1995)

implementation of a sampling program in accordance with relevant EPA made or endorsed guidelines.

The field program involved the advancement of 20 test pit locations via an excavator on an approximate grid across the site. Asbestos analysis undertaken on collected soil samples indicated the following:

- Trace asbestos fines/friable asbestos (AF/FA) within fill material at six (JB03, JB06, JB08, JB10, JB11 and JB16) of the 20 advanced sample locations. AF/FA exceeded the adopted health-based criterion in fill at one sample location (JB06);
- ACM fragments were identified within fill at 10 (JB01, JB02, JB03, JB05, JB06, JB07, JB08, JB09, JB10 and JB16) of the 20 advanced sample locations; and
- Aesthetic issues in the form of general and building/demolition waste within the fill material were identified. JBS&G (2018) noted where fill material is to remain, consideration should be given to placement of impacted soils within areas where they will not be accessible/observable to future site occupants/workers upon completion of development activities.

JBS&G (2018) made the following conclusions/recommendations:

- It was recommended that, prior to submission of development applications to Council, the client conducts a detailed investigation of the lot to refine the remedial extent required to make the site suitable for the proposed land uses;
- The site will require to be managed under an asbestos management plan (AMP) given the identification of asbestos in exceedances of site suitability criteria; and
- Additional investigations and a remedial action plan (RAP) would be required to be prepared to address the presence of the aforementioned impacts and provide an appropriate framework for implementation of management/remediation activities and subsequent validation to demonstrate the suitability of the lot.

4.3.3 Detailed Site Investigation (JBS&G 2019b)

JBS&G (2019b) conducted a DSI to further characterise the lot and refine the remedial extents. The investigation comprised a review of previous investigations, updated EPA/heritage searches, and involved implementation of a systematic and targeted soil sampling program (48 test pit locations in total). The sampling density was double EPA 1995 sampling design guidelines as required by WA DOH (2018[28]) which are referenced by NEPC (2013).

Asbestos quantification (AQ) was completed on fill material to a maximum depth of 3.0 m bgs. Asbestos impacted fill was restricted to a distinct fill horizon which overlayed reworked dolerite/shale and/or natural soil/bedrock which was reported to be free of anthropogenic material and asbestos.

JBS&G (2019b) reported the following:

- Surface (0-0.1 m) ACM was observed at 29 of the advanced sample locations;
- Sub-surface ACM (present/absent) was reported in fill at 30 locations;
- ACM in fill (below 0.1 m bgs) exceeded the adopted commercial/industrial health screening level (HSL D) criterion in 10 L samples (NEPC 2013 protocol) at six locations (AQ14 0-0.4, AQ24 0.1-1.1, AQ27 0.1-0.7, AQ32 0.1-0.7, AQ34 0-1.0 and AQ38 0.1-1.1). ACM was

[28] *Guidelines for the Assessment Remediation and Management of Asbestos-Contaminated Sites in Western Australia*, May 2009. Western Australia Department of Health (DOH), (DOH 2018)

reported below the adopted ACM HSL D criterion in 10 L samples in fill (below 0.1 m bgs) at 21 additional locations;

- A total of 98 soil samples were submitted to the laboratory for asbestos analysis. Five samples (AQ19 0.1-0.9, AQ20 0.1-1.1, AQ40 0.1-1.1, QC01 (AQ40 0.1-1.1) and AQ44 0.1.-0.6) from fill at four locations exceeded the adopted AF/FA HSL D criterion of 0.001% w/w in 10 L samples. Ten additional locations reported trace levels of AF/FA in fill below the adopted AF/FA criterion;
- Based on the results, asbestos impacted fill (absence/presence) was restricted to a discrete soil type of brown silty clay with varied inclusions of porcelain, brick, metal, slag, timber identified from surface to a maximum depth of 2.0 m bgs across the majority of the lot. Anthropogenic inclusions observed in fill under a commercial/industrial land use scenario were not considered to pose an unacceptable aesthetic issue with the notable exception of fill within the north eastern portion of the lot;
- Lead was reported at two locations (three samples; AQ40 0.5-1.1 (2100 mg/kg) and duplicate QC01J (1900 mg/kg) and AQ45 0.1-0.2 (1800 mg/kg)) exceeding the adopted health criterion. Following statistical evaluation of the data set, the lead exceedances were not considered to represent an unacceptable health risk;
- Heavy metal concentrations exceeded the adopted ecological criteria at a number of locations. However, with consideration of the proposed development comprising a commercial/industrial allotment surfaced by hardstands these exceedances were not considered to represent unacceptable risk noting established site vegetation at the time of investigation appeared healthy and any future flora to be established in this portion of the site would likely be within constructed garden beds/imported growing media;
- Fill was reported to contain low leachate properties and not to represent a risk to groundwater. Noting the proposed development will is anticipated to be largely paved, groundwater infiltration and in turn migration is limited. It was noted that fill at sample AQ40 0.5-1.1 reported a lead concentration which demonstrated a moderate leachability. Notwithstanding this material was required to be removed due to the reported AF/FA exceedances (AQ40 0.1-1.1);
- Based on a detailed desktop assessment, groundwater was noted likely to be saline and located at depth, and on this basis it was not considered be suitable for beneficial re-use;
- Bulk anthropogenic / building and construction waste was identified at the lot surface and in areas of fill at depth and was considered to pose an aesthetic issue which required remediation (removal). It was estimated approximately 100 to 200 m^3 of waste was present on site;
- Reworked dolerite/shale materials and natural weathered dolerite were identified underlying fill materials. There was no evidence of staining, odours, ACM or gross anthropogenic waste observed in materials underlying fill at the lot; and
- Based on review of the analytical results fill materials and reworked natural soils at the lot were reported to generally fall within the general solid waste (GSW) (non-protrusible) NSW Waste Classification (EPA 2014[29]) thresholds, and classifiable as Special (Asbestos) Waste where asbestos is present. Fill at sample location AQ40 0.5-1.1 was classifiable as restricted solid waste (RSW)/Special (asbestos).

JBS&G (2019b) concluded:

[29] *Waste Classification Guidelines Part 1: Classifying Waste*. NSW EPA 2014 (EPA 2014)

- A RAP should be prepared for the lot to address the above aesthetic and asbestos impacted media as follows:
    - surficial and sub-surface anthropogenic materials representing an aesthetic issue requiring remediation;
    - AF/FA impacted fill at five locations (DSI and inclusive of JBS&G (2018)). It was estimated approximately 550 m^3 of AF/FA impacted fill required removal from the area; and
    - ACM was identified within a discrete fill horizon and considered to pose an unacceptable health risk requiring remediation to facilitate commercial/industrial land use without ongoing management. Following removal of AF/FA impacted fill, it was estimated that 3 800 m^3 of ACM impacted soil required remediation.

4.3.4 Remedial Action Plan (JBS&G 2019c)

JBS&G (2019c) prepared a detailed RAP to address unacceptable levels of asbestos and anthropogenic waste identified in JBS&G (2019b) to make the site suitable for commercial/industrial land use unencumbered by any management plans (EMP etc.). The preferred remedial method was to excavate and dispose of friable asbestos hotspots (offsite), with the balance of impacted fill to be excavated and subject to rake/tyne and picking of bonded ACM and anthropogenic waste considered to pose human health and aesthetic issue, respectively.

5. Data Gaps

Based on the review of the site history and previous site investigation data, the following data gaps have been identified in relation to the site:

Lot 216 DP 1030744

- Additional sampling and analysis required to address identified sources of potential contamination (surface water/groundwater/sediment and surface soils/fill) and satisfy the required sampling density in accordance with the *Sampling Design Guidelines* (EPA 1995[30]) and NEPC (2013).

Lot 601 DP 1047403

- Additional sampling and analysis required to address identified sources of potential contamination (fill) and satisfy the required sampling density in accordance with EPA (1995) and NEPC (2013).

Lot 10 DP 1022044

- Additional sampling and analysis for a range of COPC (not adequately assessed in previous investigations) is required for surface water, sediment, soil and groundwater including VOCs and PFAS;
- Additional groundwater sampling and analysis is required down gradient of historic and current petroleum storage (ASTs and USTs) and/or chemical storage and handing areas;
- Additional soil sampling and analysis for a range of COPC is required (in surface soils and at depth) down gradient of historic and current petroleum storage (ASTs and USTs) and/or chemical storage and handling areas;
- Additional sampling and analysis of fill material is required from within the fill profile at depth (noting previous investigation generally assessed shallow fill) which excluded a substantial portion of identified fill material;
- No sampling and analysis of soil has been conducted underlying existing site structures (Plant 1 and Plant 2 (**Figure 2b**)), as such, sampling and analysis is required;
- Additional screening of asbestos in soil is required for land surrounding Lot 63 DP 752051 (615A Great Western Highway) which has been extensively filled and identified to contain bonded and non-bonded (friable) asbestos and anthropogenic materials representing a potential human health and aesthetic issue (**Section 4.3**), respectively;
- Additional screening of potential residual waste and asbestos in soil is required in vicinity of a former “disused shed” located in the south west of the lot to confirm the previously reported buried waste material and asbestos lagging have been adequately removed;
- Additional investigation is required to assess soil physiochemical parameters such as pH and cation exchange capacity (CEC) to enable appropriate consideration of potential ecological risks consistent with current NEPC (2013) NEPM guidelines.
- No soil vapour assessment has been completed and this is required in areas identified as containing current and/or former potential sources of volatile contaminants; and
- Additional assessment is required to address the nature/extent of potential contamination associated with the presence of hazardous building materials (ACM, heavy metals, PCBs)

[30] *Contaminated Sites: Sampling Design Guidelines*. NSW Environment Protection Authority 1995 (EPA 1995)

identified within existing/former site structures which may have contaminated surrounding soils (due to damage/breakages/weathering etc).

Lot 107 DP 1028208

- Additional sampling and analysis required to satisfy the required sampling density in accordance with EPA (1995) and NEPC (2013);
- No soil assessment has been completed within the south western portion of the lot. This is required noting JBS&G (2019a) identified the presence of large stockpiles of shale (fill), which may contain potential contamination (buried anthropogenic material/other waste material); and
- The potential remains for further ACM to be buried within a former service easement/embankment identified in the south west of the site.

Note, additional investigation to address the data gaps identified above are to be completed prior to issue of a construction certificate.

6. Conceptual Site Model

6.1 Areas of Environmental Concern

Based on the site history review and observations of site conditions during the detailed site inspection, areas of environmental concern and potential contaminants of concern have been identified for the assessment and are presented in **Table 6.1**. Site features are shown on **Figure 2b**, AECs are shown on **Figure 4**.

Table 6.1 Areas of Environmental Concern and Associated Contaminants of Potential Concern

Area of Environmental Concern (AEC)	COPC	Location
AEC 1: Fill material from unknown sources	Heavy metals, PAHs, TRH, BTEX, OCPs, PCBs, PFAS and asbestos.	Entire Site
AEC 2: Potential Impacted Fill from Known Source	Heavy metals, asbestos and aesthetic issues.	Lot 10 DP 1022044 Lot 107 DP 1028208
AEC 3: Settling Ponds	Sediment Heavy metals, PAHs, OCPs/PCBs, TRH, VOC, asbestos and PFAS. Surface Water Heavy metals, PAHs, TRH/BTEX, VOCs, nitrate/nitrite, ammonia and PFAS.	Lot 10 DP 1022044 Lot 216 DP 1030744
AEC 4: Petroleum Storage	Heavy metals, PAHs, TRH/BTEX, VOC, sVOC	Lot 10 DP 1022044 Lot 107 DP 1028208
AEC 5: Hydraulic Oil Storage	Heavy metals, PAHs, TRH/BTEX, PCB and VOC/sVOC	Lot 10 DP 1022044
AEC 6: Raw Material/Waste Storage	Heavy metals, PAHs, TRH/BTEX, OCP, PCB, PFAS and asbestos	Lot 10 DP 1022044
AEC 7: Chemical Storage	Heavy metals, PAHs, PCBs, VOC/sVOC, TRH and PFAS.	Lot 10 DP 1022044
AEC 8: Hazardous Building Materials	Heavy metals, PCBs and asbestos.	Lot 10 DP 1022044 Lot 107 DP 1028208
AEC 9: Electrical Transformers	Heavy metals and PCBs.	Lot 10 DP 1022044 Lot 107 DP1028208
AEC 10: Parking areas	Heavy metals, TRH/BTEX and VOC.	Lot 10 DP 1022044 Lot 107 DP 1028208 Lot 63 DP 72051
AEC 11: Former location of inferred buried asbestos and waste material.	Heavy metals, PAHs, TRH, BTEX, OCPs, PCBs, PFAS and asbestos.	Lot 10 DP 1022044

6.2 Potentially Contaminated Media

Potentially contaminated media present at the assessment area include:

- Sediments;
- Fill materials;
- Natural soils/bedrock;
- Soil vapour;
- Surface waters; and
- Groundwater.

Table 6.2 below provides a breakdown of potentially contaminated media with identified AECs presented in **Table 6.1**.

Table 6.2: Potentially Contaminated Media

AEC	Potentially Contaminated Media	Comment
AEC 1	Fill material	Potential remains for contamination in fill material resultant from historical/current manufacturing land uses, importation of fill materials of unknown origin or use of site waste materials to create former/existing site levels and/or as may be associated with former agricultural/industrial land use.
	Natural soils	Natural soils underlie fill materials and may potentially be impacted by the downward migration of contaminants through fill, particularly in open areas where infiltration is possible and/or where seepage water may pass through fill. Natural soils may also be impacted by contaminated groundwater migration.
	Groundwater	There is the potential for the leaching of contaminants vertically from fill into groundwater and/or potential off-site impacts.
AEC 2	Fill material	Potential remains for fill material with known heavy metal, asbestos and anthropogenic waste on Lot 63 DP752051 to extend beyond the lot boundary to other areas of the site.
	Natural soils	Natural soils underlie fill materials and may potentially be impacted by the downward migration of contaminants through fill, particularly in open areas where infiltration is possible and/or where seepage water may pass through fill. Natural soils may also be impacted by contaminated groundwater migration.
	Groundwater	There is the potential for the leaching of contaminants vertically from fill into groundwater and/or potential off-site impacts.
AEC 3	Surface water	Potential remains for contamination in surface waters resultant from historical/current manufacturing land uses.
	Sediment	Potential remains for accumulation of contaminants within setting ponds, particularly those that are highly sorbed and/or readily transported hydrologically.
	Groundwater	There is the potential for the migration of contaminants vertically from surface water/sediment leaching into groundwater.
AEC 4, 5, 7, 9 and 10	Fill material	Potential remains for contamination in fill resultant from spills, leaks of chemical, oil, petroleum and vehicle storage associated with the commercial/industrial land use of the site.
	Natural soils	Natural soils underlie fill materials and may potentially be impacted by the downward migration of contaminants through fill, particularly in open areas where infiltration is possible or where subsurface leakage (i.e from USTs) could occur or seepage water passes. Natural soils may also be impacted by contaminated groundwater migration.
	Soil vapour	Given the potential volatile nature of some contaminants, there is a potential for ground gas/soil vapour to be a contaminated medium.
	Groundwater	There is the potential for the leaching of contaminants vertically from fill into groundwater and/or potential off-site impacts.
AEC 6	Fill material/natural soils	Potential remains for contamination in fill material resultant from raw material and/or waste material storage (fly ash/slag) used to create former/existing site levels. Given the nature and distribution of waste material there may be potential for the downward migration of contaminates through fill to the underlying natural soils and groundwater.
AEC 8	Fill material	Potential remains for hazardous building materials to have contaminated surrounding surface soil/fill material.
AEC 11	Fill material/natural soils/groundwater	Potential remains for contamination in fill material associated with formerly identified buried waste and asbestos. Given the nature of waste material is generally unknown there may be potential for the downward migration of contaminates through fill to the underlying natural soils and groundwater.

6.3 Potential for Migration

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

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

The potential contaminants identified as part of the site/assessment area history review and previous investigation are generally in either a solid form (e.g. heavy metals, asbestos, etc.) and liquid form (e.g. fuel, lubricants, etc.), however, dependent upon concentrations, there is the potential for TRH/VOC impacts to occur in a vapour form also in soils underlying the site.

As the site is covered by a combination of concrete/asphaltic pavement and vegetation (landscape garden beds, grass cover and timbered areas), the potential for windblown dust migration of contamination from the site is generally low. The potential for contamination migration via surface water movement and infiltration of water and subsequent migration through the soil profile is considered generally to be low were impermeable pavements and moderate where exposed surface soil is present. Drainage lines and non-bunded settling ponds are present (Lot 10 DP1022044), these are considered to be a potential vector for contamination migration via surface water and sediments as such in these areas there is a moderate to high potential of subsequent contaminant migration through the soil profile (dependant on the nature of potential contamination).

Notwithstanding, given that the underlying natural soil is anticipated to be of a low permeability (silty clays) which retard the movement of subsurface water, there is considered to be a low risk of potential for migration of contamination through surface soils and subsequently via groundwater at depth (dependant on the nature and distribution of contamination). Notwithstanding, the risk of groundwater impact is higher where current/former petroleum/chemical storage has been identified (particularly USTs).

The vapour generation potential associated with volatile and semi-volatile potential contaminants of concern (TRH, BTEX, VOCs) are identified as a potential migration pathway, particularly in areas where subsurface infrastructure, such as stormwater, sewer, USTs underlie the site.

6.4 Potential Exposure Pathways

Based on the contaminants of concern identified in various media as discussed above, the potential exposure pathways for the site include:

- Inhalation of potential COPC including asbestos, heavy metal impacted dust and/or vapours migrating upwards from fill material of unknown origins or impacted surface soils resulting from historical leaks/spills, industrial activities etc.; and/or
- Potential dermal and oral contact to impacted soils as present at shallow depths and/or accessible by future service excavations across the extent of the site; and/or
- Potential oral and dermal contact to surface waters and sediments within current/former settling pits as accessible by current and future site users and/or during future excavation/redevelopment; and/or
- Potential contaminant uptake by vegetation within landscaped areas.

6.5 Potential Receptors

Potential human populations who may be exposed to site impacts in the future (if they are not remediated or appropriate management is not implemented prior to or during development) include:

- Current and future site occupants/workers/visitors who may potentially be exposed to contaminants of concern through direct contact with impacted soils / groundwater / surface

waters and sediments and/or inhalation of dusts/fibres/vapours associated with impacted soils; and/or

- Excavation/construction/maintenance workers conducting activities at the site, who may potentially be exposed to contaminants of concern through direct contact with impacted soils/groundwater/vapours present within excavations and/or inhalation of dusts/fibres associated with impacted soils;
- Flora species established on the site;
- Downgradient ecological receptors including the fresh water Girraween Creek; and
- Existing and/or future users/occupants of adjoining residential, commercial/industrial properties should contamination be identified to be migrating from the current site.

6.6 Preferential Pathways

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

Man-made preferential pathways are present throughout the assessment area, generally associated with fill materials, and at near surface depths over the remainder of the assessment area. Fill materials are anticipated to have a high permeability.

Sub-surface services are also present, or will be present as part of site redevelopment, throughout the assessment area. Preferential pathways can be created by the generally higher permeability backfill used to re-instate these trenches.

Preferential pathways are also important in the assessment of potential off-site sources of COPC. Preferential pathways are potentially present in the adjoining road network, as associated with service easements.

7. Sampling and Analysis Plan

7.1 Data Quality Objectives

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

Lot 63 in DP 752051 (615A Great Western Highway) is currently being remediated in accordance with the RAP (JBS&G 2019c) prepared for this portion of the site (**Section 4.3.4**) as part of the contract of sale between the Cumberland Council and ISPT for commercial/industrial land use, unencumbered by any environmental planning instrument. As such, no further assessment was required as part of the current investigation..

State the Problem

The site is proposed to be redeveloped to accommodate a commercial/industrial warehouse logistics estate (**Section 1.4**). Following review of previous investigations (**Section 4**) conducted at the site, data gaps that pose potential risks from soil, groundwater/surface water and vapour contamination were identified at the site. As such, additional environmental data is required to sufficiently characterise the site to enable a RAP to be prepared that, when successfully implemented, will ensure the assessment area is suitable for the intended land use.

The investigation outlined herein has been undertaken to address identified data gaps in accessible areas of the site . As discussed in **Section 5**, additional investigation is required to be undertaken in the south western portion of the site to sufficiently characterise site fill material in accordance with relevant EPA made and endorsed guidelines and to ensure the sampling density as specified in EPA (1995) and NEPC (2013) are achieved.

Further, previous investigations have been restricted to portions of the site. As such, a site wide Phase 1 and Phase 2 ESA is required to address the potential for contamination at the site with regard to the proposed commercial/industrial land use. Information of known and potential site contamination conditions inferred from the desktop assessment, review of previous investigations (**Section 4**) and observations made during the site inspection and current investigation, resulted in the development of the CSM presented in **Section 6**, and the respective data forms the basis of the Phase 1 and Phase 2 ESA (DSI) as outlined herein.

7.1.1 Identify the Decision

Based on the decision-making process for assessing urban redevelopment sites detailed in EPA (2017[31]), the following decisions must be made:

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

[31] *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme (3rd edition)*, NSW Environmental Protection Authority, October 2017 (EPA 2017)

7.1.2 Identify Inputs to the Decision

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

- Desktop review and update of readily available records including those held by the NSW EPA, department of Environment and Heritage and site setting including a review of site geology, hydrology, hydrogeology etc;
- Desktop review of the available historic contamination assessment reports to identify areas of potential concern and collation of relevant data to be utilised as part of the Phase 1 and Phase 2 ESA (DSI) report outlined herein;
- Detailed site inspection/walkover;
- Observations and interpretation of fill and natural material through intrusive investigation and screening of site soils;
- Soil sampling and analysis from within the accessible south western portion of Lot 107 DP1028208 to provide adequate characterisation data of materials within this portion of the site;
- Development of appropriate assessment criteria for evaluation of soil impacts;
- Field parameters measured utilising calibrated equipment during the intrusive investigation;
- Laboratory analysis of soil samples of potentially contaminated media for contaminants of concern; and
- Confirmation that data generated by sample analysis are of an acceptable quality to allow reliable comparison to assessment criteria by review of quality assurance / quality control (QA/QC) as per the data quality indicators established in **Section 7.1.5**.

Specifically, sufficient data needs to be collected from each of the identified potentially impacted media in the identified AECs for the associated COPCs (**Table 6.1**).

7.1.3 Define the Study Boundaries

The lateral study boundaries are limited to the assessment area of the site as shown on **Figure 2b.** The vertical extent of the investigation was to a maximum depth of 2 m (TP03), 0.5 m into natural materials.

Seasonality was not assessed as part of this investigation. Data is therefore representative of the timing and duration of the current investigation in which site inspection and sampling occurred.

7.1.4 Develop a Decision Rule

Analytical data for potentially contaminated media was assessed against NSW EPA endorsed criteria as identified in **Section 8**.

Statistical analysis of the soil data set was undertaken, if required, in accordance with relevant guidance documents. The following statistical criteria was adopted:

- No analyte concentration in any sample exceeds the adopted criterion; or
- The upper 95% confidence limit on the average concentration for each analyte (calculated for samples collected from consistent soil horizons, stratigraphy or material types) must be below the adopted criterion; and
- No single analyte concentration shall exceed 250% of the adopted criterion; and
- The standard deviation of the results for an analyte must be less than 50% of the criterion.

The decision rules adopted to answer the decisions identified in **Section 7.1.2** are summarised in **Table 7.1**.

Table 7.1 Summary of Decision Rules

Decisions Required to be Made	Decision Rule
1. Are there any unacceptable risks to on-site future receptors from soils/sediments or groundwater/surface water?	Analytical data was compared against EPA endorsed criteria. The criteria in **Section 8.2** were adopted with respect to soil/sediment and groundwater/surface water. If the statistical criteria were satisfied, the answer to the decision was **No**. If the criteria were not satisfied, the answer to the decision was **Yes**.
2. Are there any chemical mixtures?	Were there more than one group of contaminants present which increase the risk of harm? If there is, the answer to the decision was **Yes**. Otherwise, the answer to the decision was **No**.
3. Are there any aesthetic issues?	If there were any ACM fragments on the ground surface, any unacceptable odours or soil discolouration, or excessive extraneous/foreign/waste materials, the answer to the decision was **Yes**. Otherwise, the answer to the decision was **No**.
4. Is there any evidence of, or potential for, migration of contaminants from the site?	Based on assessment results, was there any evidence of, or the potential for, migration of unacceptable contaminant concentrations to migrate from the site? If yes, the answer to the decisions was **Yes**. Otherwise, the answer to the decision was **No**.
6. Is a site management strategy required?	Is the answer to any of the above decisions Yes? If **Yes**, a site management strategy is required. If **No**, a site management strategy is not required.
6. Are there any data gaps?	Were there any data gaps identified that require further investigation. If **Yes**, further investigation is required. If **No**, no further investigation is required.

7.1.5 Specific Limits on Decision Errors

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

Specific limits for this project have been adopted in accordance with the appropriate guidance from the NSW EPA and NEPC (2013) and appropriate indicators of data quality (DQIs) established for the project as discussed below in relation to precision, accuracy, representativeness, comparability, completeness and sensitivity (PARCCS parameters). The acceptable limit on decision error is 95 % compliance with DQIs.

The DQIs and data assessment criteria are summarised in **Table 7.2**.

- **Precision** - measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD) of duplicate samples.
- **Accuracy** - measures the bias in a measurement system. The accuracy of the laboratory data that are generated during this study is a measure of the closeness of the analytical results obtained by a method to the 'true' value. Accuracy is assessed by reference to the analytical results of laboratory control samples, laboratory spikes and analyses against reference standards.
- **Representativeness** – expresses the degree which sample data accurately and precisely represent a characteristic of a population or an environmental condition. Representativeness is achieved by collecting samples on a representative basis across the site, and by using an adequate number of sample locations to characterise the site to the required accuracy.

- **Comparability** - expresses the confidence with which one data set can be compared with another. This is achieved by maintaining a level of consistency in techniques used to collect samples; 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 determined by 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 7.2 Data Quality Indicators

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

- [1] If the RPD between duplicates is greater than the pre-determined data quality indicator, a judgment was made as to whether the excess is critical in relation to the validation of the data set or unacceptable sampling error is occurring in the field.
- [2] A qualitative assessment of compliance with standard procedures and appropriate sample collection methods was completed during the DQI compliance assessment.

7.2 Optimise the Design of Obtaining Data

Various strategies for developing a statistically based sampling plan are identified in EPA (1995), including judgemental, random, systematic and stratified sampling patterns. For an area of 5 ha, EPA (1995) recommends a minimum of 55 sampling locations.

Based on the finding of previous investigations (**Section 4**) and in accordance with EPA (1995), sampling within Lot 107 DP 1028208 was a targeted sampling approach was undertaken to ensure the identified data gaps in this area of the site (**Section 5**) were addressed.

Historically 43 sample locations were advanced within Lot 107 DP1028208. To supplement the existing site characterisation an additional 12 sample locations were advanced to assess fill material within the south western portion of the site and to meet the minimum soil sampling density in EPA (1995).

Based upon the objectives of the investigation and the available site use information, the density of the investigation undertaken is considered appropriate.

Based on review of previous investigations (**Section 4**), JBS&G consider the number of systematic sample locations across the majority of the site to have been satisfied in accordance with EPA (1995) and NEPC (2013) as shown on **Figure 3**. A range of data gaps including those addressed herein require targeted investigation as presented in **Section 5**.

7.2.1 Soil Sampling Methodology

The adopted soil sampling methodologies for the assessment outlined herein were completed via mechanical advancement of soil sampling locations via an excavator and the collection of soil samples, conducted in general accordance with the requirements of NEPC (2013) and other relevant EPA made or endorsed guidelines.

To assess for COPC identified in **Table 5.1**, discrete 500 mL bag samples and 250 mL jar samples of soil were collected at regular intervals based on the encountered strata at each sample location. Discrete soil samples were collected as grab samples and taken directly from the hand excavator bucket to avoid the loss of volatile compounds and immediately transferred to laboratory supplied sample jars. A new pair of nitrile gloves was worn for each sample. The sample containers were then transferred to a chilled esky for sample preservation prior to and during shipment to the testing laboratory. A chain-of-custody form was completed and forwarded with the samples to the testing laboratory. Based upon field observations, samples were analysed in accordance with the analytical schedule detailed in **Table 7.3.**

Not all samples collected were analysed. Specific samples were chosen for analysis based on the findings of the previous investigations, desktop review, field observations and to provide detailed and broad site contamination characterisation.

For QA/QC purposes, as part of investigations (**Section 4**) field duplicates and triplicates were planned at a rate of 1/20 primary samples. Rinsate samples were obtained from non-disposable sampling equipment and trip spike and trip blank samples accompanied sampling events where appropriate/required. Standard industry methods were implemented by suitably qualified, trained and experienced consultants. It is noted not all QA/QC samples were utilised, however the methodology allowed for collection of data able to be relied upon for the investigation objectives.

During the collection of soil samples, features such as seepage, discolouration, staining, odours and other indicators of contamination were noted. A calibrated Photo Ionisation Detector (PID) was utilised to screen for Volatile Organic Compounds (VOCs) within the sampled material.

7.2.2 Duplicate and Triplicate Sample Preparation

Investigations by JBS&G involved the collection of samples from selected locations using standard operating procedures including equipment decontamination and replication, whereby sufficient soil

was collected to provide a primary, blind (intra-laboratory) duplicate and split (inter-laboratory) duplicate (triplicate) samples.

The collected soil samples were divided laterally into three samples with minimal disturbance to reduce the potential for loss of volatiles and placed in three clean glass jars and sample bags as appropriate.

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

JBS&G note additional duplicate and triplicate sampling was conducted by Coffey (2013) and DLA (2017) as part of the investigations. Detailed QA/QC assessment as prepared by others is provided in **Appendix L.**

7.2.3 Laboratory Analysis

JBS&G contracted Eurofins MGT (Eurofins) as laboratory for the required chemical analyses. Eurofins was NATA accredited for the required analyses. In addition, the laboratories were required to meet JBS&G's internal quality assurance/quality control (QA/QC) requirements.

The following **Table 7.3** summarises the analysis schedule as completed as part of the current investigation, which forms part of the site wide Phase 1 and Phase 2 ESA outlined herein.

Table 7.3 Analytical Schedule

Lot	Sample Type	No. of Sampling Locations	Analyses
Lot 107 DP 1028208	Soil	12 Locations (test pit samples)	Heavy Metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn) – 12 samples PAH – 12 samples TRH/BTEX – 12 samples OCP/PCB – 12 samples Asbestos (500 mL) – 12 samples pH/CEC – 2 samples

A rinsate sample was obtained from non-disposable sampling equipment throughout the sampling activities and submitted for analysis at the completion of the sampling event.

8. Assessment Criteria

The following outlines the criteria adopted as part of the current assessment and as relevant to the evaluation of the site data set (inclusive of data as presented in historic investigations outlined in **Section 4**, as discussed in **Section 11**.

8.1 Regulatory Guidelines

The following guidelines are applicable to the site:

- *National Environment Protection (Assessment of Site Contamination) Measure 1999*, National Environment Protection Council, 2013 (NEPC 2013);
- *Waste Classification Guidelines,* NSW EPA, 2014 (EPA 2014);
- *Contaminated Sites: Sampling Design Guidelines*, NSW EPA, 1995 (EPA 1995);
- *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites*, NSW OEH, 2011 (OEH 2011[32]);
- *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme (3rd edition)*, NSW EPA, October 2017 (EPA 2017);
- *Guidelines for the Assessment Remediation and Management of Asbestos-Contaminated Sites in Western Australia, May 2009 (updated 2018).* Western Australia Department of Health (DOH), (DOH 2018);
- *Australia and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG 2018); and
- *Guidelines for Managing Risks in Recreational Water.* National Health and Medical Research Council, Canberra (NHMRC 2008).

8.2 Assessment Criteria Selection

8.2.1 Soil and Sediment Assessment Criteria

The proposed development and ongoing use of the site is equivalent to a NEPC (2013) land use scenario of commercial/industrial (HIL D). Concentrations of contaminants in soil were compared against HILs and HSLs, and EILs and ESLs, as outlined below:

- HILs: HIL D – Commercial/Industrial;
- HSLs: HSL D – Commercial/Industrial (Clay - fine textured soils);
- EILs and ESLs: Commercial/Industrial (aged soils);
- Management Levels for Commercial/Industrial (Clay - fine textured soils) (NEPC 2013); and
- Aesthetic considerations as per NEPC (2013).

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

Note, as a conservative measure consideration was given to ANZG interim sediment quality guidelines (ISQG) default guideline values (DGVs) for sediment analysis, noting the samples were collected from small man-made retention basins (not from the receiving natural freshwater environment).

[32] JBS&G note revised reporting guidelines were release in April 2020 after the reporting herein had been substantially completed.

A criterion of absence/presence (i.e. no visible) has been adopted for asbestos to achieve the objectives of the investigation. Aesthetics were also considered in the assessment of site suitability consistent with EPA (2017) and NEPC (2013).

Table 8.1 below details derived soil EILs as per NEPC (2013) guidance. Note, pH and CEC are calculated averages based on reported values (**Table A, Appendix B**). This is considered appropriate given fill material and natural generally comprised silty clays. All EIL values are in mg/kg unless otherwise specified.

Table 8.1 Derivation of Soil EILs

Physical Parameters	
pH (pH units)[5]	CEC (meq/100g)[5]
6	33
Investigation Levels	
	EIL
Contaminant	Commercial and Industrial Land Use (mg/kg)
Arsenic	160
Chromium (III)	310[6]
Copper	320[1]
DDT	640
Lead	1800
Naphthalene	370
Nickel	730[2]
Zinc	620[3]

[1]Selected utilising the CEC value to determine the most conservative EIL.
[3] Selected based on the value for CEC.
[4] Selected based on value for pH and CEC resulting in the most conservative EIL.
[5] pH and CEC are based on an average reported value, noting fill and natural comprised silty clays. This is considered appropriate for the purposes of the investigation. Detailed results are provided in **Table A, Appendix A.**
[6] Based on a conservative assumption of 20% clay content.

Review of ground conditions as reported by others (**Section 4**) and shown in detailed borehole/testpit logs (**Appendix M)** indicated fill and underlying natural materials encountered in Lot 10 DP 1022044, Lot 216 DP 1030744 and Lot 601 DP 1047403 were generally consistent with that reported by JBS&G in other areas of the site. As such, the derived EILs in **Table 8.1** above were applied to the site data set as a whole (**Table A, Appendix B**). This is considered appropriate to assess for potential risks to ecological receptors at the site as part of the Phase 1 and Phase 2 ESA outlined herein.

8.2.2 Groundwater and Surface Water Assessment Criteria

Groundwater and surface water analytical data evaluated as part of the site wide investigation has been compared against the following groundwater criteria:

- Criteria for the 95% protection in freshwater ecosystems presented in ANZG (2018);
- GIL for fresh water as presented in NEPC (2013);
- Groundwater Health Screening Levels, HSL D (vapour intrusion for clay 2-<4m) for specified VOCs;
- Groundwater Health Screening Levels, HSL D (vapour intrusion for clay 4-<8m) for specified VOCs; and
- Criteria for recreational water (factor of 10 times applied) as presented in NHMRC (as amended Oct 2017).

Consideration was given to groundwater investigation levels (GILs) for drinking water, as presented in NEPC (2013). GILs were not considered applicable as part of this investigation due to

the reported saline nature of groundwater underlying the site and as such lack of beneficial re-use as potable water.

9. Quality Assurance/Quality Control

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

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

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

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

10. Results

10.1 Soil Results

Soil sampling results collected as part of the investigation to address identified data gaps for Lot 107 DP 1028208 (Boral House), as outlined in **Section 5**, are summarised in the following sections.

10.2 Soil Field Observations

Sample locations are shown on **Figure 3**, field logs are provided in **Appendix M**.

Fill material was noted at all sample locations and generally comprised a brown heterogeneous reworked topsoil with inclusions of organics (mulch/rootlets), lithic grey shale fragments, minor igneous road base gravel and variable trace anthropogenic material (crushed concrete/brick) in some locations. Fill comprising structural basecourse (recycled aggregate) was observed surrounding site structures. Fill material was noted to depths of between 0.1 and 1.5 m bgs (TP203).

No odorous or stained soils or gross anthropogenic waste was observed during the investigation.

No further evidence of service infrastructure (conduits/service pits) containing ACM was identified within the south western portion of the site along the alignment of a presumed former service easement. Note, dense vegetation precluded a detailed intrusive investigation along the embankment. Previous investigations (JBS&G 2019a) have identified bonded and non-bonded (friable) asbestos impacted fill Bonded ACM was observed within clay fill along the north eastern boundary of Lot 107 DP 1028208 adjacent to Lot 63 DP 752051.

Reworked natural fill material was observed to be free from indicators of contamination and/or anthropogenic materials and comprised the following material types:

- Grey lithic shale was observed within topsoils and at the ground surface within the western/south western portion of the site. The shale was likely associated with historic brick manufacturing; and
- Reworked dolerite was observed underlying fill materials and generally comprised an orange brown clay with inclusions of highly weathered dolerite fragments.

Natural material underlying fill and/or reworked natural soils comprised a well sorted, compact, orange brown silty clay with weathered dolerite noted at depth. JBS&G note that materials logged as weathered dolerite may comprise a combination of igneous materials (basalt/picrite) but were not able to be distinguished visually by the current investigation methods given their similar physical properties.

10.3 Soil Analytical Results

Soil analytical results are summarised in **Table A, Attachment B** and detailed laboratory certificates of analysis are included in **Attachment N.** Details pertaining to the analysis are summarised in the following sections.

10.3.1 Heavy Metals

Heavy metal concentrations were reported below the adopted human health criteria for all samples submitted for analysis.

Heavy metal concentrations exceeded the adopted ecological criteria for chromium at one sample location TP07 0-0.1. The reported elevated chromium concentrations are likely associated with

weathering and accumulation of heavy metals from mafic or ultramafic rocks (dolerite and basalts[33]) which naturally occur underlying the site and surrounding area. As such, the reported heavy metal concentration is considered likely representative of background soil conditions.

JBS&G note well established vegetation in vicinity of TP207 (which reported heavy metals in exceedance of the ecological criteria) was visibly healthy and noting the proposed land use (commercial/industrial), the reported exceedances of the ecological criteria are considered unlikely to represent a risk to future ecological receptors at the site.

10.3.2 PAHs

Concentrations of PAHs were reported below the laboratory LOR for all samples submitted for analysis.

10.3.3 TRH/BTEX

All concentrations of TRH/BTEX were reported below the laboratory LOR or adopted site criteria for all samples submitted for analysis.

10.3.4 OCPs/PCBs

All concentrations of OCPs/PCBs were reported below the laboratory LOR for all samples submitted for analysis.

10.3.5 Asbestos

No ACM or AF/FA was observed or reported in any sample collected or submitted for analysis.

[33] *Composition of the Earth's Crust and Distribution of the Elements*. In: Siegel, F.R., Ed., Review of Research on Modern Problems in Geochemistry, Paris, International Association for Geochemistry and Cosmochemistry, Earth Science Series, 16, 13-37. Mielke, J.E. (1979).

11. Site Characterisation

Multiple phases of investigation have been undertaken at the site between 2000 and 2020 (**Section 4**). Previous investigations have involved the advancement of a total of 279 sampling locations (soil bores/test pits/sediment samples) across accessible areas of the site with good systematic coverage generally achieved across the site, with sampling densities increased/targeted in some areas of greater potential for land contamination.

The following sections provide an evaluation of the site data set, which forms the Phase 1 and Phase 2 ESA (DSI) outlined herein. Sample locations are shown on **Figure 3**, exceedances of the adopted site criteria (as outlined in **Section 8**) are presented in analytical tables (**Appendix B**) and on **Figure 5**.

11.1 Are there any unacceptable risks to future site users from soil/groundwater/surface water?

Soil

JBS&G note Lot 63 in DP 752051 is currently being remediated for commercial/industrial land use, unencumbered by any environmental planning instrument (i.e. environmental management plan (EMP)). The DSI (JBS&G 2019b), RAP (JBS&G 2019c) and the remediation/validation works (upon completion) have been/will be subject to NSW EPA Site Auditor review. As such, given a Site Audit Statement (SAS) will be prepared for this portion of the site to ensure the lot is suitable for commercial/industrial land use, no further consideration to the identified soil contamination within this portion of the site (**Section 4.4**) was warranted.

The current investigation included the advancement and sampling/analysis of an additional 12 locations (TP200-TP211) to address data gaps identified for Lot 107 DP 1028208, as discussed in **Section 5**. With the exception of chromium at one location (TP207) which exceeded the adopted ecological criterion, all other COPC were reported below the adopted human health and ecological site criteria (pursuant to NEPC (2013)). Elevated chromium was reported at two additional locations (TP05 and TP06) during previous investigation (JBS&G 2019a) and is considered to be associated with local igneous rock underlying the site and present as reworked natural material in filled areas, which contain naturally elevated heavy metal concentrations, particularly chromium and nickel, and are considered not to represent an unacceptable ecological risk at the site.

Sample SS05 (JBS&G 2019a) reported a Benzo(a)Pyrene (B(a)P) concentration of 7.1 mg/kg exceeding the adopted ecological screening level of 1.4 mg/kg (commercial/industrial, NEPC 2013). B(a)P concentrations are likely associated with historic industrial land use at the site. NEPC (2013) states that plants grown in PAH impacted soils have only limited ability to take up and incorporate anthropogenic PAHs through their roots and into their biomass, especially those PAHs with higher molecular weights including B(a)P. As such, and with consideration to the proposed land use (commercial/industrial), JBS&G consider that minor exceedances of the adopted ecological criterion for B(a)P at one location do not represent an unacceptable risk to ecological receptors at the site.

With the exception of the north eastern extent of Lot 107 DP 1028208 (as discussed below) fill material within the southern portion of the site generally comprised reworked natural materials (shale and dolerite) with minor anthropogenic inclusions noted at relatively few locations. Isolated areas were noted to contain bulk building and demolition waste (brick and concrete) which may be considered to pose an unacceptable aesthetic issue (albeit to a limited extent given the proposed commercial/industrial land use), particularly in landscaped areas if not suitably covered.

Previous investigations (Coffey 2013 and DLA 2017) identified the presence of fill material across the majority of Lot 10 DP 1022044, generally comprising gravelly silty sands and clays with varied inclusions of sandstone and shale. Fill containing anthropogenic material (minor building rubble/waste) was reported at some locations. Fill was reported at depths of between 0.1 m bgs to a maximum of 4 m bgs at BH22 (Coffey 2013). Coffey (2013) reported difficulty in determining the

extent of fill across the area. DLA (2017) logged clays with lithic shale fragments at depth, noting lithic shale encountered within clay may be representative of reworked fill materials as associated with remnant historic manufacturing activities (Boral Bricks) and site filling activities as identified at the site. Weathered igneous rock (potentially reworked associated with former quarrying activities) was reported by JBS&G in the southern portion of the site.

Sampling and analysis from within these horizons of potentially reworked natural materials and within natural soil at depth did not report concentrations of COPC above the adopted site criteria and as such, they are not considered to represent an unacceptable risk at the site.

Coffey (2013) and DLA (2017) analysed selected soil samples for COPC across the broader site area (**Figure 3**) which including heavy metals, TRH/BTEX, PAHs, OCPs/PCBs and asbestos. Analysis of selected soil samples reported concentrations of COPC below the adopted criteria and as such site soils were not considered to represent an unacceptable risk at the site. Detailed analytical results are presented in **Table A, Appendix A**.

Asbestos impacted soil (bonded and friable) was identified at five sample locations (HA02 to HA04, AQ10, AQ13 and AQ15), within the north eastern portion of Lot 107 DP 1028208 adjacent to Lot 63 DP 752051 to a maximum depth of 0.6 m bgs. Asbestos impacted fill comprised a distinct material type with inclusions of glass, porcelain, scrap metal and fragments of bonded ACM, consistent with impacted fill identified by JBS&G (2019b). Samples collected from this fill horizon also reported elevated concentrations of zinc (HA01, HA02 and HA03) and copper (HA02) above the adopted ecological criteria (pursuant to NEPC 2013)) which are not considered to represent an unacceptable ecological risk under the current commercial/industrial redevelopment scenario (hardstand pavement covering the majority of the site).

Based on visual observations and the analytical results presented in JBS&G (2019a), fill material containing ACM and anthropogenic waste was considered to be generally constrained to an area adjacent to Lot 63 to the inferred extent outlined on **Figure 5**. It is estimated there is approximately 285 m^3 of material impacted with bonded asbestos and 15 m^3 of material impacted with friable asbestos within this portion of the site.

Based on the observations of fill material extending beyond the Lot 63 boundary to Lot 107, JBS&G consider there is the potential for further asbestos and anthropogenic waste impacts to be present in the surrounding soils within Lot 10 DP 1022044. As such, further investigation may be required to determine the nature and extent of potential contamination in other areas of the site.

Coffey (2013) reported the presence of bonded asbestos at one location (BH08 0-0.2) which was presumed to be associated with fallout from hazardous building materials affixed to Plant 2 (ACM roofing). Asbestos present in surface soils exceed the adopted HSL (NEPC 2013) and as such, surface soils surrounding site structures known to contain hazardous building materials are considered to be potentially impacted with ACM. Further, former infrastructure (buried conduits suspected to be present at the site) were identified to potentially contain ACM.

JBS&G consider the identified asbestos impacts to represent an unacceptable human health risk requiring remediation/management.

JBS&G note buried asbestos was previously identified in vicinity of a disused shed on Lot 107 DP 1022044 (Woodward-Clyde 2000) which was reportedly disposed of in 1996. The inferred area is shown on **Figure 2b**. Further investigation (Coffey 2013 and DLA 2017) did not confirm asbestos waste in this area had been removed. As such there is the potential for residual asbestos to be present in this area, dependant on the nature and distribution of the impact and/or any former removal activities.

JBS&G consider the potential for isolated hydrocarbon and/or other chemical impacts in soil (surface and at depth in vicinity of UPSS) in immediate vicinity of current and/or former chemical/petroleum storage and handling areas identified at the site

Sediment

As part of the Phase 1 and Phase 2 ESA outlined herein, JBS&G compared sediment data to relevant DGVs for freshwater ecosystems (ANZG 2019). The results indicated minor heavy metal exceedances of copper and nickel at sample locations SED1, SED2 (Coffey 2013) and SD3 (DLA 2017) as shown on **Figure 5**. Analytical results are presented in **Table A** (**Appendix B**).

JBS&G note the adopted criteria have been established for sediments within natural freshwater environmental settings. The sediment samples were collected from within engineered settling ponds/water basins external to the downgradient receiving environment (Girraween Creek). Given the underlying geology of the site (igneous rock), sediments are considered likely to contain elevated heavy metal concentrations as associated with natural background conditions. Further, Girraween Creek is considered to be a highly urbanised tributary and not an ecologically sensitive environment.

As such, the minor exceedances of the adopted criteria in sediments are considered not to represent an unacceptable risk to onsite or potential offsite ecological receptors.

Surface Water and Groundwater

JBS&G (2019a) noted groundwater was not reported within three monitoring wells installed to 8 m bgs in the southern portion of the site. As discussed in **Section 2.8**, groundwater within the southern portion of the site is anticipated to be located at great depth (>13 m bgs) and as such is not considered to pose a risk to future users and/or site receptors given the lack of source receptor pathways and/or beneficial reuse opportunities.

Groundwater is anticipated to be encountered at shallower depths towards the north of the site and a series of exposed settling ponds are present in the north west. Limited surface water and groundwater assessment conducted by Coffey (2013) and DLA (2017) (analytical data presented in **Appendix B**) reported minor exceedances of heavy metals. Given the underlying geology of the site (igneous rock), heavy metals in surface/groundwater are likely to be attributed to the natural background heavy metal concentrations and are representative of background concentrations to be expected in urban/industrial settings. Further, Girraween Creek is considered to be a highly urbanised tributary and not an ecologically sensitive environment.

As such, the minor exceedances of the adopted criteria in surface/groundwater are considered not to represent an unacceptable risk to onsite or potential offsite ecological receptors. Notwithstanding the above, there may be the potential for isolated hydrocarbon impacts to groundwater in vicinity of current/former petroleum storage (particularly UPSS).

11.2 Are there any chemical mixtures?

While a range of potential chemical mixtures have been identified within the site area, no chemical mixtures have been identified at elevated concentrations within site media. Should chemical mixtures exist in the form of contamination at the site, they can readily be addressed by management/remediation requirements as required based on individual contaminant concentrations.

11.3 Are there any aesthetic issues?

Based on the assessment outlined herein, asbestos containing materials at the site surface in Lot 107 DP 1028208 and as may be associated with fallout from existing structures on Lot 10 DP 1022044 are considered to represent an unacceptable aesthetic issue. Further, generally inert building and demolition waste (concrete/brick) identified within *in-situ* soil on Lot 107 DP 1028208 (co-mingled

with asbestos) and at the surface of the site in the south western portion are considered to potentially represent an aesthetic issue (in accordance with NEPC (2013)).

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

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

- COPC were generally identified to be in solid form (asbestos and heavy metals);
- Migration through subsurface groundwater infiltration is considered to be greatly reduced by the underlying natural silty clays and substantially limited under the redevelopment plan presented in **Appendix A**, comprising hardstand pavements across the majority of the site;
- The migration of ACM and/or fibrous asbestos is unlikely where identified within *in-situ* fill material (in the absence of ground disturbance);
- The absence of significant contaminant impacts in groundwater, particularly given anticipated depth to groundwater, although there may be some isolated impacts around fuel storage areas, noting these are not located near inferred downgradient site boundaries; and
- The absence of identified contaminant impacts in subsurface soil below impacted fill material.

A moderate potential for the migration of contaminants was identified where ACM impacted surface soils may be present surrounding existing site infrastructure (albeit to a limited extent, noting ACM was only observed in surface soils surrounding site infrastructure at one location (BH8, Coffey (2013)), and as may associated with the presence of a series of surface water settling ponds which notably discharge from the site to the north west (**Figure 2b**).

Based on the surface water and sediment data presented as part of the investigation outlined herein (**Appendix A**) and discussed above, the potential for migration of potential contamination from the site via settling ponds is considered to be low in the absence of identified gross or widespread contamination and with consideration to the reported contaminant concentrations being generally acquiescent with urban background concentrations.

11.5 Is a site management strategy required?

Based on the findings of this investigation, it is considered the site can be made suitable for the intended commercial/industrial use subject to the implementation of additional data gap investigations (DGI) (**Section 11.6**), and preparation of a RAP to address the identified impacts without ongoing management.

11.6 Are there any data gaps?

As part of the investigation outlined herein, JBS&G consider data gaps identified for Lot 107 DP 1028208 to have been generally addressed. As discussed in **Section 4** and **Section 5**, while the site has been generally well characterised by various investigations including the current assessment, a range of data gaps have been identified at the site. These data gaps are required to be addressed by targeted investigations to confirm the extent of management required.

Notwithstanding, based on review of the site data set presented herein and the nature of identified data gaps (comprising common potential sources of common contamination that can be readily dealt with), JBS&G do not consider that potential contamination as associated with the identified data gaps would preclude redevelopment of the site for commercial industrial land use, in accordance with SEPP 55 regulation.

12. Key Findings

Subject to the limitations in **Section 14**, the following key findings are presented.

- The site has historically been utilised for a combination of commercial and light industrial activities associated with regional quarrying and manufacturing and has been subject to significant ground disturbance. Following cessation of large scale quarrying activities, the northern portion of the site has continued to be utilised for masonry/manufacturing activities (Austral Masonry) with the southern portion utilised for commercial (Boral Offices) and vacant land (Council depot/stockpiling yard);
- The Phase 1 and Phase 2 ESA outlined herein identified potential AECs (**Figure 4**) and associated COPC related to current and/or former land uses including a range of commercial/industrial activities;
- Review of historic contamination assessments identified the following with regard to the current contamination status of the site:
    - Investigations across Lot 10 DP 1022044, when combined, have generally satisfied the sampling density requirements as per EPA (1995) and NEPC (2013);
    - A range of potentially contaminating land use activities, including the presence of current/former petroleum and chemical storage, hazardous building materials, waste material production and placement of fill of unknown origin were identified and targeted by previous investigations;
    - Fill is present across the majority of the site to depths of between 0.1 m and 4 m bgs and was noted to comprise a combination of sandy gravelly clays and reworked natural materials (shales/dolerite);
    - Lot 63 DP 752051 has been subject to extensive characterisation and is currently being remediated (as part of the sales contract between ISPT and Council) to make the site suitable for commercial/industrial land use without the requirement for ongoing management;
    - The same impacted fill profile identified on Lot 63 DP 752051 was identified extending beyond the Lot boundary to the south (Lot 107 DP 1028208), albeit to a limited extent. Approximately 300 m^2 of asbestos impacted soil surrounding Lot 63 in lot 107 are considered to represent an unacceptable health risk requiring remediation and/or management;
    - Potential remains for the same fill profile to be present adjacent to Lot 63 in other areas of the site;
    - Asbestos previously identified at the site surface in the southern portion of Lot 107 (JBS&G 2019a) was subsequently removed as part of make safe works (JBS&G 2019c), based on previous investigations the potential remained for further ACM to be present within a former service easement within the southern portion of Lot 107;
    - Asbestos was identified at one location adjacent to current structures (identified to contain hazardous building materials) in Lot 10 DP 1022044;

- Former UPSS and other petroleum storage (current/former) have been identified at the site which will require removal (formal decommissioning[34]) and/or management including potentially impacted soils and/or groundwater relevant to the proposed land use in (NEPC 2013);
- Soil sampling did not identify the presence of chemical COPC above the adopted health criteria across the site;
- Copper and zinc concentrations exceeding the ecological criterial within Lot 107 at three locations (adjacent to Lot 63) were reported the distinct fill material noted to contain ACM and scrap metal (currently being remediated on Lot 63) and were considered likely associated with metal waste inclusions. The reported concentrations were not considered to represent an unacceptable ecological risk under the proposed redevelopment scenario;
- Low level chromium concentrations at several locations are considered representative of natural background conditions associated with the underlying geology (ultramafic and mafic igneous rock) and were not considered to represent an unacceptable ecological risk at the site;
- A single B(a)P concentration exceeding the ecological criteria was not considered to represent an unacceptable risk for the intended commercial/industrial use of at the site;
- Limited sediment assessment identified low level heavy metal concentrations exceeding the conservative ecological assessment criteria (ANZG 2019) for the 95% species protection in freshwater environments. Heavy metals were considered not to represent an unacceptable risk at the site, noting they were likely reflective of natural background conditions (associated with the underlying geology and/or conditions to be expected in urban environments); and
- Limited surface water and groundwater analysis at the site did not identify gross or widespread contamination. Low level heavy metal concentrations reported above the adopted ecological site criteria are considered reflective of regional background conditions as to be expected in urban/industrial environments and are not considered to represent an unacceptable risk at the site or to downgradient disturbed natural environments (Girraween Creek).

- Detailed review of previous investigation identified a range of data gaps (**Section 5**) based on the identified AECs and COPCs identified as part of the Phase 1 and Phase 2 ESA outlined herein;
- The implementation of an additional targeted sampling plan (12 additional sample locations) outlined herein indicated the following:
  - Fill material within the south western portion of the site is generally consistent with reworked natural material (shales and dolerite) as previously identified across the site and is considered to not represent an unacceptable risk at the site;
  - Chromium reported above the adopted ecological criterion at one location (TP07) was considered representative of the underlying igneous geology (subject to

- 34 In accordance with Guidelines for Implementing the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008, Department of Environment, Climate Change and Water NSW, September 2009 (DECC 2009).

quarrying) and was not considered to represent an unacceptable risk to future ecological receptors; and

- No further ACM was identified within the former service easement. Noting detailed intrusive investigation precluded by dense vegetation. Should further asbestos infrastructure (conduits) be present within this portion of the site then it is anticipated it can be dealt with under an unexpected finds protocol, to be implemented during future remedial/redevelopment works.

- Based on the findings of the intrusive investigation outlined herein, it is considered that data gaps identified for Lot 107 DP 1028208 have been adequately addressed.

13. Conclusions and Recommendations

Based on the results of the investigation and subject to the limitations in **Section 14**, JBS&G conclude the site can be made suitable for the proposed land use subject to remediation/management of identified contamination. The investigation outlined herein is considered to have generally satisfied the requirements of the SEARS.

JBS&G recommend that a DGI be conducted prior to issue of a construction certificate to address identified potential contamination at the site (**Section 5**) following which a RAP be prepared to describe the required remediation and validation works to ensure the site is suitable for the proposed commercial industrial land use without ongoing management.

14. 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.

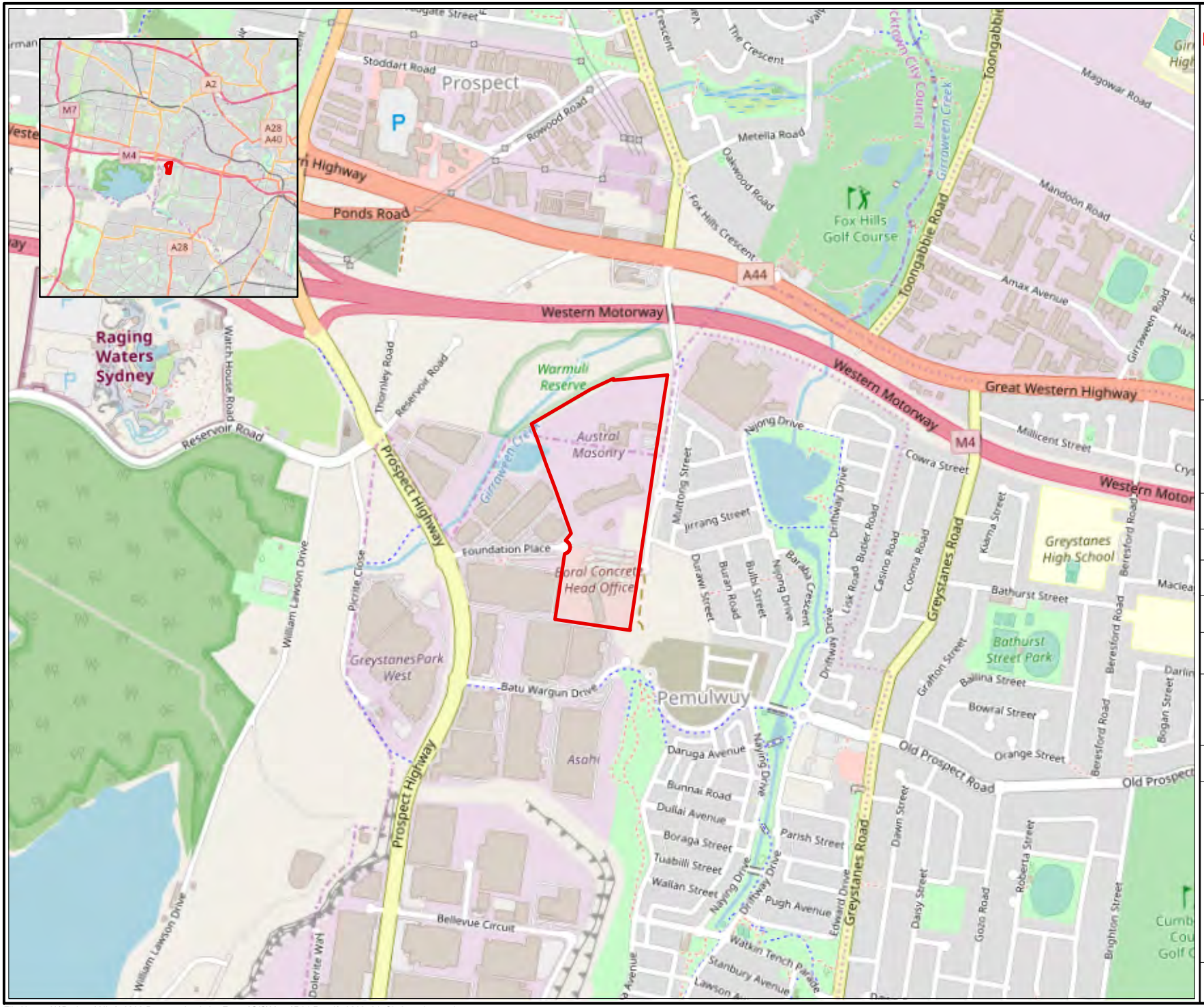
Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the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

Approximate Site Boundary

JBS&G

Job No: 58238	
Client: Aliro	
Version: R01 Rev A	Date 1/04/2020
Drawn By: RF	Checked By: CK
Scale 1:15,000	

0 100 200
metres

Coord. Sys. GDA 1994 MGA Zone 56

Prospect Legistics Estate,
Clunies Ross Street,
Pemulwuy, NSW

SITE LOCATION

FIGURE 1

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\R01 Rev A\58238_01_SiteLocation.mxd
Reference: NSW DFSI, 2019

Legend

- Approximate Site Boundary
- Cadastre (NSW LPI, 2019)

JBS&G

Job No: 58238	
Client: Aliro	
Version: R01 Rev A	Date 7/04/2020
Drawn By: RF	Checked By: MS
Scale 1:4,500	

0 50 100
metres

Coord. Sys. GDA 1994 MGA Zone 56

Prospect Logistics Estate, Clunies Ross Street, Pemulwuy, NSW

SITE LAYOUT AND SETTING

FIGURE 2A

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\R01 Rev A\58238_02a_SiteLayout_Setting.mxd
Reference: Nearmap (www.nearmap.com.au) 22-01-2020

Legend

- Approximate Site Boundary
- Cadastre (NSW LPI, 2019)

Site Features

- Current Settling Pond
- Former Settling Pond
- Stockpile
- Possible Redundant Service Easement
- Crushed/ Recycled Basecourse
- Dense Vegetation with Large Stockpiles of Shale
- Asbestos Roof
- Former Buried Asbestos Waste
- Former Diesel AST
- Lot Currently Being Remediated
- Abandoned UST

JBS&G

Job No: 58238

Client: Aliro

Version: R01 Rev A	Date 7/04/2020
Drawn By: RF	Checked By: MS

Scale 1:4,500

0 50 100
metres

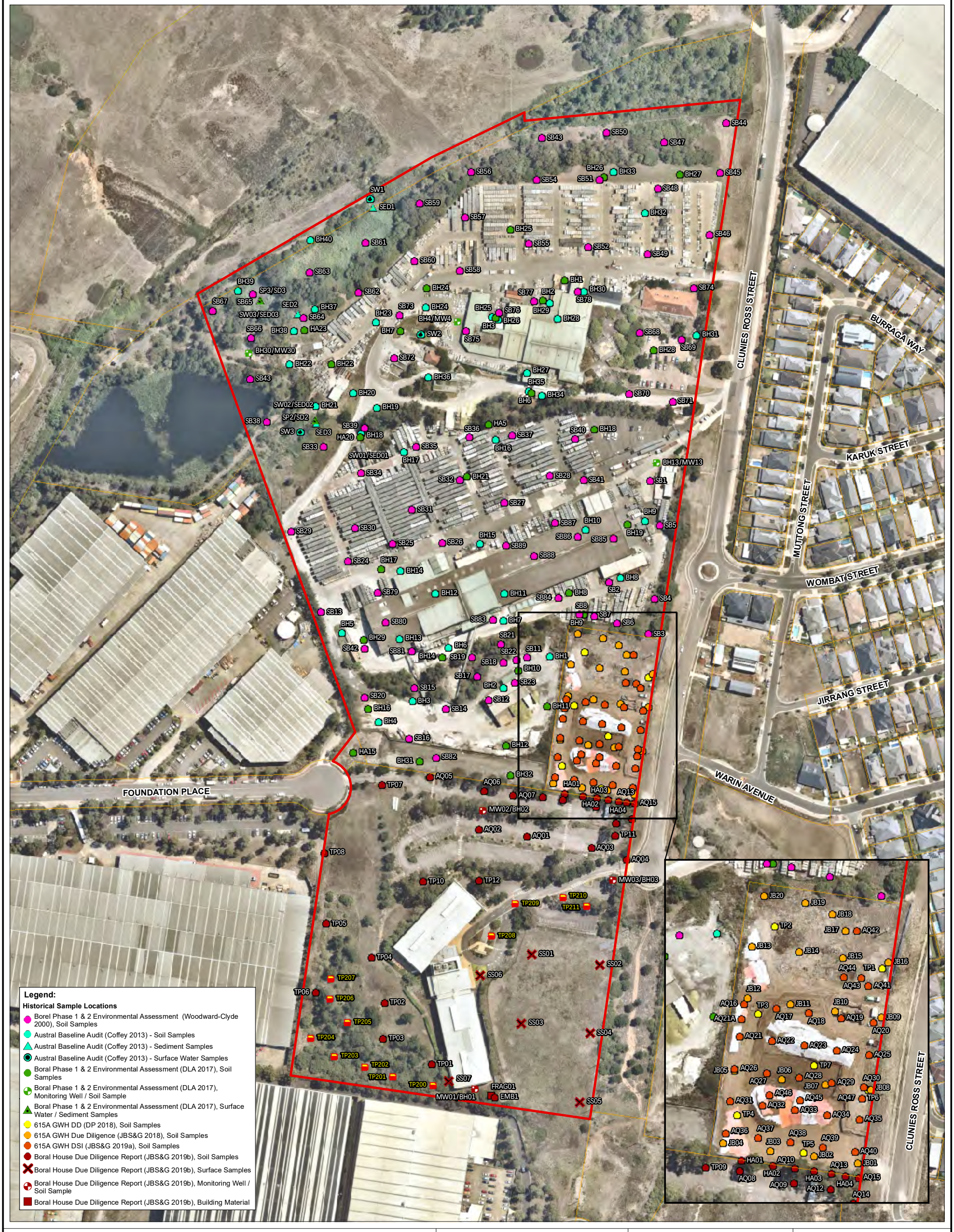
Coord. Sys. GDA 1994 MGA Zone 56

Prospect Logistics Estate, Clunies Ross Street, Pemulwuy, NSW

SITE FEATURES

FIGURE 2B

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\R01 Rev A\58238_02b_SiteFeatures.mxd
Reference: Nearmap (www.nearmap.com.au) 22-01-2020



Legend:

- Approximate Site Boundary
- Cadastre (NSW LPI, 2019)
- Sample Locations (JBSG 2020)

JBS&G

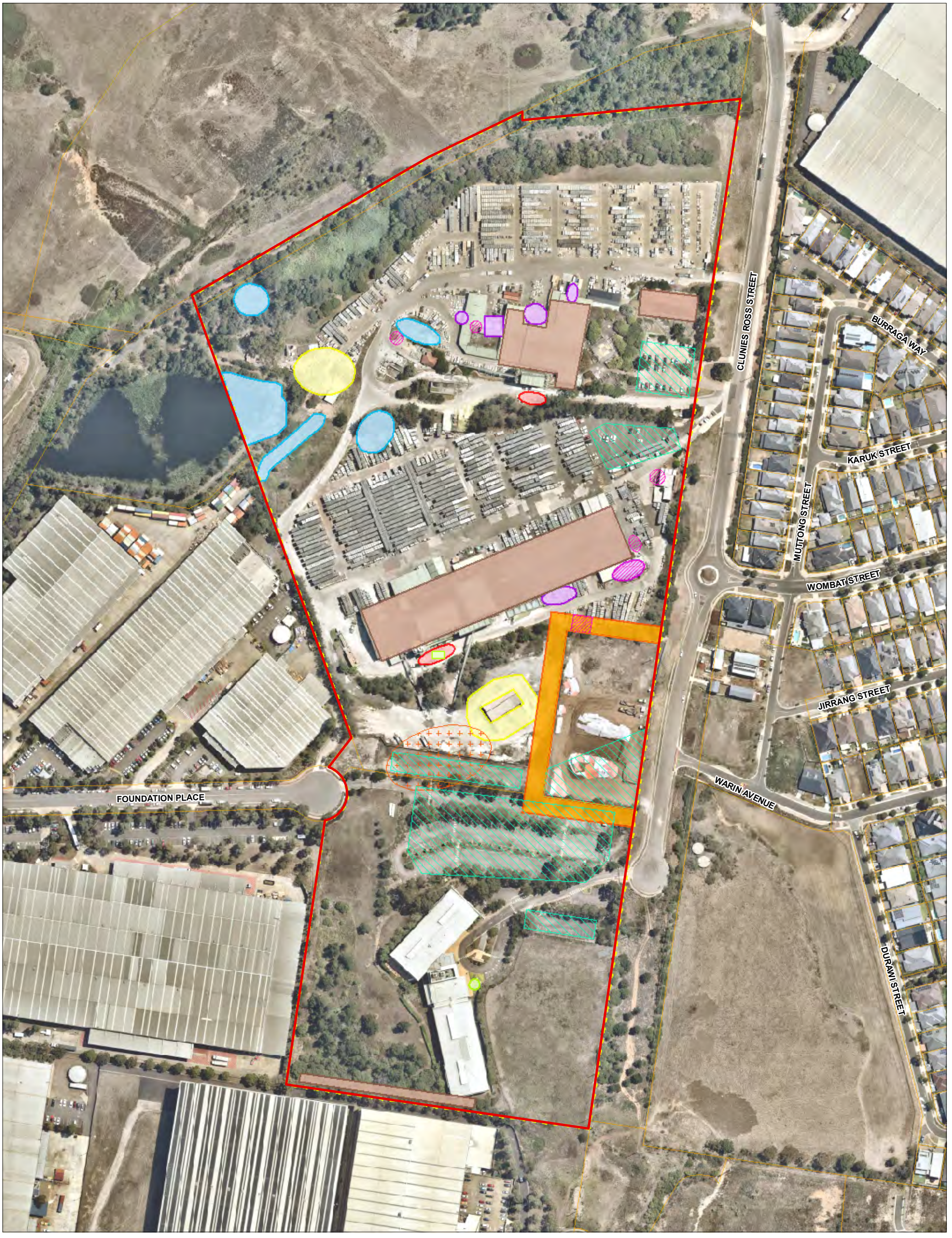
0 25 50
metres

Prospect Logistics Estate, Clunies Ross Street, Pemulwuy, NSW

SAMPLE LOCATIONS

Job No: 58238		Scale: 1:2,500		
Client: Aliro		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: RF	Checked By: CK	Version: R01 Rev 0	Date: 07-Apr-2020	**FIGURE 3**

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\R01 Rev A\58238_03_SampleLocs.mxd
Reference:



Legend:

Approximate Site

Cadastre (NSW LPI, 2019)

Areas of Environmental Concern

1. Fill of Unknown Origin (entire site)
2. Potential Asbestos Impacted Fill from Known Source
3. Settling Ponds
4. Petroleum Hydrocarbon Storage
5. Hydraulic Oil Storage
6. Raw Material/Waste Storage
7. Chemical Storage
8. Known/Potential Hazardous Building Materials
9. Electrical Transformer (current/former)
10. Parking Areas
11. Former Buried Asbestos Waste

JBS&G

0 25 50

metres

Prospect Logistics Estate, Clunies Ross Street, Pemulwuy, NSW

AREAS OF ENVIRONMENTAL CONCERN

Job No: 58238		Scale: 1:2,500		
Client: Aliro		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: RF	Checked By: CK	Version: R01 Rev 0	Date: 07-Apr-2020	**FIGURE 4**

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\R01 Rev A\58238_04_AECs2.mxd
Reference:

SED2	Depth	Concentration	Criteria
Analyte	(m bgs)		
Nickel	-	42 mg/kg	ANZG (Sed. Q-DGVs)

SD3	Depth	Concentration	Criteria
Analyte	(m bgs)		
Nickel	-	24 mg/kg	ANZG (Sed. Q-DGVs)
Zinc	-	220 mg/kg	ANZG (Sed. Q-DGVs)

SD2	Depth	Concentration	Criteria
Analyte	(m bgs)		
Nickel	-	32 mg/kg	ANZG (Sed. Q-DGVs)

SD3	Depth	Concentration	Criteria
Analyte	(m bgs)		
Nickel	-	73 mg/kg	ANZG (Sed. Q-DGVs)
Copper	-	84 mg/kg	ANZG (Sed. Q-DGVs)

BH08	Depth	Concentration	Criteria
Analyte	(m bgs)		
Bonded ACM	0.0-0.2	Present	HSL D

HA01	Depth	Concentration	Criteria
Analyte	(m bgs)		
Zinc	-	1300 mg/kg	EIL (Comm/Ind)

HA02	Depth	Concentration	Criteria
Analyte	(m bgs)		
Copper	-	360 mg/kg	EIL (Comm/Ind)
Zinc	-	2400 mg/kg	EIL (Comm/Ind)
Bonded ACM	0.0-0.1	Present	HSL D

HA03	Depth	Concentration	Criteria
Analyte	(m bgs)		
Copper	-	1200 mg/kg	EIL (Comm/Ind)
Bonded ACM	0.0-0.5	Present	HSL D

AQ13	Depth	Concentration	Criteria
Analyte	(m bgs)		
Asbestos from FA & AF in Soil	0.6-1.0	0.0016 %w/w	HSL D
Bonded ACM	0.0-0.4	Present	HSL D

HA04	Depth	Concentration	Criteria
Analyte	(m bgs)		
Bonded ACM	0.0-0.4	Present	HSL D

AQ15	Depth	Concentration	Criteria
Analyte	(m bgs)		
Bonded ACM	0.0-0.6	Present	HSL D

TP05	Depth	Concentration	Criteria
Analyte	(m bgs)		
Chromium (Total)	0.0-0.1	510 mg/kg	EIL (Comm/Ind)

TP207	Depth	Concentration	Criteria
Analyte	(m bgs)		
Chromium (Total)	0.0-0.1	400 mg/kg	EIL (Comm/Ind)

TP06	Depth	Concentration	Criteria
Analyte	(m bgs)		
Chromium (Total)	0.0-0.1	550 mg/kg	EIL (Comm/Ind)

SS05	Depth	Concentration	Criteria
Analyte	(m bgs)		
B(a)P	-	7.1 mg/kg	ESL (Comm/Ind)

Legend:

Historical Sample Locations

- Borel Phase 1 & 2 Environmental Assessment (Woodward-Clyde 2000), Soil Samples
- Austral Baseline Audit (Coffey 2013) - Soil Samples
- Austral Baseline Audit (Coffey 2013) - Sediment Samples
- Austral Baseline Audit (Coffey 2013) - Surface Water Samples
- Boral Phase 1 & 2 Environmental Assessment (DLA 2017), Soil Samples
- Boral Phase 1 & 2 Environmental Assessment (DLA 2017), Monitoring Well / Soil Sample
- Boral Phase 1 & 2 Environmental Assessment (DLA 2017), Surface Water / Sediment Samples
- 615A GWH DD (DP 2018), Soil Samples
- 615A GWH Due Diligence (JBS&G 2018), Soil Samples
- 615A GWH DSI (JBS&G 2019a), Soil Samples
- Boral House Due Diligence Report (JBS&G 2019b), Soil Samples
- Boral House Due Diligence Report (JBS&G 2019b), Surface Samples
- Boral House Due Diligence Report (JBS&G 2019b), Monitoring Well / Soil Sample
- Boral House Due Diligence Report (JBS&G 2019b), Building Material

Legend:

- Approximate Site Boundary
- Cadastre (NSW LPI, 2019)
- Sample Locations (JBSG 2020)

JBS&G

0 25 50
metres

Job No: 58238		Scale: 1:2,500	
Client: Aliro		Coord. Sys. GDA 1994 MGA Zone 56	
Drawn By: RF	Checked By: CK	Version: R01 Rev 0	Date: 07-Apr-2020

Prospect Legistics Estate, Clunies Ross Street, Pemulwuy, NSW

SOIL AND SEDIMENT EXCEEDANCES

FIGURE 5

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\R01 Rev A\58238_05_Exceedances.mxd
Reference:

Appendix A Concept Design Plans

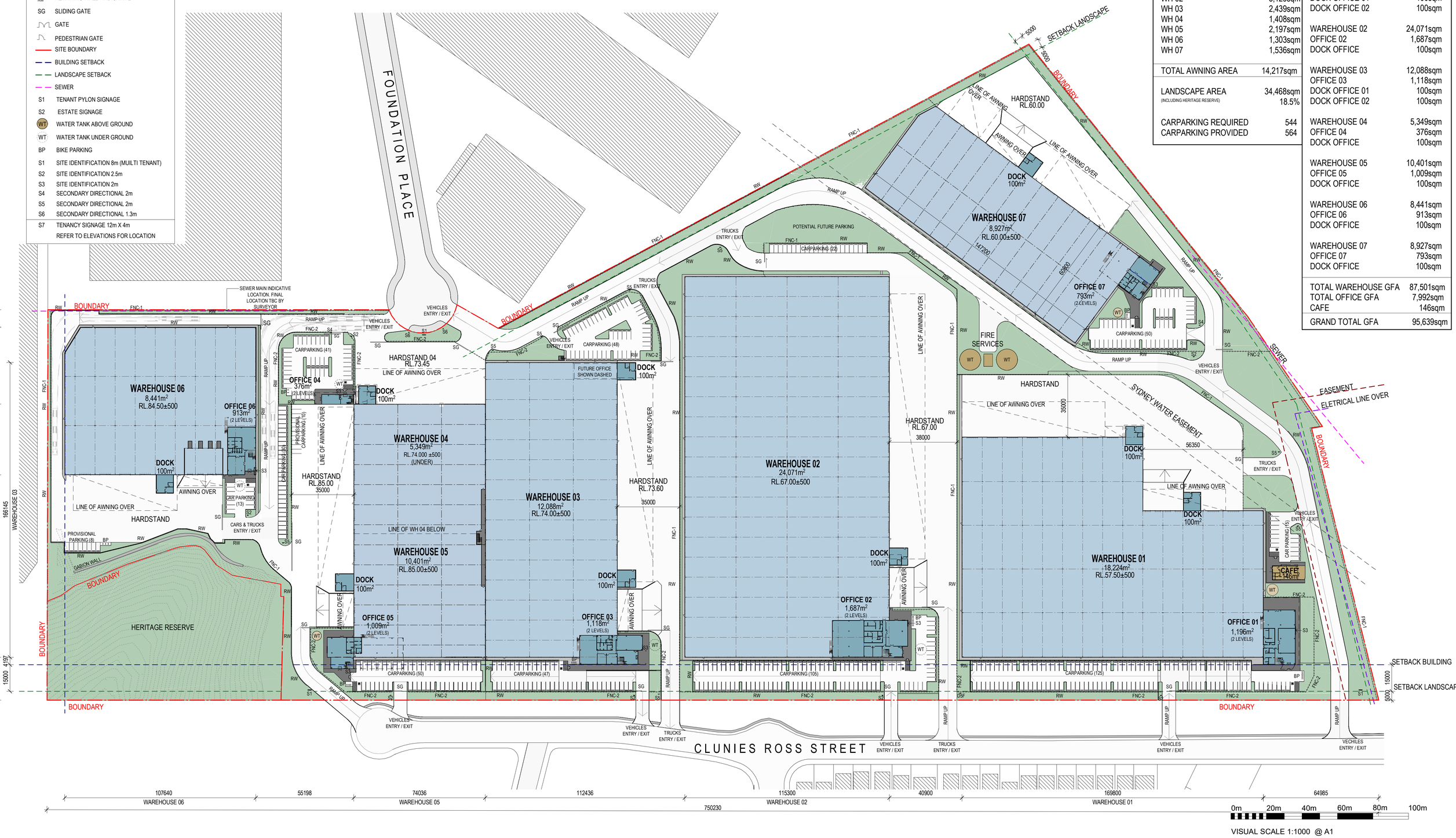
Aliro

SITE LEGEND

- FNC-1, CHAINMESH FENCING
- FNC-2, PALISADE FENCING
- RW — RETAINING WALL - INDICATIVE
- SG — SLIDING GATE
- GATE
- PEDESTRIAN GATE
- SITE BOUNDARY
- BUILDING SETBACK
- LANDSCAPE SETBACK
- SEWER
- S1 — TENANT PYLON SIGNAGE
- S2 — ESTATE SIGNAGE
- WT — WATER TANK ABOVE GROUND
- WT — WATER TANK UNDER GROUND
- BP — BIKE PARKING
- S1 — SITE IDENTIFICATION 8m (MUILTI TENANT)
- S2 — SITE IDENTIFICATION 2.5m
- S3 — SITE IDENTIFICATION 2m
- S4 — SECONDARY DIRECTIONAL 2m
- S5 — SECONDARY DIRECTIONAL 2m
- S6 — SECONDARY DIRECTIONAL 1.3m
- S7 — TENANCY SIGNAGE 12m X 4m
  REFER TO ELEVATIONS FOR LOCATION

AREA SCHEDULE (GFA)	
SITE COVERAGE	51.2%
AWNINGS AREA	
WH 01	2,205sqm
WH 02	3,129sqm
WH 03	2,439sqm
WH 04	1,408sqm
WH 05	2,197sqm
WH 06	1,303sqm
WH 07	1,536sqm
TOTAL AWNING AREA	14,217sqm
LANDSCAPE AREA (INCLUDING HERITAGE RESERVE)	34,468sqm 18.5%
CARPARKING REQUIRED	544
CARPARKING PROVIDED	564

AREA SCHEDULE (GFA)	
SITE AREA (INCLUDING HERITAGE RESERVE)	**186,596.5 sqm**
WAREHOUSE 01	18,224sqm
OFFICE 01	1,196sqm
DOCK OFFICE 01	100sqm
DOCK OFFICE 02	100sqm
WAREHOUSE 02	24,071sqm
OFFICE 02	1,687sqm
DOCK OFFICE	100sqm
WAREHOUSE 03	12,088sqm
OFFICE 03	1,118sqm
DOCK OFFICE 01	100sqm
DOCK OFFICE 02	100sqm
WAREHOUSE 04	5,349sqm
OFFICE 04	376sqm
DOCK OFFICE	100sqm
WAREHOUSE 05	10,401sqm
OFFICE 05	1,009sqm
DOCK OFFICE	100sqm
WAREHOUSE 06	8,441sqm
OFFICE 06	913sqm
DOCK OFFICE	100sqm
WAREHOUSE 07	8,927sqm
OFFICE 07	793sqm
DOCK OFFICE	100sqm
TOTAL WAREHOUSE GFA	87,501sqm
TOTAL OFFICE GFA	7,992sqm
CAFE	146sqm
GRAND TOTAL GFA	95,639sqm



VISUAL SCALE 1:1000 @ A1

M	ISSUED FOR DA	22.05.20
L	ISSUED FOR DA	21.05.20
K	ISSUED FOR DA	20.05.20
J	PRELIMINARY ISSUED	08.05.20
H	PRELIMINARY ISSUED	30.04.20
G	PRELIMINARY ISSUED	21.04.20
F	FOR INFORMATION	27.03.20
#	DESCRIPTION	DATE

SBA ARCHITECTS
Commercial Industrial Residential Retail Interior Design
Phone: 02 9929 9188 Web: www.sbaarch.com.au

CLIENT: Aliro

ELEVATION @ GREYSTANES

LOTS 107, 63 & 10 CLUNIES ROSS STREET, GREYSTANES

NORTH

TITLE: SITE PLAN

DATE	SCALE	PROJECT NO.	DWG NO.	REVISION
22.05.20	As indicated @ A1	19280	DA100	M

Appendix B Analytical Tables

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

				Metals & Metalloids										TPHs (NEPC 1999)					TRHs (NEPC 2013)							BTEXN							Polycyclic Aromatic Hydrocarbons																	
				Arsenic (Total)	Cadmium	Chromium (Total)	Cobalt	Copper	Lead	Mercury (inorganic)	Nickel	Titanium	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	BTEX (Total)	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(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	Benzo(b,j+k)fluoranthene	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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.1	0.1	0.1	0.1	0.05	0.5	0.1	0.1	0.1		0.1	0.1	0.1	0.1	0.5	0.1	0.2	0.05
ANZG (2019) - Sediment Quality DGVs				20	1.5	80		65	50	0.15	21		200	280[#1]	280[#1]	280[#1]	280[#1]	280																																			
NEPM 2013 EIL - Commercial Industrial (Specific)				160		310[#2]		320[#3]	1800		730[#4]		620[#5]																			370																				
NEPM 2013 ESL Commercial and Industrial, Fine Soil																				2500[#6]	6600[#6]		170[#7]		215[#7]	95[#6]		185[#6]	135[#6]			95[#6]						1.4[#6]													
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																																			
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																																			
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																			1000[#10]	5000	10000				800[#11]																													
NEPM 2013 Soil HIL D				3000[#12]	900	3600[#13]	4000	240000	1500[#14]	730[#15]	6000		400000																																								
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																							999995[#19]		310[#20]	4		999999	999999			999999	999999																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																							999995[#19]		480[#20]	6		999999	999999			999999	999999																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																							999995[#19]		999999[#20]	9		999999	999999			999999	999999																			
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**	**Matrix_Type**																																																
Coffey (2013)																																																			
BH01 0.0-0.2	20/02/2013	-	Soil	<2	<0.4	<5	<5	13	<5	<0.05	<5	220	11	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH02 0.0-0.2	19/02/2013	-	Soil	2.5	<0.4	<5	6.3	120	<5	<0.05	<5	1100	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH03 0.0-0.2	20/02/2013	-	Soil	5.2	0.5	24	<5	20	20	<0.05	6.6	15	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	0.7	<0.5	<0.5	<0.5	1.3	0.6	-	-
BH04 0.0-0.1	20/02/2013	-	Soil	<2	<0.4	<5	<5	5.3	<5	<0.05	<5	18	5.9	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH05 0.0-0.2	20/02/2013	-	Soil	2.8	0.4	42	17	34	13	0.34	57	120	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 0.16-0.26	18/02/2013	-	Soil	3.3	2.3	13	99	41	<5	<0.05	61	690	35	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 1.0-1.1	19/02/2013	-	Soil	6.3	<0.4	70	66	48	<5	<0.05	360	1200	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07 0.08-0.13	18/02/2013	-	Soil	<2	5	<5	130	7.7	<5	<0.05	<5	38	7.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07 0.2-0.3	18/02/2013	-	Soil	2.4	1.7	24	31	40	<5	<0.05	75	470	30	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH07 0.4-0.5	18/02/2013	-	Soil	4.4	2	10	39	46	<5	<0.05	91	470	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08 0.0-0.2	20/02/2013	-	Soil	<2	0.5	41	6.8	61	68	0.39	31	310	190	<10	-	190	340	530	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH09 0.0-0.1	20/02/2013	-	Soil	3.5	<0.4	<5	<5	19	<5	<0.05	7.1	130	34	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH10 0.16-0.26	20/02/2013	-	Soil	4.6	<0.4	41	26	64	5.4	<0.05	91	470	56	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 0.19-0.29	20/02/2013	-	Soil	3.4	2.7	17	48	63	<5	<0.05	92	520	41	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12 0.4-0.5	20/02/2013	-	Soil	5.7	1.5	71	22	75	170	<0.05	59	360	180	<10	-	<100	120	120	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13 0.13-0.23	20/02/2013	-	Soil	5	0.9	130	62	56	<5	<0.05	290	1400	72	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14 0.19-0.29	18/02/2013	-	Soil	6.7	0.6	89	50	45	5.3	<0.05	180	810	94	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15 0.15-0.25	18/02/2013	-	Soil	4.5	0.6	160	50	42	<5	<0.05	250	1500	65	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16 0.0-0.2	20/02/2013	-	Soil	2.1	<0.4	94	7.3	30	45	<0.05	52	410	83	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 0.5-0.6	19/02/2013	-	Soil	4.2	<0.4	8.6	<5	38	<5	<0.05	5.1	360	17	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	<1.5	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH17 0.5-0.6	19/02/2013	-	Soil	4.2	<0.4	8.6	<5	38	<5	<0.05	5.1	360	17	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	<1.5	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH17 0.5-6.0	19/02/2013	-	Soil	4.2	<0.4	8.6	<5	38	<5	<0.05	5.1	360	17	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH18 0.0-0.2	20/02/2013	-	Soil	3.3	<0.4	15	7.8	22	13	<0.05	19	110	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH19 0.4-0.5	19/02/2013	-	Soil	2.4	0.5	8.6	23	110	<5	<0.05	64	760	50	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19 1.0-1.1	19/02/2013	-	Soil	9.8	<0.4	11	16	43	15	0.07	25	<10	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20 0.0-0.2	20/02/2013	-	Soil	2.6	<0.4	38	15	27	7.5	<0.05	38	98	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH21 0.0-0.2	19/02/2013	-	Soil	3.3	<0.4	33	10	26	<5	<0.05	31	330	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH21 1.0-1.1	19/02/2013	-	Soil	<2	<0.4	14	<5	12	<5	<0.05	6.7	380	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 3.0-3.1	19/02/2013	-	Soil	5	<0.4	99	99	18	7.5	<0.05	110	82	36	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 3.9-4.0	19/02/2013	-	Soil	13	0.8	73	50	34	12	<0.05	62	97	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22 0.0-0.1	19/02/2013	-	Soil	2.9	0.4	31	17	80	53	<0.05	37	550	260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 0.08-0.18	19/02/2013	-	Soil	4.8	<0.4	6.3	19	110	<5	<0.05	46	600	39	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 0.5-0.6	19/02/2013	-	Soil	6.1	<0.4	31	22	35	13	<0.05	65	57	66	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 0.08-0.18	19/02/2013	-	Soil	4.4	<0.4	11	21	76	<5	<0.05	59	600	33	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 0.5-0.6	19/02/2013	-	Soil	4.6	<0.4	20	13	29	8.2	<0.05	40	17	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 1.1-1.2	19/02/2013	-	Soil	2.6	0.5	89	73	57	<5	<0.05	400	740	82	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25 0.19-0.29	18/02/2013	-	Soil	2.6	2.3	20	44	78	<5	<0.05	110	750	49	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH26 0.18-0.28	18/02/2013	-	Soil	2.6	3.2	17	47	70	5.5	<0.05	80	490	41	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27 0.17-0.27	18/02/2013	-	Soil	5.5	1.3	20	58	58	<5	<0.05	110	340	68	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	<1.5	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH27 0.4-0.5	18/02/2013	-	Soil	5.3	1.6	17	65	54	8	<0.05	74	120	67	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28 0.16-0.26	18/02/2013	-	Soil	4	5.8	13	58	100	<5	<0.05	87	750	51	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH29 0.19-0.29	18/02/2013	-	Soil	2.7	<0.4	63	47	37	6	<0.05	130	130	34	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH30 0.19-0.29	18/02/2013	-	Soil	23	0.4	19	14	33	190	0.23	27	19	93	<10	-	140	180	320	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31 0.0-0.2	20/02/2013	-	Soil	3.4	<0.4	14	9.8	12	11	<0.05	9.8	11	28	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31 0.4-0.5	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32 0.08-0.18	20/02/2013	-	Soil	3.4	<0.4	18	6.9	12	5.1	<0.05	19	290	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33 0.0-0.2	20/02/2013	-	Soil	6	<0.4	130	39	23	15	<0.05	50	48	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34 0.09-0.19	19/02/2013	-	Soil	<2	<0.4	<5	8	36	<5	<0.05	18	510	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34 1.0-1.1	19/02/2013	-	Soil	4.4	<0.4	27	9.9	19	5	<0.05	30	<10	34	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35 0.08-0.18	18/02/2013	-	Soil	2.1	2.3	8.9	42	12	6.1	<0.05	6.8	220	35	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35 0.4-0.5	18/02/2013	-	Soil	2.3	1.7	8.4	21	36	<5	<0.05	9.6	290	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36 0.0-0.2	20/02/2013	-	Soil	6.9	<0.4	98	36	40	19	0.06	69	110	95	<10	-	<100	100	100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
BH37 0.0-0.2	21/02/2013	-	Soil	5.7	<0.4	160	98	38	7.5	<0.05	150	98	43	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38 0.0-0.2	21/02/2013	-	Soil	7.8	<0.4	110	34	35	15	<0.05	68	840	72	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38 0.4-0.5	21/02/2013	-	Soil	2.5	0.6	190	71	47	16	<0.05	120	490	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH39 0.0-0.2	21/02/2013	-	Soil	4.1	<0.4	92	47	48	8.5	<0.05	83	84	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40 0.0-0.2	21/02/2013	-	Soil	3.1	<0.4	50	26	30	7.9	<0.05	40	53	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP2	18/02/2013	-	Soil	<2	4.1	19	79	45	<5	<0.05	140	590	50	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	<1.5	<0.5	<0.5	<0.5	<1	<1.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP3	19/02/2013	-	Soil	<2	<0.4	8.9	<5	20	<5	<0.05	5.7	300	13	<10	-	<100	<100	<100	-	-	-	-	-	-	-	<0.5	<1.5	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<1.11	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-
DUP3A	19/02/2013	-	Soil	<4	<0.4	7	2	14	4	<0.1	5	230	12	<25	-	<100	<100	-	-	-	-	-	-	-	-	<0.2	-	<1	<0.5	<1	<2	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-
DUP5	19/02/2013	-	Soil	7.2	<0.4	7.6	10	40	11	<0.05	18	<10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP5A	19/02/2013	-	Soil	<4	<0.4	54	33	49	7	<0.1	150	260	52	<25	-	<100	<100	-	-	-	-	-	-	-	-	<0.2	-	<1	<0.5	<1	<2	<3	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP7A	20/02/2013	-	Soil	4	<0.4	49	15	22	13	<0.1	42	84	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED1	21/02/2013	-	Sediment	<2	<0.4	12	6.1	17	6.5	<0.05	11	90	44	<10	<50	<100	<100	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED2	21/02/2013	-	Sediment	<2	<0.4	65	16	21	<5	<0.05	42	190	32	<10	<50	<100	<100	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED3	21/02/2013	-	Sediment	<2	<0.4	31	76	84	5.2	<0.05	73	280	86	<10	<50	860	<100	860	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

				Metals & Metalloids										TPHs (NEPC 1999)					TRHs (NEPC 2013)							BTEXN								Polycyclic Aromatic Hydrocarbons																
				Arsenic (Total)	Cadmium	Chromium (Total)	Cobalt	Copper	Lead	Mercury (Inorganic)	Nickel	Titanium	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	BTEX (Total)	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(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	Benzo(b,j+k)flouranthene	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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.1	0.1	0.1	0.1	0.05	0.5	0.1	0.1		0.1	0.1	0.1	0.1	0.5	0.1	0.2	0.05
ANZG (2019) - Sediment Quality DGVs				20	1.5	80		65	50	0.15	21		200	280[#1]	280[#1]	280[#1]	280[#1]	280																																
NEPM 2013 EIL - Commercial Industrial (Specific)				160		310[#2]		320[#3]	1800		730[#4]		620[#5]																				370																	
NEPM 2013 ESL Commercial and Industrial, Fine Soil																				2500[#6]	6600[#6]		170[#7]		215[#7]	95[#6]		185[#6]	135[#6]			95[#6]						1.4[#6]												
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																																		
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																																		
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																			1000[#10]	5000	10000			800[#11]																										
NEPM 2013 Soil HIL D				3000[#12]	900	3600[#13]	4000	240000	1500[#14]	730[#15]	6000		400000																													40[#16]					4000[#17]			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																							999999[#19]		310[#20]	4		999999	999999			999999	999999																	
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																							999999[#19]		480[#20]	6		999999	999999			999999	999999																	
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																							999999[#19]		999999[#20]	9		999999	999999			999999	999999																	
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**	**Matrix_Type**																																															
DLA (2017)																																																		
BH1 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	200	-	24	12	<0.1	81	-	26	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH1 1.9-2.0	8/02/2017	-	Soil	18	<0.4	15	-	84	19	<0.1	22	-	60	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH4 0.5-0.6	7/02/2017	-	Soil	<4	<0.4	12	-	67	4	<0.1	56	-	33	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH4 1.9-2.0	7/02/2017	-	Soil	<4	<0.4	53	-	14	8	<0.1	52	-	21	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH4 5.9-6.0	7/02/2017	-	Soil	9	<0.4	9	-	39	15	<0.1	15	-	55	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH6 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	67	-	48	10	<0.1	69	-	45	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH6 1.9-2.0	8/02/2017	-	Soil	<4	<0.4	46	-	39	10	<0.1	61	-	47	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH7 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	20	-	16	15	<0.1	22	-	17	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH7 1.9-2.0	8/02/2017	-	Soil	<4	<0.4	50	-	37	12	<0.1	110	-	48	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH8 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	70	-	44	4	<0.1	240	-	56	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH8 1.9-2.0	8/02/2017	-	Soil	<4	<0.4	76	-	45	4	<0.1	250	-	57	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH9 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	46	-	17	4	<0.1	74	-	26	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH9 1.9-2.0	8/02/2017	-	Soil	<4	<0.4	57	-	40	4	<0.1	280	-	54	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH10 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	19	-	130	14	<0.1	35	-	61	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH10 1.9-2.0	8/02/2017	-	Soil	<4	<0.4	220	-	42	4	<0.1	220	-	57	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH11 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	7	-	62	5	<0.1	5	-	18	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH11 1.9-2.0	8/02/2017	-	Soil	<4	<0.4	140	-	43	4	<0.1	120	-	38	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH12 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	25	-	39	17	<0.1	69	-	130	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH12 1.9-2.0	8/02/2017	-	Soil	<4	<0.4	12	-	24	13	<0.1	19	-	49	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH13 0.5-0.6	7/02/2017	-	Soil	<4	<0.4	62	-	45	4	<0.1	160	-	45	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH13 2.5-2.6	7/02/2017	-	Soil	<4	<0.4	19	-	36	16	<0.1	45	-	82	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH13 7.4-7.5	7/02/2017	-	Soil	6	<0.4	9	-	43	17	<0.1	20	-	62	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH14 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	58	-	46	3	<0.1	310	-	54	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH14 1.9-2.0	8/02/2017	-	Soil	<4	<0.4	53	-	40	3	<0.1	360	-	47	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH16 0.5-0.6	8/02/2017	-	Soil	7	<0.4	15	-	44	13	<0.1	28	-	53	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	0.2	0.2	<0.1	<0.2	-
BH16 1.9-2.0	8/02/2017	-	Soil	4	<0.4	21	-	44	18	<0.1	28	-	55	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.2	-
BH17 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	290	-	31	4	<0.1	240	-	45	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH17 1.9-2.0	8/02/2017	-	Soil	<4	<0.4	230	-	48	5	<0.1	250	-	59	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH18 0.5-0.6	8/02/2017	-	Soil	4	<0.4	11	-	36	15	<0.1	31	-	62	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH18 1.9-2.0	8/02/2017	-	Soil	5	<0.4	12	-	37	14	<0.1	32	-	58	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH19 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	38	-	37	9	<0.1	56	-	41	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH19 1.9-2.0	8/02/2017	-	Soil	4	1	9	-	33	16	<0.1	260	-	200	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH2 0.5-0.6	8/02/2017	-	Soil	4	<0.4	46	-	41	12	<0.1	130	-	37	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH2 1.9-2.0	8/02/2017	-	Soil	7	<0.4	13	-	32	13	<0.1	17	-	48	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH21 0.5-0.6	8/02/2017	-	Soil	19	<0.4	14	-	34	18	<0.1	23	-	63	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH21 1.9-2.0	8/02/2017	-	Soil	7	<0.4	13	-	28	14	<0.1	23	-	61	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH22 0.5-0.6	7/02/2017	-	Soil	<4	<0.4	14	-	22	4	<0.1	9	-	16	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH22 1.9-2.0	7/02/2017	-	Soil	<4	<0.4	100	-	22	6	<0.1	65	-	22	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH24 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	17	-	42	13	<0.1	29	-	47	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH24 1.9-2.0	8/02/2017	-	Soil	5	<0.4	74	-	38	15	<0.1	80	-	55	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH25 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	13	-	57	11	<0.1	49	-	58	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH25 1.9-2.0	8/02/2017	-	Soil	5	<0.4	12	-	21	15	<0.1	9	-	25	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH26 0.5-0.6	7/02/2017	-	Soil	<4	<0.4	60	-	34	11	<0.1	62	-	39	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH26 1.9-2.0	7/02/2017	-	Soil	5	<0.4	19	-	18	16	<0.1	10	-	16	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH27 0.5-0.6	7/02/2017	-	Soil	<4	<0.4	160	-	18	16	<0.1	48	-	25	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH27 1.9-2.0	7/02/2017	-	Soil	<4	<0.4	110	-	52	14	<0.1	56	-	59	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	0.06	-	<0.1	<0.1	0.121	0.2	<0.1	<0.1	<0.1	0.5	0.2	<0.2	-
BH28 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	31	-	57	11	<0.1	68	-	35	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH28 1.9-2.0	8/02/2017	-	Soil	<4	<0.4	12	-	22	8	<0.1	9	-	15	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH29 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	100	-	43	5	<0.1	270	-	60	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH29 1.9-2.0	8/02/2017	-	Soil	<4	<0.4	160	-	37	5	<0.1	130	-	33	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH3 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	130	-	38	13	<0.1	140	-	45	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH3 1.9-2.0	8/02/2017	-	Soil	<4	<0.4	29	-	19	13	<0.1	58	-	56	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH30 0.5-0.6	7/02/2017	-	Soil	<4	<0.4	16	-	16	4	<0.1	11	-	14	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH30 5.9-6.0	7/02/2017	-	Soil	<4	<0.4	130	-	26	9	<0.1	59	-	62	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH31 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	10	-	36	6	<0.1	12	-	19	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH31 1.9-2.0	8/02/2017	-	Soil	<4	<0.4	19	-	34	18	<0.1	25	-	70	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH32 0.5-0.6	8/02/2017	-	Soil	<4	<0.4	7	-	22	4	<0.1	4	-	13	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
BH32 1.9-2.0	8/02/2017	-	Soil	<4	<0.4	200	-	34	4	<0.1	140	-	35	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
HA15 0.2-0.4	8/02/2017	-	Soil	<4	<0.4	10	-	40	28	<0.1	25	-	40	<25	-	110	370	-	<50	330	410	740	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	0.1	0.2	0.7	0.94	-	0.8	<0.1	1.137	1.2	<0.1	0.6	0.4	8.8	1.4	2	-
HA15 0-0.2	8/02/2017	-	Soil	<4	<0.4	9	-	47	21	<0.1	22	-	42	<25	-	120	320	-	<50	310	320	630	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	0.2	0.8	0.78	-	0.6	0.2	1.124	1.3	<0.1	0.5	0.4	8.5	1.4	1	-
HA20 0.2-0.3	9/02/2017	-	Soil	7	<0.4	19	-	43	19	<0.1	39	-	79	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.2	-
HA20 0.5-0.6	9/02/2017	-	Soil	5	<0.4	21	-	44	16	<0.1	42	-	68	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.2	-
HA23 0.1-0.2	9/02/2017	-	Soil	<4	<0.4	160	-	25	17	<0.1	65	-	34	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
HA23 0.2-0.3	9/02/2017	-	Soil	<4	<0.4	190	-	26	11	<0.1	110	-	29	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
HA5 0.2-0.3	9/02/2017	-	Soil	5	<0.4	24	-	30	16	<0.1	33	-	58	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
HA5 0.4-0.5	9/02/2017	-	Soil	5	<0.4	25	-	35	15	<0.1	44	-	59	<25	-	<100	<100	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	-
SD2	2/08/2017	-	Sediment	<2	<0.4	50	-	34	7	<0.05	32	-	57	-	-	-	-	-	<50	<100	<100	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
SD3	2/08/2017	-	Sediment	<2	<0.4	20	-	60	6	<0.05	24	-	220	-	-	-	-	-	<51	120	240	<50	<1	<25	<25	<0.2	-	<1	<0.5	<1	<2	<1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

				Metals & Metalloids										TPHs (NEPC 1999)					TRHs (NEPC 2013)							BTEXN								Polycyclic Aromatic Hydrocarbons																
				Arsenic (Total)	Cadmium	Chromium (Total)	Cobalt	Copper	Lead	Mercury (Inorganic)	Nickel	Titanium	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	BTEX (Total)	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(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	Benzo(b,j+k)flouranthene	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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.1	0.1	0.1	0.1	0.05	0.5	0.1	0.1		0.1	0.1	0.1	0.1	0.5	0.1	0.2	0.05
ANZG (2019) - Sediment Quality DGVs				20	1.5	80		65	50	0.15	21		200	280[#1]	280[#1]	280[#1]	280[#1]	280																																
NEPM 2013 EIL - Commercial Industrial (Specific)				160		310[#2]		320[#3]	1800		730[#4]		620[#5]																				370																	
NEPM 2013 ESL Commercial and Industrial, Fine Soil																				2500[#6]	6600[#6]		170[#7]		215[#7]	95[#6]		185[#6]	135[#6]			95[#6]						1.4[#6]												
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																																		
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																																		
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																			1000[#10]	5000	10000			800[#11]																										
NEPM 2013 Soil HIL D				3000[#12]	900	3600[#13]	4000	240000	1500[#14]	730[#15]	6000		400000																													40[#16]					4000[#17]			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																							999999[#19]		310[#20]	4		999999	999999			999999	999999																	
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																							999999[#19]		480[#20]	6		999999	999999			999999	999999																	
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																							999999[#19]		999999[#20]	9		999999	999999			999999	999999																	
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**	**Matrix_Type**																																															
JBS&G (2019b)																																																		
EMB1	30/05/2019	658838	Soil	<2	<0.4	190	-	66	11	<0.1	130	-	160	<20	22	57	91	170	<50	120	<100	120	<50	<20	<20	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
FRAG01	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01	30/05/2019	658838	Soil	13	2.4	130	-	220	430	0.2	150	-	1300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
HA02	30/05/2019	658838	Soil	22	4	120	-	360	930	0.3	170	-	2400	<20	<20	53	<50	53	<50	<100	<100	<100	<50	<20	<20	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
HA03	30/05/2019	658838	Soil	15	2	160	-	250	1100	0.2	180	-	1200	<20	20	120	110	250	<50	180	<100	180	<50	<20	<20	<0.1	-	<0.1	<0.1	<0.1	0.3	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
HA04	30/05/2019	658838	Soil	4.5	0.7	160	-	120	150	<0.1	140	-	380	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
SS01	30/05/2019	658838	Soil	3.2	<0.4	140	-	66	16	<0.1	120	-	92	<20	<20	130	110	240	<50	210	<100	210	<50	<20	<20	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
SS02	30/05/2019	658838	Soil	2.5	<0.4	91	-	49	18	<0.1	66	-	80	<20	30	180	210	420	<50	340	130	470	<50	<20	<20	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
SS03	30/05/2019	658838	Soil	<2	<0.4	170	-	84	20	<0.1	120	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
SS04	30/05/2019	658838	Soil	2.7	<0.4	99	-	67	16	<0.1	84	-	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	1.15	0.7	<0.5	0.5	<0.5	4.2	0.7	-	-
SS05	30/05/2019	658838	Soil	2.9	<0.4	86	-	69	23	<0.1	78	-	89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	0.6	1.2	3.5	7.5	7.1	3.4	5.9	1.3	10.98	15	0.6	5.2	10	89.3	13	-	-
SS06	3/06/2019	659015	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS07	3/06/2019	659015	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	<20	<20	230	160	390	<50	350	<100	350	<50	<20	<20	<0.1	-	0.6	<0.1	1.2	3.2	4.4	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01 1.9-1.0	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01 6.9-7.0	30/05/2019	658838	Soil	<2	<0.4	94	-	53	<5	<0.1	310	-	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
MW02 0.9-1.0	30/05/2019	658838	Soil	4	<0.4	220	-	70	20	<0.1	270	-	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
MW02 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW03 0.9-1.0	30/05/2019	658838	Soil	<2	<0.4	36	-	22	7.3	<0.1	53	-	75	<40	52	420	340	812	87	660	170	917	87	<40	<40	<0.2	-	<0.2	<0.2	<0.2	<0.4	<0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	2.2	<0.5	<0.5	2.2	<0.5	-	-
QA02	30/05/2019	658838	Soil	<2	<0.4	94	-	61	<5	<0.1	280	-	100	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
QC02	30/05/2019	218764	Soil	<4	<0.4	34	-	44	3	<0.1	140	-	42	<25	<50	<100	<100	-	<50	<100	<100	<50	<50	<25	-	<0.2	-	<1	<0.5	<1	<2	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.2	<0.05
MW03 7.9-8.0	30/05/2019	658838	Soil	<2	<0.4	120	-	46	<5	<0.1	340	-	98	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP01 0.3-0.4	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP01 0-0.1	30/05/2019	658838	Soil	2.2	<0.4	280	-	62	5.2	<0.1	180	-	100	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP01 1.4-1.5	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP01 1-1.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	<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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02 1-1.1	30/05/2019	658838	Soil	<2	<0.4	160	-	51	<5	<0.1	430	-	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP03 0-0.1	30/05/2019	658838	Soil	4.9	<0.4	130	-	38	11	<0.1	110	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP04 0.5-0.6	30/05/2019	658838	Soil	3	<0.4	270	-	37	6.5	<0.1	270	-	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP04 0-0.1	30/05/2019	658838	Soil	<2	<0.4	15	-	5.2	5.4	<0.1	6.7	-	30	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP05 0-0.1	30/05/2019	658838	Soil	5.6	<0.4	510	-	95	19	<0.1	440	-	190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	0.5	<0.5	<0.5	<0.5	0.5	<0.5	-	-
TP05 2-2.2	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP06 0-0.1	30/05/2019	658838	Soil	3.1	<0.4	550	-	87	7.3	<0.1	550	-	240	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
QA01	30/05/2019	658838	Soil	2.3	<0.4	470	-	65	6.7	<0.1	400	-	110	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
QC01	30/05/2019	218764	Soil	<4	<0.4	220	-	36	6	<0.1	160	-	65	<25	<50	<100	<100	-	<50	<100	<100	<50	<50	<25	-	<0.2	-	<1	<0.5	<1	<2	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.2	<0.05
TP06 1.4-1.5	30/05/2019	658838	Soil	<2	<0.4	200	-	47	<5	<0.1	510	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP07 0-0.1	30/05/2019	658838	Soil	<2	<0.4	150	-	36	<5	<0.1	130	-	70	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP08 0-0.1	30/05/2019	658838	Soil	6.5	<0.4	160	-	55	17	<0.1	180	-	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP09 0.4-0.5	30/05/2019	658838	Soil	2.2	<0.4	49	-	41	14	<0.1	86	-	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP10 0-0.1	30/05/2019	658838	Soil	<2	<0.4	110	-	85	12	<0.1	100	-	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP10 1-1.1	30/05/2019	658838	Soil	<2	<0.4	150	-	52	<5	<0.1	340	-	100	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP11 0.3-0.4	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	<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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11 0-0.1	30/05/2019	658838	Soil	<2	<0.4	170	-	90	6	<0.1	130	-	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP11 2.7-2.8	30/05/2019	658838	Soil	<2	<0.4	120	-	44	<5	<0.1	320	-	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP12 0.5-0.6	30/05/2019	658838	Soil	<2	<0.4	90	-	50	<5	<0.1	260	-	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP12 0-0.1	30/05/2019	658838	Soil	<2	<0.4	160	-	71	14	<0.1	150	-	110	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
AQ01 0-0.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ02 0.3-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ03 0.1-0.95	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ04 0-0.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ05 0-0.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ05 2.4-3.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ06 0.4-1.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ07 0-0.2	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ08 0.9-1.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ08 0-0.9	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ09 0.3-1.3	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ09 0-0.3	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ09 1.5-2.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ10 0.4-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ10 0-0.4	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ11 0.6-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ11 0-0.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ12 0.1-1.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ12 0-0.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ13 0.6-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ13 0-0.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ14 0-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ14 1-1.5	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ15 0.5-1.5	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ15 0-0.5	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

	Metals & Metalloids										TPHs (NEPC 1999)					TRHs (NEPC 2013)							BTEXN								Polycyclic Aromatic Hydrocarbons																			
	Arsenic (Total)	Cadmium	Chromium (Total)	Cobalt	Copper	Lead	Mercury (Inorganic)	Nickel	Titanium	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	BTEX (Total)	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)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	Benzo(b,j+k)fluoranthene	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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.1	0.1	0.1	0.1	0.05	0.5	0.1	0.1		0.1	0.1	0.1	0.1	0.5	0.1	0.2	0.05
ANZG (2019) - Sediment Quality DGVs	20	1.5	80		65	50	0.15	21		200	280[#1]	280[#1]	280[#1]	280[#1]	280																																		
NEPM 2013 EIL - Commercial Industrial (Specific)	160		310[#2]		320[#3]	1800		730[#4]		620[#5]																			370																			
NEPM 2013 ESL Commercial and Industrial, Fine Soil																	2500[#6]	6600[#6]		170[#7]		215[#7]	95[#6]		185[#6]	135[#6]			95[#6]						1.4[#6]													
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																																
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																																
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																1000[#10]	5000	10000			800[#11]																													
NEPM 2013 Soil HIL D	3000[#12]	900	3600[#13]	4000	240000	1500[#14]	730[#15]	6000		400000																															40[#16]				4000[#17]			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																				999995[#19]		310[#20]	4		999999	999999			999999	999999																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																				999995[#19]		480[#20]	6		999999	999999			999999	999999																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																				999995[#19]		999995[#20]	9		999999	999999			999999	999999																			

Field_ID	Sampled_Date-Time	Lab_Report_Number	Matrix_Type																																																
JBS&G (2020)																																																		
TP200_0.0-0.1	9/03/2020	707966	SOIL	9.3	<0.4	34	-	55	26	<0.1	25	-	60	<20	<20	170	87	257	<50	230	<100	230	<50	<20	<20	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP201_0.9-1.0	9/03/2020	707966	SOIL	22	<0.4	6.7	-	40	26	<0.1	8.8	-	41	<20	<20	93	<50	93	<50	100	<100	100	<50	<20	<20	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP202_0.0-0.1	9/03/2020	707966	SOIL	7.9	<0.4	13	-	24	22	<0.1	10	-	30	<20	<20	90	<50	90	<50	<100	<100	<100	<50	<20	<20	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP203_0.5-0.6	9/03/2020	707966	SOIL	10	<0.4	5.5	-	41	20	<0.1	11	-	45	<20	<20	130	<50	130	<50	130	<100	130	<50	<20	<20	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP204_0.0-0.1	9/03/2020	707966	SOIL	4.5	<0.4	6.6	-	75	17	0.1	10	-	37	<20	<20	95	<50	95	<50	<100	<100	<100	<50	<20	<20	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP205_0.4-0.5	9/03/2020	707966	SOIL	9.3	<0.4	6.7	-	49	22	<0.1	8.8	-	30	<20	<20	61	<50	61	<50	<100	<100	<100	<50	<20	<20	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP206_0.0-0.1	9/03/2020	707966	SOIL	11	<0.4	55	-	47	26	<0.1	34	-	79	<20	<20	100	<50	100	<50	120	<100	120	<50	<20	<20	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP207_0.0-0.1	9/03/2020	707966	SOIL	<2	<0.4	400	-	65	<5	<0.1	180	-	89	<20	<20	84	<50	84	<50	<100	<100	<100	<50	<20	<20	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP208_0.9-1.0	9/03/2020	707966	SOIL	<2	<0.4	280	-	64	<5	<0.1	440	-	120	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP209_0.9-1.0	9/03/2020	707966	SOIL	<2	<0.4	230	-	54	<5	<0.1	330	-	95	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP210_0.4-0.5	9/03/2020	707966	SOIL	<2	<0.4	110	-	57	<5	<0.1	280	-	93	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
TP211_0.0-0.1	9/03/2020	707966	SOIL	4.5	<0.4	170	-	95	11	<0.1	140	-	140	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-

Env Stds Comments
#1:Adopted from TPHs total
#2:TV taken for Chromium (III), Clay Content of 1%
#3:TV taken for pH 6
#4:TV taken for CEC 30
#5:TV taken for pH 6 and CEC 30
#6:ESLs are of low reliability.
#7:ESLs are of moderate reliability.
#8:Commercial/industrial D includes premises such as shops, offices, factories and industrial sites.
#9:The screening level of 0.001% w/w asbestos in soil for FA and AF (i.e. non-bonded/friable asbestos) only applies where the FA and AF are able to be quantified by gravimetric procedures (refer Section 4.10). This screening level is not applicable to free fibres.
#10:Management limits of BTEX and naphthalene are not available, hence should not be subtracted from the relevant fractions to obtain F1 and F2.
#11:Limits applied after consideration of relevant ESLs and HSLs
#12:Key limitations of HSL should be referred to prior to application in Friebel and Nadebaum (2011b and 2011d).
#13:TV adopted from Chromium (VI)
#14:Assumptions of HSL are presented in Friebel and Nadebaum (2011a and 2011b).
#15:Refer to HSL and soil saturation concentration limit.
#16:Refer to Section 8.2 and Appendix J in Friebel and Nadebaum (2011a).
#17:TV maybe be multiplied by a factor to account for biodegradation of vapour
#18:HIL relates to non-dioxin-like PCBs only. If PCB source is suspected a site-specific assessment should be untertaken
#19:To obtain F2 subtract naohthalene from >C10-C16.
#20:To obtain F1 subtract the sum of BTEX from C6-C10.

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

				Organochlorine Pesticides																								Organophosphorus Pesticides												Carbarmate & Other Pesticides				VOC	Chlorinated Alkanes																	
				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	Azinphos methyl	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Parathion	Ronnel	a-BHC	b-BHC	d-BHC	g-BHC (Lindane)	Total MAH*	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.1	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.1	1																	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ANZG (2019) - Sediment Quality DGVs																																																														
NEPM 2013 EIL - Commercial Industrial (Specific)												640																																																		
NEPM 2013 ESL Commercial and Industrial, Fine Soil																																																														
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																																														
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																																														
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																																																															
NEPM 2013 Soil HIL D						45				530				3600					100				50			2500	160			2000																																
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																																																														
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																																																														
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																																																														
Field_ID	Sampled_Date-Time	Lab_Report_Number	Matrix_Type																																																											
Coffey (2013)																																																													
BH01 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02 0.0-0.2	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04 0.0-0.1	20/02/2013	-	Soil	<0.05	<0.05	<0.1	-	-	-	-	<0.05	<0.2	<0.05	<0.3	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 0.16-0.26	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 1.0-1.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07 0.08-0.13	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07 0.2-0.3	18/02/2013	-	Soil	<0.05	<0.05	<0.1	-	-	-	-	<0.05	<0.2	<0.05	<0.3	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07 0.4-0.5	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08 0.0-0.2	20/02/2013	-	Soil	<0.05	<0.05	<0.1	-	-	-	-	<0.05	<0.2	<0.05	<0.3	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 0.0-0.1	20/02/2013	-	Soil	<0.05	<0.05	<0.1	-	-	-	-	<0.05	<0.2	<0.05	<0.3	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10 0.16-0.26	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 0.19-0.29	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12 0.4-0.5	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13 0.13-0.23	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14 0.19-0.29	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15 0.15-0.25	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 0.5-0.6	19/02/2013	-	Soil	<0.05	<0.05	<0.1	-	-	-	-	<0.05	<0.2	<0.05	<0.3	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 0.5-0.6	19/02/2013	-	Soil	<0.05	<0.05	<0.1	-	-	-	-	<0.05	<0.2	<0.05	<0.3	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 0.5-6.0	19/02/2013	-	Soil	<0.05	<0.05	<0.1	-	-	-	-	<0.05	<0.2	<0.05	<0.3	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19 0.4-0.5	19/02/2013	-	Soil	<0.05	<0.05	<0.1	-	-	-	-	<0.05	<0.2	<0.05	<0.3	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19 1.0-1.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 0.0-0.2	19/02/2013	-	Soil	<0.05	<0.05	<0.1	-	-	-	-	<0.05	<0.2	<0.05	<0.3	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 1.0-1.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 3.0-3.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 3.9-4.0	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22 0.0-0.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 0.08-0.18	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 0.5-0.6	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 0.08-0.18	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 0.5-0.6	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 1.1-1.2	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25 0.19-0.29	18/02/2013	-	Soil	<0.05	<0.05	<0.1	-	-	-	-	<0.05	<0.2	<0.05	<0.3	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26 0.18-0.28	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27 0.17-0.27	18/02/2013	-	Soil	<0.05	<0.05	<0.1	-	-	-	-	<0.05	<0.2	<0.05	<0.3	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27 0.4-0.5	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28 0.16-0.26	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29 0.19-0.29	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 0.19-0.29	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31 0.4-0.5	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32 0.08-0.18	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34 0.09-0.19	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34 1.0-1.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35 0.08-0.18	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35 0.4-0.5	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37 0.0-0.2	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38 0.0-0.2	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38 0.4-0.5	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH39 0.0-0.2	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40 0.0-0.2	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP2	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP3	19/02/2013	-	Soil	<0.05	<0.05	<0.1	-	-	-	-	<0.05	<0.2	<0.05	<0.3	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP3A	19/02/2013	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<0.1	<0.1	<0.1	<0.3	-	<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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP5	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP5A	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP7A	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED1	21/02/2013	-	Sediment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED2	21/02/2013	-	Sediment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED3	21/02/2013	-	Sediment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

				Organochlorine Pesticides																								Organophosphorus Pesticides												Carbarmate & Other Pesticides				VOC	Chlorinated Alkanes																	
				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	Azinphos methyl	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Parathion	Ronnel	a-BHC	b-BHC	d-BHC	g-BHC (Lindane)	Total MAH*	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.1	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.1	1																	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ANZG (2019) - Sediment Quality DGVs																																																														
NEPM 2013 EIL - Commercial Industrial (Specific)												640																																																		
NEPM 2013 ESL Commercial and Industrial, Fine Soil																																																														
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																																														
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																																														
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																																																														
NEPM 2013 Soil HIL D						45				530				3600					100				50			2500	160			2000																																
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																																																														
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																																																														
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																																																															
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**	**Matrix_Type**																																																											
DLA (2017)																																																														
BH1 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH1 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH4 0.5-0.6	7/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH4 1.9-2.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH4 5.9-6.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH7 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH7 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH8 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH8 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH9 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH9 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13 0.5-0.6	7/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13 2.5-2.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13 7.4-7.5	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH2 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH2 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22 0.5-0.6	7/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22 1.9-2.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26 0.5-0.6	7/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26 1.9-2.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27 0.5-0.6	7/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27 1.9-2.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 0.5-0.6	7/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 5.9-6.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32 0.5-0.6	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA15 0.2-0.4	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA15 0-0.2	8/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA20 0.2-0.3	9/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA20 0.5-0.6	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA23 0.1-0.2	9/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA23 0.2-0.3	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA5 0.2-0.3	9/02/2017	-	Soil	<0.1	<0.1	<0.2	-	-	-	-	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA5 0.4-0.5	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SD2	2/08/2017	-	Sediment	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SD3	2/08/2017	-	Sediment	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

				Organochlorine Pesticides																								Organophosphorus Pesticides												Carbarmate & Other Pesticides				VOC	Chlorinated Alkanes																	
				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	Azinphos methyl	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Parathion	Ronnel	a-BHC	b-BHC	d-BHC	g-BHC (Lindane)	Total MAH*	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.1	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.1	1																	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ANZG (2019) - Sediment Quality DGVs																																																														
NEPM 2013 EIL - Commercial Industrial (Specific)												640																																																		
NEPM 2013 ESL Commercial and Industrial, Fine Soil																																																														
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																																														
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																																														
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																																																														
NEPM 2013 Soil HIL D						45				530				3600					100				50			2500	160			2000																																
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																																																														
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																																																														
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																																																														
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**	**Matrix_Type**																																																											
JBS&G (2019b)																																																														
EMB1	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
FRAG01	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA02	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HA03	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HA04	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS01	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SS02	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SS03	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS04	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS05	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS06	3/06/2019	659015	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS07	3/06/2019	659015	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01 0-0.1	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW01 1.9-1.0	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01 6.9-7.0	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW02 0.9-1.0	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW02 0-0.1	30/05/2019	658838	Soil	<0.5	<0.5	<0.5	<0.5	-	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<2	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW03 0.9-1.0	30/05/2019	658838	Soil	<0.5	<0.5	<0.5	<0.5	-	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<2	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1
QA02	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QC02	30/05/2019	218764	Soil	<0.1	<0.1	<0.2	<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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
MW03 7.9-8.0	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP01 0.3-0.4	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP01 0-0.1	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP01 1.4-1.5	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP01 1-1.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP02 0-0.1	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02 1-1.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04 0.5-0.6	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04 0-0.1	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP05 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05 2-2.2	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP06 0-0.1	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QA01	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QC01	30/05/2019	218764	Soil	<0.1	<0.1	<0.2	<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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
TP06 1.4-1.5	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP07 0-0.1	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP08 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP09 0.4-0.5	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10 1-1.1	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP11 0.3-0.4	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP11 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11 2.7-2.8	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP12 0.5-0.6	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP12 0-0.1	30/05/2019	658838	Soil	<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	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AQ01 0-0.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ02 0.3-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ03 0.1-0.95	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ04 0-0.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ05 0-0.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ05 2.4-3.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ06 0.4-1.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ07 0-0.2	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ08 0.9-1.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ08 0-0.9	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ09 0.3-1.3	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ09 0-0.3	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ09 1.5-2.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ10 0.4-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ10 0-0.4	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ11 0.6-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ11 0-0.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ12 0.1-1.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ12 0-0.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ13 0.6-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ13 0-0.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ14 0-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ14 1-1.5	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ15 0.5-1.5	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ15 0-0.5	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

				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	0.1	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.1	1
ANZG (2019) - Sediment Quality DGVs																											
NEPM 2013 EIL - Commercial Industrial (Specific)												640															
NEPM 2013 ESL Commercial and Industrial, Fine Soil																											
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																											
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																											
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																											
NEPM 2013 Soil HIL D						45				530				3600					100				50			2500	160
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																											
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																											
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																											
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**	**Matrix_Type**																								
JBS&G (2020)																											
TP200_0.0-0.1	9/03/2020	707966	SOIL	<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	<0.2	<1
TP201_0.9-1.0	9/03/2020	707966	SOIL	<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	<0.2	<1
TP202_0.0-0.1	9/03/2020	707966	SOIL	<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	<0.2	<1
TP203_0.5-0.6	9/03/2020	707966	SOIL	<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	<0.2	<1
TP204_0.0-0.1	9/03/2020	707966	SOIL	<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	<0.2	<1
TP205_0.4-0.5	9/03/2020	707966	SOIL	<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	<0.2	<1
TP206_0.0-0.1	9/03/2020	707966	SOIL	<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	<0.2	<1
TP207_0.0-0.1	9/03/2020	707966	SOIL	<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	<0.2	<1
TP208_0.9-1.0	9/03/2020	707966	SOIL	<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	<0.2	<1
TP209_0.9-1.0	9/03/2020	707966	SOIL	<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	<0.2	<1
TP210_0.4-0.5	9/03/2020	707966	SOIL	<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	<0.2	<1
TP211_0.0-0.1	9/03/2020	707966	SOIL	<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	<0.2	<1

	Organophosphorus Pesticides												Carbarmate & Other Pesticides				VOC	Chlorinated Alkanes																	
	Azinphos methyl	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Parathion	Ronnel	a-BHC	b-BHC	d-BHC	g-BHC (Lindane)	Total MAH*	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	1	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ANZG (2019) - Sediment Quality DGVs																																			
NEPM 2013 EIL - Commercial Industrial (Specific)																																			
NEPM 2013 ESL Commercial and Industrial, Fine Soil																																			
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																			
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																			
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																																			
NEPM 2013 Soil HIL D			2000																																
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																																			
Field_ID																																			
JBS&G (2020)																																			
TP200_0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP201_0.9-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP202_0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP203_0.5-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP204_0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP205_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP206_0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP207_0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP208_0.9-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP209_0.9-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP210_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP211_0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Env Stds Comments
#1:Adopted from TPHs total
#2:TV taken for Chromium (III), Clay Content of 1%
#3:TV taken for pH 6
#4:TV taken for CEC 30
#5:TV taken for pH 6 and CEC 30
#6:ESLs are of low reliability.
#7:ESLs are of moderate reliability.
#8:Commercial/industrial D includes premises such as shops, offices, factories and indust
#9:The screening level of 0.001% w/w asbestos in soil for FA and AF (i.e. non-bonded/fria
#10:Management limits of BTEX and naphthalene are not available, hence should not be
#11:Limits applied after consideration of relevant ESLs and HSLs
#12:Key limitations of HSL should be referred to prior to application in Friebel and Nadeb
#13:TV adopted from Chromium (VI)
#14:Assumptions of HSL are presented in Friebel and Nadebaum (2011a and 2011b).
#15:Refer to HSL and soil saturation concentration limit.
#16:Refer to Section 8.2 and Appendix J in Friebel and Nadebaum (2011a).
#17:TV maybe be multiplied by a factor to account for biodegradation of vapour
#18:HIL relates to non-dioxin-like PCBs only. If PCB source is suspected a site-specific asse
#19:To obtain F2 subtract naohthalene from >C10-C16.
#20:To obtain F1 subtract the sum of BTEX from C6-C10.

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

				Chlorinated Alkenes														Solvents	Polychlorinated Biphenyls								Monocyclic Aromatic Hydrocarbons									Miscellaneous Hydrocarbons							Chlorinated Benzenes							Trihalomethanes				Misc Chemicals
				1,1-dichloroethene	1,1-dichloropropene	1,3-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	2-Propanone (Acetone)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Bromobenzene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	Tert-butyl benzene	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	Hexachlorobutadiene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	1		1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	1	0.5	0.5	1	1	1	0.5	1	0.5	0.5	0.5	0.5	1	0.5	0.5	1	1	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	1
ANZG (2019) - Sediment Quality DGVs																																																			
NEPM 2013 EIL - Commercial Industrial (Specific)																																																		
NEPM 2013 ESL Commercial and Industrial, Fine Soil																																																		
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																																		
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																																		
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																																																		
NEPM 2013 Soil HIL D																									7[#18]																										80				
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																																																		
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																																																		
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																																																		
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**	**Matrix_Type**																																															
Coffey (2013)																																																		
BH01 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02 0.0-0.2	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04 0.0-0.1	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 0.16-0.26	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 1.0-1.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07 0.08-0.13	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07 0.2-0.3	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07 0.4-0.5	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 0.0-0.1	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10 0.16-0.26	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 0.19-0.29	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12 0.4-0.5	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13 0.13-0.23	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14 0.19-0.29	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15 0.15-0.25	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 0.5-0.6	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 0.5-0.6	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 0.5-6.0	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19 0.4-0.5	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19 1.0-1.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 0.0-0.2	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 1.0-1.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 3.0-3.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 3.9-4.0	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22 0.0-0.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 0.08-0.18	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 0.5-0.6	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 0.08-0.18	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 0.5-0.6	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 1.1-1.2	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25 0.19-0.29	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26 0.18-0.28	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27 0.17-0.27	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27 0.4-0.5	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28 0.16-0.26	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29 0.19-0.29	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 0.19-0.29	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31 0.4-0.5	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32 0.08-0.18	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34 0.09-0.19	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34 1.0-1.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35 0.08-0.18	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35 0.4-0.5	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37 0.0-0.2	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38 0.0-0.2	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38 0.4-0.5	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH39 0.0-0.2	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40 0.0-0.2	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP2	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP3	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP3A	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP5	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP5A	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP7A	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED1	21/02/2013	-	Sediment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED2	21/02/2013	-	Sediment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED3	21/02/2013	-	Sediment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

				Chlorinated Alkenes														Solvents	Polychlorinated Biphenyls								Monocyclic Aromatic Hydrocarbons										Miscellaneous Hydrocarbons							Chlorinated Benzenes							Trihalomethanes				Misc Chemicals
				1,1-dichloroethene	1,1-dichloropropene	1,3-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	2-Propanone (Acetone)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Bromobenzene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	Tert-butyl benzene	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	Hexachlorobutadiene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	1		1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	1	0.5	0.5	1	1	1	0.5	1	0.5	0.5	0.5	1	0.5	0.5	1	1	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	1
ANZG (2019) - Sediment Quality DGVs																																																						
NEPM 2013 EIL - Commercial Industrial (Specific)																																																					
NEPM 2013 ESL Commercial and Industrial, Fine Soil																																																					
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																																					
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																																					
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																																																					
NEPM 2013 Soil HIL D																									7[#18]																									80					
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																																																					
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																																																					
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																																																					
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**	**Matrix_Type**																																																			
DLA (2017)																																																					
BH1 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH1 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH4 0.5-0.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH4 1.9-2.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH4 5.9-6.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH6 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH7 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH7 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH8 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH8 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH9 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH9 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH10 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH11 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH12 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13 0.5-0.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH13 2.5-2.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13 7.4-7.5	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH14 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH16 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH17 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH18 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH19 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH2 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH2 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH21 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22 0.5-0.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH22 1.9-2.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH24 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH25 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26 0.5-0.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH26 1.9-2.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27 0.5-0.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH27 1.9-2.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH28 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH29 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH3 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 0.5-0.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH30 5.9-6.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH31 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH32 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA15 0.2-0.4	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA15 0-0.2	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
HA20 0.2-0.3	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
HA20 0.5-0.6	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA23 0.1-0.2	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
HA23 0.2-0.3	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA5 0.2-0.3	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
HA5 0.4-0.5	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SD2	2/08/2017	-	Sediment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SD3	2/08/2017	-	Sediment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

				Chlorinated Alkenes														Solvents	Polychlorinated Biphenyls									Monocyclic Aromatic Hydrocarbons										Miscellaneous Hydrocarbons							Chlorinated Benzenes							Trihalomethanes				Misc Chemicals
				1,1-dichloroethene	1,1-dichloropropene	1,3-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	2-Propanone (Acetone)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Bromobenzene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	Tert-butyl benzene	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	Hexachlorobutadiene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	1		1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	1	0.5	0.5	1	1	1	0.5	1	0.5	0.5	0.5	0.5	1	0.5	0.5	1	1	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	1
ANZG (2019) - Sediment Quality DGVs																																																							
NEPM 2013 EIL - Commercial Industrial (Specific)																																																						
NEPM 2013 ESL Commercial and Industrial, Fine Soil																																																						
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																																						
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																																						
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																																																						
NEPM 2013 Soil HIL D																									7[#18]																													80				
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																																																					
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																																																					
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																																																					
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**	**Matrix_Type**																																																			
JBS&G (2019b)																																																					
EMB1	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
FRAG01	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA02	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
HA03	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
HA04	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS01	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
SS02	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
SS03	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS04	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS05	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
SS06	3/06/2019	659015	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS07	3/06/2019	659015	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01 0-0.1	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
MW01 1.9-1.0	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01 6.9-7.0	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW02 0.9-1.0	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW02 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<1	<5	<5	<5	<5	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
MW03 0.9-1.0	30/05/2019	658838	Soil	<1	-	<2	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<5	<5	<5	<5	<5	<1	<1	-	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	-
QA02	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
QC02	30/05/2019	218764	Soil	<1	<1	<2	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.05	<1	<1	<1	<1	<1
MW03 7.9-8.0	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
TP01 0.3-0.4	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP01 0-0.1	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
TP01 1.4-1.5	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP01 1-1.1	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	-
TP02 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP02 1-1.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04 0.5-0.6	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04 0-0.1	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
TP05 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05 2-2.2	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP06 0-0.1	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
QA01	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
QC01	30/05/2019	218764	Soil	<1	<1	<2	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.05	<1	<1	<1	<1	<1
TP06 1.4-1.5	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP07 0-0.1	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
TP08 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP09 0.4-0.5	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10 1-1.1	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
TP11 0.3-0.4	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	-
TP11 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11 2.7-2.8	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP12 0.5-0.6	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP12 0-0.1	30/05/2019	658838	Soil	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	-
AQ01 0-0.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ02 0.3-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ03 0.1-0.95	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ04 0-0.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ05 0-0.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ05 2.4-3.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ06 0.4-1.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ07 0-0.2	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ08 0.9-1.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ08 0-0.9	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ09 0.3-1.3	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ09 0-0.3	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ09 1.5-2.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ10 0.4-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ10 0-0.4	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ11 0.6-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ11 0-0.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ12 0.1-1.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ12 0-0.1	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ13 0.6-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ13 0-0.6	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ14 0-1.0	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ14 1-1.5	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ15 0.5-1.5	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AQ15 0-0.5	14/06/2019	660830	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

				Chlorinated Alkenes													Solvents	Polychlorinated Biphenyls								Monocyclic Aromatic Hydrocarbons										Miscellaneous Hydrocarbons							Chlorinated Benzenes							Trihalomethanes				Misc Chemicals
				1,1-dichloroethene	1,1-dichloropropene	1,3-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	2-Propanone (Acetone)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Bromobenzene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	Tert-butyl benzene	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	Hexachlorobutadiene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	1		1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	1	0.5	0.5	1	1	1	0.5	1	0.5	0.5	0.5	0.5	1	0.5	0.5	1	1	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	1
ANZG (2019) - Sediment Quality DGVs																																																						
NEPM 2013 EIL - Commercial Industrial (Specific)																																																						
NEPM 2013 ESL Commercial and Industrial, Fine Soil																																																						
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																																						
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																																						
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																																																						
NEPM 2013 Soil HIL D																								7[#18]																							80					
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																																																						
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																																																						
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																																																						
Field_ID	Sampled_Date-Time	Lab_Report_Number	Matrix_Type																																																			
JBS&G (2020)																																																						
TP200_0.0-0.1	9/03/2020	707966	SOIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-
TP201_0.9-1.0	9/03/2020	707966	SOIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-
TP202_0.0-0.1	9/03/2020	707966	SOIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-
TP203_0.5-0.6	9/03/2020	707966	SOIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-
TP204_0.0-0.1	9/03/2020	707966	SOIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-
TP205_0.4-0.5	9/03/2020	707966	SOIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-
TP206_0.0-0.1	9/03/2020	707966	SOIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-
TP207_0.0-0.1	9/03/2020	707966	SOIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-
TP208_0.9-1.0	9/03/2020	707966	SOIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-
TP209_0.9-1.0	9/03/2020	707966	SOIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-
TP210_0.4-0.5	9/03/2020	707966	SOIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-
TP211_0.0-0.1	9/03/2020	707966	SOIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-

Env Stds Comments
#1:Adopted from TPHs total
#2:TV taken for Chromium (III), Clay Content of 1%
#3:TV taken for pH 6
#4:TV taken for CEC 30
#5:TV taken for pH 6 and CEC 30
#6:ESLs are of low reliability.
#7:ESLs are of moderate reliability.
#8:Commercial/industrial D includes premises such as shops, offices, factories and industr
#9:The screening level of 0.001% w/w asbestos in soil for FA and AF (i.e. non-bonded/frial
#10:Management limits of BTEX and naphthalene are not available, hence should not be
#11:Limits applied after consideration of relevant ESLs and HSLs
#12:Key limitations of HSL should be referred to prior to application in Friebel and Nadeb
#13:TV adopted from Chromium (VI)
#14:Assumptions of HSL are presented in Friebel and Nadebaum (2011a and 2011b).
#15:Refer to HSL and soil saturation concentration limit.
#16:Refer to Section 8.2 and Appendix J in Friebel and Nadebaum (2011a).
#17:TV maybe be multiplied by a factor to account for biodegradation of vapour
#18:HIL relates to non-dioxin-like PCBs only. If PCB source is suspected a site-specific asse
#19:To obtain F2 subtract naohthalene from >C10-C16.
#20:To obtain F1 subtract the sum of BTEX from C6-C10.

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

				Asbestos											Ionic Balance			Other	
				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	Total Asbestos#1	Cation Exchange Capacity	EC 1:5 soil:water	pH 1:5 soil:water	% Moisture 103oC	Moisture
				g	%w/w	%w/w	g	g	g	g	g	g	g	g/kg	meq/100g	µS/cm	ph Units	%	%
EQL														0.1	0.05	5	0.1	1	0.1
ANZG (2019) - Sediment Quality DGVs																			
NEPM 2013 EIL - Commercial Industrial (Specific)																			
NEPM 2013 ESL Commercial and Industrial, Fine Soil																			
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D					0.05[88]														
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL						0.001[89]													
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																			
NEPM 2013 Soil HIL D																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																			
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**	**Matrix_Type**																
Coffey (2013)																			
BH01 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02 0.0-0.2	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04 0.0-0.1	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 0.16-0.26	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 1.0-1.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07 0.08-0.13	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07 0.2-0.3	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07 0.4-0.5	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 0.0-0.1	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10 0.16-0.26	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 0.19-0.29	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12 0.4-0.5	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13 0.13-0.23	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14 0.19-0.29	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15 0.15-0.25	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 0.5-0.6	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 0.5-0.6	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 0.5-6.0	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19 0.4-0.5	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19 1.0-1.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 0.0-0.2	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 1.0-1.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 3.0-3.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21 3.9-4.0	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22 0.0-0.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 0.08-0.18	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 0.5-0.6	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 0.08-0.18	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 0.5-0.6	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24 1.1-1.2	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25 0.19-0.29	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26 0.18-0.28	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27 0.17-0.27	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27 0.4-0.5	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28 0.16-0.26	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29 0.19-0.29	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 0.19-0.29	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31 0.4-0.5	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32 0.08-0.18	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34 0.09-0.19	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34 1.0-1.1	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35 0.08-0.18	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35 0.4-0.5	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36 0.0-0.2	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37 0.0-0.2	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38 0.0-0.2	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38 0.4-0.5	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH39 0.0-0.2	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40 0.0-0.2	21/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP2	18/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP3	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP3A	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP5	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP5A	19/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP7A	20/02/2013	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED1	21/02/2013	-	Sediment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED2	21/02/2013	-	Sediment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED3	21/02/2013	-	Sediment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

				Asbestos											Ionic Balance			Other	
				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	Total Asbestos#1	Cation Exchange Capacity	EC 1:5 soil:water	pH 1:5 soil:water	% Moisture 103oC	Moisture
				g	%w/w	%w/w	g	g	g	g	g	g	g	g/kg	meq/100g	µS/cm	ph Units	%	%
EQL														0.1	0.05	5	0.1	1	0.1
ANZG (2019) - Sediment Quality DGVs																			
NEPM 2013 EIL - Commercial Industrial (Specific)																			
NEPM 2013 ESL Commercial and Industrial, Fine Soil																			
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D					0.05[88]														
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL						0.001[89]													
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																			
NEPM 2013 Soil HIL D																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																			
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**	**Matrix_Type**																
DLA (2017)																			
BH1 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
BH1 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
BH4 0.5-0.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.6
BH4 1.9-2.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27
BH4 5.9-6.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
BH6 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
BH6 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
BH7 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
BH7 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
BH8 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
BH8 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.5
BH9 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
BH9 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
BH10 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
BH10 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
BH11 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
BH11 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
BH12 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
BH12 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.8
BH13 0.5-0.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
BH13 2.5-2.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
BH13 7.4-7.5	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7
BH14 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
BH14 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
BH16 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7
BH16 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7
BH17 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
BH17 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27
BH18 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.1
BH18 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.2
BH19 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
BH19 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
BH2 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
BH2 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
BH21 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3
BH21 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.1
BH22 0.5-0.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
BH22 1.9-2.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
BH24 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
BH24 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
BH25 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
BH25 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
BH26 0.5-0.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.6
BH26 1.9-2.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
BH27 0.5-0.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
BH27 1.9-2.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
BH28 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
BH28 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
BH29 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
BH29 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28
BH3 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
BH3 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28
BH30 0.5-0.6	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
BH30 5.9-6.0	7/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
BH31 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
BH31 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.1
BH32 0.5-0.6	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
BH32 1.9-2.0	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
HA15 0.2-0.4	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
HA15 0-0.2	8/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.4
HA20 0.2-0.3	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
HA20 0.5-0.6	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
HA23 0.1-0.2	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
HA23 0.2-0.3	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
HA5 0.2-0.3	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
HA5 0.4-0.5	9/02/2017	-	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.9
SD2	2/08/2017	-	Sediment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SD3	2/08/2017	-	Sediment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

				Asbestos										Ionic Balance			Other	
				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	Total Asbestos#1	Cation Exchange Capacity	EC 1:5 soil:water	pH 1:5 soil:water	% Moisture 103oC	Moisture
				g	%w/w	%w/w	g	g	g	g	g	g	g	g/kg	meq/100g	µS/cm	ph Units	%	%
EQL														0.1	0.05	5	0.1	1	0.1
ANZG (2019) - Sediment Quality DGVs																			
NEPM 2013 EIL - Commercial Industrial (Specific)																			
NEPM 2013 ESL Commercial and Industrial, Fine Soil																			
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D					0.05[88]														
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL						0.001[89]													
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																			
NEPM 2013 Soil HIL D																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																			
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																			
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**	**Matrix_Type**																
JBS&G (2019b)																			
EMB1	30/05/2019	658838	Soil	561	0	0	0	0	0	0	0	0	0	-	-	-	-	9	-
FRAG01	30/05/2019	658838	Soil	77	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
HA01	30/05/2019	658838	Soil	548	0	0	0	0	0	0	0	0	0	-	-	-	-	6.8	-
HA02	30/05/2019	658838	Soil	747	0	0	0	0	0	0	0	0	0	-	-	-	-	9.4	-
HA03	30/05/2019	658838	Soil	615	0	0	0	0	0	0	0	0	0	-	-	-	-	13	-
HA04	30/05/2019	658838	Soil	845	0	0	0	0	0	0	0	0	0	-	-	-	-	9.4	-
SS01	30/05/2019	658838	Soil	484	0	0	0	0	0	0	0	0	0	-	-	-	-	9.4	-
SS02	30/05/2019	658838	Soil	490	0	0	0	0	0	0	0	0	0	-	-	-	-	12	-
SS03	30/05/2019	658838	Soil	577	0	0	0	0	0	0	0	0	0	-	-	-	-	21	-
SS04	30/05/2019	658838	Soil	492	0	0	0	0	0	0	0	0	0	-	-	-	-	15	-
SS05	30/05/2019	658838	Soil	560	0	0	0	0	0	0	0	0	0	-	-	-	-	9.5	-
SS06	3/06/2019	659015	Soil	1146	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
SS07	3/06/2019	659015	Soil	874	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
MW01 0-0.1	30/05/2019	658838	Soil	359	0	0	0	0	0	0	0	0	0	-	-	-	-	12	-
MW01 1.9-1.0	30/05/2019	658838	Soil	825	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
MW01 6.9-7.0	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-
MW02 0.9-1.0	30/05/2019	658838	Soil	877	0	0	0	0	0	0	0	0	0	-	-	-	-	11	-
MW02 0-0.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.5	-
MW03 0.9-1.0	30/05/2019	658838	Soil	136	0	0	0	0	0	0	0	0	0	-	-	-	-	14	-
QA02	30/05/2019	658838	Soil	809	0	0	0	0	0	0	0	0	0	-	-	-	-	8.2	-
QC02	30/05/2019	218764	Soil	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	12
MW03 7.9-8.0	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7	-
TP01 0.3-0.4	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	45	94	7.1	13	-
TP01 0-0.1	30/05/2019	658838	Soil	660	0	0	0	0	0	0	0	0	0	-	-	-	-	16	-
TP01 1.4-1.5	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	62	530	7.1	14	-
TP01 1-1.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-
TP02 0-0.1	30/05/2019	658838	Soil	487	0	0	0	0	0	0	0	0	0	-	-	-	-	17	-
TP02 1-1.1	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-
TP03 0-0.1	30/05/2019	658838	Soil	492	0	0	0	0	0	0	0	0	0	-	-	-	-	17	-
TP04 0.5-0.6	30/05/2019	658838	Soil	530	0	0	0	0	0	0	0	0	0	-	-	-	-	11	-
TP04 0-0.1	30/05/2019	658838	Soil	1069	0	0	0	0	0	0	0	0	0	-	-	-	-	<1	-
TP05 0-0.1	30/05/2019	658838	Soil	490	0	0	0	0	0	0	0	0	0	-	-	-	-	16	-
TP05 2-2.2	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-
TP06 0-0.1	30/05/2019	658838	Soil	549	0	0	0	0	0	0	0	0	0	-	-	-	-	19	-
QA01	30/05/2019	658838	Soil	534	0	0	0	0	0	0	0	0	0	-	-	-	-	16	-
QC01	30/05/2019	218764	Soil	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	21
TP06 1.4-1.5	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-
TP07 0-0.1	30/05/2019	658838	Soil	758	0	0	0	0	0	0	0	0	0	-	-	-	-	16	-
TP08 0-0.1	30/05/2019	658838	Soil	612	0	0	0	0	0	0	0	0	0	-	-	-	-	11	-
TP09 0.4-0.5	30/05/2019	658838	Soil	888	0	0	0	0	0	0	0	0	0	-	-	-	-	7.3	-
TP10 0-0.1	30/05/2019	658838	Soil	713	0	0	0	0	0	0	0	0	0	-	-	-	-	7.4	-
TP10 1-1.1	30/05/2019	658838	Soil	846	0	0	0	0	0	0	0	0	0	-	-	-	-	9.5	-
TP11 0.3-0.4	30/05/2019	658838	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.1	-
TP11 0-0.1	30/05/2019	658838	Soil	532	0	0	0	0	0	0	0	0	0	-	-	-	-	11	-
TP11 2.7-2.8	30/05/2019	658838	Soil	764	0	0	0	0	0	0	0	0	0	-	-	-	-	5.7	-
TP12 0.5-0.6	30/05/2019	658838	Soil	1410	0	0	0	0	0	0	0	0	0	-	-	-	-	9.6	-
TP12 0-0.1	30/05/2019	658838	Soil	465	0	0	0	0	0	0	0	0	0	-	-	-	-	15	-
AQ01 0-0.6	14/06/2019	660830	Soil	582	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ02 0.3-1.0	14/06/2019	660830	Soil	495	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ03 0.1-0.95	14/06/2019	660830	Soil	598	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ04 0-0.6	14/06/2019	660830	Soil	553	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ05 0-0.1	14/06/2019	660830	Soil	585	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ05 2.4-3.0	14/06/2019	660830	Soil	612	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ06 0.4-1.1	14/06/2019	660830	Soil	773	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ07 0-0.2	14/06/2019	660830	Soil	458	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ08 0.9-1.6	14/06/2019	660830	Soil	630	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ08 0-0.9	14/06/2019	660830	Soil	670	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ09 0.3-1.3	14/06/2019	660830	Soil	697	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ09 0-0.3	14/06/2019	660830	Soil	448	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ09 1.5-2.1	14/06/2019	660830	Soil	720	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ10 0.4-1.0	14/06/2019	660830	Soil	625	0	0.0002	0	0	0	0	0.004	0.001	0.001	-	-	-	-	-	-
AQ10 0-0.4	14/06/2019	660830	Soil	644	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ11 0.6-1.0	14/06/2019	660830	Soil	708	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ11 0-0.6	14/06/2019	660830	Soil	740	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ12 0.1-1.1	14/06/2019	660830	Soil	640	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ12 0-0.1	14/06/2019	660830	Soil	586	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ13 0.6-1.0	14/06/2019	660830	Soil	672	0	0.0016	0	0	0	0	0.024	0.0106	0.0106	-	-	-	-	-	-
AQ13 0-0.6	14/06/2019	660830	Soil	708	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ14 0-1.0	14/06/2019	660830	Soil	711	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ14 1-1.5	14/06/2019	660830	Soil	720	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ15 0.5-1.5	14/06/2019	660830	Soil	434	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
AQ15 0-0.5	14/06/2019	660830	Soil	667	0	0.0006	0	0	0	0	0.004	0.004	0.004	-	-	-	-	-	-

Table A: Soil Analytical Results
Project Number: 58238
Project Name: Prospect Logistics Estate

	Asbestos											Ionic Balance			Other	
	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	Total Asbestos#1	Cation Exchange Capacity	EC 1:5 soil:water	pH 1:5 soil:water	% Moisture 103oC	Moisture
	g	%w/w	%w/w	g	g	g	g	g	g	g	g/kg	meq/100g	µS/cm	ph Units	%	%
EQL											0.1	0.05	5	0.1	1	0.1
ANZG (2019) - Sediment Quality DGVs																
NEPM 2013 EIL - Commercial Industrial (Specific)																
NEPM 2013 ESL Commercial and Industrial, Fine Soil																
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D		0.05[#8]														
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL			0.001[#9]													
NEPM 2013 Mgnt Limits - Commercial and Industrial, Fine																
NEPM 2013 Soil HIL D																
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 0 to <1m																
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 1 to <2m																
NEPM 2013 Soil HSL D for Vapour Intrusion - Clay 2 to <4m																

Field_ID	Sampled_Date-Time	Lab_Report_Number	Matrix_Type															
JBS&G (2020)																		
TP200_0.0-0.1	9/03/2020	707966	SOIL	272	0	0	0	0	0	0	0	0	-	19	31	5.6	12	-
TP201_0.9-1.0	9/03/2020	707966	SOIL	427	0	0	0	0	0	0	0	0	-	-	-	-	12	-
TP202_0.0-0.1	9/03/2020	707966	SOIL	352	0	0	0	0	0	0	0	0	-	-	-	-	14	-
TP203_0.5-0.6	9/03/2020	707966	SOIL	255	0	0	0	0	0	0	0	0	-	-	-	-	12	-
TP204_0.0-0.1	9/03/2020	707966	SOIL	381	0	0	0	0	0	0	0	0	-	2.9	16	5.2	14	-
TP205_0.4-0.5	9/03/2020	707966	SOIL	451	0	0	0	0	0	0	0	0	-	-	-	-	14	-
TP206_0.0-0.1	9/03/2020	707966	SOIL	451	0	0	0	0	0	0	0	0	-	-	-	-	17	-
TP207_0.0-0.1	9/03/2020	707966	SOIL	271	0	0	0	0	0	0	0	0	-	-	-	-	25	-
TP208_0.9-1.0	9/03/2020	707966	SOIL	410	0	0	0	0	0	0	0	0	-	-	-	-	21	-
TP209_0.9-1.0	9/03/2020	707966	SOIL	427	0	0	0	0	0	0	0	0	-	-	-	-	18	-
TP210_0.4-0.5	9/03/2020	707966	SOIL	520	0	0	0	0	0	0	0	0	-	-	-	-	15	-
TP211_0.0-0.1	9/03/2020	707966	SOIL	380	0	0	0	0	0	0	0	0	-	-	-	-	23	-

Env Stds Comments
#1:Adopted from TPHs total
#2:TV taken for Chromium (III), Clay Content of 1%
#3:TV taken for pH 6
#4:TV taken for CEC 30
#5:TV taken for pH 6 and CEC 30
#6:ESLs are of low reliability.
#7:ESLs are of moderate reliability.
#8:Commercial/industrial D includes premises such as shops, offices, factories and industr
#9:The screening level of 0.001% w/w asbestos in soil for FA and AF (i.e. non-bonded/friat
#10:Management limits of BTEX and naphthalene are not available, hence should not be
#11:Limits applied after consideration of relevant ESLs and HSLs
#12:Key limitations of HSL should be referred to prior to application in Friebel and Nadeb
#13:TV adopted from Chromium (VI)
#14:Assumptions of HSL are presented in Friebel and Nadebaum (2011a and 2011b).
#15:Refer to HSL and soil saturation concentration limit.
#16:Refer to Section 8.2 and Appendix J in Friebel and Nadebaum (2011a).
#17:TV maybe be multiplied by a factor to account for biodegradation of vapour
#18:HIL relates to non-dioxin-like PCBs only. If PCB source is suspected a site-specific asse
#19:To obtain F2 subtract naohthalene from >C10-C16.
#20:To obtain F1 subtract the sum of BTEX from C6-C10.

SURFACE WATER

DLA Environmental Services
A Pacific Environment company

Sample ID	Depth (m)	Date	Chemical Report	Description	BTEX				Naph	TRH				PAHs		Heavy Metals (µg/L)							
					Benz	Toluen	EthylBenz	Xylene		F1	F2	F3	F4	BaP TEQ	Total PAH	As	Cd	Cr VI	Cu	Pb	Hg	Ni	Zn
NEPM (NEPC, 2013) Groundwater Investigation Levels Fresh Waters (µg/L)					ANZECC 95% and NEPM 2013 - 950 µg/L	–	–	ANZECC 95% and NEPM 2013 - 350 µg/L (as o-xylene) - 350 µg/L (as p-xylene) - 200 µg/L	ANZECC 95% - 16 µg/L	–	–	–	–	–	–	ANZECC 95% & NEPM 2013 - 24 µg/L	ANZECC 95% & NEPM 2013 - 0.2 µg/L	ANZECC 95% & NEPM 2013 - 1.0 µg/L	ANZECC 95% & NEPM 2013 - 1.4 µg/L	ANZECC 95% & NEPM 2013 - 3.4 µg/L	ANZECC 95% - 0.6 µg/L NEPM 2013 - 0.06 µg/L	ANZECC 95% & NEPM 2013 - 11 µg/L	ANZECC 95% & NEPM 2013 - 8.0 µg/L
SP2	--	9/02/2017	Envirolab 161636	Water	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6	nd	nd	nd	nd
SP3	--	9/02/2017	Envirolab 161636	Water	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	4
QC W	--	9/02/2017	Envirolab 161636	Water	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6	nd	nd	nd	nd

* Depth relates to Depth Below Surface Level

ND = Not Detected Above Laboratory LOR

Bold = Exceedance of Site Accepted Criteria

Bold = Exceedance of Site Accepted Criteria

GROUNDWATER

DLA Environmental Services
A Pacific Environment company

Sample ID	Date	Chemical Report	Description	BTEX					TRH					PAHs	
				Benzene	Toluene	EthylBenzene	Xylenes	Naphthalene	F1	F2	F3	F4	Total TRH	BaP TEQ	Total PAH
NEPM (NEPC, 2013) Groundwater Investigation Levels Fresh Waters (µg/L)				ANZECC 95% - 500 µg/L, NEPM 2013 - 5,000 µg/L	ANZECC 95% Low Reliability - 180 µg/L	ANZECC 95% Low Reliability - 5 µg/L	ANZECC 95% and NEPM 2013 (as o-xylene) - 350 µg/L (as p-xylene) - 200 µg/L	ANZECC 95% - 50 µg/L	Limit of Reporting - 10 µg/L	Limit of Reporting - 50 µg/L	Limit of Reporting - 100 µg/L	Limit of Reporting - 100 µg/L	-	-	-
MW30	16/02/2017	Envirolab 162047	Groundwater	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
QC GW	16/02/2017	Envirolab 162047	Groundwater	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

ND = not detected above laboratory LOR
Bold = exceedance of Site Acceptance Criteria
In the absence of a nominated guideline value, the Laboratory Limit of Reporting (LOR) has been taken as the nominated trigger value for the presence of TRH compounds in groundwater.
99% protection level for slightly to moderately disturbed system recommended by ANZECC/ARMCANZ (2000) used for Benzene and Naphlathene, due to the potential bioaccumulation effects.

			ANZECC 95% & NEPM 2013 - 24 µg/L	ANZECC 95% & NEPM 2013 - 0.2 µg/L	ANZECC 95% & NEPM 2013 - 1.0 µg/L	ANZECC 95% & NEPM 2013 - 1.4 µg/L	ANZECC 95% & NEPM 2013 - 3.4 µg/L	ANZECC 95% - 0.6 µg/L NEPM 2013 - 0.06 µg/L	ANZECC 95% & NEPM 2013 - 11 µg/L	ANZECC 95% & NEPM 2013 - 8.0 µg/L
			Heavy Metals							
Sample ID	Date	Chemical Report	As	Cd	Cr VI	Cu	Pb	Hg	Ni	Zn
MW30	16/02/2017	Envirolab 162047	nd	nd	nd	**4**	nd	nd	4	nd
QC GW	16/02/2017	Envirolab 162047	nd	nd	nd	**4**	nd	nd	4	nd

ND = not detected above laboratory LOR
Bold = exceedance of Site Acceptance Criteria
In the absence of a nominated guideline value, the Laboratory Limit of Reporting (LOR) has been taken as the nominated trigger value for the presence of TRH compounds in groundwater.
95% protection level for slightly to moderately disturbed system recommended by ANZECC/ARMCANZ (2000) used for Benzene and Naphthalene, due to the potential bioaccumulation effects.

Table LR2
Surface Water Analytical Results
Phase 2 Environmental Audit
Boral Prospect

Field ID	SW1	SW2	SW3
Sampled Date	21/02/2013	21/02/2013	21/02/2013

Chem Group	ChemName	Units	EQL	ANZECC 2000 Freshwater 95%			
BTEX	Benzene	µg/L	1	950	<1	<1	<1
	Ethylbenzene*	µg/L	1	80	<1	<1	<1
	Toluene*	µg/L	1	180	<1	<1	<1
	Xylene (m & p)*	µg/L	2	275	<2	<2	<2
	Xylene (o)	µg/L	1	350	<1	<1	<1
TPH	C6 - C9	µg/L	20		<20	<20	<20
	C10 - C14	µg/L	50		<50	<50	<50
	C15 - C28	µg/L	100		<100	<100	<100
	C29 - C36	µg/L	100		<100	<100	<100
	C10 - C36 (Sum of total)	µg/L	100		<100	<100	<100
PAH	Acenaphthene	µg/L	1		<1	<1	<1
	Acenaphthylene	µg/L	1		<1	<1	<1
	Anthracene*	µg/L	1	0.0004	<1	<1	<1
	Benzo(a)anthracene	µg/L	1		<1	<1	<1
	Benzo(a)pyrene*	µg/L	1	0.0002	<1	<1	<1
	Benzo(b)&(k)fluoranthene	µg/L	2		<2	<2	<2
	Benzo(g,h,i)perylene	µg/L	1		<1	<1	<1
	Chrysene	µg/L	1		<1	<1	<1
	Dibenz(a,h)anthracene	µg/L	1		<1	<1	<1
	Fluoranthene8	µg/L	1	0.0014	<1	<1	<1
	Fluorene	µg/L	1		<1	<1	<1
	Indeno(1,2,3-c,d)pyrene	µg/L	1		<1	<1	<1
	Naphthalene	µg/L	1	16	<1	<1	<1
	Phenanthrene*	µg/L	1	0.002	<1	<1	<1
	Pyrene	µg/L	1		<1	<1	<1
	Total PAHs	µg/L	2		<2	<2	<2
Metals	Arsenic	mg/L	0.005	0.013	<0.005	**0.023**	<0.005
	Cadmium	mg/L	0.0005	0.0002	<0.0005	**0.0009**	<0.0005
	Chromium	mg/L	0.005	0.001	<0.005	**0.16**	<0.005
	Cobalt*	mg/L	0.005	0.09	<0.005	**0.033**	<0.005
	Copper	mg/L	0.005	0.0014	<0.005	**0.31**	<0.005
	Lead	mg/L	0.005	0.0034	<0.005	**0.077**	<0.005
	Mercury	mg/L	0.0001	0.0006	<0.0001	<0.0001	<0.0001
	Nickel	mg/L	0.005	0.011	<0.005	**0.15**	<0.005
	Titanium	mg/L	0.005		0.006	5.5	0.016
	Zinc	mg/L	0.005	0.008	<0.005	**2**	<0.005
	pH	units	0.1		6.9	9	7.5
	Electrical Conductivity	uS/cm	1		350	610	890

Notes

	Exceedance NEPM 1999 HIL-F (Commerical / Industrial)
<1	Less than laboratory limit of reporting
	* Low reliability trigger values adopted

Appendix C Groundwater Bore Search

e Investigation (PSI) Web Portal NSW | September 2019

615

Search by Location

Searches | Results

Groundwater Bores (WaterNSW, 2019)

Spatial filters

Only return features that intersect with the shape drawn on the map

Clear this shape after applying the query.

Apply a search distance

1 Kilometers

Result layer name

Groundwater Bores (WaterNSW, 2019) _Q

Apply

Prospect

Girraween

Pemulwuy

Greystanes

Western Mtwy

Great Western Hwy

Homebase

Fox Hills Golf Club

Metella Reserve

Wet'n'Wild Sydney

Darling Street Park

Bathurst Street Park

Harold Reid Park

Pendle Hill Park

Cumberland Country Golf Club

Monty Bennett Oval

Carolyn Street Park

Daisy Street Park

Roberta Street Park

Daniel Street Park

GW112896

GW101177

GW113201

GW113202

GW107832

GW113203

GW107831

GW111108

GW108169

NSW Office of Water
Work Summary

GW112896

Licence: 10BL602282
Licence Status: ACTIVE

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

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

Commenced Date:
Completion Date: 04/04/2007
Final Depth:
Drilled Depth:

Contractor Name: Macquarie Drilling
Driller: Unkown Unknown
Assistant Driller:

Property: CALTEX OIL (AUST) PTY LTD
442 BLACKTOWN ROAD
PROSPECT 2148 NSW
Standing Water Level:
GWMA:
GW Zone:
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.41	25//739107
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: 6257577.0
Easting: 308123.0
Latitude: 33°48'16.6"S
Longitude: 150°55'37.7"E

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

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details

Water Bearing Zones

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

Geologists Log

Drillers Log

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

Remarks

23/07/2014: Nat Carling, 23-July-2014; Added status, drill method & depth, updated work type.

*** End of GW112896 ***

NSW Office of Water
Work Summary

GW112894

Licence: 10BL602282
Licence Status: ACTIVE

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

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

Commenced Date:
Completion Date: 04/04/2007
Final Depth:
Drilled Depth:

Contractor Name: Macquarie Drilling
Driller: Unkown Unknown
Assistant Driller:

Property: CALTEX OIL (AUST) PTY LTD
442 BLACKTOWN ROAD
PROSPECT 2148 NSW
Standing Water Level:
GWMA:
GW Zone:
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.41	25//739107
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: 6257595.0
Easting: 308117.0
Latitude: 33°48'16.0"S
Longitude: 150°55'37.5"E

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

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details

Water Bearing Zones

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

Geologists Log

Drillers Log

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

Remarks

23/07/2014: Nat Carling, 23-July-2014; Added status, drill method & depth, updated work type.

*** End of GW112894 ***

NSW Office of Water
Work Summary

GW107832

Licence: 10BL165697
Licence Status: ACTIVE

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

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

Commenced Date:
Completion Date: 03/11/2005
Final Depth: 4.00 m
Drilled Depth: 4.00 m

Contractor Name:
Driller: Nealings Edwin Stapleton
Assistant Driller:

Property: STOCKLAND DEVELOPMENTS P/L FORMER CSIRO SITE CLUNES ROSS ST PROSPECT 2148 NSW
Standing Water Level:
GWMA: -
Salinity:
GW Zone: -
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.41	108 1081614
Licensed:	CUMBERLAND	PROSPECT	Whole Lot 108//1081614

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

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6256578.0
Easting: 308411.0
Latitude: 33°48'49.2"S
Longitude: 150°55'48.1"E

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

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	4.00	125			Auger
1		Annulus	Crushed Aggregate	0.80	4.00				Graded, Q:3200.000m3
1	1	Casing	Pvc Class 18	-0.70	1.00	50			Seated on Bottom, Screwed
1	1	Opening	Screen	3.00	4.00	50		1	PVC Class 18, Screwed, A: 0.40mm

Water Bearing Zones

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

							(m)		

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.20	0.20	BROWN SOIL	Soil	
0.20	1.30	1.10	RED BROWN CLAY	Clay	
1.30	3.00	1.70	BROWN SHALE	Shale	
3.00	4.00	1.00	GREY SHALE	Shale	

Remarks

07/06/2011: Karla Abbs, 7-Jun-2011: Corrected invalid rock type in drillers log

*** End of GW107832 ***

NSW Office of Water
Work Summary

GW113203

Licence: 10BL600583
Licence Status: ACTIVE

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

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

Commenced Date:
Completion Date: 27/02/2007
Final Depth:
Drilled Depth:

Contractor Name: Macquarie Drilling
Driller: Unkown Unknown
Assistant Driller:

Property: PREVIOUS CSIRO SITE
WESTERN PRECINCT
LAKEWOOD PROSPECT 2148
NSW
Standing Water Level:

GWMA:
GW Zone:
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.41	669 1148337
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: 6256467.0
Easting: 308225.0
Latitude: 33°48'52.7"S
Longitude: 150°55'40.8"E

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

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details

Water Bearing Zones

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

Geologists Log

Drillers Log

From	To	Thickness	Drillers Description	Geological Material	Comments

(m)	(m)	(m)			

Remarks

29/07/2014: Nat Carling, 29-July-2014; Added status, drill method & depth.

*** End of GW113203 ***

NSW Office of Water
Work Summary

GW101177

Licence: 10BL158272
Licence Status: CANCELLED

Authorised Purpose(s): TEST BORE
Intended Purpose(s): INDUSTRIAL

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

Commenced Date:
Completion Date: 14/01/1998
Final Depth: 150.00 m
Drilled Depth: 150.00 m

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

Property: N/A
GWMA: -
GW Zone: -
Standing Water Level: 14.000
Salinity:
Yield: 3.400

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.41	PART LOT5 DP235064
Licensed:	CUMBERLAND	PROSPECT	Whole Lot //

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: 6256771.0
Easting: 307482.0
Latitude: 33°48'42.3"S
Longitude: 150°55'12.2"E

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

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	17.50	200			Rotary Air
1		Hole	Hole	17.50	150.00	155			Rotary Air
1	1	Casing	Pvc Class 9	-0.50	65.50	140			Suspended in Clamps, Glued
1	1	Casing	Steel	-0.50	17.50	168	158		Driven into Hole, Welded
1	1	Opening	Slots - Vertical	20.00	30.00	140		1	PVC Class 9, SL: 100.0mm, A: 2.50mm
1	1	Opening	Slots - Vertical	54.00	60.00			1	SL: 100.0mm, A: 2.50mm

Water Bearing Zones

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

25.00	30.00	5.00	Unknown			0.60	30.00		490.00
56.00	60.00	4.00	Unknown			1.10	60.00		510.00
125.00	140.00	15.00	Unknown	14.00		1.70	144.00		520.00

Geologists Log

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	2.50	2.50	Overburden	Overburden	
2.50	15.00	12.50	Weathered sandstone	Sandstone	
15.00	25.00	10.00	L/G (light grained) shale	Shale	
25.00	30.00	5.00	Dark grey shale (water bearing)	Shale	
30.00	56.00	26.00	D/brown shale	Shale	
56.00	60.00	4.00	Dark grey shale (water bearing)	Shale	
60.00	112.00	52.00	sandstone medium grained light grey	Sandstone	
112.00	125.00	13.00	white sandstone	Sandstone	
125.00	140.00	15.00	sandstone and quartz (water bearing)	Sandstone	
140.00	150.00	10.00	dark grey sandstone	Sandstone	

Remarks

14/01/1998: Form A Remarks:
Chlorine added on completion.
13/09/1999: PREVIOUS LIC. NO: 158272
22/01/2013: Nat Carling, 22-Jan-2013; Added rock type codes to driller's log & added missing information (based on existing data).

*** End of GW101177 ***

NSW Office of Water
Work Summary

GW112895

Licence: 10BL602282
Licence Status: ACTIVE

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

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

Commenced Date:
Completion Date: 04/04/2007
Final Depth:
Drilled Depth:

Contractor Name: Macquarie Drilling
Driller: Unkown Unknown
Assistant Driller:

Property: CALTEX OIL (AUST) PTY LTD
442 BLACKTOWN ROAD
PROSPECT 2148 NSW
Standing Water Level:
GWMA:
GW Zone:
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.41	25//739107
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: 6257579.0
Easting: 308103.0
Latitude: 33°48'16.5"S
Longitude: 150°55'36.9"E

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

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details

Water Bearing Zones

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

Geologists Log
Drillers Log

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

Remarks

23/07/2014: Nat Carling, 23-July-2014; Added status, drill method & depth, updated work type.

*** End of GW112895 ***

NSW Office of Water
Work Summary

GW112893

Licence: 10BL602282
Licence Status: ACTIVE

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

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

Commenced Date:
Completion Date: 02/04/2007
Final Depth:
Drilled Depth:

Contractor Name: Macquarie Drilling
Driller: Unkown Unknown
Assistant Driller:

Property: CALTEX OIL (AUST) PTY LTD
442 BLACKTOWN ROAD
PROSPECT 2148 NSW
Standing Water Level:
GWMA:
GW Zone:
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.41	25//739107
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: 6257588.0
Easting: 308137.0
Latitude: 33°48'16.2"S
Longitude: 150°55'38.3"E

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

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details

Water Bearing Zones

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

Geologists Log

Drillers Log

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

Remarks

23/07/2014: Nat Carling, 23-July-2014; Added status, drill method & depth, updated work type.

*** End of GW112893 ***

NSW Office of Water
Work Summary

GW113201

Licence: 10BL600583
Licence Status: ACTIVE

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

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

Commenced Date:
Completion Date: 27/02/2007
Final Depth:
Drilled Depth:

Contractor Name: Macquarie Drilling
Driller: Unkown Unknown
Assistant Driller:

Property: PREVIOUS CSIRO SITE
WESTERN PRECINCT
LAKEWOOD PROSPECT 2148
NSW
Standing Water Level:
GWMA:
GW Zone:
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.41	669 1148337
Licensed:			

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

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6256628.0
Easting: 308171.0
Latitude: 33°48'47.4"S
Longitude: 150°55'38.8"E

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

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details

Water Bearing Zones

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

Geologists Log

Drillers Log

From	To	Thickness	Drillers Description	Geological Material	Comments

(m)	(m)	(m)			

Remarks

29/07/2014: Nat Carling, 29-July-2014; Added status, drill method & depth.

*** End of GW113201 ***

NSW Office of Water
Work Summary

GW113202

Licence: 10BL600583
Licence Status: ACTIVE

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

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

Commenced Date:
Completion Date: 27/02/2007
Final Depth:
Drilled Depth:

Contractor Name: Macquarie Drilling
Driller: Unkown Unknown
Assistant Driller:

Property: PREVIOUS CSIRO SITE
WESTERN PRECINCT
LAKEWOOD PROSPECT 2148
NSW
Standing Water Level:

GWMA:
GW Zone:
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.41	669 1148337
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: 6256592.0
Easting: 308209.0
Latitude: 33°48'48.6"S
Longitude: 150°55'40.3"E

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

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details

Water Bearing Zones

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

Geologists Log

Drillers Log

From	To	Thickness	Drillers Description	Geological Material	Comments

(m)	(m)	(m)			

Remarks

29/07/2014: Nat Carling, 29-July-2014; Added status, drill method & depth.

*** End of GW113202 ***

WaterNSW
Work Summary

GW107831

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

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

Commenced Date:
Completion Date: 03/11/2005
Final Depth: 7.40 m
Drilled Depth: 7.40 m

Contractor Name: (None)
Driller: Nealings Edwin Stapleton
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	PROSPECT	108 1081614
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: 6256269.000
Easting: 308468.000
Latitude: 33°48'59.2"S
Longitude: 150°55'50.1"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	7.40	125			Auger
1		Annulus	Crushed Aggregate	3.30	7.40				Graded, Q:3100.000m3
1	1	Casing	Pvc Class 18	-0.70	4.40	50			Seated on Bottom, Screwed
1	1	Opening	Screen	4.40	7.40	50		0	PVC Class 18, Screwed, A: 0.04mm

Drillers Log

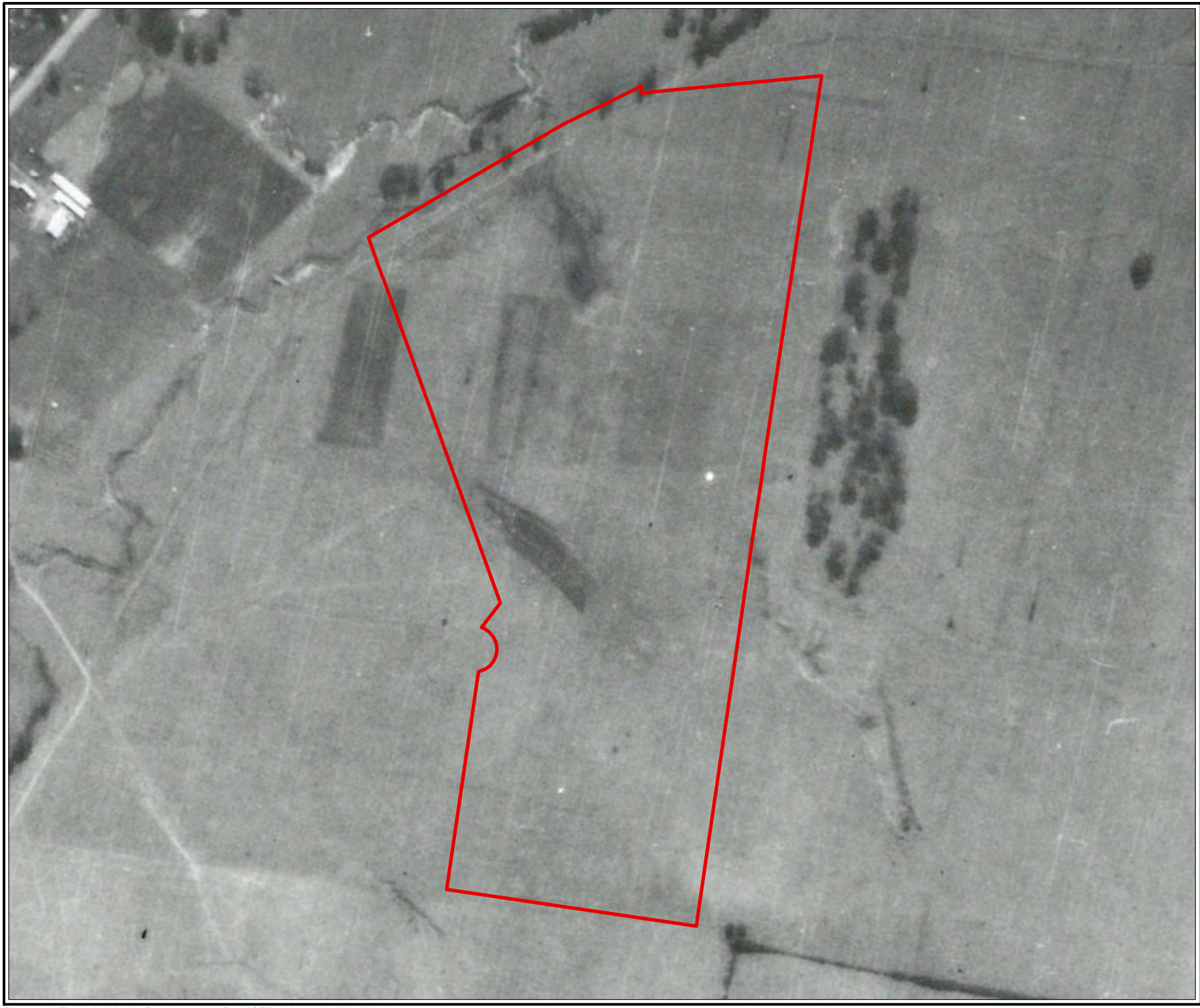
From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	1.60	1.60	FILL BROWN/CLAY	Fill	
1.60	2.90	1.30	CLAY GRAVEL BROWN	Clay	
2.90	4.70	1.80	CLAY BROWN	Clay	
4.70	6.00	1.30	BLACK WEATHERED SHALE	Shale	
6.00	7.40	1.40	HARD BROWN CLAY	Clay	

Remarks

07/06/2011: Karla Abbs, 7-Jun-2011: Corrected invalid rock type in drillers log

***** End of GW107831 *****

Appendix D Aerial Photographs



Legend:

Approximate Site Boundary

JBS&G

Job No: 55364

Client: Aliro Group Pty Ltd

Version: Aerials	Date 1/04/2020
Drawn By: RH	Checked By: CK

Scale 1:4,500

0 50 100

metres

Coord. Sys. GDA 1994 MGA Zone 56

Prospect Logistics Estate,
Clunies Ross Street,
Pemulwuy, NSW

HISTORICAL AERIAL PHOTOGRAPH - 1930

FIGURE 1930

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\Aerials\58238_1930.mxd
Reference: Department of Finance & Innovation; 2020

Legend:

Approximate Site Boundary

JBS&G

Job No: 55364	
Client: Aliro Group Pty Ltd	
Version: Aerials	Date 1/04/2020
Drawn By: RH	Checked By: CK
Scale 1:4,500	

0 50 100

metres

Coord. Sys. GDA 1994 MGA Zone 56

Prospect Logistics Estate,
Clunies Ross Street,
Pemulwuy, NSW

HISTORICAL AERIAL PHOTOGRAPH - 1943

FIGURE 1943

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\Aerials\58238_1943.mxd
Reference: Department of Finance & Innovation; 2020

Legend:

Approximate Site Boundary

JBS&G

Job No: 55364	
Client: Aliro Group Pty Ltd	
Version: Aerials	Date 1/04/2020
Drawn By: RH	Checked By: CK
Scale 1:4,500	

0 50 100

metres

Coord. Sys. GDA 1994 MGA Zone 56

Prospect Logistics Estate,
Clunies Ross Street,
Pemulwuy, NSW

HISTORICAL AERIAL PHOTOGRAPH - 1961

FIGURE 1961

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\Aerials\58238_1961.mxd
Reference: Department of Finance & Innovation; 2020

Legend:

Approximate Site Boundary

JBS&G

Job No: 55364	
Client: Aliro Group Pty Ltd	
Version: Aerials	Date 1/04/2020
Drawn By: RH	Checked By: CK
Scale 1:4,500	

0 50 100

metres

Coord. Sys. GDA 1994 MGA Zone 56

Prospect Logistics Estate,
Clunies Ross Street,
Pemulwuy, NSW

HISTORICAL AERIAL PHOTOGRAPH - 1970

FIGURE 1970

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\Aerials\58238_1970.mxd
Reference: Department of Finance & Innovation; 2020

Legend:

Approximate Site Boundary

JBS&G

Job No: 55364	
Client: Aliro Group Pty Ltd	
Version: Aerials	Date 1/04/2020
Drawn By: RH	Checked By: CK
Scale 1:4,500	

0 50 100

metres

Coord. Sys. GDA 1994 MGA Zone 56

Prospect Logistics Estate,
Clunies Ross Street,
Pemulwuy, NSW

HISTORICAL AERIAL PHOTOGRAPH - 1982

FIGURE 1982

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\Aerials\58238_1982.mxd
Reference: Department of Finance & Innovation; 2020

Legend:

Approximate Site Boundary

JBS&G

Job No: 55364	
Client: Aliro Group Pty Ltd	
Version: Aerials	Date 1/04/2020
Drawn By: RH	Checked By: CK
Scale 1:4,500	

0 50 100

metres

Coord. Sys. GDA 1994 MGA Zone 56

Prospect Logistics Estate,
Clunies Ross Street,
Pemulwuy, NSW

HISTORICAL AERIAL PHOTOGRAPH - 1991

FIGURE 1991

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\Aerials\58238_1991.mxd
Reference: Department of Finance & Innovation; 2020

Legend:

Approximate Site Boundary

JBS&G

Job No: 55364	
Client: Aliro Group Pty Ltd	
Version: Aerials	Date 1/04/2020
Drawn By: RH	Checked By: CK
Scale 1:4,500	

0 50 100

metres

Coord. Sys. GDA 1994 MGA Zone 56

Prospect Logistics Estate,
Clunies Ross Street,
Pemulwuy, NSW

HISTORICAL AERIAL PHOTOGRAPH - 2002

FIGURE 2002

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\Aerials\58238_2002.mxd
Reference: Department of Finance & Innovation; 2002

Legend:

Approximate Site Boundary

JBS&G

Job No: 55364	
Client: Aliro Group Pty Ltd	
Version: Aerials	Date 1/04/2020
Drawn By: RH	Checked By: CK
Scale 1:4,277	

0 50 100

metres

Coord. Sys. GDA 1994 MGA Zone 56

585 Reservoir Road
Prospect, NSW

HISTORICAL AERIAL PHOTOGRAPH - 2016

FIGURE 2016

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\Aerials\58238_2016.mxd
Reference: Nearmap - nearmap.com.au - 05-05-2016

Legend:

Approximate Site Boundary

JBS&G

Job No: 55364	
Client: Aliro Group Pty Ltd	
Version: Aerials	Date 1/04/2020
Drawn By: RH	Checked By: CK

Scale 1:4,500

0 50 100

metres

Coord. Sys. GDA 1994 MGA Zone 56

585 Reservoir Road
Prospect, NSW

HISTORICAL AERIAL PHOTOGRAPH - 2020

FIGURE 2020

File Name: N:\Projects\Aliro\58238 Prospect Logistics Estate\GIS\Maps\Aerials\58238_2020.mxd
Reference: Nearmap - nearmap.com.au - 22-01-2020

Appendix E Land Title Records

scottASHWOOD PTY.LTD
An InfoTrack Company

ABN: 42 166 543 255
Ph: 02 9099 7400
Fax: 02 9232 7141
(Ph: 0412 199 304)

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

Summary of Owners Report

LPI **Sydney**

Address: - 44 Clunies Ross Street, Prospect (Pemulwuy)

Description: - Lot 10 D.P. 1022044, Lot 216 D.P. 1030744 & Lot 601 D.P. 1047403

As regards Lot 216 D.P. 1030744

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
10.06.1905 (1905 to 1935)	The Emu Gravel and Road Metal Company Limited Now The Emu and Prospect Gravel and Road Metal Company Limited	Vol 1612 Fol 198
16.11.1935 (1935 to 1988)	The N.S.W. Associated Blue Metal Quarries Limited Now The N.S.W. Associated Blue Metal Quarries Pty Limited	Vol 1612 Fol 198 Now Vol 9787 Fol 165
26.05.1988 (1988 to date)	# Boral Resources (NSW) Pty Limited	Vol 9787 Fol 165 Now 216/1030744

# Denotes Current Registered Proprietor

Easements: -

- 29.08.1978 (Q 805096) Easement for Transmission Line (D) 18 wide

Leases: -

- 26.02.2013 to Austral Masonry (NSW) Pty Limited – expires 07.02.2018, also 34 months option to renew

---

As regards Lot 10 D.P. 1022044

As regards the part tinted orange on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
27.12.1923 (1923 to 1941)	The Emu Gravel and Road Metal Company Limited Now The Emu and Prospect Gravel and Road Metal Company Limited	Vol 3543 Fol 249 Now Vol 4818 Fol 80
21.05.1941 (1941 to 1948)	Theo James Hicks (Dairy Farmer) Norman Kenneth Hicks (Dairy Farmer) Leslie Gordon Hicks (Dairy Farmer)	Vol 4818 Fol 80 Now Vol 5245 Fol 201
10.06.1948 (1948 to 1958)	Theo James Hicks (Dairy Farmer) Leslie Gordon Hicks (Dairy Farmer)	Vol 5245 Fol 201 Now Vol 7375 Fol' 5 & 6
07.11.1958 (1958 to 1988)	The N.S.W. Associated Blue Metal Quarries Limited Now The N.S.W. Associated Blue Metal Quarries Pty Limited	Vol 7375 Fol' 5 & 6 Now Vol 9787 Fol 165
26.05.1988 (1988 to date)	# Boral Resources (NSW) Pty Limited	Vol 9787 Fol 165 Now 10/1022044

# Denotes Current Registered Proprietor

scottASHWOOD PTY.LTD
An InfoTrack Company

ABN: 42 166 543 255
Ph: 02 9099 7400
Fax: 02 9232 7141
(Ph: 0412 199 304)

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

As regards the two parts tinted green on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
15.01.1925 (1925 to 1941)	Joseph Hicks (Farmer)	Vol 3686 Fol 43
17.11.1941 (1941 to 1948)	Theo James Hicks (Dairy Farmer) Norman Kenneth Hicks (Dairy Farmer) Leslie Gordon Hicks (Dairy Farmer) (Transmission Application not investigated)	Vol 3686 Fol 43 Now Vol 5280 Fol's 145, 146 & 147
10.06.1948 (1948 to 1958)	Theo James Hicks (Dairy Farmer) Leslie Gordon Hicks (Dairy Farmer)	Vol 5280 Fol's 145, 146 & 147 Now Vol 7375 Fol' 5 & 6
07.11.1958 (1958 to 1988)	The N.S.W. Associated Blue Metal Quarries Limited Now The N.S.W. Associated Blue Metal Quarries Pty Limited	Vol 7375 Fol' 5 & 6 Now Vol 9787 Fol 165
26.05.1988 (1988 to date)	# Boral Resources (NSW) Pty Limited	Vol 9787 Fol 165 Now 10/1022044

# Denotes Current Registered Proprietor

As regards the part tinted pink on the attached cadastre

This part was formerly a road subsequently closed

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
26.09.1930 (1930 to 1941)	Joseph Hicks (Dairy Farmer)	Vol 4441 Fol 3
17.11.1941 (1941 to 1948)	Theo James Hicks (Dairy Farmer) Norman Kenneth Hicks (Dairy Farmer) Leslie Gordon Hicks (Dairy Farmer) (Transmission Application not investigated)	Vol 4441 Fol 3 Now Vol 5280 Fol's 145, 146 & 147
10.06.1948 (1948 to 1958)	Theo James Hicks (Dairy Farmer) Leslie Gordon Hicks (Dairy Farmer)	Vol 5280 Fol's 145, 146 & 147 Now Vol 7375 Fol' 5 & 6
07.11.1958 (1958 to 1988)	The N.S.W. Associated Blue Metal Quarries Limited Now The N.S.W. Associated Blue Metal Quarries Pty Limited	Vol 7375 Fol' 5 & 6 Now Vol 9787 Fol 165
26.05.1988 (1988 to date)	# Boral Resources (NSW) Pty Limited	Vol 9787 Fol 165 Now 10/1022044

# Denotes Current Registered Proprietor

scottASHWOOD PTY.LTD
An InfoTrack Company

ABN: 42 166 543 255
Ph: 02 9099 7400
Fax: 02 9232 7141
(Ph: 0412 199 304)

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

As regards the two parts tinted yellow on the attached cadastre

Date of Acquisition and term held	**Registered Proprietor(s) & Occupations where available**	**Reference to Title at Acquisition and sale**
30.10.1909 (1909 to 1923)	The Emu and Prospect Gravel and Road Metal Company Limited	Vol 1959 Fol 92
06.06.1923 (1923 to 1941)	Joseph Hicks (Dairy Farmer)	Vol 1959 Fol 92 Now Vol 3508 Fol 232
17.11.1941 (1941 to 1948)	Theo James Hicks (Dairy Farmer) Norman Kenneth Hicks (Dairy Farmer) Leslie Gordon Hicks (Dairy Farmer) (Transmission Application not investigated)	Vol 3508 Fol 232 Now Vol 5280 Fol's 145, 146 & 147
10.06.1948 (1948 to 1958)	Theo James Hicks (Dairy Farmer) Leslie Gordon Hicks (Dairy Farmer)	Vol 5280 Fol's 145, 146 & 147 Now Vol 7375 Fol' 5 & 6
07.11.1958 (1958 to 1988)	The N.S.W. Associated Blue Metal Quarries Limited Now The N.S.W. Associated Blue Metal Quarries Pty Limited	Vol 7375 Fol' 5 & 6 Now Vol 9787 Fol 165
26.05.1988 (1988 to date)	# Boral Resources (NSW) Pty Limited	Vol 9787 Fol 165 Now 10/1022044

# Denotes Current Registered Proprietor

Leases: -

- 06.06.1923 to Joseph Hicks (Agriculturist) – expired 24.09.1923

Easements as regards the whole of Lot 10 D.P. 1022044: -

- 08.12.1961 (J 90028 & D.P. 202757) Easement for Water Supply Works 10.06 metres wide
- 19.10.1971 (M 502589 & D.P. 550911) Easement for Transmission Line 20.115 & 30.48 metres wide – partly released (Q 981596, 02.01.1979
- 29.08.1978 (Q 805096) Easement for Transmission Line (D) 18 wide

Leases as regards the whole of Lot 10 D.P. 1022044: -

- 06.06.1923 to Joseph Hicks (Agriculturist) – expired 24.09.1923
- 07.03.2001 to Valewin Pty Limited – expires 08.02.2051
    - 10.04.2001 transferred to Asibond Pty Limited
    - 10.04.2001 (Sub Lease) to Boral Masonry Limited – expires 08.02.2021, also 2 x 5 year options
    - 27.02.2013 (Sub Lease) to Austral Masonry (NSW) Pty Limited – expires 07.02.2018, also 34 months option to renew

scottASHWOOD PTY.LTD
An InfoTrack Company

ABN: 42 166 543 255
Ph: 02 9099 7400
Fax: 02 9232 7141
(Ph: 0412 199 304)

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

As regards Lot 601 D.P. 1047403

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
30.10.1909 (1909 to 1923)	The Emu and Prospect Gravel and Road Metal Company Limited	Vol 1959 Fol 92
06.06.1923 (1923 to 1941)	Joseph Hicks (Dairy Farmer)	Vol 1959 Fol 92 Now Vol 3508 Fol 232
17.11.1941 (1941 to 1948)	Theo James Hicks (Dairy Farmer) Norman Kenneth Hicks (Dairy Farmer) Leslie Gordon Hicks (Dairy Farmer) (Transmission Application not investigated)	Vol 3508 Fol 232 Now Vol 5280 Fol's 145, 146 & 147
10.06.1948 (1948 to 1958)	Theo James Hicks (Dairy Farmer) Leslie Gordon Hicks (Dairy Farmer)	Vol 5280 Fol's 145, 146 & 147 Now Vol 7375 Fol' 5 & 6
07.11.1958 (1958 to 1988)	The N.S.W. Associated Blue Metal Quarries Limited Now The N.S.W. Associated Blue Metal Quarries Pty Limited	Vol 7375 Fol' 5 & 6 Now Vol 9787 Fol 165
26.05.1988 (1988 to date)	# Boral Resources (NSW) Pty Limited	Vol 9787 Fol 165 Now 601/1047403

# Denotes Current Registered Proprietor

Easements: - NIL

Leases: -

- 26.02.2013 to Austral Masonry (NSW) Pty Limited – expires 07.02.2018, also 34 months option to renew

---

Yours Sincerely
Mark Groll
21 December 2016

Cadastral Records Enquiry Report

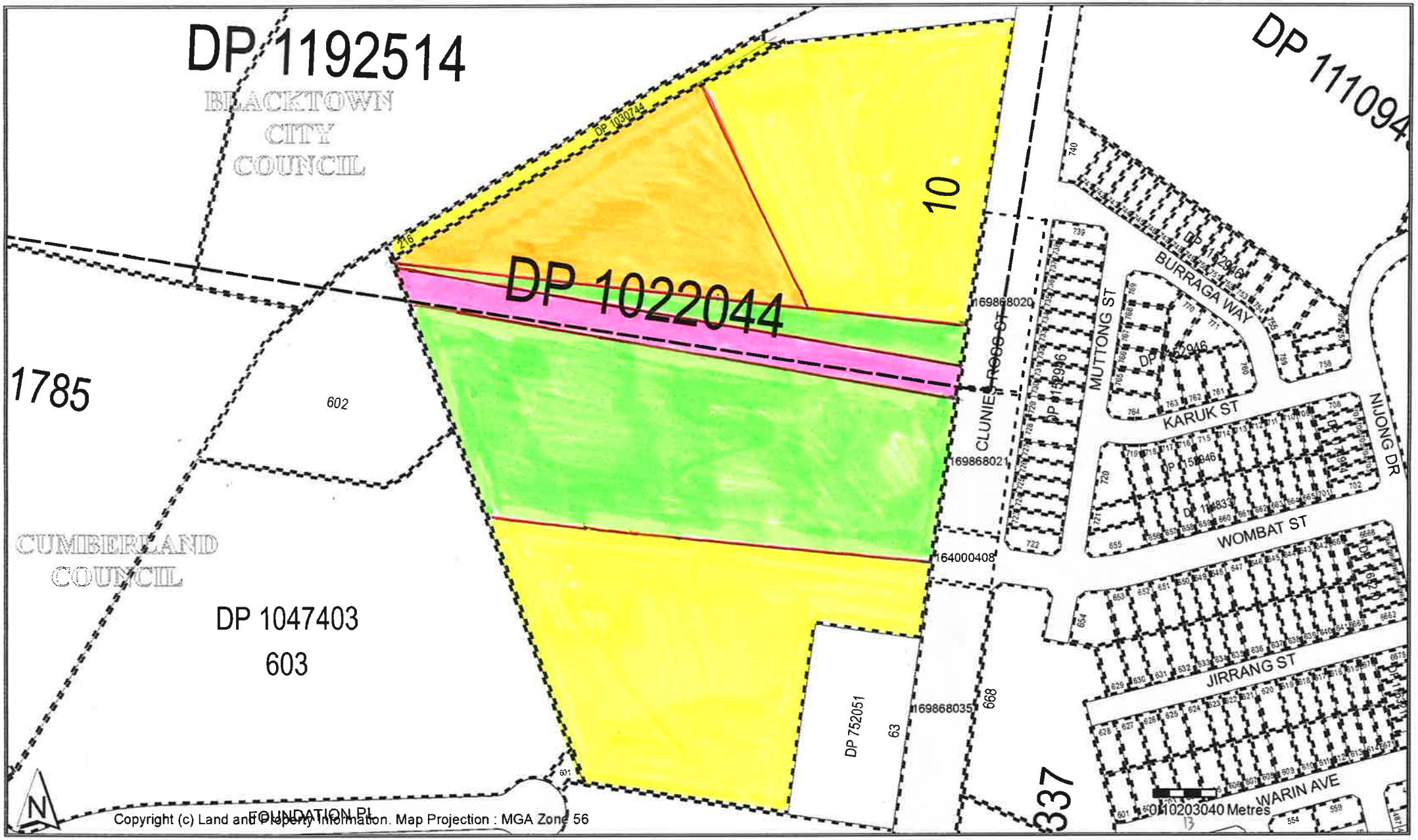
Land & Property Information

Ref : MARK

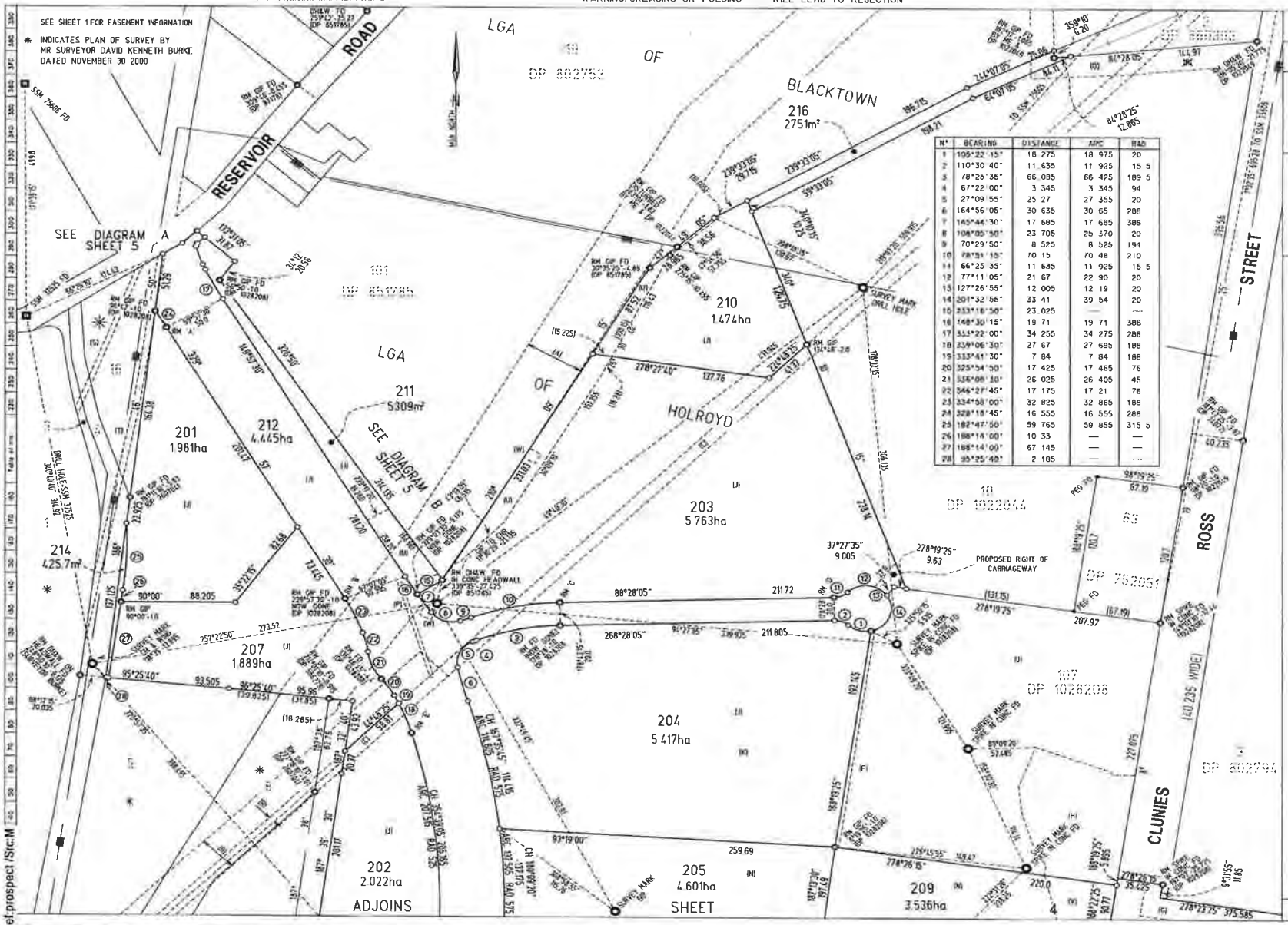
Requested Parcel : Lot 10 DP 1022044

Identified Parcel : Lot 10 DP 1022044

Locality : PEMULWUY **LGA :** CUMBERLAND **Parish :** PROSPECT **County :** CUMBERLAND



PLAN FORM 3 — To be used in conjunction with Plan Form 2 — WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION



N°	BEARING	DISTANCE	ARC	RAD
1	105°22'15"	18.275	18.975	20
2	110°30'40"	11.635	11.925	15.5
3	78°25'35"	66.085	66.425	189.5
4	67°22'00"	3.345	3.345	94
5	27°09'55"	25.27	27.355	20
6	164°56'05"	30.635	30.65	288
7	145°44'30"	17.685	17.685	388
8	108°05'30"	23.705	25.370	20
9	70°29'50"	8.525	8.525	194
10	78°51'15"	70.15	70.48	210
11	66°25'35"	11.635	11.925	15.5
12	77°11'05"	21.67	22.90	20
13	127°26'55"	12.005	12.19	20
14	201°32'55"	33.41	39.54	20
15	233°18'50"	23.025	—	—
16	140°30'15"	19.71	19.71	388
17	311°22'00"	34.255	34.275	288
18	339°06'30"	27.67	27.695	188
19	333°41'30"	7.84	7.84	188
20	325°54'50"	17.425	17.465	76
21	336°08'30"	26.025	26.405	45
22	346°27'45"	17.175	17.21	76
23	334°58'00"	32.825	32.865	188
24	328°18'45"	16.555	16.555	288
25	182°47'50"	59.765	59.855	315.5
26	188°16'00"	10.33	—	—
27	188°14'00"	67.145	—	—
28	95°25'40"	2.185	—	—

DP1030744

Registered 29 06 2001

This is sheet 3 of my plan is 67 sheets dated 13.06 2001

Surveyor registered under Surveyors Act 1929

This is sheet of the plan of sheets covered by subdivision certificate No. of

Authorised Person/Council/Accredited Certifier

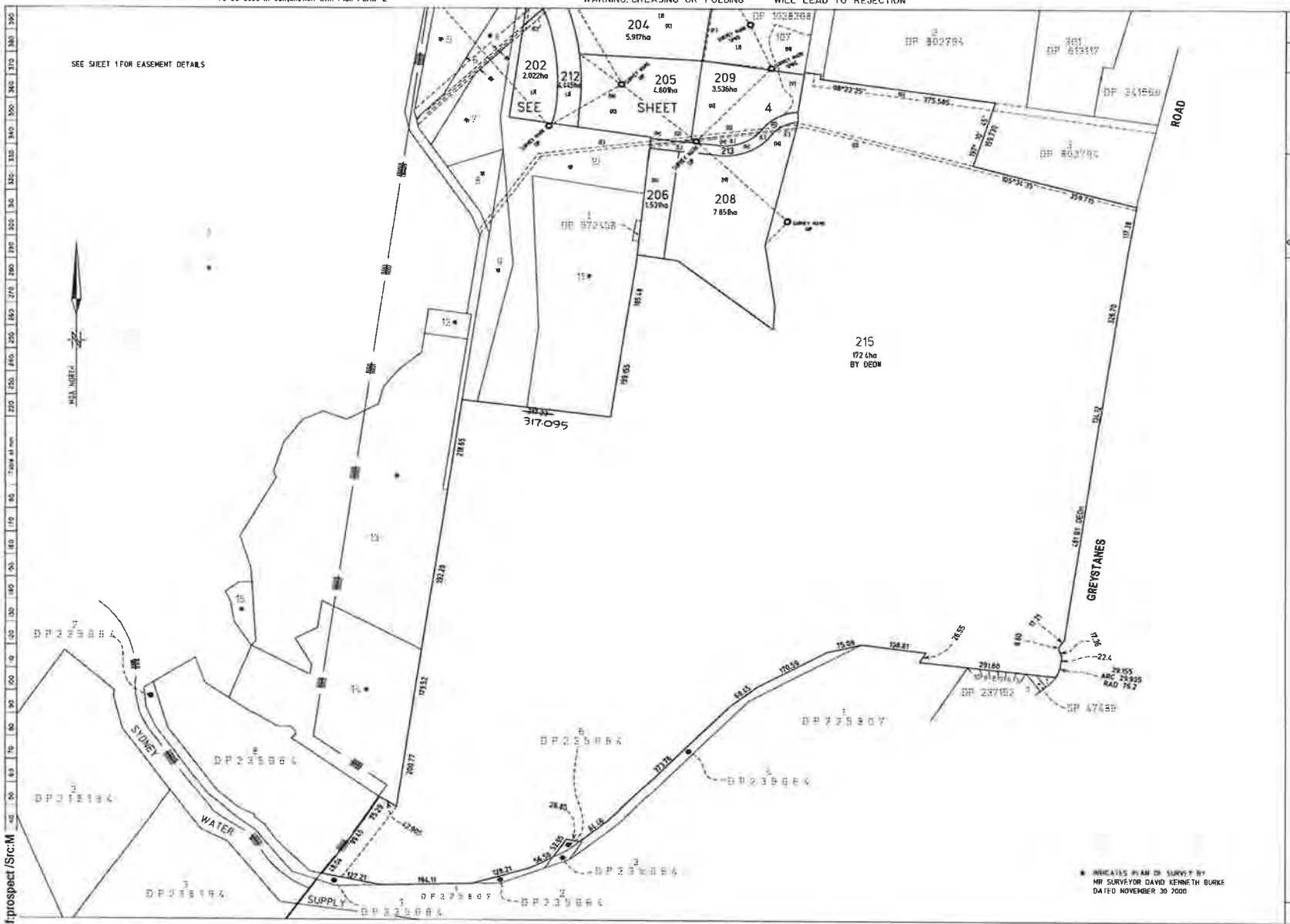
For use where space is insufficient in any panel on Plan Form 2.

Reduction Ratio 1: 2000

Plan Drawing only to appear in this space

SURVEYOR'S REFERENCE s321071904 rev F (21071/22)

PLAN FORM 3 To be used in conjunction with Plan Form 2 WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION



D DP1030744

Registered: 29 06 2001

This is sheet 2 of my plan in 4 sheets dated 13 06 2001

Surveyor registered under Surveyors Act 1929

This is sheet of the plan of sheets covered by subdivision certificate No. of

For any area space is insufficient in any panel see Plan Form 2.

Reduction Ratio 1: 5500

Plan Drawing only to appear in this space

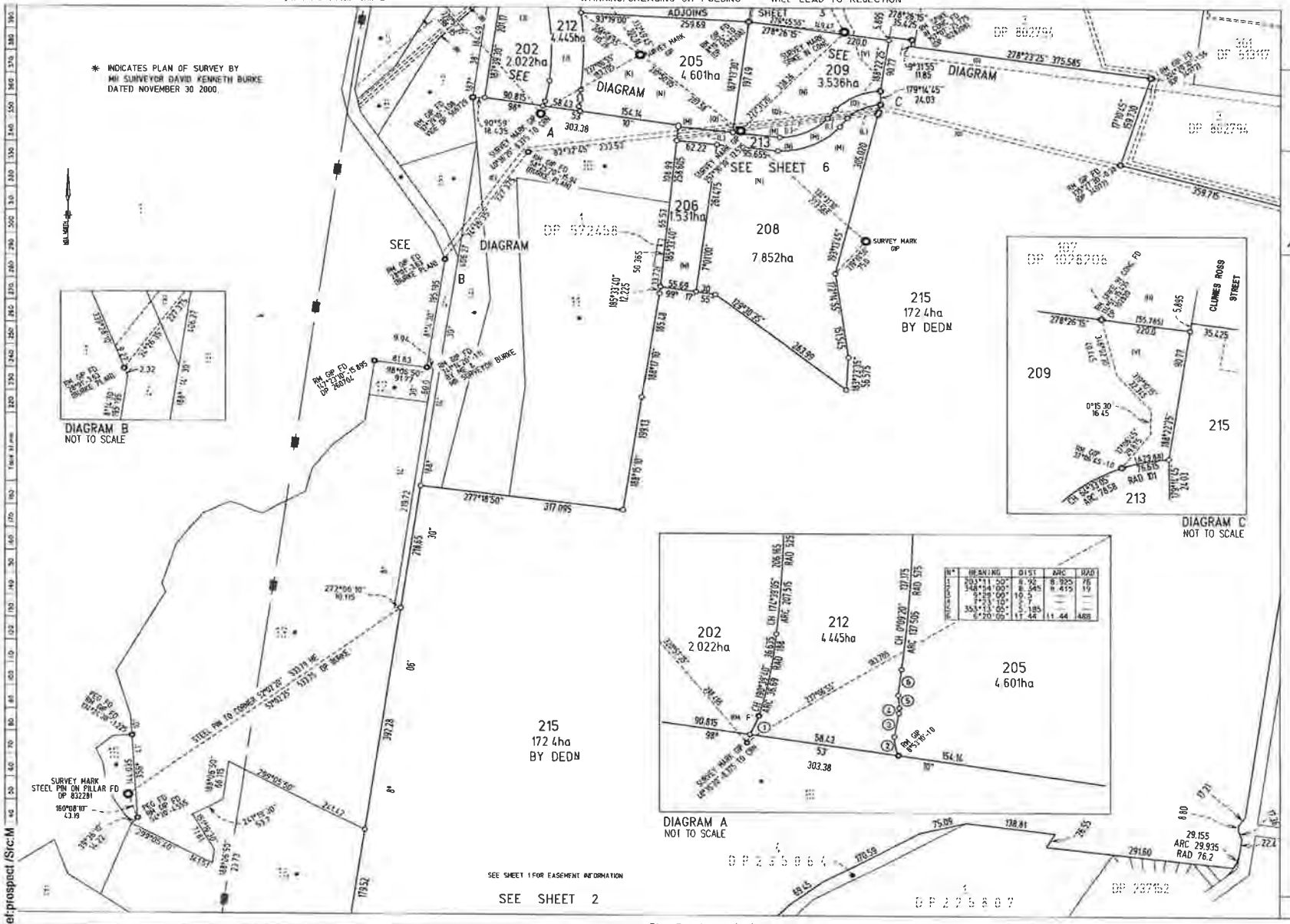
SURVEYOR'S REFERENCE: s221071004 rev F (21071/22)

DISTANCE 317.095 AMENDED IN LPI/NSW AT SURVEYORS REQUEST VIDE 2002/2629 10.12.2002

PLAN FORM 3

To be used in conjunction with Plan Form 2

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION



DP1030744

Registered: 29 06 2001

This is sheet 4 of my plan in 67 sheets dated 13.06.2001

Surveyor registered under Surveyors Act 1978

This is sheet of the plan of sheets covered by subdivision certificate No. of

For use where space is insufficient in any panel on Plan Form 3.

Redaction Ratio is: 4000

Plan Drawing only to appear in this space

SURVEYOR'S REFERENCE: SL21071004 rev F (21071/22)

PLAN FORM 3 — To be used in conjunction with Plan Form 2 — WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

DIAGRAM A
NOT TO SCALE

SCEDULE OF SHORT & CURVED LINES

PI	BEARING	DIST	ARC	RAD
1	325°18'45"	16.555	16 555	288
2	133°31'05"	7.99		
3	225°09'10"	7.905		
A	197°30'10"	3.785	2 895	3
B	163°19'40"	17.33	17 37	76
C	153°22'	34.255	34 275	288
	34°11'55"	20.56		
	313°31'05"	31.87		

THORNLEY RD

ROAD

RESERVOIR

SSM 7560R FD

SSM 32525 FD

SSM 32525 SURVEY MARK

DH&W FD 251°42'-25.27 (DP 851785)

* INDICATES PLAN OF SURVEY BY MR SURVEYOR DAVID KENNETH BURKE DATED NOVEMBER 30 2000

101
DP 851785

211
5309m²

212
4.445ha

201
1.981ha

SEE SHEET 1 FOR EASEMENT INFORMATION

DIAGRAM B
NOT TO SCALE

DP 851785

211

212

203

SURVEY MARK GI PIPE

DP1030744

Registered: 29 06 2001

This is sheet 5 of my plan in 67 sheets dated 13 06 2001

Surveyor registered under Surveyors Act 1978

This is sheet of the plan of sheets covered by subdivision certificate No of

Reduction Ratio 1 NTS

Plan Drawing only to appear in this space

SURVEYOR'S REFERENCE: s521071004 rev F (21071/22)

PLAN FORM 3 — To be used in conjunction with Plan Form 2 — WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

DP1030744

Registered: 29.06.2001

This is sheet 6 of my plan in 67 sheets dated 13.06.2001

Surveyor registered under Surveyors Act 1929

This is sheet ... of the plan of ... sheets covered by subdivision certificate No. ... of ...

For use where space is insufficient in any panel in Plan Form 2

DIAGRAM A
NOT TO SCALE

DIAGRAM B
NOT TO SCALE

DIAGRAM C
NOT TO SCALE

DIAGRAM D
NOT TO SCALE

SEE SHEET 1 FOR EASEMENT INFORMATION

SCEDULE OF SHORT & CURVED LINES

Pt	BEARING	DIST	ARC	RAD
1	6°12'40"	5.53		
2	6°12'40"	2.92		
3	38°15'20"	19.14		
4	64°33'05"	76.615	78.58	101
5	179°14'45"	24.03		
6	244°28'00"	56.745	58.115	77
7	218°15'20"	18.810		

Plan Drawing only to appear in this space

SURVEYOR'S REFERENCE: s621071004 rev F (21071/22)

Reduction Ratio 1: NTS

PLAN FORM 3

To be used in conjunction with Plan Form 2

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

DP1030744

Registered: 29 06 2001

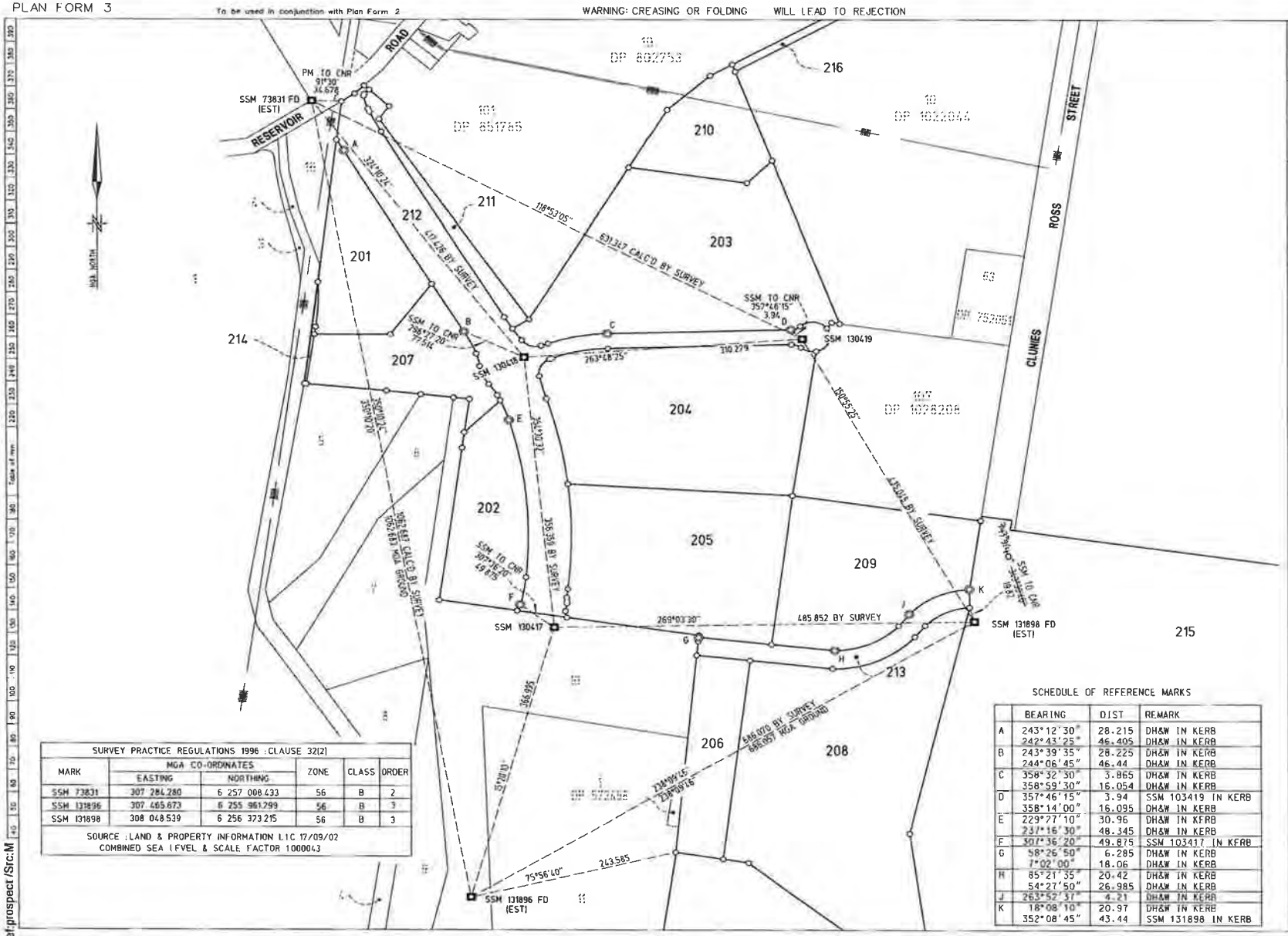
This is sheet 7 of my plan in 7 sheets dated

Surveyor registered under Surveyors Act 1929

This is sheet of the plan of sheets covered by subdivision certificate No. of

Authorised Person/General Manager/Accredited Certifier

For use where space is insufficient in any panel on Plan Form 2



SURVEY PRACTICE REGULATIONS 1996 : CLAUSE 32(2)					
MARK	MGA CO-ORDINATES		ZONE	CLASS	ORDER
	EASTING	NORTHING			
SSM 73831	307 284.280	6 257 008.433	56	B	2
SSM 131896	307 465.673	6 255 961.299	56	B	3
SSM 131898	308 048.539	6 256 373.215	56	B	3
SOURCE : LAND & PROPERTY INFORMATION L.I.C 17/09/02 COMBINED SEA LEVEL & SCALE FACTOR 1.000043					

SCHEDULE OF REFERENCE MARKS

	BEARING	DIST	REMARK
A	243°12'30"	28.215	DH&W IN KERB
	242°43'25"	46.405	DH&W IN KERB
B	243°39'35"	28.225	DH&W IN KERB
	244°06'45"	46.44	DH&W IN KERB
C	358°32'30"	3.865	DH&W IN KERB
	358°59'30"	16.054	DH&W IN KERB
D	357°46'15"	3.94	SSM 103419 IN KERB
	358°14'00"	16.095	DH&W IN KERB
E	229°27'10"	30.96	DH&W IN KERB
	231°16'30"	48.345	DH&W IN KERB
F	307°36'20"	49.875	SSM 103417 IN KERB
G	58°26'50"	6.285	DH&W IN KERB
	7°02'00"	18.06	DH&W IN KERB
H	85°21'35"	20.42	DH&W IN KERB
	54°27'50"	26.985	DH&W IN KERB
J	263°52'37"	4.21	DH&W IN KERB
K	18°08'10"	20.97	DH&W IN KERB
	352°08'45"	43.44	SSM 131898 IN KERB

Reduction Ratio 1: 3000

SURVEYOR'S REFERENCE: s121071004 rev A

SHEET 7 ADDED TO ORIGINAL PLAN 12.11.2002

BEARING AMENDED IN LPI/NSW AT SURVEYORS REQUEST VIDE 2002/2629 10.12.2002

Plan Drawing only to appear in this space

PLAN FORM 2

Plan Drawing only to appear in this space

SIGNATURES, AND SEALS ONLY

THE PLACEMENT OF REFERENCE/PERMANENT MARKS IN LOT 212 & 213 HAS BEEN DEFERRED IN ACCORDANCE WITH CL 60 OF THE SURVEYORS (PRACTICE) REGULATION 1996 WHEN PLACED, THE NATURE & POSITION OF THESE REFERENCE/PERMANENT MARKS WILL BE SHOWN IN A SCHEDULE ON A SEPARATE SHEET ANNEXED TO THIS PLAN

SURVEY PRACTICE REGULATIONS 1996 : CLAUSE 32(2)

MARK	MGA CO-ORDINATES EASTING	MGA CO-ORDINATES NORTHING	ZONE	CLASS
PM 29163	308 329.926	6 257 805.272	56	B
SSM 489	308 359.289	6 257 471.882	56	B
SSM 32525	307 168	6 256 937	56	U
SSM 75605	308 180.838	6 257 375.675	56	B
SSM 75606	307 086.542	6 257 432.307	56	B

SOURCE LAND & PROPERTY INFORMATION L.I.C. 15/03/01
COMBINED SCA LEVEL & SCALE FACTOR 1.000064

(A) EASEMENT FOR ELECTRICITY TRANSMISSION LINE 45.72 WIDE CREATED BY TRANSFER M533923 VIDE DP 208990
(B) EASEMENT FOR TRANSMISSION LINE 30.48 & 80.175 WIDE CREATED BY TRANSFER M005594 VIDE DP 550911
NOTE: EASEMENT FOR TRANSMISSION LINE 30.48 WIDE HAS BEEN PARTIALLY RELEASED BY TRANSFER 0881596
(C) EASEMENT FOR WATER SUPPLY WORKS 30.06 WIDE CREATED BY TRANSFER J90028 VIDE DP 270757
(D) EASEMENT FOR TRANSMISSION LINE 18 WIDE CREATED BY TRANSFER 0805096 VIDE DP 589976
(E) PROPOSED EASEMENT FOR WATER SUPPLY 8.0 WIDE
(F) PROPOSED EASEMENT TO DRAIN WATER 3.0 WIDE
(G) EASEMENT FOR TRANSMISSION LINE 18 WIDE VIDE P 738173 (PLAN)
(H) RESTRICTION ON THE USE OF LAND VIDE DP 1028208.
(J) POSITIVE COVENANT VIDE DP 1028208
(K) EASEMENT TO DRAIN WATER
(L) EASEMENT FOR OVERHEAD POWERLINES 5.0 WIDE
(M) EASEMENT FOR WATER SUPPLY PIPELINE
(N) POSITIVE COVENANT
(P) EASEMENT FOR UNDERGROUND MAINS 3.0 WIDE CREATED BY TRANSFER P869765 VIDE DP 584691
(Q) EASEMENT FOR WATERMAINS 7.5 WIDE VIDE DP 583926 (T 305244)
(R) PROPOSED EASEMENT FOR WATER SUPPLY WORKS 5.0 WIDE
(S) PROPOSED EASEMENT FOR WATER SUPPLY WORKS 4.0 WIDE
(T) PROPOSED EASEMENT FOR WATER SUPPLY WORKS 5.0 WIDE
(U) RESTRICTION ON THE USE OF LAND
(V) RESTRICTION ON THE USE OF LAND
(W) RIGHT OF WAY 9.145 WIDE (DP 330231) (A960004)

* INDICATES PLAN OF SURVEY BY MR SURVEYOR DAVID KENNETH BURKE DATED NOVEMBER 30 2000
COPY FILED WITH DP [illegible]

Crown Lands Office Approval

PLAN APPROVED _____ Authorised Officer

Land District _____

Paper No. _____

Field Book _____ pages _____

Subdivision Certificate

I certify that the provisions of s.109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to the proposed SUBDIVISION (set out herein / insert subdivision type / new road)

Authorised Person/General Manager/Accredited Certifier

Consent Authority HOLROYD CITY COUNCIL

Date of endorsement 28th JUNE 2001

File number [illegible]

Subdivision Certificate no 23-2001

* Strike through if inapplicable.

* If the plan is to be lodged electronically in the Land Titles Office it should include a signature in an electronic or digital format approved by the Registrar-General

* Delete if inapplicable.

DP1030744 (E)

Registered: 29 06 2001

CA: SEE CERTIFICATE

Title System: TORRENS

Purpose: SUBDIVISION

Ref Map: 9152-4,14 & 42

Last Plan: DP19302, DP860392, DP1028208

PLAN OF SUBDIVISION OF LOT 108 & 109 DP 1028208, LOT 3 DP 860392 & LOT 6 DP 19302

Lengths are in metres. Reduction Ratio 1:4000

LGA: HOLROYD & BLACKTOWN

Locality: PROSPECT

Parish: PROSPECT

County: CUMBERLAND

This is sheet 1 of my plan in 7 (Delete if inapplicable) sheets.

Surveyors (Practice) Regulation 1996

I, PETER W CORNISH of HARD & FORESTER Pty Ltd a surveyor registered under the Surveyor's Act 1929, hereby certify that the survey represented in this plan is accurate, has been made in accordance with the Surveyors (Practice) Regulation 1996 and was completed on 13.06.2001

The survey relates to 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213 & 215

(Note specify the land actually surveyed, or specify any land shown in the plan that is not the subject of the survey)

Datum Line: X - Y

Zone: Suburban/~~Country~~ (Signature)

Surveyor registered under the Surveyor's Act 1929

Plans used in preparation of survey/~~compilation~~

DP 1028208 DP 1022044

PANEL FOR USE ONLY for statements of intention to dedicate public roads, to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.

PURSUANT TO SEC 88B & 88E OF THE CONVEYANCING ACT 1919-1964 IT IS INTENDED TO CREATE

(1) EASEMENT TO DRAIN WATER (K) ✱
(2) EASEMENT FOR OVERHEAD POWERLINES 4.0 WIDE (L)
(3) EASEMENT FOR WATER SUPPLY PIPELINE (M) ✱
(4) POSITIVE COVENANT (N)
(5) RESTRICTION ON THE USE OF LAND (U)
(6) RESTRICTION ON THE USE OF LAND (V)

PROPOSED
IT IS ~~INTENDED~~ TO DEDICATE LOTS 212 & 213 TO THE PUBLIC AS ROAD AFTER CONSTRUCTION

✱ AFFECTING THE WHOLE OF THE LOT

SURVEYOR'S REFERENCE: 5210/1004 rev F (2107V2)

"CHECKLIST" DEFERRED MARK AUDIT MPR PERM

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

PLAN FORM 2

Plan Drawing only to appear in this space

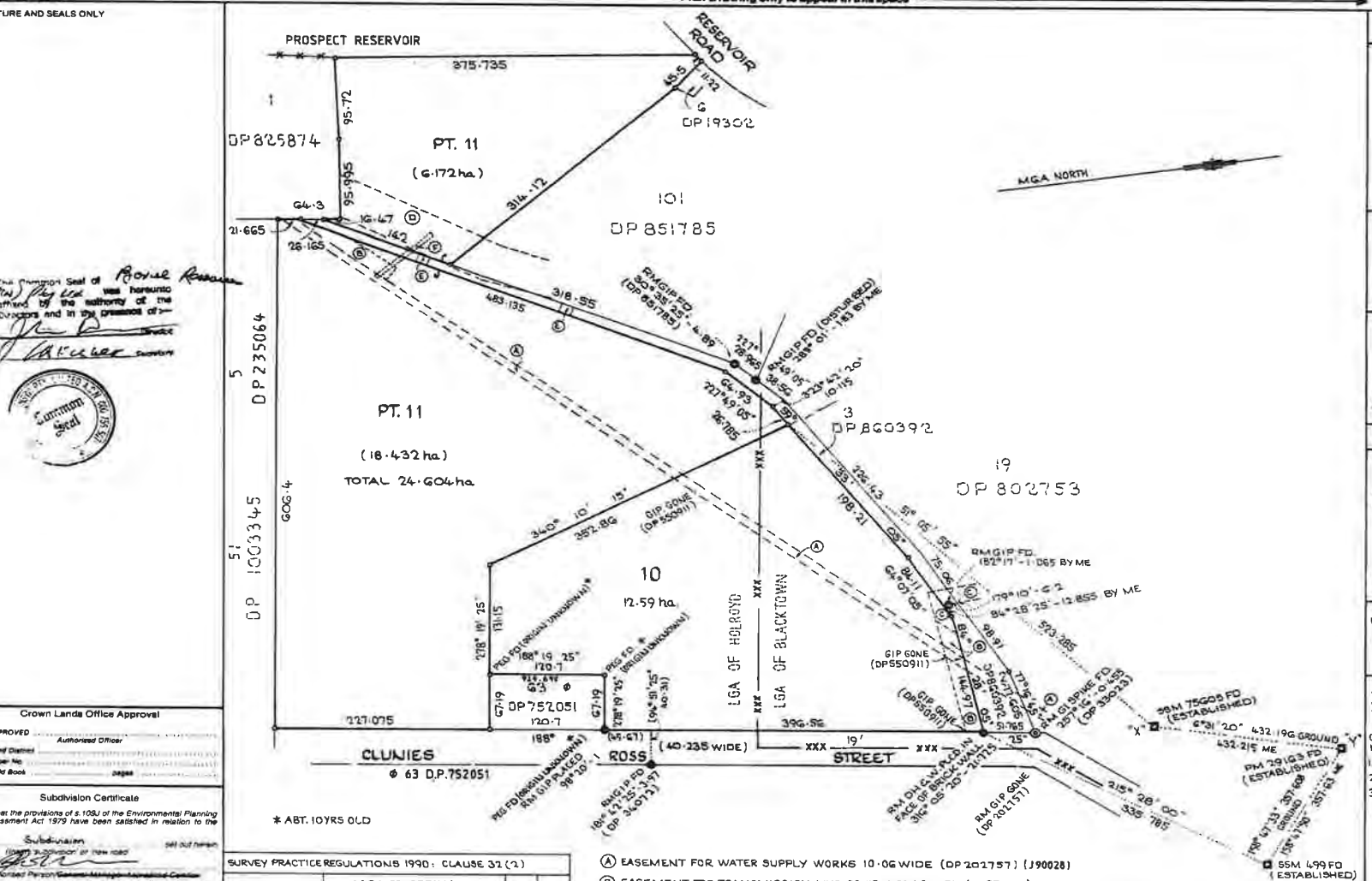
SIGNATURE AND SEALS ONLY

The Common Seal of Boyce Research (NSW) Pty Ltd was hereunto affixed by the authority of the Directors and in the presence of:

Director

Secretary

Common Seal



SURVEY PRACTICE REGULATIONS 1990: CLAUSE 32(2)				
MARK	MGA CO-ORDINATES		ZONE	CLASS
	EASTING	NORTHING		
SSM 499	308 359·293	G 257 471·887	56	B
SSM 75605	308 180·837	G 257 375·878	56	B
PM 29163	308 329·930	G 257 805 277	56	B

SOURCE: MGA CO-ORDINATES OBTAINED FROM 8CIMS, IG 8 2000
COMBINED SCALE FACTOR 1·000044

(A) EASEMENT FOR WATER SUPPLY WORKS 10·06 WIDE (DP 202757) (J90028)
(B) EASEMENT FOR TRANSMISSION LINE 20·115 & 30 48 WIDE (DP 550911) - SEE NOTE BELOW (M502589)
(C) EASEMENT FOR TRANSMISSION LINE 18 WIDE (DP 589976) (Q 805096)
(D) EASEMENT FOR TRANSMISSION LINE 45 72 WIDE (DP 208890) (H939523)
(E) RIGHT OF WAY 9·145 WIDE (DP 33023) (A 960804)
(F) EASEMENT FOR UNDERGROUND MAINS 3 WIDE (DP 584691) (P 869765)

NOTE: EASEMENT FOR TRANSMISSION LINE 30·48 WIDE, CREATED BY DP 550911, HAS BEEN PARTIALLY RELEASED BY TR Q981596

Crown Lands Office Approval

PLAN APPROVED ..... Authorised Officer

Land District .....
Paper No. .....
Field Book ..... pages

Subdivision Certificate

I certify that the provisions of s.109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to the proposed

Subdivision / new road set out hereon

Authorised Person/General Manager/Accredited Certifier

Consent Authority: Regional Minister for Urban Affairs & Planning

Date of endorsement: 28/12/2000

Accreditation No.:

Subdivision Certificate No.:

File No.:

Note:
When the plan is to be lodged electronically in the Land Titles Office, it should include a signature in an electronic or digital format approved by the Registrar-General.

†Delete whichever is inapplicable

SURVEYORS REFERENCE: 13407 Checklist

DP1022044

Registered: 28 12 2000

CA: SEE CERTIFICATE

Title System: TORRENS

Purpose: SUBDIVISION

Ref Map: U 9152 – 4, U 9152 – 14 & U 9152 - 42

Last Plan: DP860392

PLAN OF SUBDIVISION OF LOT 1 IN DP 860392

Lengths are in metres Reduction Ratio 1:3000

LGA BLACKTOWN & HOLROYD

Locality: PROSPECT

Parish: PROSPECT

County: CUMBERLAND

This is sheet 1 of my plan in | sheets (Delete if inapplicable)

Surveyors (Practice) Regulation 1996

I, JAMES PATRICK THORPE

of DUNLOP THORPE & CO., SYDNEY

a surveyor registered under the Surveyors Act 1929, hereby certify that the survey represented in this plan is accurate, has been made in accordance with the Surveyors Practice Regulation 1996 and was completed on 14.12.00

The survey relates to LOT 10

(Here specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey)

Datum Line: 'X' - 'Y'

Zone: Suburb/City/Town

(Signature) J. P. Thorpe

Surveyor registered under the Surveyors Act 1929

Plans used in preparation of survey/compilation

DP's. 33023 DP 34072
860392
851785
550911
589976
802753

PANEL FOR USE ONLY for statements of intention to dedicate public roads, to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.

PURSUANT TO SECTION 88 B OF THE CONVEYANCING ACT 1919 - 1964, IT IS INTENDED TO CREATE:

1. RESTRICTION ON USE OF LAND
2. POSITIVE COVENANT
3. RESTRICTION ON USE OF LAND

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

13407

PLAN FORM 2

Plan Drawing only to appear in this space

SIGNATURES, AND SEALS ONLY

SIGNED IN ACCORDANCE WITH THE CORPORATIONS ACT 2001 BY BORAL RESOURCES (NSW) PTY LTD (ACN 000 756 507)

(A) RESTRICTION ON THE USE OF LAND
(B) EASEMENT FOR ELECTRICITY TRANSMISSION LINE 45.72 WIDE CREATED BY TRANSFER M925018 VIDE DP 208890
(C) POSITIVE COVENANT VIDE DP 1028208
(D) EASEMENT FOR WATER SUPPLY WORKS 60.96 WIDE CREATED BY TRANSFER 3902124 VIDE DP 207757
(E) RESTRICTION ON THE USE OF LAND VIDE DP 1030744
(F) RIGHT OF WAY 3.145 WIDE (DP 330231) (AW608041)
(G) EASEMENT FOR UNDERGROUND MAINS 3.0 WIDE CREATED BY TRANSFER P650795 VIDE OF 581591
(H) EASEMENT FOR DRAINAGE 3.0 WIDE

PROSPECT HIGHWAY

RESERVOIR ROAD

LGA OF BLACKTOWN

LGA OF HOLROYD

SURVEY PRACTICE REGULATION 2001: CLAUSE 32 (2)					
MARK	MGA CO-ORDINATES EASTING	MGA CO-ORDINATES NORTHING	ZONE	CLASS	ORDER
SSM 131896	307 465.673	6 255 961.299	56	B	1
SSM 131898	308 048.539	6 256 323.215	56	B	1
PM 73831	307 284.280	6 257 008.433	56	B	2

SOURCE: MGA CO-ORDINATES ADOPTED FROM LPI AT 28th FEBRUARY 2002
COMBINED M.S.L. SCALE FACTOR 1.000043

602 1.423 Ha

603 5.783 Ha

601 310.5m

No	BEARING	DIST	ARC	RAD
1	278°19'25"	9.63		
2	217°23'55"	9.005		
3	307°36'55"	12.005	12.19	20
4	17°21'42"	26.81		
5	257°11'05"	21.67	22.90	20
6	246°25'30"	11.635	11.925	15.5
7	250°23'50"	8.525	8.525	156
8	288°05'50"	23.705	25.31	20
9	325°48'30"	17.685	17.685	388
10	53°18'50"	23.075		
11	21°32'55"	35.41	39.54	20

CH 258°51'15" 70.150
ARC 70.48
RAD 210.0

(Y) DP1022044 - RESTRICTION ON USE OF LAND NUMBERED 1 IN S885
- RESTRICTION ON USE OF LAND NUMBERED 3 IN S885
- POSITIVE COVENANT

SURVEYOR'S REFERENCE: s121071011 rev C (21071/60)

"CHECKLIST"

WARNING CREASING OR FOLDING WILL LEAD TO REJECTION

D DP1047403

Registered 30.12.2002

C A : SEE CERTIFICATE

Title System : TORRENS

Purpose : SUBDIVISION

Ref Map : U9152-42#

Last Plan : DP1030744

PLAN OF SUBDIVISION OF LOTS 203 & 210 DP 1030744

Lengths are in metres. Reduction Ratio 1 2000

LGA HOLROYD/BLACKTOWN

Locality PROSPECT

Parish PROSPECT

County CUMBERLAND

This is sheet 1 of my plan in 2 sheets (Delete if inapplicable)

Surveyors (Practice) Regulation 1996

I, PETER W CORNISH

of HARD & FORESTER Pty Ltd

a surveyor registered under the Surveyor's Act 2001, hereby certify that the survey represented in this plan is accurate, has been made in accordance with the Surveyors Practice Directions 2001 and was completed on 24.04.2002

The survey relates to LOTS 601, 602 & 603

(here specify the land actually surveyed, or specify any land shown in the plan that is not the subject of the survey)

Datum Line :

Zone - Suburban/Country (Signature)

Surveyor registered under the Surveyors Act 1929

Plans used in preparation of survey/compilation

DP 1030744
DP 1028208

PANEL FOR USE ONLY for statements of intention to dedicate public roads, to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants

PURSUANT TO SEC 88B OF THE CONVEYANCING ACT 1919-1964 IT IS INTENDED TO CREATE

(1) RESTRICTION ON THE USE OF LAND (A)
(2) EASEMENT FOR DRAINAGE 3.0 WIDE (H) OF WATER

Crown Lands Office Approval

PLAN APPROVED _____ Authorised Officer

Land District _____

Paper No. _____

Field Book _____ page _____

Subdivision Certificate

I certify that the provisions of s.109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to the proposed Subdivision (Insert 'subdivision' or 'new road') set out herein

* Authorised Person/General Manager/Accredited Certifier

Consent Authority: Minister for Planning

Date of endorsement: 13.11.2002

Accreditation no. _____

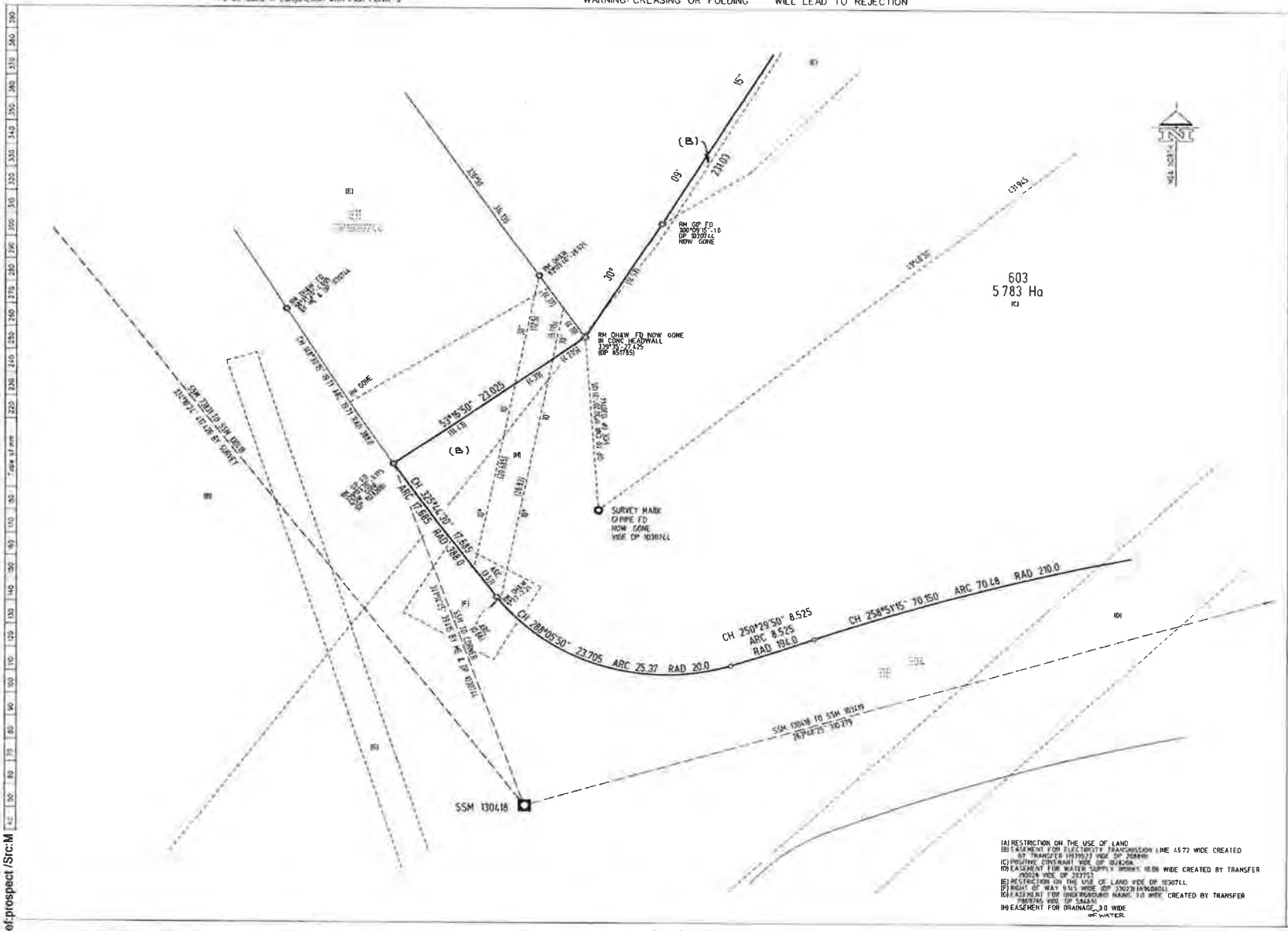
Subdivision Certificate no. 23-08-01C

File no. 201/00265/1214

Note: When the plan is to be lodged electronically in the Land Titles Office it should include a signature in an electronic or digital format approved by the Registrar-General

* Delete if inapplicable

PLAN FORM 3 To be used in conjunction with Plan Form 2 WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION



DP1047403

Registered 30.12.2002

This is sheet 2 of my plan in 2 sheets dated

Surveyor registered under Surveyors Act 1978

This is sheet 2 of the plan of 2 sheets approved by Landonline for lodgement on the 13.11.2002 23.02 o'c

Authorised Person or Corporate Officer

For use where space is insufficient in any panel on Plan Form 2

Reduction Ratio 1 : 250

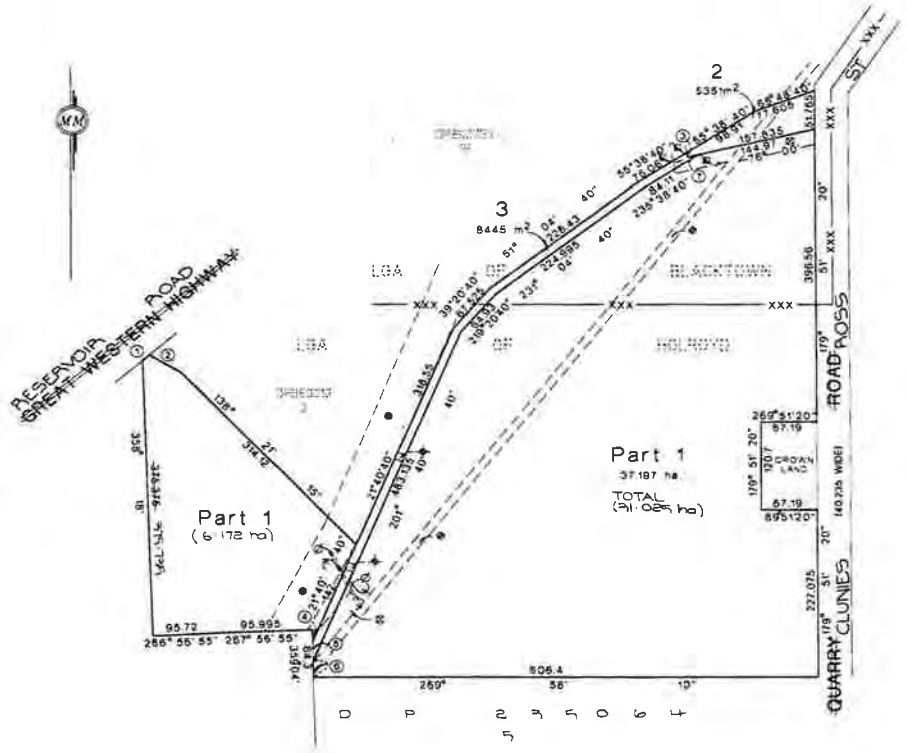
Plan Drawing only to appear in this space

SURVEYOR'S REFERENCE s12107101 rev C (21071/60)

Plan Drawing only to appear in this space

*OFFICE USE ONLY

SIGNATURES, SEALS AND STATEMENTS of intention to create public roads or to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.



- RIGHT OF WAY 9.145 WIDE, CREATED BY TRANSFER A960804 VIDE DP33023
- EASEMENT FOR ELECTRICITY TRANSMISSION LINE 45.72 WIDE CREATED BY TRANSFER H939523 VIDE DP206890
- EASEMENT FOR WATER SUPPLY WORKS CREATED BY TRANSFER J90026 VIDE DP202757 10.06 WIDE
- EASEMENT FOR TRANSMISSION LINE, 30.48 & 20.115 WIDE, CREATED BY TRANSFER M502569 VIDE DP550911 AND VIDE TRANSFER Q981596 FOR PARTIAL RELEASE OF EASEMENT
- EASEMENT FOR UNDERGROUND MAINS, 3 WIDE, CREATED BY TRANSFER P869765 VIDE DP584691
- EASEMENT FOR TRANSMISSION LINE 18 WIDE, CREATED BY TRANSFER Q805096 VIDE DP589976

SCHEDULE OF SHORT LINES

No	BEARING & DISTANCE
1	67°32'00"-11.22
2	122°28'30"-45.5
3	170°41'30"-6.165
4	359°04'00"-18.47
5	359°04'00"-26.16
6	359°04'00"-21.665
7	76°00'00"-12.865

DP 860392

Registered: 28 8 1996

D.A.

Title System TORRENS

Purpose ACQUISITION (NOT A CURRENT PLAN AT PRCN - SEE SEC 32AA LG ACT 919)

Ref. Map U9152-4-14-42

Last Plan DP37027

PLAN OF SUBDIVISION OF LOTS A & B IN DP33023

Lengths are in metres. Reduction Ratio 1:4000

LGA: BLACKTOWN & HOLROYD

Locality PROSPECT

Parish PROSPECT

County CUMBERLAND

(Delete if inapplicable)

I, SCOTT ANDREW SUGDEN

of WILLIAM L. BACKHOUSE PTY LTD
P.O. BOX 601 CASTLE HILL 2154
A.C.N. 003 000 708

a surveyor registered under the Surveyors Act 1929, hereby certify that the survey represented in this plan is accurate and has been made in accordance with the Survey Practice Regulation 1990 and was completed on

the 6 SEPTEMBER 1995.

Signature
Surveyor registered under the Surveyors Act 1929.
Datum Line of Azimuth
Insert date of survey.

Plans used in preparation of survey/compilation
DP33023, DP202757, DP206890, DP550911, DP560012, DP584691, DP589976, DP806006

PANEL FOR USE ONLY for statements of intention to dedicate public roads or to create public reserves drainage reserves, easements, restrictions on the use of land or positive covenants

LOT 2 IS TO BE ACQUIRED BY THE MINISTER ADMINISTERING THE MINISTER ADMINISTERING THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Crown Lands Office Approval

PLAN APPROVED

Authorised Officer

Land District

Paper No.

Field Book pages

Council Clerk's Certificate

I hereby certify that:
(a) the requirements of the Local Government Act, 1919 [other than the requirements for the registration of plans], and
(b) the requirements of Part 3 Division 2 of the *Water Board Act 1987 and *Water Supply Authorities Act 1987

have been complied with by the applicant in relation to the proposed

Insert "new road", "subdivision" or "consolidation" as at hereon

Subdivision No

Date

(Signature)

Council Clerk

Council File No.

*This part of certificate to be deleted where the application is only for a consolidated lot or the opening of a new road or where the land to be subdivided is wholly outside the areas of operations of the Metropolitan Water Sewerage and Drainage Board and the Hunter District Water Board.

Delete if inapplicable.

SURVEYOR'S REFERENCE: CA26214 COMP 95.291

PLAN FORM 2

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT

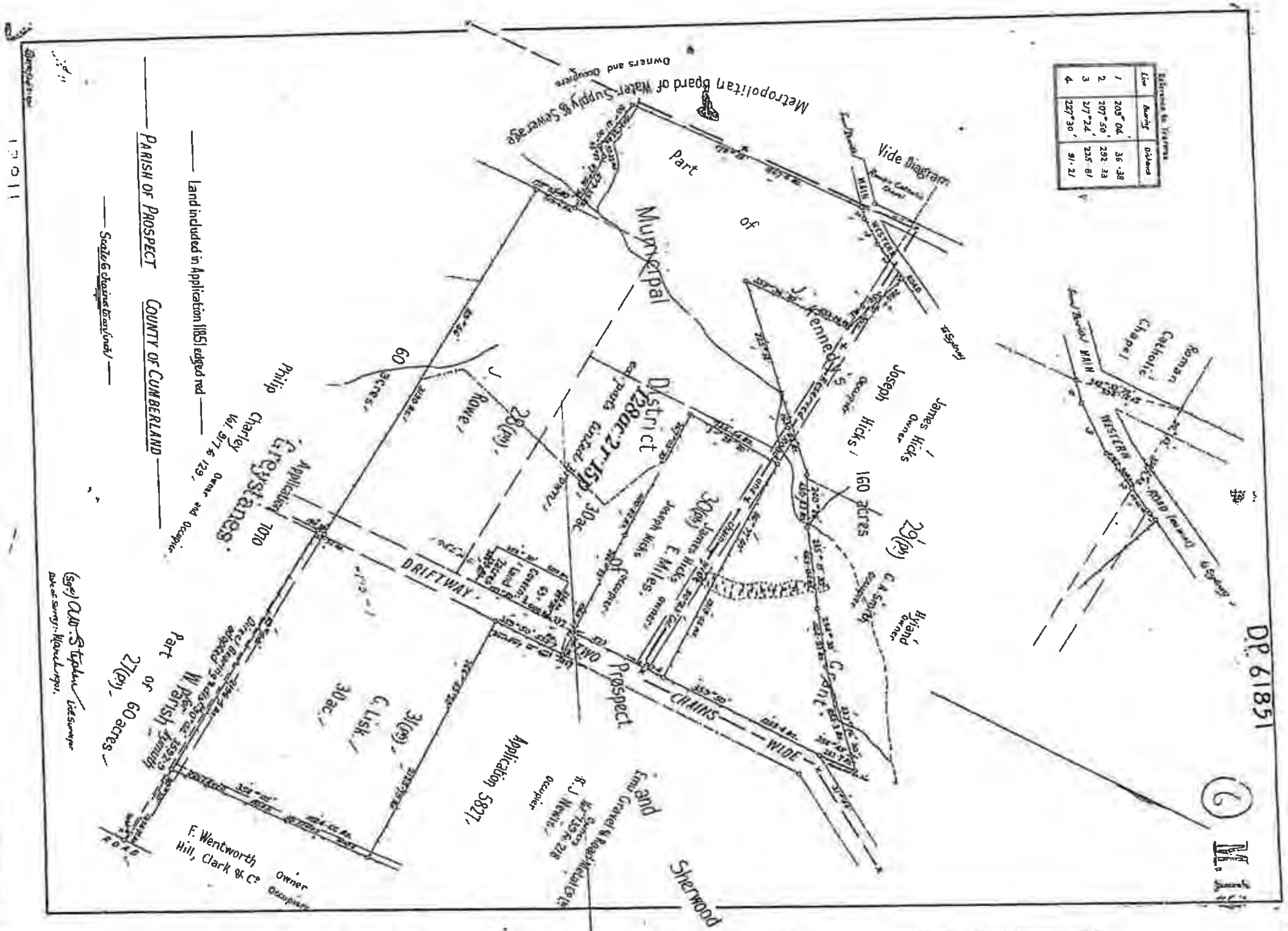
DP 61851

LINKS	METRES
2	0.402
18	3.621
20	4.023
36.38	7.318
44	8.851
50	10.058
59.56	11.982
91.21	18.349
100	20.117
103.25	20.771
111.35	22.400
112.35	22.601
162.3	32.650
162.32	32.654
163.82	32.955
200	40.234
200.36	40.306
225.81	45.426
227	45.665
227.4	45.746
283.7	57.071
292.33	58.807
319.6	64.293
334	67.190
356.5	71.716
396.16	79.695
430	86.502
430.42	86.587
464.93	93.529
475.8	95.716
477.35	96.028
500	100.504
523	105.211
555.7	111.789
558.5	112.352
600	120.701
665.04	133.785
833.26	167.626
837	168.378
853.3	171.657
1065.67	214.379
1288.4	259.185
1396.75	280.981
1584.66	318.783
1630.82	328.069
1867.6	375.701
1919.55	386.152
2128.79	427.641
2196.5	441.866
3190	641.726
3592.9	722.777
11008.02	2214.622
19195.5	3861.520

AC RD P	SQ M
2 - -	8094

AC RD P	HA
30 - -	12.14
32 3 10 1/2	13.28
60 - -	24.28
128 - 10	51.82
128 2 15	52.04
160 - -	64.75

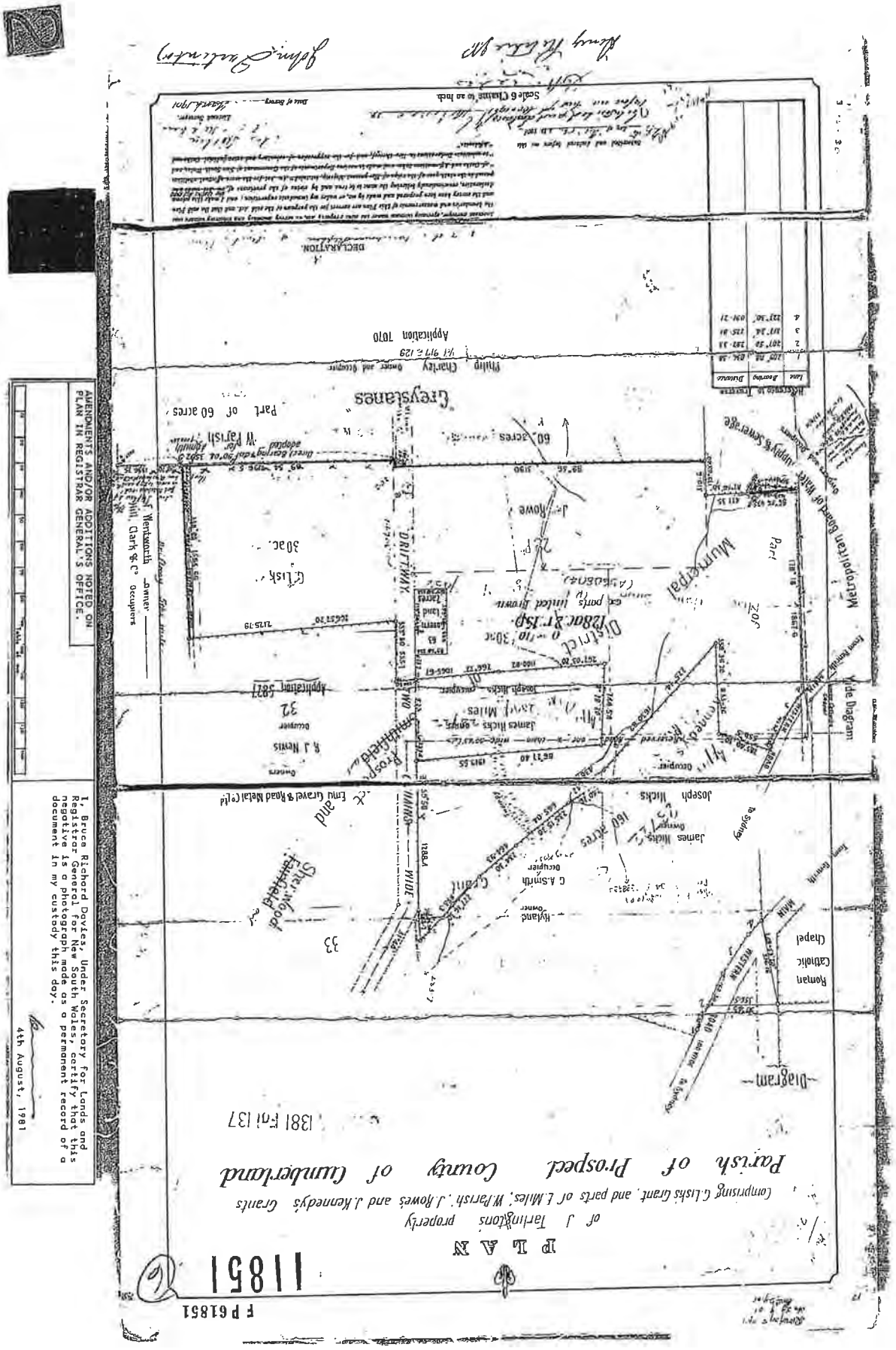
[redacted]



AMENDMENTS AND/OR ADDITIONS NOTED ON PLAN IN REGISTRAR GENERAL'S OFFICE.

I, Bruce Richard Davies, Under Secretary for Lands and Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this day.

4th August, 1981



DP 33023

FEET	INCHES	METRES
-	1 1/2	0.038
-	6 1/2	0.165
1	-	0.305
1	1	0.330
1	1 1/4	0.438
1	6	0.457
3	-	0.914
4	-	1.219
5	-	1.524
6	1 1/2	1.867
16	0 1/2	4.890
16	7 1/4	5.061
18	-	5.486
24	6 1/2	7.480
29	2	8.890
30	-	9.144
35	4 1/4	10.776
35	10	10.922
36	9 3/4	11.220
38	-	11.582
38	10 1/2	11.849
40	-	12.192
42	2	12.852
46	4	14.122
71	1	21.666
84	10	25.857
85	10	26.162
111	4	33.934
116	1 1/2	35.399
132	-	40.234
132	3	40.310
138	2	42.113
149	3 1/4	45.498
149	10	45.669
210	11 1/2	64.300
213	0 1/4	64.929
219	-	66.751
220	5 1/4	67.189
221	6 1/2	67.526
231	0 1/4	70.415
238	1	72.568
254	7 1/4	77.603
314	0 1/2	95.720
314	11 1/4	95.993
391	-	106.985
396	-	120.701
413	0 3/4	125.901
465	10 1/2	141.999
565	1 1/2	172.250
565	7 1/2	172.403
570	9 1/4	173.971
738	2	224.993
742	10 1/2	226.428
745	-	227.076
1030	7	314.122
1045	1 1/4	318.548
1232	8 3/4	375.736
1337	11 1/4	407.803
1435	6 1/4	437.547
1470	10 1/2	448.323
1510	11 3/4	460.546
1585	1	483.133
1585	1 1/4	483.140
1989	6	606.488

AC	RD	P	HA
2	2	2 1/4	1.017
92	3	11 1/4	37.56

MUN OF HOLROYD

PLAN

of subdivision of parts of the land in C/Ts Vol 476

Parish of Prospect County of Cu

Scale: 200 Feet to an Inch.

D.P. 33023 (E)

FORMERLY Plan in N103977
MPS (RP) 12439
6435 7161

C.A. 1838 of 13 2 1958

CHARTING MAP CCC 390

Council Approval

GREAT WESTERN HIGHWAY

Shire of

Concrete Block

Right of Way

A

2 acres 2rds

Mun of

Right of Way 30' Wide

B

32 acres 31

W21356
(Water Board)

App 118

Council Approval

Note: Lot 'A' to be consolidated with Lot 'B'

I Kenneth John Morrow of 22 Co
registered under the Surveyors
survey represented in this plan
by me in accordance with the Su
was completed on 3rd January 195

Surveyor registered

Datum Line of Azimuth XY

1838

PLAN

parts of the land in C.T.s Vol:4768 Fol:84 and Vol:1815 Fols:546
h of Prospect County of Cumberland.
Scale: 200 Feet to an Inch.

D.P. 33023 (E)
FORMERLY Plan in N103977
MPS (RP) 12439
6445 74)
C.A. 1838 of 13 2 1958
CROWN MAP CCC 390

Shire of Blacktown

Mun of Holroyd

App 1851

A
2 acres 2rds 1¼ per

B
32 acres 3rd. 11¼ per

ROAD — 132.0" WIDE

CROWN LAND — 132.0" WIDE

DRIFTWAY — 745.0" WIDE

Right of Way C398894

Right of Way 30' Wide

Large Reg fd ↑ and RM fd. (Adopted)

Concrete Block

Fence

Remains v o

Total 1470'10½"

1985'6"

89°58'10"

8734(L)

t 'A' to be ated with

expired

I Kenneth John Morrow of 22 Cooper Street Strathfield a Surveyor registered under the Surveyors Act 1929-1946 hereby certify that the survey represented in this plan is accurate and has been made by me in accordance with the Survey Practice Regulations 1933 and was completed on 3rd January 1958

K.J. Morrow DP 33023 (E)

Surveyor registered under the Surveyors Act 1929-1946.

18/58.

This is the plan referred to in Transfer [illegible]

DP 73722 (6)

Papers 2IM/3992
App^{n} 23722+
{Mun^{y} Prospect & Sherwood.
{Shire Blacktown.

PLAN

Part 160 ac: Grant to J. Kennedy. (Por. 29^{Ph})
& part 30 ac. Grant to E. Miles. (Por. 30^{Ph})

Ph of Prospect : C^{o} of Cumberland

Scale: 8 Chains to one inch.

Areas Amended in Red. Gen. Ref.

Registrar General's Dept.
Sydney 17th October. 1921.

AMENDMENTS AND/OR ADDITIONS NOTED ON PLAN IN REGISTRAR GENERAL'S OFFICE.

I, Bruce Richard Davies, Under Secretary for Lands and Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this day.

4th January, 1982

CONVERSION TABLE ADDED IN DEPARTMENT OF LANDS

DP 73722

LINKS	METRES
23.6	4.748
100	20.117
217	43.653
259.9	52.284
397.1	79.884
523	105.211
558.5	112.352
606.4	121.988
744.5	149.770
750.4	150.956
833.25	167.623
865.3	174.071
991.1	199.378
1100.8	221.446
1596.5	321.165
1630.8	328.065
1919.5	386.142
1959	394.088
15986.5	3215.972

AC	RD	P	HA
12	2	14	5.094
25	3	15	10.46
30	-	-	12.14
160	-	-	64.75

G. 2

NEW SOUTH WALES

Appln. Nos. 11851 and 23722 (part)
Prior Titles Vol.4768 Fol.84
" " Vol.8387 Fol.171.

CERTIFICATE OF TITLE

REAL PROPERTY ACT, 1900, as amended.

09787165

1st Edition issued 17-8-1964.

EM. J569901.

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

Witness

CANCELLED

Registrar-General.

SEE AUTO FOLIO Auto Consol 9787-165

Vol 9787 Fol 165 (Page 1)

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lots A and B in Deposited Plan 33023 in the Municipality of Blacktown and Holroyd, Parish of Prospect and County of Cumberland being granted as set out in the schedule hereunder. Excepting thereout the minerals reserved by the Crown Grants of 3 acres 2 roods 16 perches and 15 9/10 perches.

SCHEDULE OF GRANTS.

Number of Portion	Name of Grantee	Date of Grant	Grant Reference Volume	Folio
Pt. 28	John Rowe	1-5-1797		
Pt. 30	Edward Miles	1-5-1797		
Pt. 29	John Kennedy	3-5-1797		
Pt. 3ac. 2rd. 16pers.	-	26-9-1930	4441	3
159/10 pers.	-	26-9-1930	4441	22

FIRST SCHEDULE (Continued overleaf)

~~THE N.S.W. ASSOCIATED BLUE METAL QUARRIES PTY. LIMITED.~~

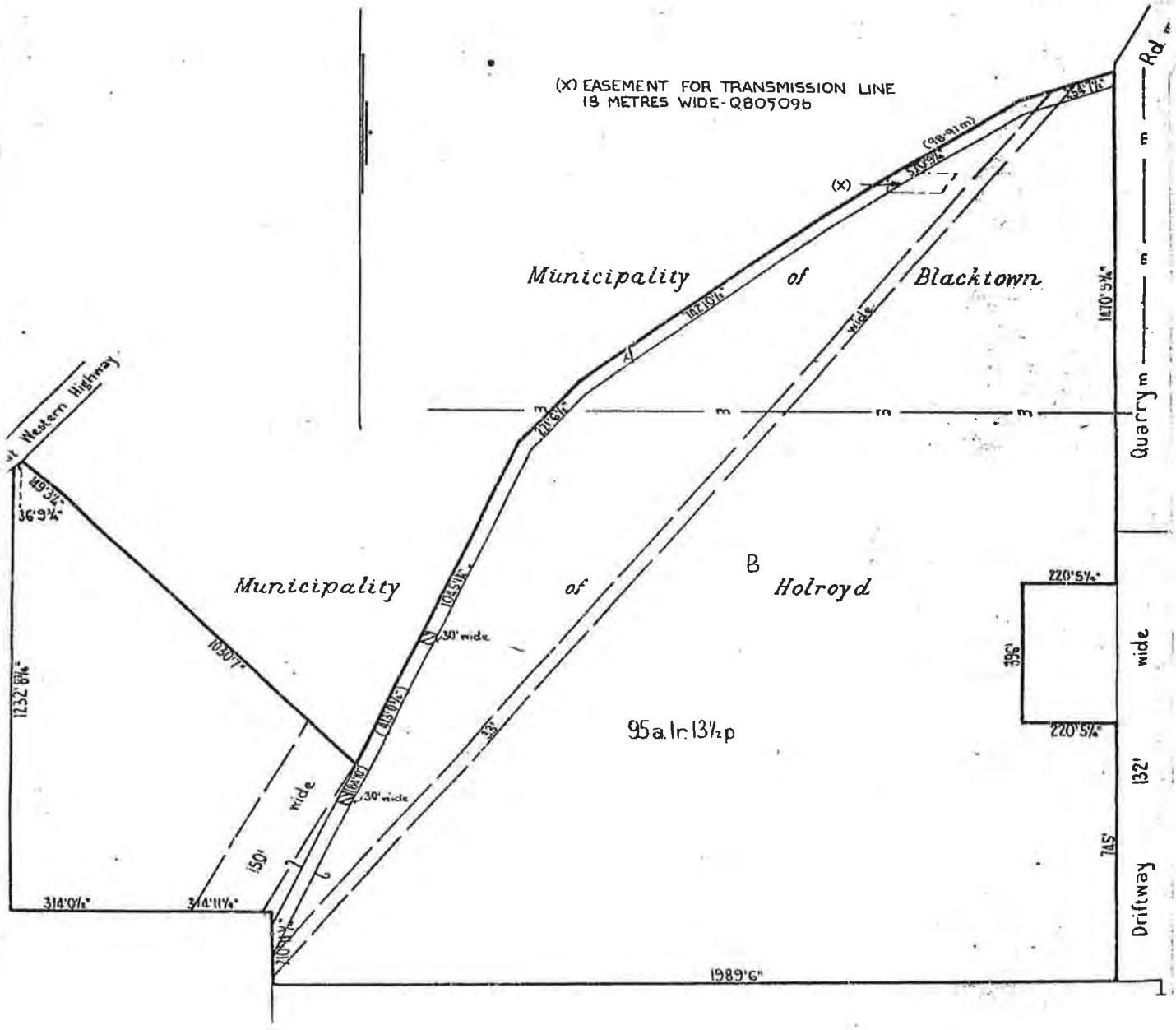
Registrar General.

SECOND SCHEDULE (Continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant(s) above referred to
2. ~~Right of way created by Transfer No. A960804 affecting the pieces of land shown as "30 feet wide" hatched black in the plan hereon.~~
3. ~~Mortgage No. C506739 of that part of the land above described formerly comprised in certificate of title Volume 4768 Folio 84 to Blue Metal and Gravel Pty. Limited. Entered 18-6-1937.~~ discharged K617647
4. ~~Mortgage No. C511685 of that part of the land above described formerly comprised in certificate of title Volume 4768 Folio 84 to Quarries Pty. Limited. Entered 18-6-1937.~~ discharged K617648
5. Covenant created by Transfer No. H103977.
6. ~~Easement for Electricity Transmission created by Transfer No. H939523 affecting the piece of land shown as "150 feet wide" in the plan hereon.~~
7. Easement for Water Supply Works created by Transfer J90028 affecting the piece of land shown as "33 feet wide" in the plan hereon.

Registrar General.

PLAN SHOWING LOCATION OF LAND



Scale. 300 feet to one inch.
All lengths shown hereon are in feet and inches

J569901

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
BORAL RESOURCES (NSW.) PTY. LIMITED BY TRANSFER X545979. Registered 26-5-1988					

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION
Transfer	M502589	19-10-1971	Easement for Transmission Line affecting that part of the land within described shown as "Proposed Easement for Transmission Line 100ft wide and 66ft wide" in D.P. 550911	29-2-1972		
Transfer	P859765	—	Easement for Underground Mains, as more fully set out in the said instrument, affecting that part of the land within described shown as "Proposed Easement for Underground Mains 3. Wide" in D.P. 584691.	13-10-1976		
Transfer	Q505096	—	Easement for Transmission Line affecting ~~the land within described~~ that part of the land within described shown as hereinbefore in the plan hereon	29.5.1978		
Transfer	Q981596	—	The easement for Transmission Line created by M502589 is partially released as shown in plan annexed to Q981596.	2-1-1979.		

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

K408263
DP550911 - Ea. 1
CA1
M502589 To
East & Transmission
100' wide + 66' wide
DP584691
CT 16 87
P859765 1/4
Q805096 To 6
CT 10/11/78
Q981596
X545979
see overleaf
Vol. 9787 Fol. 165

Vol. 165 Fol.

CT 14/7/78
DP860392 CW1 B

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
CANCELLED SEE AUTO FOLIO					

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION		

FORM No. 177A

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

Historical Title

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
19/12/2016 4:09PM

FOLIO: AUTO CONSOL 9787-165

Recorded	Number	Type of Instrument	C.T. Issue
14/5/1999	5823660	CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 9787-165	
		PARCELS IN CONSOL ARE: A-B/33023.	
19/12/2000	7297668	PARCELS EXCISED. CONSOL BROKEN UP	

*** END OF SEARCH ***

prospect PRINTED ON 19/12/2016

Historical Title

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
19/12/2016 4:08PM

FOLIO: A/33023

First Title(s): OLD SYSTEM VOL 4441 FOL 3
VOL 4441 FOL 22
Prior Title(s): VOL 9787 FOL 165

Recorded	Number	Type of Instrument	C.T. Issue
29/7/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
13/5/1999	5819717	DEPARTMENTAL DEALING	FOLIO CREATED CT NOT ISSUED
		FIRST TITLES(S) AS AMENDED: VOL 4441 FOL 22, OLD SYSTEM.	
14/5/1999	5823109	DEPARTMENTAL DEALING	
14/5/1999	5823660	CONVERTED TO AUTO CONSOL 9787-165	CONSOL CREATED CT NOT ISSUED
19/12/2000	7297668	EXCISED FROM AUTO CONSOL 9787-165	
~~20/12/2000~~	~~7301343~~	~~TRANSFER~~ Lot 1 DP 860392	~~EDITION 1~~
20/12/2000	7301553	DEPARTMENTAL DEALING	FOLIO CANCELLED

*** END OF SEARCH ***

Req:R967093 /Doc:DL 7301343 /Rev:03-Jan-2001 /Sts:NO.OK /Pgs:ALL /Prt:20-Dec-2016 11:35 /Seq:1 of
Ref:prospect /Src:M
97-01T

(2)

TRANSFER

Real Property Act, 1900

7301343N

Office of State Revenue use only

NEW SOUTH WALES DUTY
20-12-2000 0000497118-001
SECTION 01HR LEGN-ORIGINAL
NO DUTY PAYABLE

(A) **LAND TRANSFERRED**

Show no more than 20 References to Title.
If appropriate, specify the share transferred.

2/860392 being part volume 9787 folio 165
Now being part of Lots A and B in DP 33023

(B) **LODGED BY**

L.T.O. Box	Name, Address or DX and Telephone
6L	TRACEY WADSWORTH C/- BORAL OFFICES GREYSTANES RD GREYSTANES 2145 PH 9769 0655 REFERENCE (max. 15 characters):

(C) **TRANSFEROR** BORAL RESOURCES (N.S.W.) PTY. LIMITED

(D) acknowledges receipt of the consideration of $1.00

and as regards the land specified above transfers to the Transferee an estate in fee simple

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

(F) **TRANSFEREE**

T TS (s713 LGA) TW (Sheriff)	MINISTER ADMINISTERING THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

(G) **TENANCY:**

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

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

BORAL RESOURCES (NSW) PTY. LIMITED A.C.N. 000 756 507 Common Seal

..... Signature of Witness

..... Name of Witness (BLOCK LETTERS)

..... Address of Witness

..... Signature of Transferor Director Assistant Secretary

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

L. Brownfield Signature of Witness

M. T. BROWNFIELD Name of Witness (BLOCK LETTERS)

1 FARRER PLACE SYDNEY Address of Witness

SIGNED by me VINCENT FERNANDEZ RAMOS as delegate of the Minister administering the Environmental Planning and Assessment Act, 1979, and I hereby certify that I have no notice of the revocation of such delegation.

..... Signature of Transferee

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

CHECKED BY (office use only) .....

AUSDOC Office Pty. Ltd.

Historical Title

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
19/12/2016 4:07PM

FOLIO: 3/860392

First Title(s): VOL 4441 FOL 22 OLD SYSTEM
Prior Title(s): A/33023

Recorded	Number	Type of Instrument	C.T. Issue
28/8/1996	DP860392	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
21/12/2000	7302830	DEPARTMENTAL DEALING	FOLIO CREATED EDITION 1
21/12/2000	7303616	DEPARTMENTAL DEALING	EDITION 2
2/7/2001	DP1030744	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

prospect PRINTED ON 19/12/2016

Historical Title

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
19/12/2016 4:01PM

FOLIO: 216/1030744

First Title(s): OLD SYSTEM
Prior Title(s): 3/860392

Recorded	Number	Type of Instrument	C.T. Issue
2/7/2001	DP1030744	DEPOSITED PLAN	FOLIO CREATED EDITION 1
2/7/2001	7733761	DEPARTMENTAL DEALING	EDITION 2
3/7/2001	7734414	DEPARTMENTAL DEALING	
9/7/2001	7749448	DEPARTMENTAL DEALING	EDITION 3
26/2/2013	AH558412	LEASE	EDITION 4

*** END OF SEARCH ***

prospect PRINTED ON 19/12/2016

Title Search

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 216/1030744

SEARCH DATE	TIME	EDITION NO	DATE
19/12/2016	3:51 PM	4	26/2/2013

LAND

LOT 216 IN DEPOSITED PLAN 1030744
AT PROSPECT
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF PROSPECT COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1030744

FIRST SCHEDULE

BORAL RESOURCES (NSW) PTY LIMITED

SECOND SCHEDULE (3 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 Q805096 EASEMENT FOR TRANSMISSION LINE (D) 18 WIDE AFFECTING THE PART(S) OF THE LAND ABOVE DESCRIBED SHOWN SO BURDENED IN THE TITLE DIAGRAM. (SEE DP589976)
3 AH558412 LEASE TO AUSTRAL MASONRY (NSW) PTY LIMITED EXPIRES: 7/2/2018. OPTION OF RENEWAL: 34 MONTHS.

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

prospect PRINTED ON 19/12/2016

Historical Title

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
19/12/2016 4:08PM

FOLIO: B/33023

First Title(s): OLD SYSTEM VOL 4441 FOL 3
VOL 4441 FOL 22
Prior Title(s): VOL 9787 FOL 165

Recorded	Number	Type of Instrument	C.T. Issue
29/7/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
13/5/1999	5819717	DEPARTMENTAL DEALING	FOLIO CREATED CT NOT ISSUED
14/5/1999	5823660	CONVERTED TO AUTO CONSOL 9787-165	CONSOL CREATED CT NOT ISSUED
19/12/2000	7297668	EXCISED FROM AUTO CONSOL 9787-165	
~~20/12/2000~~	~~7301343~~	~~TRANSFER~~ Lot 2 DP 800792	EDITION 1
20/12/2000	7301553	DEPARTMENTAL DEALING	FOLIO CANCELLED

*** END OF SEARCH ***

prospect PRINTED ON 19/12/2016

Historical Title

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
19/12/2016 4:07PM

FOLIO: 1/860392

First Title(s): VOL 4441 FOL 22 VOL 4441 FOL 3
OLD SYSTEM
Prior Title(s): B/33023

Recorded	Number	Type of Instrument	C.T. Issue
28/8/1996	DP860392	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
21/12/2000	7302830	DEPARTMENTAL DEALING	FOLIO CREATED EDITION 1
21/12/2000	7303616	DEPARTMENTAL DEALING	EDITION 2
28/12/2000	DP1022044	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

Historical Title

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
19/12/2016 4:01PM

FOLIO: 10/1022044

First Title(s): VOL 4441 FOL 3 OLD SYSTEM
Prior Title(s): 1/860392

Recorded	Number	Type of Instrument	C.T. Issue
28/12/2000	DP1022044	DEPOSITED PLAN	FOLIO CREATED EDITION 1
6/2/2001	7390193	CAVEAT	
7/3/2001	7453092	LEASE	
7/3/2001	7453093	VARIATION OF LEASE	EDITION 2
10/4/2001	7532645	SUB-LEASE	
10/4/2001	7532646	VARIATION OF LEASE	
10/4/2001	7532647	TRANSFER OF LEASE	EDITION 3
27/2/2013	AH558419	SUB-LEASE	
15/6/2016	AK509587	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

Title Search

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 10/1022044

SEARCH DATE	TIME	EDITION NO	DATE
19/12/2016	3:51 PM	3	10/4/2001

LAND

LOT 10 IN DEPOSITED PLAN 1022044
AT PROSPECT
LOCAL GOVERNMENT AREA CUMBERLAND
PARISH OF PROSPECT COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1022044

FIRST SCHEDULE

BORAL RESOURCES (NSW) PTY LIMITED

SECOND SCHEDULE (10 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 H103977 COVENANT
3 LAND EXCLUDES MINERALS WITHIN THE GRANT OF 3 ACRES 2 ROODS 16 PERCHES (VOL. 4441 FOL. 3)
4 J90028 EASEMENT FOR WATER SUPPLY WORKS 10.06 METRE(S) WIDE AFFECTING THE PART(S) OF THE LAND ABOVE DESCRIBED SHOWN SO BURDENED IN THE TITLE DIAGRAM. (SEE DP202757)
5 M502589 EASEMENT FOR TRANSMISSION LINE 20.115 & 30.48 METRE(S) WIDE AFFECTING THE PART(S) OF THE LAND ABOVE DESCRIBED SHOWN SO BURDENED IN THE TITLE DIAGRAM. (SEE DP550911)
Q981596 PARTIALLY RELEASED AS SHOWN IN PLAN ANNEXED TO Q981596
6 Q805096 EASEMENT FOR TRANSMISSION LINE 18 METRE(S) WIDE AFFECTING THE PART(S) OF THE LAND ABOVE DESCRIBED SHOWN SO BURDENED IN THE TITLE DIAGRAM. (SEE DP589976)
7 DP1022044 RESTRICTION(S) ON THE USE OF LAND REFERRED TO AND NUMBERED (1) IN THE S.88B INSTRUMENT
8 DP1022044 POSITIVE COVENANT
9 DP1022044 RESTRICTION(S) ON THE USE OF LAND REFERRED TO AND NUMBERED (3) IN THE S.88B INSTRUMENT
10 7453092 LEASE TO VALEWIN PTY LIMITED EXPIRES: 8/2/2051.
7453093 VARIATION OF LEASE 7453092
7532645 LEASE OF LEASE 7453092 TO BORAL MASONRY LIMITED EXPIRES: 8/2/2021. OPTION OF RENEWAL: 5 YEARS TOGETHER WITH 1 FURTHER PERIOD OF 5 YEARS.
7532646 VARIATION OF LEASE 7532645
7532647 TRANSFER OF LEASE 7453092 LESSEE NOW ASIBOND PTY LIMITED

END OF PAGE 1 - CONTINUED OVER

FOLIO: 10/1022044 PAGE 2

SECOND SCHEDULE (10 NOTIFICATIONS) (CONTINUED)

* AH558419 LEASE OF LEASE 7532645 TO AUSTRAL MASONRY (NSW) PTY LIMITED EXPIRES: 7/2/2018. OPTION OF RENEWAL: 34 MONTHS.

NOTATIONS

NOTE: THE CERTIFICATE OF TITLE FOR THIS FOLIO OF THE REGISTER DOES NOT INCLUDE SECURITY FEATURES INCLUDED ON COMPUTERISED CERTIFICATES OF TITLE ISSUED FROM 4TH JANUARY, 2004. IT IS RECOMMENDED THAT STRINGENT PROCESSES ARE ADOPTED IN VERIFYING THE IDENTITY OF THE PERSON(S) CLAIMING A RIGHT TO DEAL WITH THE LAND COMPRISED IN THIS FOLIO.

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

Historical Title

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
19/12/2016 4:09PM

FOLIO: 11/1022044

First Title(s): VOL 4441 FOL 22 VOL 4441 FOL 3
OLD SYSTEM
Prior Title(s): 1/860392

Recorded	Number	Type of Instrument	C.T. Issue
28/12/2000	DP1022044	DEPOSITED PLAN	FOLIO CREATED EDITION 1
27/6/2001	DP1028208	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

prospect PRINTED ON 19/12/2016

Historical Title

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
19/12/2016 4:08PM

FOLIO: 108/1028208

First Title(s): VOL 4441 FOL 22 VOL 4441 FOL 3
OLD SYSTEM
Prior Title(s): 11/1022044

Recorded	Number	Type of Instrument	C.T. Issue
27/6/2001	DP1028208	DEPOSITED PLAN	FOLIO CREATED EDITION 1
2/7/2001	DP1030744	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

Historical Title

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
19/12/2016 4:07PM

FOLIO: 203/1030744

First Title(s): OLD SYSTEM
Prior Title(s): ~~3/860392~~ 108/1028208

Recorded	Number	Type of Instrument	C.T. Issue
2/7/2001	DP1030744	DEPOSITED PLAN	FOLIO CREATED EDITION 1
2/7/2001	7733761	DEPARTMENTAL DEALING	EDITION 2
9/7/2001	7749448	DEPARTMENTAL DEALING	EDITION 3
30/12/2002	DP1047403	DEPOSITED PLAN	FOLIO CANCELLED
10/2/2003	9363681	UNNECESSARY - DEPARTMENTAL DEALING	
10/2/2003	9363900	DEPARTMENTAL DEALING	FOLIO CANCELLED

*** END OF SEARCH ***

Historical Title

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
19/12/2016 4:01PM

FOLIO: 601/1047403

First Title(s): OLD SYSTEM
Prior Title(s): 203/1030744

Recorded	Number	Type of Instrument	C.T. Issue
10/2/2003	9363753	DEPARTMENTAL DEALING	FOLIO CREATED EDITION 1
16/12/2003	9776096	REJECTED - TRANSFER RELEASING EASEMENT	
26/2/2013	AH558412	LEASE	EDITION 2
15/6/2016	AK509587	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

Title Search

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 601/1047403

SEARCH DATE	TIME	EDITION NO	DATE
19/12/2016	3:51 PM	2	26/2/2013

LAND

LOT 601 IN DEPOSITED PLAN 1047403
AT PROSPECT
LOCAL GOVERNMENT AREA CUMBERLAND
PARISH OF PROSPECT COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1047403

FIRST SCHEDULE

BORAL RESOURCES (NSW) PTY LIMITED

SECOND SCHEDULE (7 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 H103977 COVENANT
3 DP1022044 RESTRICTION(S) ON THE USE OF LAND REFERRED TO AND NUMBERED (1) IN THE S.88B INSTRUMENT
4 DP1022044 POSITIVE COVENANT
5 DP1022044 RESTRICTION(S) ON THE USE OF LAND REFERRED TO AND NUMBERED (3) IN THE S.88B INSTRUMENT
6 DP1028208 POSITIVE COVENANT
7 AH558412 LEASE TO AUSTRAL MASONRY (NSW) PTY LIMITED EXPIRES: 7/2/2018. OPTION OF RENEWAL: 34 MONTHS.

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

Environmental Legal Searches
Environmental Management Group Pty Ltd
ACN 108 771 482
ABN 76 784 207 704

MOBILE: 0404 069 995
FAX: 02 - 8211 9179
EMAIL: search@elsearches.com.au
WEB: www.elsearches.com.au
ADDRESS: PO BOX 393 Kingsford NSW 2032

16 May 2008

GEOTECHNIQUE PTY LTD
P O Box 880
PENRITH NSW 2751

Attention: ***Ms Frances Kuipers***

RE: Lot 63 DP 752051
Clunies Ross Street, Pemulwuy
Your Ref. No: 11762/1

SUMMARY OF PROPRIETORS

Lot 63 DP 752051

Year	Proprietor	Source
1963 – To date	The Council of The Municipality of Holroyd	Current Certificate of Title
Prior to 1963	Crown Land	Vol. 8484 Fol. 244

Terms of Conditions & Limitations

1. The client is responsible for payment associated with the search.
2. The client is authorised to use our report subject to settlement of our account. Until the account is settled, the report remains the property of Environmental Legal Searches. If the account is not settled within 30 days of the invoice date, then the authority to use the report may be revoked. Where authority to use the report is revoked, all references to the report should be deleted or rendered inactive until the account is settled.
3. Search was based on **Lot 63 DP 752051** provided by **Ms Frances Kuipers of Geotechnique Pty Ltd.**

   The attached cadastral plan and Crown Plan (929.690) MUST be checked against the survey plan for the property for correctness.
4. The details of the leases (if applicable) were solely based on the available records of the Department of Lands. The MOST RECENT record may not be available on the day of the searching.

Department of Lands

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 63/752051

SEARCH DATE	TIME	EDITION NO	DATE
13/5/2008	2:04 PM	-	-

VOL 8484 FOL 244 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LOT 63 IN DEPOSITED PLAN 752051
LOCAL GOVERNMENT AREA HOLROYD
PARISH OF PROSPECT COUNTY OF CUMBERLAND
(FORMERLY KNOWN AS PORTION 63)
TITLE DIAGRAM CROWN PLAN 929.690

FIRST SCHEDULE

THE COUNCIL OF THE MUNICIPALITY OF HOLROYD

SECOND SCHEDULE (2 NOTIFICATIONS)

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)
2 EXCEPTING LAND BELOW A DEPTH FROM THE SURFACE OF 15.24 METRES BY THE CROWN GRANT

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

3395842 GTN 11762 PRINTED ON 13/5/2008

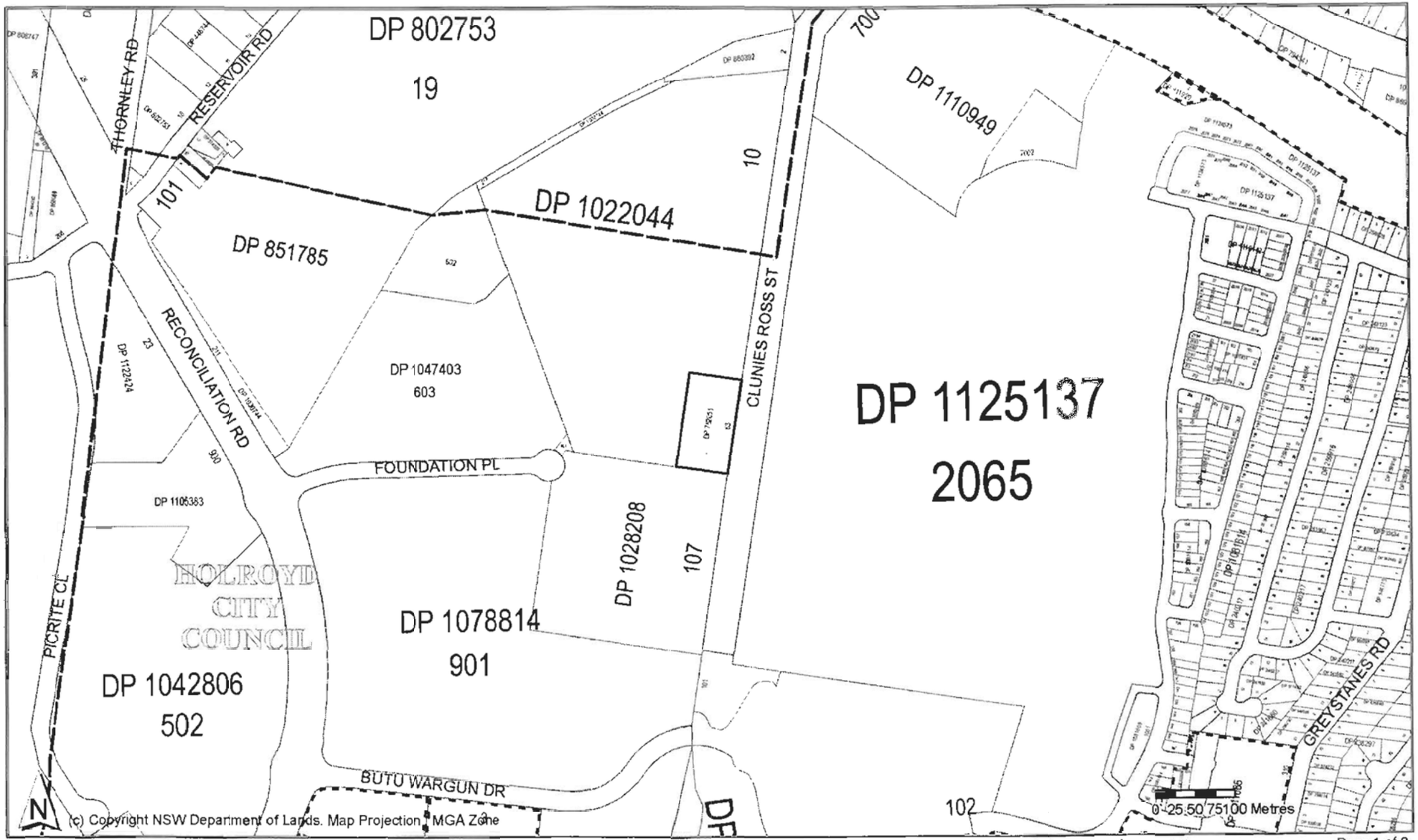
* ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE.

Department of Lands
Reliable from the ground up

Cadastral Records Enquiry Report

Requested Parcel : Lot 63 DP 752051 **Identified Parcel** : Lot 63 DP 752051

Locality : PEMULWUY **LGA** : HOLROYD **Parish** : PROSPECT **County** : CUMBERLAND



3694
- 67

PLAN *shewing the position of* 2 ACRES *of* LAND *purchased by the*
GOVERNMENT *from* JOHN TARLINGTON *at* PROSPECT
COUNTY OF CUMBERLAND
and where the Contractors get the Metal are now Quarrying.

Surveyed with Transit Instrument

Transmitted to the Surveyor General with my
Letter No 65/92 dated 18th July 1892
Surveyor

Vide also S.P. Vol 5. fol 59.

BUTLER *Por 63 Sp L 29 to The Council of Municipality of Holroyd for Quarry Purposes (Expired 6 years from 21st July 1925)*
now *Por 63 P Sp L 46 N The Council of Municipality of Holroyd*
MRS. FITZPATRICK.

Por 63 Sp L 29 to The Council of Municipality of Holroyd (Expired 6 years from 21st July 1925)

Por 63 by the Council of the Municipality of Holroyd
The Council of the Municipality of Holroyd replaced Por 63 1926
Crown Land 2 to surface and depth of 50 feet

63
2 ACRES
GOVERNMENT

LISK
now
TARLINGTON.

ROAD

RESERVE ROAD

PARISH.

DRIFT ROAD

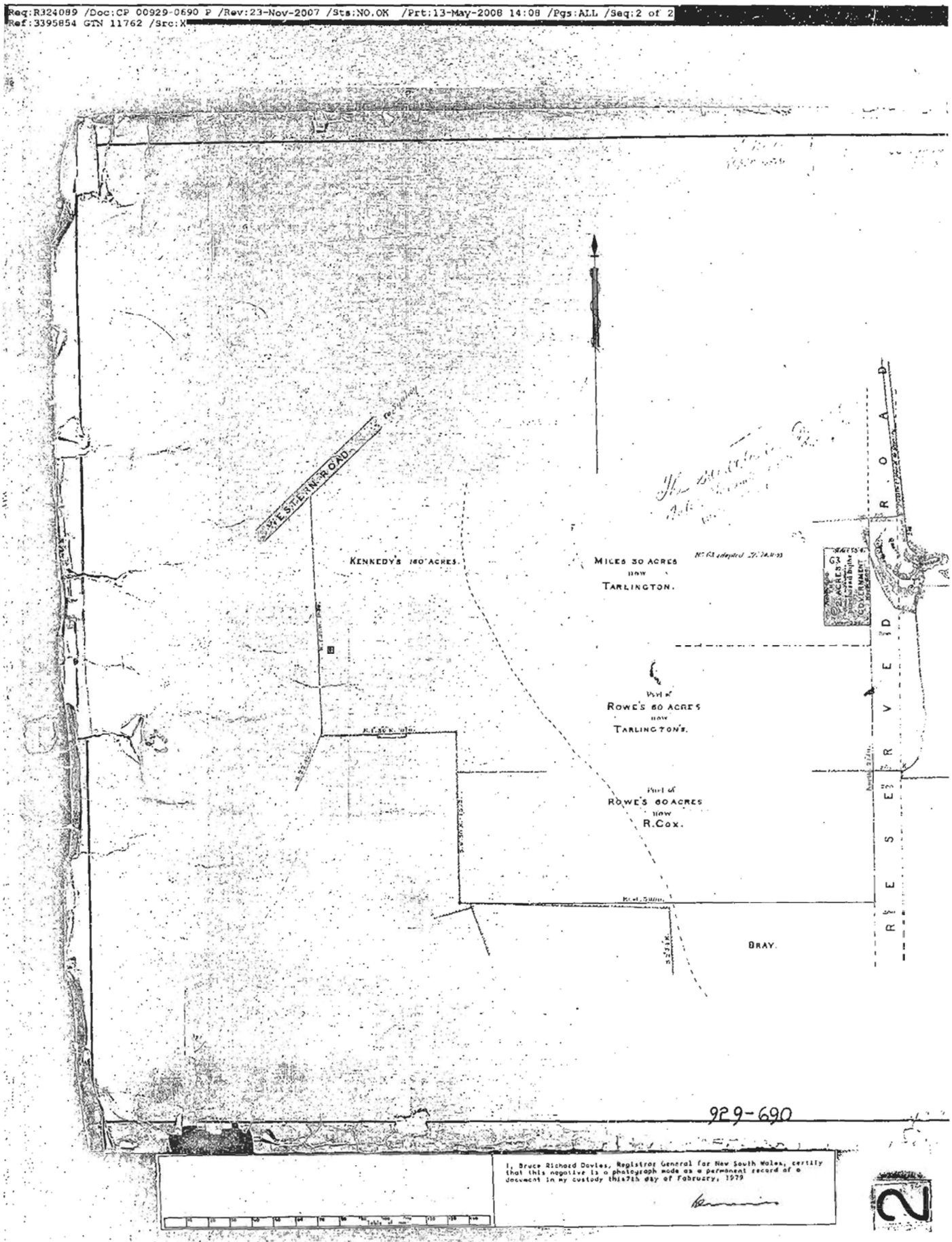
BRAY.

929-690

690

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 7th day of February, 1979

Registrar General



929-690

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 7th day of February, 1979

2

D. and S. No. 1963/2708

[Grant of New South Wales] [AND GRANT]

NEW SOUTH WALES
SEVEN SHILLINGS AND SIX PENCE
STAMP DUTY
SYDNEY, N.S.W.

REGISTER BOOK
VOL. 8484 FOL. 244

GRANT OF LAND

CANCELLED ON ISSUE OF NEW FOLIO 63/752051

GRM

TD

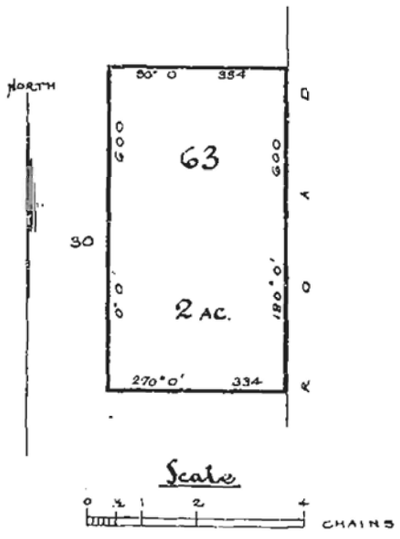
ELIZABETH the SECOND, by the Grace of God of the United Kingdom, Australia and Her other Realms and Territories Queen, Head of the Commonwealth, Defender of the Faith—

To All to whom these Presents shall come, Greeting—

Whereas in accordance with the provisions of the 66th Section of the Crown Lands Consolidation Act, 1913 as amended

* THE COUNCIL OF THE MUNICIPALITY OF HOLROYD (hereinafter called the GRANTEE) duly became the Purchaser of the piece or parcel of Land hereinafter described limited to the surface thereof and to a depth of fifty feet below such surface for the sum of six hundred pounds being the price thereof as determined by the Local Land Board NOW KNOW YE That for and in consideration of the said sum for and on Our behalf well and truly paid into the Treasury of Our State of New South Wales before these Presents are issued and of all and singular the premises WE HAVE GRANTED and for Us Our Heirs and Successors DO HEREBY GRANT unto the GRANTEE and its Assigns subject to the Reservations Exceptions and Conditions hereinafter contained ALL THAT Piece or Parcel of Land in Our said State containing by Admeasurement two acres be the same more or less situated in the County of Cumberland Parish of Prospect Portion 63 as shown in plan catalogued No. C.929-690 in the Department of Lands

L.G.A BLACKTOWN



As per Plan hereon SAVING EXCEPTING AND RESERVING unto Us Our Heirs and Successors all that part of the said land which lies at a depth greater than fifty feet below the surface thereof With all the Rights and Appurtenances whatsoever thereto belonging To Hold unto the GRANTEE and its ~~Heirs and~~ Assigns for ever **Provided Nevertheless** AND WE DO ALSO HEREBY RESERVE AND EXCEPT unto Us Our Heirs and Successors all minerals which the said land contains with full power and authority for Us Our Heirs and Successors and such person or persons as shall from time to time be authorised by Us or Them to enter upon the said land and to search for mine dig and remove the said minerals **And also** all such parts and so much of the said land as may hereafter be required for public ways in over and through the same to be set out by Our Governor for the time being of Our said State or some person by him authorised in that respect with full power for Us Our Heirs and Successors and for Our Governor as aforesaid by such person or persons as shall be by Us Them or him authorised in that behalf to make and conduct all such public ways And the right of full and free ingress egress and regress into out of and upon the said land for the several purposes aforesaid or any of them **Provided Further** AND IT IS EXPRESSLY DECLARED that mining operations may have been and may be carried on upon and in the land below the land hereby granted and the lands adjoining the land hereby granted and the land below the same and metals and minerals may have been and may be removed therefrom and that these presents are made upon and subject to the condition that the GRANTEE and its ~~Heirs and~~ Assigns shall not be entitled to make or prosecute any claim for damages or take any proceedings either by way of injunction or otherwise against Us Our Heirs or Successors or the Government of Our State of New South Wales or any lessee or lessees under any Mining Act or Acts of Our said State or his or their executors administrators or assigns for or in respect of any damage or loss occasioned by the letting down subsidence or lateral movement of the land hereby granted or otherwise howsoever by reason of the following acts and matters that is to say by reason of Us Our Heirs or Successors or the Government of Our said State or any person on Our Their or its behalf or any lessee or lessees as aforesaid or his or their executors administrators or assigns having worked or now or hereafter working any mines or having carried on or now or hereafter carrying on mining operations or having searched for worked won or removed or now or hereafter searching for working winning or removing any metals or minerals under in or from the land below the land hereby granted or on in under or from any other lands situated laterally to the land hereby granted and the land below the same and whether on or below the surface of such other lands **Provided Lastly** AND WE DO HEREBY EXPRESSLY RESERVE unto Us Our Heirs and Successors the liberty and authority by reason of the acts and matters aforesaid or in the course thereof for Us Our Heirs and Successors and the Government of Our said State and any person on Our Their or its behalf and any lessee or lessees as aforesaid and his or their executors administrators and assigns to from time to time let down without payment of any compensation whatsoever any part of the land hereby granted and/or of the surface thereof **In Testimony Whereof** We have caused this Our Grant to be Sealed with the Seal of Our said State.

Witness Our Trusty and Well-beloved SIR ERIC WINSLOW WOODWARD, Knight Commander of Our Most Distinguished Order of Saint Michael and Saint George, Knight Commander of Our Royal Victorian Order, Companion of Our Most Honourable Order of the Bath, Commander of Our Most Excellent Order of the British Empire, Companion of Our Distinguished Service Order, Knight of the Most Venerable Order of St. John of Jerusalem, Lieutenant-General on the Retired List of Our Australian Military Forces, Governor of Our State of New South Wales and its Dependencies in the Commonwealth of Australia, at Sydney in Our said State, this fourth day of December in the twelfth year of Our Reign and in the year of Our Lord one thousand nine hundred and sixty three

W. W. Woodward

Governor.

RECORDED and ENROLLED in the Registrar General's Office, at Sydney, in New South Wales, this day of 19 .

AV 7/6 #8749

Registrar General

COMPUTER FOLIO NO FURTHER DEALINGS TO BE REGISTERED.

Department of Lands

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
13/5/2008 2:02PM

FOLIO: 63/752051

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 8484 FOL 244

Recorded	Number	Type of Instrument	C.T. Issue
1/3/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
19/6/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
8/12/1998		AMENDMENT: LOCAL GOVT AREA	

*** END OF SEARCH ***

3395826 GTN 11762 PRINTED ON 13/5/2008

APPENDIX B

COUNCIL LETTER

Holroyd City
Built Around People

Holroyd City Council

www.holroyd.nsw.gov.au
The Gateway to Western Sydney
Corporate & Financial Services

Our Reference: FOI-2008-25
SD08/6932
Contact: Bert Leonard
Telephone: 9840 9731

RECEIVED
11 JUN 2008
BY:----------

6 June 2008

Geotechnique Pty Ltd
PO Box 880
PENRITH NSW 2751

Dear Ms Kuipers,

REQUEST FOR INFORMATION – FREEDOM OF INFORMATION ACT
LOT 63 DP 752051 – CLUNIES ROSS STREET, PEMULWUY

I refer to your application received at Council's office on 15 May 2008 requesting:

"the following information/records and indicate the period of years relative to each record

- *Development Application (DA) approval records*
- *Building Application (BA) approval records*
- *Council Notices*
- *Council Inspection Records*
- *Neighbourhood complaints*
- *Registered activities*
- *Sewer and Service plans*
- *Product spill*
- *Waste Disposal practice*
- *Chemical Storage and Usage*
- *Underground storage tank(s), interceptor pit(s), sumps and decommissioned underground storage tanks*
- *Any other information that may be useful."*

Staff of Council's Environmental Health Units have advised as follows: -

"The site is a vacant block, which has been partly mowed with the presence of road base or similar being used by vehicles to access the site and partly left overgrown with weeds and grass. It is unknown whether waste material or fill material is located in the overgrown section of the site.

The Environmental Health Unit offers the following information in relation to the environmental health related points outlined in the above letter:

Council Notices:	*As of 2 June 2008 there are no outstanding environmental health related Notices on the abovementioned property.*
Council Inspection Records:	*A part from the inspection carried out as part of this process, the Environmental Health Unit has conducted 1 inspection regarding the parking of vehicles on the property. At the time of the inspection today, there were many vehicles parked on the site.*

Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 107/1028208

SEARCH DATE	TIME	EDITION NO	DATE
28/5/2019	8:06 AM	11	28/9/2018

LAND

LOT 107 IN DEPOSITED PLAN 1028208
AT PROSPECT
LOCAL GOVERNMENT AREA CUMBERLAND
PARISH OF PROSPECT COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1028208

FIRST SCHEDULE

PGL NO. 1 PTY LTD (T AN689009)

SECOND SCHEDULE (8 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 DP1022044 RESTRICTION(S) ON THE USE OF LAND REFERRED TO AND NUMBERED (1) IN THE S.88B INSTRUMENT AFFECTING THE PART(S) FORMERLY 11/1022044.
3 DP1022044 POSITIVE COVENANT AFFECTING THE PART(S) FORMERLY 11/1022044.
4 DP1022044 RESTRICTION(S) ON THE USE OF LAND REFERRED TO AND NUMBERED (3) IN THE S.88B INSTRUMENT AFFECTING THE PART(S) FORMERLY 11/1022044.
5 DP1028208 POSITIVE COVENANT REFERRED TO AND DESIGNATED (J) IN THE TITLE DIAGRAM.
6 DP1040282 RESTRICTION(S) ON THE USE OF LAND
7 DP1070244 EASEMENT FOR UNDERGROUND CABLES 1 METRE(S) WIDE (E) AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1070244
8 DP1070244 EASEMENT FOR PADMOUNT SUBSTATION (P) AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1070244

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

pemulwuy PRINTED ON 28/5/2019

Received: 28/05/2019 08:06:41

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: - Clunies Ross Street, Pemulwuy

Description: - Lot 107 D.P. 1028208

As regards the part shown edged with yellow tint on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
06.06.1923 (1923 to 1941)	Joseph Hicks (Dairy Farmer)	Vol 1959 Fol 92 Now Vol 3508 Fol 232
17.11.1941 (1941 to 1948)	Theo James Hicks (Farmer) Norman Kenneth Hicks (Farmer) Leslie Gordon Hicks (Farmer)	Vol 3508 Fol 232 Now Vol 5280 Fol's 145, 146 & 147
10.06.1948 (1948 to 1958)	Theo James Hicks (Dairy Farmer) Norman Kenneth Hicks (Dairy Farmer)	Vol 5280 Fol's 145, 146 & 147 Now Vol 7375 Fol's 5 & 6
07.11.1958 (1958 to 1988)	N.S.W. Associated Blue Metal Quarries Pty Limited	Vol 7375 Fol's 5 & 6 Now Vol 9787 Fol 165
26.05.1988 (1988 to 2001)	Boral Resources (N.S.W.) Pty Limited	Vol 9787 Fol 165 Now 107/1028208

As regards the part shown tinted pink on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
10.11.1898 (1898 to 1940)	Philip Charley (Esquire) (& His deceased estate)	Vol 917 Fol 129
14.02.1940 (1940 to 1988)	N.S.W. Associated Blue Metal Quarries Limited	Vol 917 Fol 129 Now 5/235064
26.05.1988 (1988 to 2001)	Boral Resources (N.S.W.) Pty Limited	5/235064 Now 107/1028208

Leases: -

- 24.02.1905 to Philip Henry Morton & Ewan Richards Frazer (Esquires) – expired 21.01.1914
- 19.02.1925 to The Sydney and Suburban Blue Metal Quarries Limited, of part of the land in Volume 917 Folio 129 – surrendered 13.02.1940
- 13.02.1940 to The Sydney and Suburban Blue Metal Quarries Limited, of part of the land in Volume 917 Folio 129 – now expired

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

Search continued as regards the whole of the subject land

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
06.07.2001 (2001 to 2004)	Trafalgar Nominees (Prospect) Pty Limited	107/1028208
11.10.2004 (2004 to 2009)	National Australia Bank Superannuation Fund Pty Limited	107/1028208
09.04.2009 (2009 to 2015)	Lend Lease Funds Management Limited	107/1028208
20.02.2015 (2015 to 2018)	LAOF IV Ocean Pty Ltd	107/1028208
10.09.2018 (2018 to date)	PGL No. 1 Pty Ltd	107/1028208

# Denotes Current Registered Proprietor

Leases, excluding building premises, continued: - NIL

Easements: -

- 08.10.2004 (D.P. 1070244) Easement for Underground Cables 1 metre wide
- 08.10.2004 (D.P. 1070244) Easement for Padmount Substation

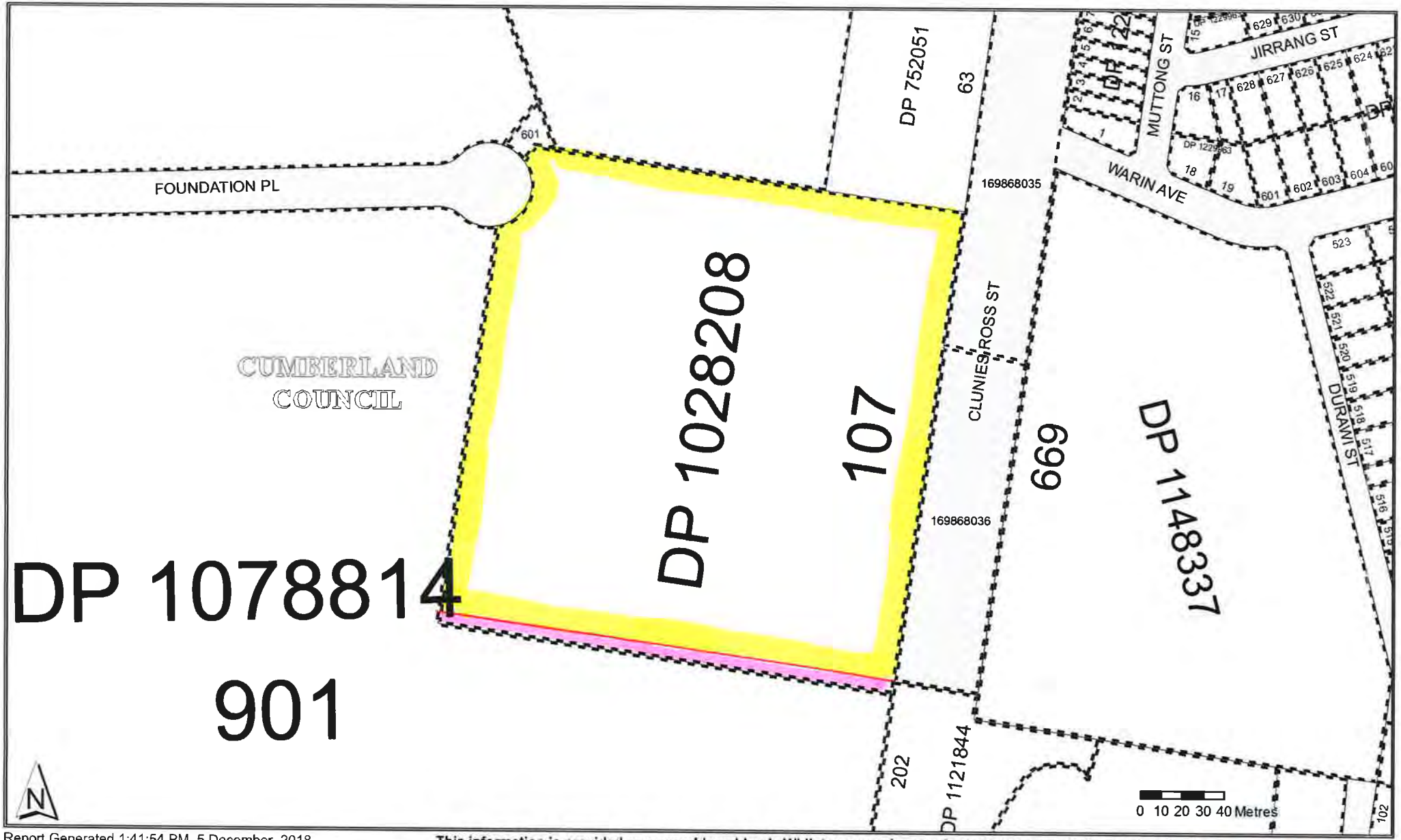
Yours Sincerely
Mark Groll
28 May 2019

LAND REGISTRY SERVICES

Cadastral Records Enquiry Report : Lot 107 DP 1028208

Ref : CMapIT

Locality : PEMULWUY
Parish : PROSPECT
LGA : CUMBERLAND
County : CUMBERLAND



Report Generated 1:41:54 PM, 5 December, 2018

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

PLAN FORM 2

Plan Drawing only to appear in this space

SIGNATURES, AND SEALS ONLY

Common Seal

Secretary

Director

SURVEY PRACTICE REGULATIONS 1933 : CLAUSE 32(2)				
MGA CO-ORDINATES				
MARK	EASTING	NORTHING	ZONE	CLASS
PM 29163	308 229.926	6 257 805.772	56	S
SSM 499	306 359.289	6 257 471.862	56	S
SSM 75605	308 180.826	6 257 375.875	56	S
SSM 75606	307 046.542	6 257 032.202	56	S

SOURCE : LAND & PROPERTY INFORMATION L I C 6/12/00
COMBINED SEA LEVEL & SCALE FACTOR 1.000044

* INDICATES PLAN OF SURVEY BY MR SURVEYOR DAVID KENNETH BURKE DATED NOVEMBER 30 2000

330°47'31" 357.625 BY SURVEY
330°47'33" 357.608 BY CO-ORDS GRD

PM 29163 FD (EST)

SSM 75605 FD (EST)

6°41'30" 202.65 BY SURVEY
6°41'30" 202.65 BY CO-ORDS GRD

SSM 499 FD (EST)

PM 10 CORNER 3°02'45" 384.775

DP 860392

DP 802753

DP 851785

DP 1022044

DP 235064

DP 34072

LGA

THORNLEY RD

RESERVOIR ROAD

BLACKTOWN ROAD

ROSS STREET

HOLROYD BOUNDARY

SEE DIAG A SHEET 4

SEE DIAG B SHEET 4

SEE SHEET 2

SEE FOR EASEMENT

Pt 108 (13.48ha)
TOTAL 19.65ha

Pt 108 (6.17ha)

107 5.08ha

109

RM DH&W FD 251°42-25 27 (DP 851785)

RM GIP FD 289°48'-9.455 (DP 877781)

RM GIP FD 30°35'25"-4.89 (DP 851785)

RM DH&W FD 316°05'20"-21.775 (DP 1022044)

RM GIP FD 88°11'15"-5.87 (DP 360704)

RM GIP FD 244°10'-5.98 (DP 360704)

RM GIP FD 88°42'25"-3.97 (DP 34072)

RM GIP FD 58°25'-1.0 (DP 1022044)

RM DH&W FD IN CONC HEADWALL 88°28'05" 211.72 (DP 851785)

RM SPIKE IN CONC PL 45°01'30"-12.44

RM SPIKE IN CONC PL 89°47'-25.775

RM CONC PK 2°10'-0.155 (DP 1022044)

RM GIP FD 327°40'-1.01 (DP 360704)

RM GIP FD 201°35'-0.01 (DP 360704)

RM GIP FD 335°17'30"-9.39 (DP 34072)

RM GIP FD 295°47'25"-8.495 (DP 34072)

RMGIP 152°57'-1.0

PROPOSED EASEMENT FOR SERVICES & CARRIAGEWAY 20.0 WIDE & VARIABLE

PROPOSED RIGHT OF CARRIAGEWAY

PROPOSED EASEMENT TO DRAIN WATER 3.0 WIDE

EASEMENT FOR TRANSMISSION LINE 18 WIDE VIDE DP 730173

SCHEDULE OF SHORT & CURVED BOUNDARIES

No	BEARING	DIST	ARC	RAD
1	201°32'55"	33.41	39.54	20.0
2	217°27'35"	9.005		
3	55°56'10"	11.22		
4	130°57'15"	45.425		
5	8°19'25"	5.895		
6	188°19'25"	5.895		
7	278°26'15"	35.425		
8	9°31'55"	11.85		

(A) EASEMENT FOR WATER SUPPLY WORKS 4.0 WIDE (PROPOSED)
(B) EASEMENT FOR WATER SUPPLY WORKS 5.0 WIDE (PROPOSED)
(C) EASEMENT FOR TRANSMISSION LINE 30.48 & 20.115 WIDE CREATED BY TRANSFER M302580 VIDE DP 350911
NOTE: EASEMENT FOR TRANSMISSION LINE 30.48 WIDE HAS BEEN PARTIALLY RELEASED BY TRANSFER 0991596
(D) EASEMENT FOR WATER SUPPLY WORKS 10.06 WIDE CREATED BY TRANSFER J90020 VIDE DP 209757
(E) EASEMENT FOR TRANSMISSION LINE 18 WIDE CREATED BY TRANSFER Q805096 VIDE DP 589976
(F) EASEMENT FOR ELECTRICITY TRANSMISSION LINE 45.72 WIDE CREATED BY TRANSFER M939323 VIDE DP 206890
(G) EASEMENT FOR UNDERGROUND MAINS 3.0 WIDE CREATED BY TRANSFER P869765 VIDE DP 584691
(H) RESTRICTION ON THE USE OF LAND
(J) POSITIVE COVENANT

Crown Lands Office Approval

PLAN APPROVED _____ Authorised Officer

Land District _____

Paper No _____

Field Book _____ pages _____

Subdivision Certificate

I certify that the provisions of s 109J of the Environmental Planning and Assessment Act 1979 have been complied in relation to the proposed SUBDIVISION set out herein

* Authorised Person / General Manager / Accredited Certifier

Consent Authority MINISTER FOR URBAN AFFAIRS & PLANNING

Date of endorsement 22/5/2001

Accreditation no

Subdivision Certificate no

File no

Note:
When the plan is to be lodged electronically in the Land Titles Office it should include a signature in an electronic or digital format approved by the Registrar-General

* Delete if inapplicable.

DP1028208

Registered: 27 06 2001

C.A.: SEE CERTIFICATE

Title System: TORRENS

Purpose: SUBDIVISION

Ref Map: U9152-4, 14 & 42

Last Plan: DP 1022044

PLAN OF SUBDIVISION OF LOT 5 DP 235064 & LOT 11 DP 1022044 AND EASEMENT FOR SERVICES AND CARRIAGEWAY 20.0 WIDE AND VARIABLE

Lengths are in metres Reduction Ratio 1 : 3000

LGA: HOLROYD & BLACKTOWN

Locality: PROSPECT

Parish: PROSPECT

County: CUMBERLAND

This is sheet 1 of my plan in 4 sheets
(Delete if inapplicable)

Surveyors (Practice) Regulation 1996

I PETER WARREN CORNISH
of HARD & FORESTER Pty Ltd
a surveyor registered under the Surveyor's Act 1929, hereby certify that the survey represented in this plan is accurate, has been made in accordance with the Surveyors (Practice) Regulation 1996 and was completed on 9.02.2001
The survey relates to LOT 107 & 108
(Specify the land actually surveyed, or specify any land shown in the plan that is not the subject of the survey)
Datum Line : X-Y
Zone : Suburban/Country (Signature) Surveyor registered under the Surveyor's Act 1929

Plans used in preparation of survey/compilation

DP 33023	DP 860392
DP 34072	DP 1022044
DP 802753	DP 235064
DP 851785	

PANEL FOR USE ONLY for statements of intention to dedicate public roads, to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants

PURSUANT TO SEC 88B OF THE CONVEYANCING ACT 1919-1964 IT IS INTENDED TO CREATE:

1. Restriction on use of land (H)
2. Positive Covenant (J)

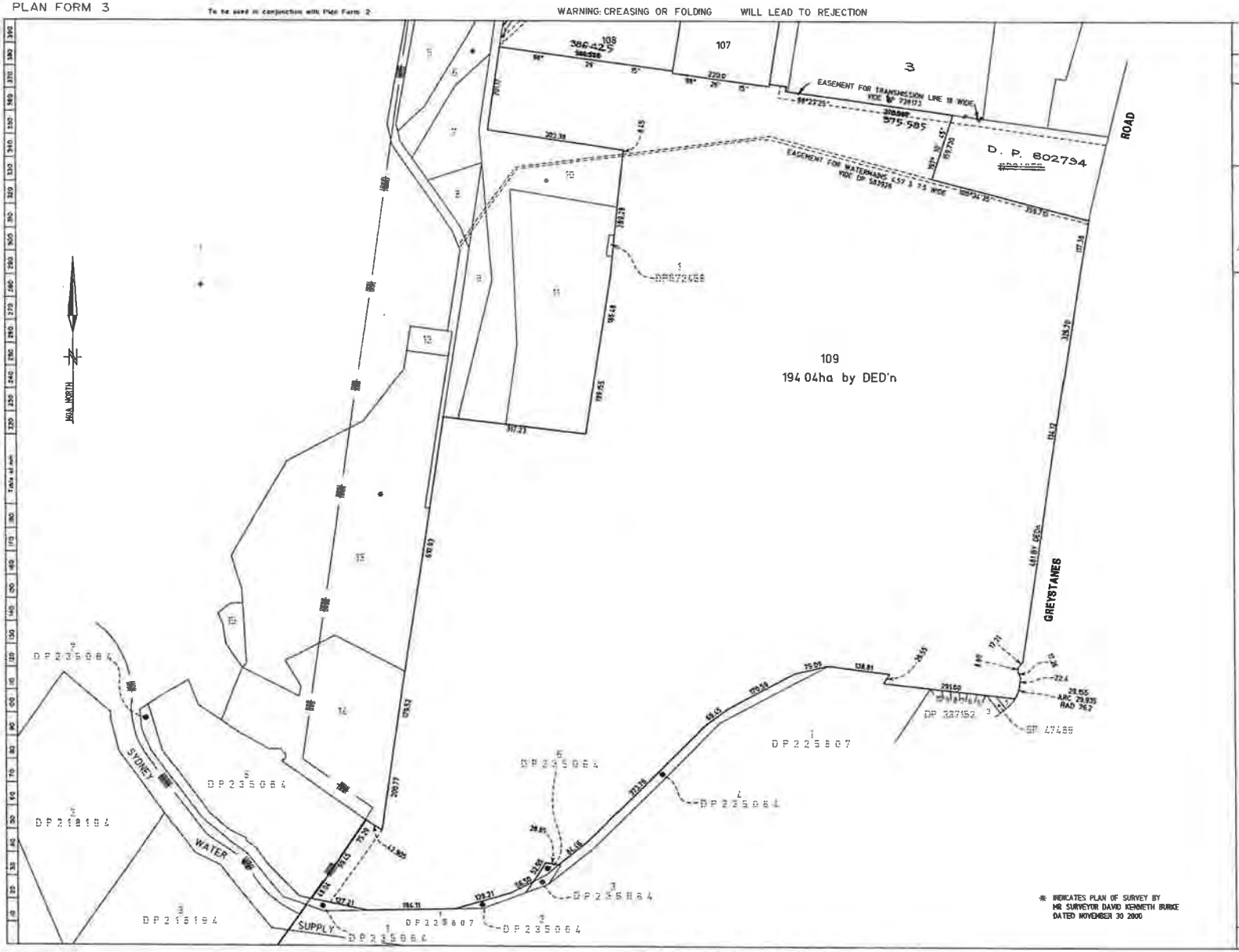
SURVEYOR'S REFERENCE: s121071003 rev B (21017/13) "CHECKLIST"

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

PLAN FORM 3

To be used in conjunction with Plan Form 2

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION



* INDICATES PLAN OF SURVEY BY MR SURVEYOR DAVID KENNETH BURKE DATED NOVEMBER 30 2000

DP1028208

Registered 27.06.2001

This is sheet 2 of my plan in 4 sheets dated 9.02.2001

Surveyor registered under Surveyors Act 1929

This is sheet 2 of the plan of 4 sheets covered by subdivision certificate No. of

Authorised Person/General Manager/Accredited Certifier

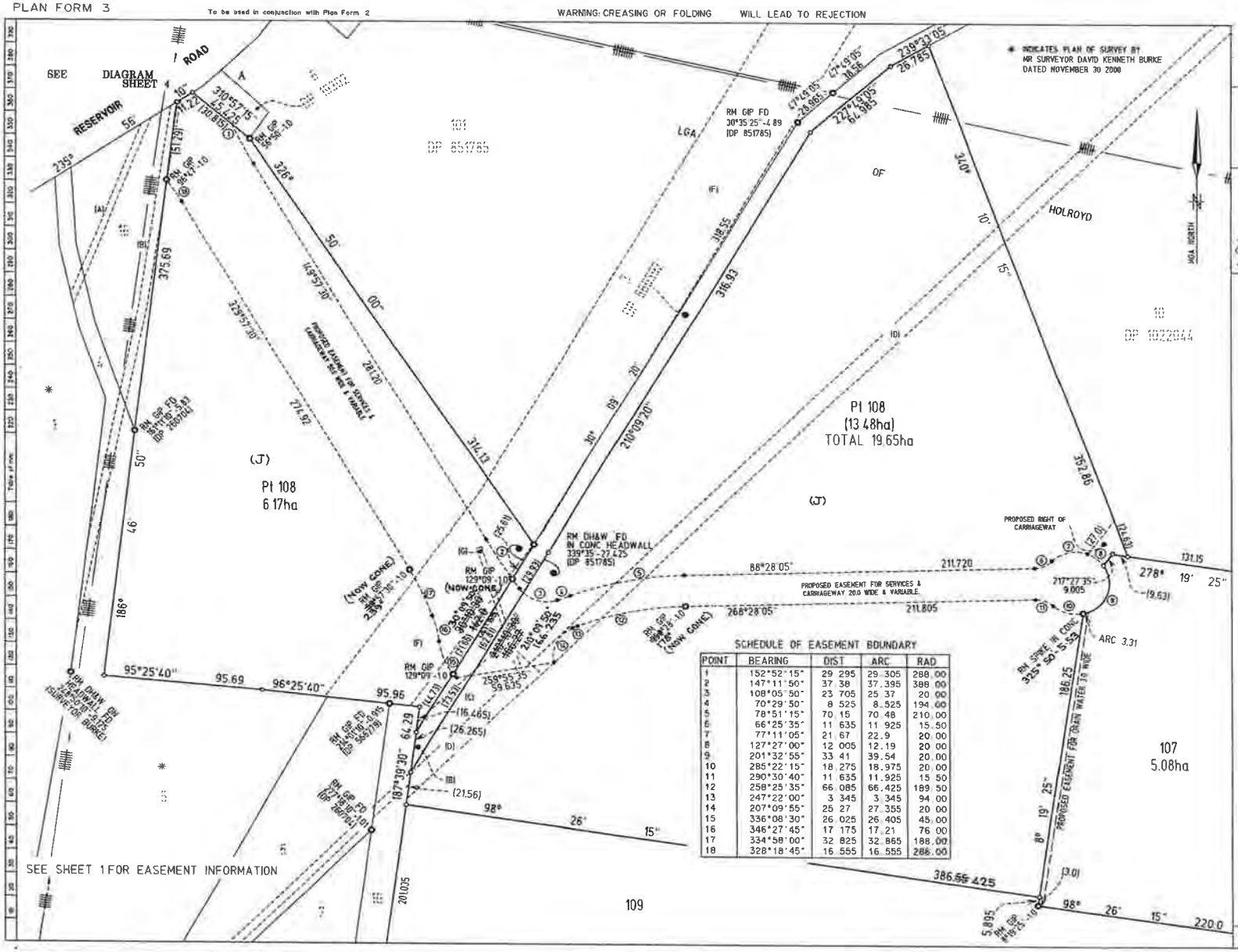
For any other space is annexed to my plan as Plan Form 2

Reduction Ratio 1: 5500

Plan Drawing only to appear in this space

SURVEYOR'S REFERENCE: s27617003.rev B (2001/13)

PLAN FORM 3 — To be used in conjunction with Plan Form 2 — WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION



SCHEDULE OF EASEMENT BOUNDARY

POINT	BEARING	DIST	ARC	RAD
1	152°52'15"	29.295	29.305	288.00
2	147°11'50"	37.38	37.395	388.00
3	108°05'50"	23.705	25.37	20.00
4	70°29'50"	8.525	8.525	194.00
5	78°51'15"	70.15	70.48	210.00
6	66°25'35"	11.635	11.925	15.50
7	77°11'05"	21.67	22.9	20.00
8	127°27'00"	12.005	12.19	20.00
9	201°32'55"	33.41	39.54	20.00
10	285°22'15"	18.275	18.975	20.00
11	290°30'40"	11.635	11.925	15.50
12	258°25'35"	66.085	66.425	189.50
13	247°22'00"	3.345	3.345	94.00
14	207°09'55"	25.27	27.355	20.00
15	336°08'30"	26.025	26.405	45.00
16	346°27'45"	17.175	17.21	76.00
17	334°58'00"	32.825	32.865	188.00
18	328°18'45"	16.555	16.555	288.00

DP1028208

Registered: 27 06 2001

This is sheet 3 of my plan in 4 sheets dated 9.02.2001

Surveyor registered under Surveyors Act 1929

This is sheet 3 of the plan of 4 sheets covered by subdivision certificate No. of

Authorised Person/Council Member/Accredited Certifier

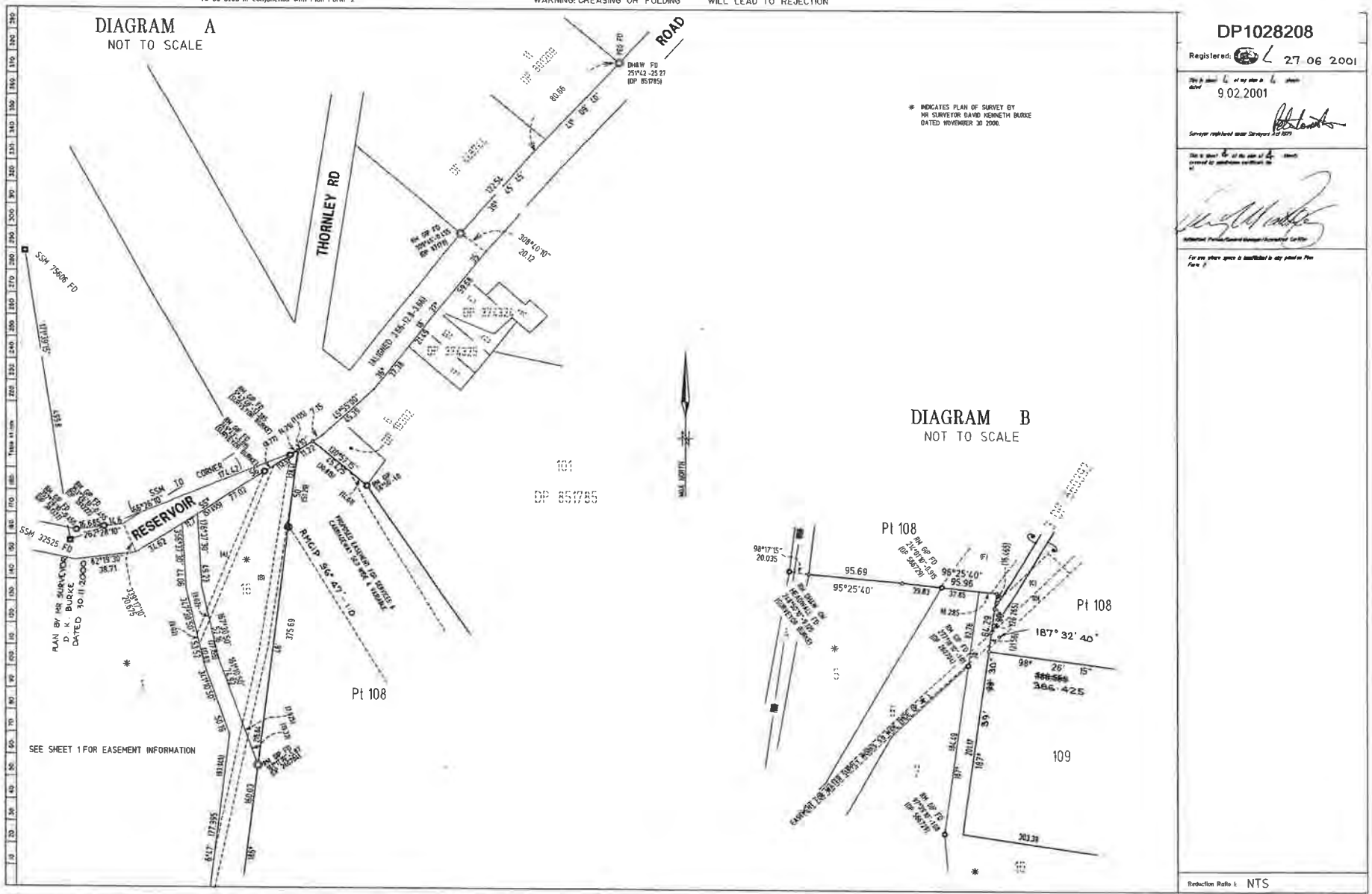
For any matters shown in insufficient to any panel on Plan Form 3

Reduction Ratio 1: 1:1500

Plan Drawing only to appear in this space

SURVEYOR'S REFERENCE: s321071003 rev B (21071/13)

PLAN FORM 3 — To be used in conjunction with Plan Form 2 — WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION



DP1028208

Registered: 27 06 2001

9.02.2001

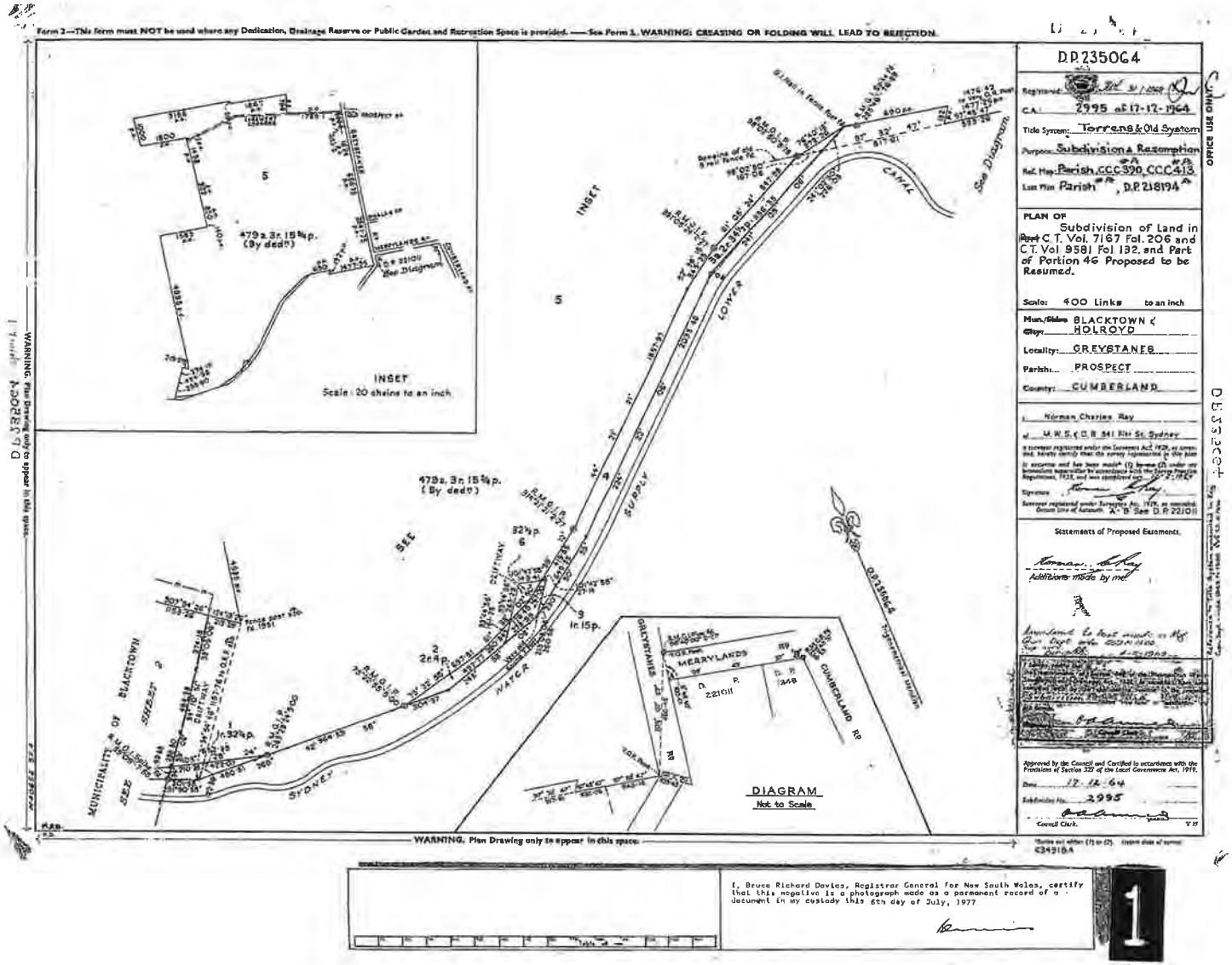
Surveyor registered under Surveyors Act 1979

Plan Drawing only to appear in this space

Reduction Ratio 1: NTS

Surveyor's Reference: s421071003 rev B (21071/10)

Form 2—This form must NOT be used where any Dedication, Drainage Reserve or Public Garden and Recreation Space is provided. —See Form 1. WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION.



WARNING. Plan Drawing only to appear in this space.

D.P. 235064

Registered: 31/1/1969
C.A. 2995 of 17-12-1964
Title System: Torrens & Old System
Purpose: Subdivision & Resumption
Ref. Map: Parish, CCC 390, CCC 413
Last Plan: Parish, D.P. 218194

PLAN OF
Subdivision of Land in ~~Part~~ C.T. Vol. 7167 Fol. 206 and C.T. Vol 9581 Fol 132, and Part of Portion 46 Proposed to be Resumed.

Scale: 400 Links to an inch

Mun./Shire City: BLACKTOWN & HOLROYD
Locality: GREYSTANES
Parish: PROSPECT
County: CUMBERLAND

I, Norman Charles Ray
of M.W.S. & D.B. 341 Pitt St. Sydney
a surveyor registered under the Surveyors Act, 1929, as amended, hereby certify that the survey represented in this plan is accurate and has been made* (1) by me (2) under my immediate supervision in accordance with the Survey Practice Regulations, 1933, and was completed on
Signature: Norman C. Ray
Surveyor registered under Surveyors Act, 1929, as amended.
Datum Line of Azimuth: 'A'-'B' See D.P. 221011

Statements of Proposed Easements.

Norman C. Ray
Additions made by me.

Approved by the Council and Certified in accordance with the Provisions of Section 327 of the Local Government Act, 1919.
Date: 17-12-64
Subdivision No. 2995
Council Clerk.

*Strike out either (1) or (2).
C34316A

OFFICE USE ONLY

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 6th day of July, 1977

CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT

DP 235064 SH 1/2

LINKS	METRES
0.08	0.016
2	0.402
2.27	0.457
3	0.609
3.78	0.760
5	1.006
7.55	1.519
8.33	1.676
27.14	5.460
32	6.437
42	8.449
53.32	10.726
59	11.869
76.89	15.468
92.83	18.674
100.01	20.119
103.43	20.807
122.98	24.740
132	26.554
140	28.164
143.41	28.850
157.83	31.750
161.25	32.438
162.4	32.670
167	33.595
167.08	33.611
178.49	35.898
201.35	40.505
210.28	42.302
213.29	42.907
226.03	45.470
230	46.269
238.8	48.039
260.58	52.420
263.23	52.953
278.99	56.124
280.84	56.496
304.37	61.230
345.25	69.453
373.26	75.088
374.18	75.273
419.85	84.460
420.45	84.581
422.07	84.907
480.81	96.724
494.38	99.453
497.77	100.135
533.26	107.275
583.5	117.382
632.35	127.209
637.31	128.206
649.35	130.628
666.75	134.129
690	138.806
794	159.727
817.61	164.477
847.98	170.586
850	170.993
922	185.477
943.16	189.734
964.89	194.105
1000	201.168
1136.35	228.597
1153.26	231.999
1157.76	232.904
1438	289.280
1476.42	297.008
1477.25	297.175
1500	301.752
1583	318.449
1624	326.697
1788.1	359.709
1857.97	373.764
1867	375.581
1951	392.479
2035.46	409.469
2841.25	571.569

DP 235064 SH 1/2 CONTD

LINKS	METRES
3188	641.324
4935	992.764
4977.77	1001.368
8479.98	1705.901

AC	RD	P	SQ M
-	-	32 1/2	822
-	1	15	1391
-	1	32 1/4	1827
-	2	4	2125

AC	RD	P	HA
3	2	34 1/2	1.5
479	3	15 3/4	194.2

Form No. 4 — To be used in conjunction with Forms 2 or 3. WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION.

D.P. 235064

Registered: 31/1/1968

This is Sheet 2 of my plan in 2 Sheets dated 12-2-1964

Surveyor registered under Surveyors Act, 1929, as amended.

This is Sheet 2 of the plan of 2 Sheets covered by my Certificate No. 2995 of 17.12.64

Council Clerk

This is sheet 2 of the plan of 2 Sheets covered by my Certificate No. 4139 of 4/10/67

Council Clerk

MUN. BLACKTOWN
PH. PROSPECT
CO. CUMBERLAND

I hereby certify that the requirements of Sec. 349 of the Metropolitan Water, Sewerage and Drainage Act, 1924, as amended, have been complied with by the applicant in relation to the proposed subdivision shown hereon and to conditions set out herein.

(Signature) Council Clerk

Approved by the Council and Certified in accordance with the Provisions of Sec. 327 of the Local Government Act, 1919. This 5th day of October 1967

Subdivision No. 4139

Council Clerk.

Scales: 200 Links to an inch

WARNING: Plan Drawing only to appear in this space.

MUNICIPALITY — MUNICIPALITY — BLACKTOWN — PROSPECT — STONEY — BEATEN — SUPPLY — ZONNEX — CANAL — DRIFTWAY — HOUROYD

24a. 2r. 31¾p — 38a. 1r. 24½p — D. P. 218194

(A) 248°11'46"80 45
(B) 301°29'51"66-42
(C) 49°53'26"76 18
(D) 218°49'28"85-69
(E) 230°12'49"74-60

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 6th day of July, 1977

2

CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT

DP 235064 SH 2/2

FEET	INCHES	METRES
6	6 3/4	1.891
100	9 3/4	30.728
135	7 1/4	41.332
184	8 5/8	56.302
191	10 3/8	58.488
221	2	67.412
238	7 3/8	72.730
276	6 7/8	84.299
416	10 5/8	127.067
641	6 3/4	195.548

LINKS	METRES
0.44	0.089
0.8	0.161
0.96	0.193
3	0.604
3.8	0.764
4.56	0.917
5.3	1.066
7.55	1.519
9.42	1.895
12.38	2.490
18.7	3.158
17.78	3.577
28.24	5.681
36.85	7.413
40.91	8.230
45.08	9.069
53.03	10.668
66.42	13.362
74.6	15.007
76.19	15.327
80.45	16.184
85.69	17.238
87.12	17.526
92.83	18.674
100.81	20.280
116.59	23.454
122.98	24.740
122.99	24.742
125.45	25.237
126.71	25.490
134	26.957
136.09	26.975
135.6	27.274
141.02	28.369
141.04	28.373
156.7	31.523
167.94	33.784
177.28	35.663
179.09	36.027
184.71	37.156
184.72	37.160
191.28	38.479
191.87	38.598
201.35	40.505
210.26	42.302
212.42	42.732
213.29	42.907
213.63	42.976
221.17	44.492
236.7	47.616
238.62	48.003
238.8	48.039
259.44	52.191
276.57	55.637
281.86	56.701
306.11	61.982
311.66	62.696
312	62.764
316	63.569
316.3	63.629
322.6	64.897
337.61	67.916
338.66	68.128
356.71	71.759

CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT

DP 235064 SH 2/2 CONTD

LINKS	METRES
374.18	75.273
402.13	80.896
416.89	83.865
494.38	99.453
523.8	105.372
527.86	106.028
569.7	114.605
612.5	123.215
641.86	129.061
643.68	129.432
896.9	180.428
932.87	187.664
959.53	193.027
1153.26	231.999
1157.75	232.904

AC	RD	P	SQ M
-	2	4 1/4	2131
-	2	28	2732

AC	RD	P	HA
3	1	2 1/4	1.321
24	2	21 3/4	9.995

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 6th day of July, 1977

3

G. 2

NEW SOUTH WALES

CERTIFICATE OF TITLE

REAL PROPERTY ACT, 1900, as amended.

09787165

Appln. Nos. 11851 and 23722 (part)
Prior Titles Vol.4768 Fol.84
" " Vol.8387 Fol.171.

1st Edition issued 17-8-1964.

EM. J569901.

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

Witness

CANCELLED

Registrar-General.

SEE AUTO FOLIO Auto Consol. 9787-165

Vol. 9787 Fol. 165 (Page 1)

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lots A and B in Deposited Plan 33023 in the Municipality of Blacktown and Holroyd, Parish of Prospect and County of Cumberland being granted as set out in the schedule hereunder. Excepting thereout the minerals reserved by the Crown Grants of 3 acres 2 roods 16 perches and 15 9/10 perches.

SCHEDULE OF GRANTS.

Number of Portion	Name of Grantee	Date of Grant	Grant Reference Volume	Folio
Pt. 28	John Rowe	1-5-1797		
Pt. 30	Edward Miles	1-5-1797		
Pt. 29	John Kennedy	3-5-1797		
Pt. 3ac. 2rd. 16pers.	-	26-9-1930	4441	3
15 9/10 pers.	-	26-9-1930	4441	22

FIRST SCHEDULE (Continued overleaf)

~~THE N.S.W. ASSOCIATED BLUE METAL QUARRIES PTY. LIMITED.~~

Registrar General.

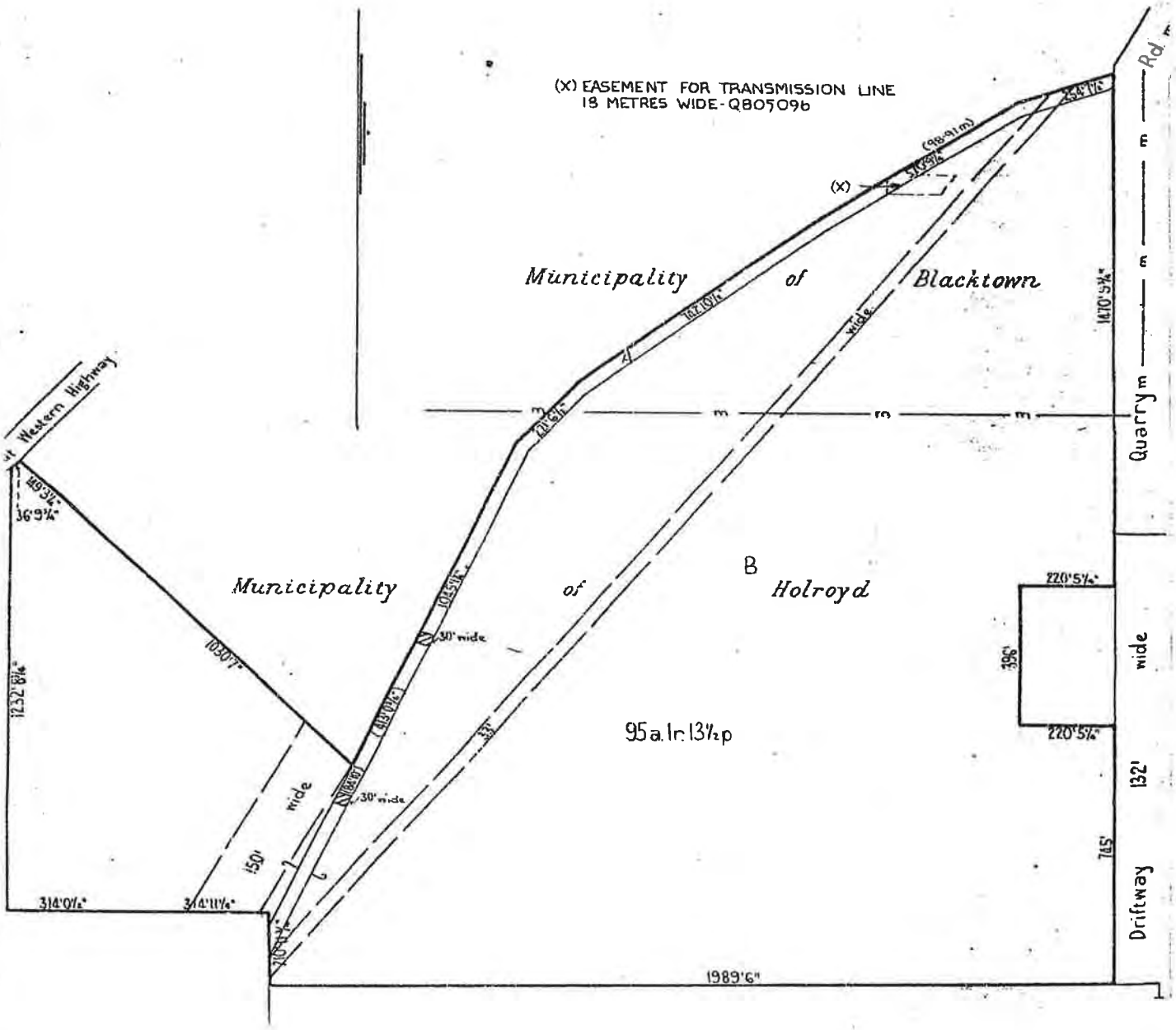
SECOND SCHEDULE (Continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant(s) above referred to
2. Right of way created by Transfer No. A960804 affecting the pieces of land shown as"30 feet wide" hatched black in the plan hereon.
3. ~~Mortgage No. G506739 of that part of the land above described formerly comprised in certificate of title Volume 4768 Folio 84 to Blue Metal and Gravel Pty. Limited. Entered 18-6-1937.~~ discharged K617647
4. ~~Mortgage No. G511685 of that part of the land above described formerly comprised in certificate of title Volume 4768 Folio 84 to Quarries Pty. Limited. Entered 18-6-1937.~~ discharged K617648
5. Covenant created by Transfer No. H103977.
6. Easement for Electricity Transmission created by Transfer No.H939523 affecting the piece of land shown as "150 feet wide" in the plan hereon.
7. Easement for Water Supply Works created by Transfer J90028 affecting the piece of land shown as "33 feet wide" in the plan hereon.

Registrar General.

Vol. 9787 Fol. 165

PLAN SHOWING LOCATION OF LAND



Scale. 300 feet to one inch.
All lengths shown hereon are in feet and inches

J569901

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
BORAL RESOURCES (NSW) PTY. LIMITED BY TRANSFER X545979. Registered 26-5-1988					

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION
Transfer	M502589	19-10-1971	Easement for Transmission Line affecting that part of the land within described shown as "Proposed Easement for Transmission Line 100 ft wide and 66 ft wide" in D.P. 556911	29-2-1972		
Transfer	P869765	—	Easement for Underground Mains, as more fully set out in the said instrument, affecting that part of the land within described shown as "Proposed Easement for Underground Mains 3. Wide" in D.P. 584691.	13-10-1976		
Transfer	G505096	—	Easement for Transmission Line affecting ~~the land above described~~ that part of the land within described shown so hatched on the plan hereon	29.5.1978		
Transfer	Q981596	—	The easement for Transmission Line created by M502589 is partially released as shown in plan annexed to Q981596.	2-1-1979.		

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

K408863
DP550911 - Ea...7
CA11
DP584691
CT 16 8-7
P869765/6
G805096 T...6
CT 10/11/78
Q981596 T...
X545979
see Dealing 1
Vol. 9787 Fol. 155

CT 14/7/78
DP860392 B

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT			ENTERED	Signature of Registrar-General
	NATURE	NUMBER	DATE		
CANCELLED SEE AUTO FOLIO					

SECOND SCHEDULE (continued)

INSTRUMENT			PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION		
NATURE	NUMBER	DATE						

FORM No. 177A

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

LAND REGISTRY SERVICES — Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
5/12/2018 1:51PM

FOLIO: AUTO CONSOL 9787-165

Recorded	Number	Type of Instrument	C.T. Issue
14/5/1999	5823660	CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 9787-165	
		PARCELS IN CONSOL ARE: A-B/33023.	
19/12/2000	7297668	PARCELS EXCISED. CONSOL BROKEN UP	

*** END OF SEARCH ***

pemulwuy PRINTED ON 5/12/2018

LAND REGISTRY SERVICES — Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
5/12/2018 1:51PM

FOLIO: B/33023

First Title(s): OLD SYSTEM VOL 4441 FOL 3
VOL 4441 FOL 22
Prior Title(s): VOL 9787 FOL 165

Recorded	Number	Type of Instrument	C.T. Issue
29/7/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
13/5/1999	5819717	DEPARTMENTAL DEALING	FOLIO CREATED CT NOT ISSUED
14/5/1999	5823660	CONVERTED TO AUTO CONSOL 9787-165	CONSOL CREATED CT NOT ISSUED
19/12/2000	7297668	EXCISED FROM AUTO CONSOL 9787-165	
20/12/2000	7301343	TRANSFER	EDITION 1
20/12/2000	7301553	DEPARTMENTAL DEALING	FOLIO CANCELLED

*** END OF SEARCH ***

pemulwuy

PRINTED ON 5/12/2018

97-01T

(2)

TRANSFER

Real Property Act, 1900

7301343N

Office of State Revenue use only

NEW SOUTH WALES DUTY
20-12-2000 0000497118-001
SECTION OTHR LEGN-ORIGINAL
NO DUTY PAYABLE

(A) **LAND TRANSFERRED**

Show no more than 20 References to Title.
If appropriate, specify the share transferred.

2/860392 being part volume 9787 folio 165
Now being part of Lots A and B in DP 33023

(B) **LODGED BY**

L.T.O. Box	Name, Address or DX and Telephone
6L	TRACEY WADSWORTH C/- BORAL OFFICES GREYSTANES RD GREYSTANES 2145 PH 9769 0655 REFERENCE (max. 15 characters):

(C) **TRANSFEROR** BORAL RESOURCES (N.S.W.) PTY. LIMITED

(D) acknowledges receipt of the consideration of $1.00

and as regards the land specified above transfers to the Transferee an estate in fee simple

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

(F) **TRANSFEREE**

T **TS** (s713 LGA) **TW** (Sheriff)	MINISTER ADMINISTERING THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

(G) **TENANCY:**

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

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

BORAL RESOURCES (NSW) PTY. LIMITED A.C.N. 000 756 507 Common Seal

.....
Signature of Witness

.....
Name of Witness (BLOCK LETTERS)

.....
Address of Witness

.....
Signature of Transferor Director
Attorney Secretary

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

.....
Signature of Witness

M.T. BROWNFIELD
Name of Witness (BLOCK LETTERS)

1 FARRER PLACE SYDNEY
Address of Witness

SIGNED by me VINCENT FERNANDEZ RAMOS as delegate of the Minister administering the Environmental Planning and Assessment Act, 1979, and I hereby certify that I have no notice of the revocation of such delegation.

.....
Signature of Transferee

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

CHECKED BY (office use only)

LAND REGISTRY SERVICES

Historical Title

InfoTrack

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
5/12/2018 1:51PM

FOLIO: 1/860392

First Title(s): VOL 4441 FOL 22 VOL 4441 FOL 3
OLD SYSTEM
Prior Title(s): B/33023

Recorded	Number	Type of Instrument	C.T. Issue
28/8/1996	DP860392	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
21/12/2000	7302830	DEPARTMENTAL DEALING	FOLIO CREATED EDITION 1
21/12/2000	7303616	DEPARTMENTAL DEALING	EDITION 2
28/12/2000	DP1022044	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

pemulwuy PRINTED ON 5/12/2018

LAND REGISTRY SERVICES

Historical Title

InfoTrack

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
5/12/2018 1:51PM

FOLIO: 11/1022044

First Title(s): VOL 4441 FOL 22 VOL 4441 FOL 3
OLD SYSTEM
Prior Title(s): 1/860392

Recorded	Number	Type of Instrument	C.T. Issue
28/12/2000	DP1022044	DEPOSITED PLAN	FOLIO CREATED EDITION 1
27/6/2001	DP1028208	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

pemulwuy

PRINTED ON 5/12/2018

Received: 05/12/2018 13:52:00

CERTIFICATE OF TITLE

NEW SOUTH WALES — REAL PROPERTY ACT, 1900

Vol. 11841 Fol. 157

Edition issued 26-5-1972

Appln. Nos.7070, 7395 & 8479 (as to part)

For Crown Grants see Schedule

Prior Title Vol. 7167 Fol. 206

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

Registrar General.

SEE AUTO FOLIO

S

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 5 in Deposited Plan 235064 at Greystanes in the Municipality of Holroyd Parish of Prospect and County of Cumberland being part of the land set out in the Schedule of Grants hereunder. EXCEPTING THEREOUT the minerals reserved by the Crown Grants of Portions 25 and 320.

SCHEDULE OF GRANTS

Number of Portion	Name of Grantee	Date of Grant	Grant Reference Volume	Folio
Pt.27	William Parish	22 - 2 - 1792		
Pt.46	Joseph Morley			
Pt.60	Edward Pugh			
Pt.59	Samuel Griffiths			
Pt.58	John Herbert	18 - 5 - 1792		
Pt.28	John Rowe	1 - 5 - 1797		
57	John Fenton	1 - 8 - 1799		
Pt.61	William Cummings	12 -11 - 1799		
56	George Stanbury	18 -12 - 1799		
Pt.26	Charles Bishop	15 - 8 - 1803		
Pt.32ac.2rd.Gt.			135	92
Pt.11ac.1rd.Gt.			135	93
13ac.Gt.			135	94
25			1663	196
320			4103	25

FIRST SCHEDULE

THE N.S.W. ASSOCIATED BLUE METAL QUARRIES PTY. LIMITED.

Registrar General.

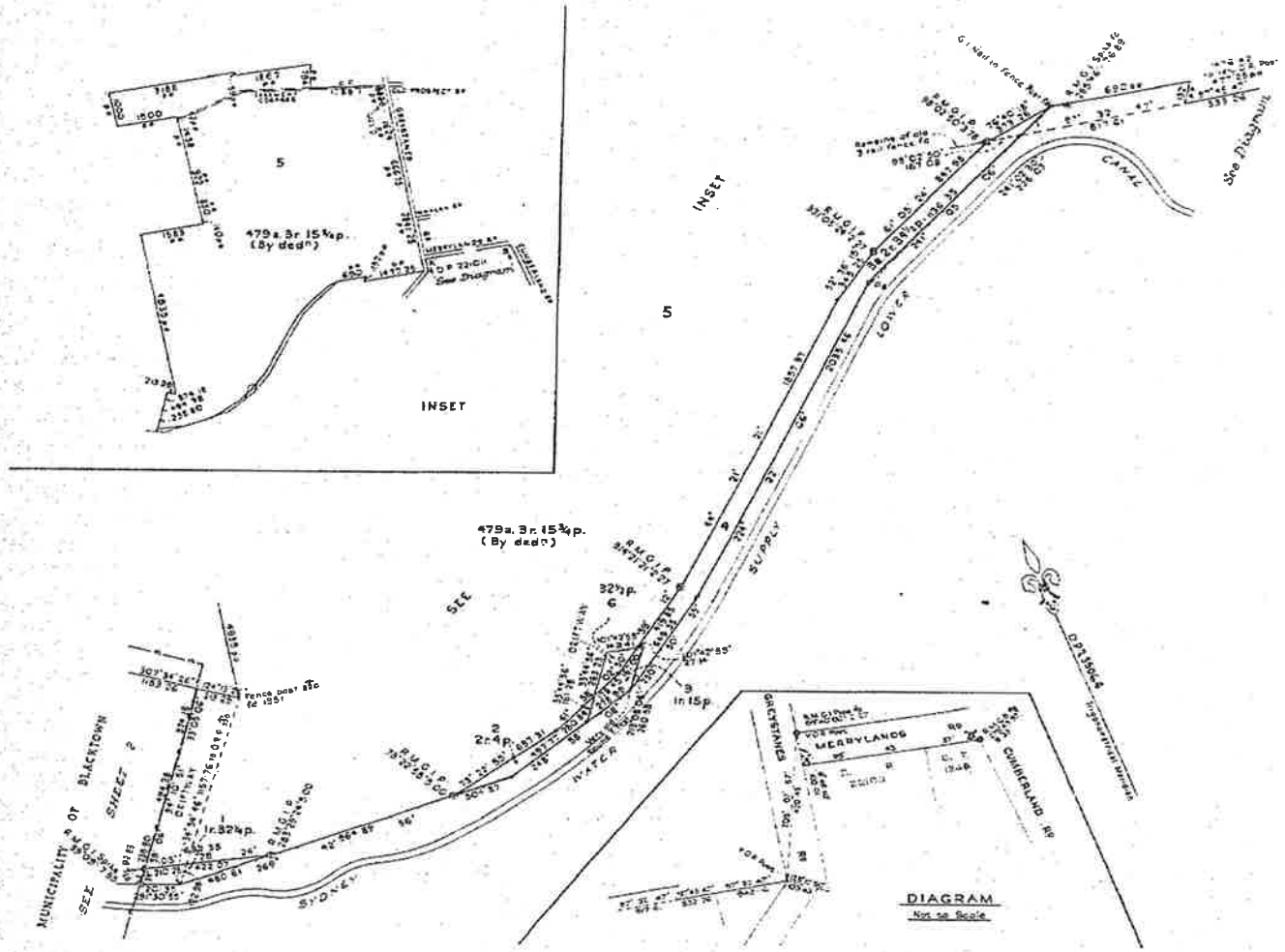
SECOND SCHEDULE

GRY

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.
2. ~~Easement for Water Supply created by Transfer No.C564686 affecting the part of the land above described shown as Easement C564686 in the plan hereon.~~ Cancelled T305245.

Registrar General.

Vol. 11841 Fol. 157



FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General

SECOND SCHEDULE (continued)

	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION
ET	Transfer	P738173	—	Easement for Transmission Line affecting ~~that~~ part of the land within described shown as "Proposed Easement for Transmission Line 18 Wide" in the plan annexed ~~to Transfer~~ P738173.	16.6.1976		
EW	T305244	Transfer - Easement to drain water affecting the part of the land within described shown so burdened in D.P.586926. Registered 6.1.1983.					
AA				The interests of the Council of the Local Government Area in the road dedicated in D.P. 638473. Registered 24 3 1986			
AB				The interests of the Council of the Local Government Area in the road dedicated in DP537465. Registered 4-9-1969.			

D.P. 638473 16-4-1986

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

C/T 6 5.76
~~DP 586926~~
P738173 ~~-74~~ X
C/T 5.352
C/T 14 10.82
T305244 to 86
T — 5 to 86
~~DP 638473~~

Vol. 11841 Fol. 157

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT			ENTERED	Signature of Registrar General
	NATURE	NUMBER	DATE		

SECOND SCHEDULE (continued)

INSTRUMENT			PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
NATURE	NUMBER	DATE						

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

LAND REGISTRY SERVICES

Historical Title

InfoTrack

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
5/12/2018 1:51PM

FOLIO: 5/235064

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 11841 FOL 157

Recorded	Number	Type of Instrument	C.T. Issue
5/6/1987		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
18/1/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
27/1/1988		AMENDMENT: LOCAL GOVT AREA	
31/5/1988	X545979	TRANSFER	EDITION 1
27/5/1999	5857486	DEPARTMENTAL DEALING	
17/8/1999	DP1003345	DEPOSITED PLAN	
27/6/2001	DP1028208	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

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PRINTED ON 5/12/2018

Received: 05/12/2018 13:52:00

LAND REGISTRY SERVICES

Historical Title

InfoTrack

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
5/12/2018 2:11PM

FOLIO: 107/1028208

First Title(s): OLD SYSTEM
Prior Title(s): 5/235064 11/1022044

Recorded	Number	Type of Instrument	C.T. Issue
27/6/2001	DP1028208	DEPOSITED PLAN	FOLIO CREATED EDITION 1
6/7/2001	7745431	TRANSFER	
6/7/2001	7745432	MORTGAGE	EDITION 2
1/5/2002	8505947	REQUEST	
9/5/2002	DP1040282	DEPOSITED PLAN	EDITION 3
12/3/2004	AA488829	DEPARTMENTAL DEALING TO UPLIFT CT	EDITION 4
24/3/2004	DP1049509	REJECTED - DEPOSITED PLAN	
8/10/2004	DP1070244	DEPOSITED PLAN	
11/10/2004	AA734831	LEASE	
11/10/2004	AA748437	DISCHARGE OF MORTGAGE	
11/10/2004	AA748438	TRANSFER	EDITION 5
22/9/2008	AE189023	REQUEST	
9/4/2009	AE605577	TRANSFER	EDITION 6
20/2/2015	AJ240912	TRANSFER	
20/2/2015	AJ240913	MORTGAGE	EDITION 7
29/5/2015	AJ480615	DEPARTMENTAL DEALING	
19/8/2015	AJ729751	TRANSFER OF MORTGAGE	
20/4/2016	AK352089	DISCHARGE OF MORTGAGE	
20/4/2016	AK352090	MORTGAGE	EDITION 8
15/6/2016	AK509587	DEPARTMENTAL DEALING	
17/8/2018	AN592562	CAVEAT	
10/9/2018	AN689007	WITHDRAWAL OF CAVEAT	

END OF PAGE 1 - CONTINUED OVER

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
5/12/2018 2:11PM

FOLIO: 107/1028208

Recorded	Number	Type of Instrument	C.T. Issue
10/9/2018	AN689008	DISCHARGE OF MORTGAGE	
10/9/2018	AN689009	TRANSFER	EDITION 9
20/9/2018	AN723101	DEPARTMENTAL DEALING	EDITION 10
28/9/2018	AN748606	REQUEST	EDITION 11

*** END OF SEARCH ***

Form: 9/-011

Licence: LAW/0526/98

TRANSFER

New South Wales

Real Property Act 1900

7745431N

Office of State Revenue use only

SECTION 18(2)
DUTY $ **********2.00

(A) **LAND TRANSFERRED**
If appropriate, specify the share or part transferred.

Folio Identifier 107/1028208

(B) **LODGED BY**

LTO Box	Name, Address or DX and Telephone
599D	**MINTER ELLISON** 88 Phillip Street, SYDNEY Telephone (02) 9921 8888 LSW Reference (optional): [redacted]202036253

(C) **TRANSFEROR** **BORAL RESOURCES (NSW) PTY LTD ABN 51 000 756 507**

(D) acknowledges receipt of the consideration of $7,500,000 and as regards the land specified above transfers to the transferee an estate in fee simple.

(E) Encumbrances (if applicable) 1. / 2. 3.

(F) **TRANSFEREE**

T **TS** (s713 LGA) **TW** (Sheriff)	**TRAFALGAR NOMINEES (PROSPECT) PTY LIMITED ACN 095 017 191**

(G) **TENANCY:**

(H) We certify this dealing correct for the purposes of the Real Property Act 1900. **DATE** 30 June 2001

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

.....
Signature of Witness

G. CIVANES
.....
Name of Witness (BLOCK LETTERS)

SOLICITOR, SYDNEY.
.....
Address of Witness

BORAL RESOURCES (NSW) PTY LTD
(ABN 51 000 756 507) by his/her/its attorney pursuant to
Power of Attorney Book 4314 No. 564

.....
Signature of Attorney

John Patrick DIGNAM

SYD4_153274_1 (W97)

THE COMMON SEAL of TRAFALGAR NOMINEES (PROSPECT) PTY LIMITED (A.C.N. 095 017 191) is affixed in accordance with its Articles of Association:

Signature of authorised person

MARK ASHTON DAVIDSON

Print Name of authorised person

DIRECTOR

Office held

Signature of authorised person

P J Norris

Print Name of authorised person

SECRETARY

Office held

Form: 01T
Licence: 04-03-349
Licensee: Mallesons Stephen Jaques

TRANSFER

New South Wales
Real Property Act 1900

AA748438G

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

STAMP DUTY

Office of State Revenue use only

NSW Treasury
$10
VENDOR DUTY
EXEMPTION
Do not disable

NEW SOUTH WALES DUTY
04-06-2004 0001996738-001
SECTION 18(2)
DUTY $ **********2.00

(A) **TORRENS TITLE** — If appropriate, specify the part transferred
Folio identifier 107/1028208

(B) **LODGED BY**

Delivery Box	Name, Address or DX and Telephone	CODES
41J	Mallesons Stephen Jaques DX 113 Sydney T +61 2 9296 2000 Reference (optional): MLO 02-5111-7876	T TW (Sheriff)

(C) **TRANSFEROR** — TRAFALGAR NOMINEES (PROSPECT) PTY LIMITED ACN 095 017 191

(D) **CONSIDERATION** — The transferor acknowledges receipt of the consideration of $ 42,300,000 and as regards
(E) **ESTATE** — the land specified above transfers to the transferee an estate in fee simple.

(F) **SHARE TRANSFERRED**

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

(H) **TRANSFEREE** — NATIONAL AUSTRALIA BANK SUPERANNUATION FUND PTY LIMITED ACN 065 048 928

(I) **TENANCY:**

(J) **DATE** 23 / 06 / 2004
dd mm yyyy

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

TRANSFEROR

EXECUTED by **TRAFALGAR NOMINEES (PROSPECT) PTY LIMITED** in accordance with section 127(1) of the Corporations Act 2001 (Cwlth) by authority of its directors:

Signature of director
MARK ASHTON DAVIDSON

Signature of ~~director~~/company secretary*
*delete whichever is not applicable
P J NORRIS
Name of ~~director~~/company secretary* (block letters)

TRAFALGAR NOMINEES (PROSPECT) PTY LIMITED
Common Seal
A.C.N. 095 017 191

TRANSFEREE

THE COMMON SEAL of **NATIONAL AUSTRALIA BANK SUPERANNUATION FUND PTY LIMITED** is duly affixed by authority of its directors in the presence of:

Signature of authorised person
SECRETARY
Office held
DENNIS PHILLIPS

Signature of authorised person
DIRECTOR
Office held
John Dyer
Name of authorised person (block letters)

A.C.N. 065 048 928
Common Seal

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

Form: 01T
Licence: 04-03-349
Licensee: Mallesons Stephen Jaques

(1)

TRANSFER

New South Wales
Real Property Act 1900

AE605577R

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the collection of the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B(2) of the RP Act requires that the Register is made available to any for search upon payment of a fee, if any.

STAMP DUTY — Office of State Revenue use only

NEW SOUTH WALES DUTY
09-04-2009 0005370874-001
SECTION 18(2)
DUTY $ **********10.00

(A) **TORRENS TITLE** — If appropriate, specify the part transferred
107/1028208

(B) **LODGED BY**

Delivery Box	Name, Address or DX and Telephone	CODES
41J	Mallesons Stephen Jaques DX 113 Sydney T +61 2 9296 2000 LLPN: 123008U Reference (optional): Natalee Forster 02-5501-3566	T TW (Sheriff)

(C) **TRANSFEROR** — National Australia Bank Superannuation Fund Pty Limited (ABN 99 065 048 928)

(D) **CONSIDERATION** — The transferor acknowledges receipt of the consideration of $ 43,180,000 and as regards
(E) **ESTATE** — the land specified above transfers to the transferee an estate in fee simple.
(F) **SHARE TRANSFERRED**

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

(H) **TRANSFEREE** — Lend Lease Funds Management Limited (ACN 000 335 473)

(I) **TENANCY:**

(J) **DATE** 08 / 04 / 2009
dd mm yyyy

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

SEE ANNEXURE "A" FOR EXECUTION BY THE TRANSFEROR

SEE ANNEXURE "A" FOR EXECUTION BY THE TRANSFEREE

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

9856949_1

Annexure **A** to Transfer

Parties:

NATIONAL AUSTRALIA BANK SUPERANNUATION FUND PTY LIMITED (ABN 99 065 048 928) to LEND LEASE FUNDS MANAGEMENT PTY LIMITED (ACN 000 335 473)

Dated: 8 April 2009

I certify that FELICITY SAVAGE, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this document in my presence as attorney for **NATIONAL AUSTRALIA BANK SUPERANNUATION FUND PTY LIMITED (ABN 99 065 048 928)** under Power of Attorney registered book 4565 No.188

Signature of witness: [signature]

Name of witness: MARGARET LEE DOBENHAM

Address of witness: L61, Governor Phillip Tower
1 Farrer Place, Sydney
NSW 2000

Signature of Attorney: [signature]

Attorney's name: Felicity Savage

Signing on behalf of:
NATIONAL AUSTRALIA BANK SUPERANNUATION FUND PTY LTD
By executing this document the attorney states that the attorney has received no notice of revocation of the power of attorney and that the attorney is a partner of Mallesons Stephen Jaques

I certify that **JENNIFER SUSAN KENCH**, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this document in my presence as attorney for **LEND LEASE FUNDS MANAGEMENT LIMITED (ACN 000 335 473)** under Power of Attorney registered book 4564 No. 721

Signature of witness: [signature]

Name of witness: JUDY TOMAS

Address of witness: L61, Governor Phillip Tower
1 Farrer Place, Sydney
NSW 2000.

Signature of Attorney: [signature]

Attorney's name: Jennifer Susan Kench

Signing on behalf of:
Lend Lease Funds Management Limited
By executing this document the attorney states that the attorney has received no notice of revocation of the power of attorney and that she is a partner of Mallesons Stephen Jaques

Req:R685441 /Doc:DL AJ240912 /Rev:26-Feb-2015 /Sts:SC.OK /Pgs:ALL /Prt:05-Dec-2018 14:15 /Seq:1 of 2
Ref:pemulwuy /Src:M

Form: 01T
Licence: 04-03-349
Licensee: King & Wood Mallesons

TRANSFER

New South Wales
Real Property Act 1900

AJ240912L

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

STAMP DUTY Office of State Revenue use only

NEW SOUTH WALES DUTY
28-01-2015 0007939110-002
SECTION 18(2)
DUTY $ **********10.00

(A) **TORRENS TITLE** If appropriate, specify the part transferred
Folio identifier 107/1028208

(B) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODES
5990	~~King & Wood Mallesons DX 113 Sydney T +61 2 9296 2000~~ MINTER ELLISON 1234385 Reference (optional): ~~602-00000410~~ BYN 1088887	T TK TW

(C) **TRANSFEROR** Lend Lease Funds Management Limited (ACN 000 335 473)

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 25,080,000.00 and as regards
(E) **ESTATE** the land specified above transfers to the transferee an estate in fee simple.

(F) **SHARE TRANSFERRED**

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

(H) **TRANSFEREE** LAOF IV Ocean Pty Ltd (ACN 601 747 442)

(I) **TENANCY:**

DATE 18 / 12 / 2014
dd mm yyyy

Certified correct for the purposes of the Real Property Act 1900. [Attesting witness - see note* below].

(J)

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

Signature of witness:

Name of witness:
Address of witness:

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

Signature of transferor: See Annexure A Page 2

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

Signature of witness: J Bolger

Name of witness: JULIAN BOLGER
Address of witness: LEVEL 61, GOVERNOR PHILLIP TOWER, 1 FARRER PLACE, SYDNEY 2000.

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

Signature of transferee: See Annexure A Page 2

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

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

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

Annexure A to TRANSFER

Transferor execution

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

Signature of witness:

Name of witness: Sarah Jane Merrett
Address of witness: 1602/108 Albert Street
Brisbane QLD 4000

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

Signature of attorney:

Attorney's name: William Oxley Partner Herbert Smith Freehills
Signing on behalf of: Lend Lease Funds Management Limited
Power of attorney-Book: 4679
-No.: 286

CHRISTOPHER BLUE
PARTNER
HERBERT SMITH FREEHILLS

Transferee execution

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

Company: LAOF IV Ocean Pty Ltd
Authority: section 127 of the Corporations Act 2001

Signature of authorised person:
Name of authorised person: **MATTHEW ROBERT BAILEY.**
Office held: Director

Signature of authorised person:
Name of authorised person: **SIMON STUART DOVER HOWARD**
Office held: DIRECTOR

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

LAND REGISTRY SERVICES **Title Search**

InfoTrack

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 107/1028208

SEARCH DATE	TIME	EDITION NO	DATE
5/12/2018	2:18 PM	11	28/9/2018

LAND

LOT 107 IN DEPOSITED PLAN 1028208
AT PROSPECT
LOCAL GOVERNMENT AREA CUMBERLAND
PARISH OF PROSPECT COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1028208

FIRST SCHEDULE

PGL NO. 1 PTY LTD (T AN689009)

SECOND SCHEDULE (8 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 DP1022044 RESTRICTION(S) ON THE USE OF LAND REFERRED TO AND NUMBERED (1) IN THE S.88B INSTRUMENT AFFECTING THE PART(S) FORMERLY 11/1022044.
3 DP1022044 POSITIVE COVENANT AFFECTING THE PART(S) FORMERLY 11/1022044.
4 DP1022044 RESTRICTION(S) ON THE USE OF LAND REFERRED TO AND NUMBERED (3) IN THE S.88B INSTRUMENT AFFECTING THE PART(S) FORMERLY 11/1022044.
5 DP1028208 POSITIVE COVENANT REFERRED TO AND DESIGNATED (J) IN THE TITLE DIAGRAM.
6 DP1040282 RESTRICTION(S) ON THE USE OF LAND
7 DP1070244 EASEMENT FOR UNDERGROUND CABLES 1 METRE(S) WIDE (E) AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1070244
8 DP1070244 EASEMENT FOR PADMOUNT SUBSTATION (P) AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1070244

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

pemulwuy PRINTED ON 5/12/2018

Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 107/1028208

SEARCH DATE	TIME	EDITION NO	DATE
28/5/2019	8:06 AM	11	28/9/2018

LAND

LOT 107 IN DEPOSITED PLAN 1028208
AT PROSPECT
LOCAL GOVERNMENT AREA CUMBERLAND
PARISH OF PROSPECT COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1028208

FIRST SCHEDULE

PGL NO. 1 PTY LTD (T AN689009)

SECOND SCHEDULE (8 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 DP1022044 RESTRICTION(S) ON THE USE OF LAND REFERRED TO AND NUMBERED (1) IN THE S.88B INSTRUMENT AFFECTING THE PART(S) FORMERLY 11/1022044.
3 DP1022044 POSITIVE COVENANT AFFECTING THE PART(S) FORMERLY 11/1022044.
4 DP1022044 RESTRICTION(S) ON THE USE OF LAND REFERRED TO AND NUMBERED (3) IN THE S.88B INSTRUMENT AFFECTING THE PART(S) FORMERLY 11/1022044.
5 DP1028208 POSITIVE COVENANT REFERRED TO AND DESIGNATED (J) IN THE TITLE DIAGRAM.
6 DP1040282 RESTRICTION(S) ON THE USE OF LAND
7 DP1070244 EASEMENT FOR UNDERGROUND CABLES 1 METRE(S) WIDE (E) AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1070244
8 DP1070244 EASEMENT FOR PADMOUNT SUBSTATION (P) AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1070244

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

pemulwuy PRINTED ON 28/5/2019

Received: 28/05/2019 08:06:41

Appendix F EPA Searches

Number	Name	Location	Type	Status	Issued date
4664	AUSTRAL MASONRY (NSW) PTY LTD	CLUNIES ROSS STREET, PROSPECT, NSW 2148	POEO licence	Issued	09-Jun-00
1534725	AUSTRAL MASONRY (NSW) PTY LTD	CLUNIES ROSS STREET, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	15-Oct-15
1534773	AUSTRAL MASONRY (NSW) PTY LTD	CLUNIES ROSS STREET, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	15-Oct-15
1006588	BORAL MASONRY LTD	CLUNIES ROSS STREET, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	21-May-01
11769	BORAL RECYCLING PTY LIMITED	CLUNIES ROSS STREET, PROSPECT, NSW 2148	POEO licence	Surrendered	12-Nov-02
11887	BORAL RECYCLING PTY LIMITED	CLUNIES ROSS STREET, PROSPECT, NSW 2148	POEO licence	Surrendered	17-Apr-03
1030591	BORAL RECYCLING PTY LIMITED	CLUNIES ROSS STREET, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	04-Sep-03
1036924	BORAL RECYCLING PTY LIMITED	CLUNIES ROSS STREET, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	20-May-04
1041594	BORAL RECYCLING PTY LIMITED	CLUNIES ROSS STREET, PROSPECT, NSW 2148	s.80 Surrender of a Licence	Issued	19-Oct-04
1503688	BORAL RECYCLING PTY LIMITED	CLUNIES ROSS STREET, PROSPECT, NSW 2148	s.80 Surrender of a Licence	Issued	23-May-12
2200	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	POEO licence	Surrendered	17-Aug-00
1009739	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	08-Aug-02
1023587	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	23-Dec-02
1027809	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	06-Jun-03
1033234	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	15-Dec-03

1037533	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	11-Jun-04
1054009	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	19-Dec-05
1063345	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	26-Jul-06
1093640	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	11-Feb-09
1104859	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	11-Aug-09
1117930	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	25-Aug-10
1119700	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	08-Oct-10
3085769152	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	Penalty Notice	Issued	18-Mar-13
1515038	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	02-Jul-13
1525063	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	15-May-15
1534965	BORAL RESOURCES (NSW) PTY LTD	RECONCILIATION ROAD, PROSPECT, NSW 2148	s.80 Surrender of a Licence	Issued	03-Dec-15
21295	ROADS AND MARITIME SERVICES	Between Reservoir Road, Prospect and St Martins Crescent, Blacktown, PROSPECT, NSW 2148	POEO licence	Issued	12-Sep-19
6250	SCHERING-PLOUGH PTY LIMITED	CLUNIES ROSS STREET , PROSPECT, NSW 2148	POEO licence	Surrendered	09-Feb-00
1021804	SCHERING-PLOUGH PTY LIMITED	CLUNIES ROSS STREET , PROSPECT, NSW 2148	s.80 Surrender of a Licence	Issued	30-Oct-02
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	-, PROSPECT, NSW 2148	POEO licence	Surrendered	09-Nov-00

1009599	SYDNEY WEED & PEST MANAGEMENT PTY LTD	-, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	06-Aug-01
1074553	SYDNEY WEED & PEST MANAGEMENT PTY LTD	-, PROSPECT, NSW 2148	s.58 Licence Variation	Issued	29-Jun-07
1507582	SYDNEY WEED & PEST MANAGEMENT PTY LTD	-, PROSPECT, NSW 2148	s.80 Surrender of a Licence	Issued	01-Aug-12

POEO Act

Home Environment protection licences POEO Public Register Search for licences, applications and notices

Search results

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

Suburb - Pemulwuy
returned 0 result

Search Again

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

Suburb - Greystanes
returned 6 results

Export to excel 1 of 1 Pages Search Again

Number	Name	Location	Type	Status	Issued date
1586833	AMIN BOUMELHEM	42 BIRRIWA STREET, GREYSTANES, NSW 2145	s.91 Clean Up Notice	Issued	06 Mar 2020
8	BITUPAVE LTD	GREYSTANES ROAD, GREYSTANES, NSW 2145	POEO licence	Surrendered	02 Mar 2000
1017478	BITUPAVE LTD	GREYSTANES ROAD, GREYSTANES, NSW 2145	s.80 Surrender of a Licence	Issued	16 Aug 2002
4537	CUMBERLAND COUNCIL	2A HYLAND ROAD, GREYSTANES, NSW 2145	POEO licence	Issued	21 Jan 2002
1093738	HOLROYD CITY COUNCIL	2A HYLAND ROAD, GREYSTANES, NSW 2145	s.58 Licence Variation	Issued	18 Nov 2008
1561060	HOLROYD CITY COUNCIL	2A HYLAND ROAD, GREYSTANES, NSW 2145	s.58 Licence Variation	Issued	23 Apr 2018

03 April 2020

CLM Act 1997

Search results

Your search for: Suburb: PROSPECT

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

3 April 2020

Search results

Your search for: Suburb: GREYSTANES

Search Again Refine Search

did not find any records in our database.

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3 April 2020

Search results

Your search for: Suburb: PEMULWUY

Search Again Refine Search

did not find any records in our database.

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3 April 2020

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
PORT MACQUARIE	Shell Coles Express Port Macquarie Service Station	121 Gordon STREET	Service Station	Regulation under CLM Act not required	-31.4343131	152.9046869
PORT MACQUARIE	Caltex Service Station	92 Hastings River DRIVE	Service Station	Regulation under CLM Act not required	-31.42934052	152.8830188
PORT MACQUARIE	Caltex Service Station	12-14 Bolwarra ROAD	Service Station	Regulation under CLM Act not required	-31.45015286	152.8854769
PORT MACQUARIE	Car park	28 Hayward STREET	Other Industry	Regulation under CLM Act not required	-31.43385131	152.9072399
PORTLAND	Ivanhoe Colliery	Pipers Flat ROAD	Other Industry	Regulation under CLM Act not required	-33.36595748	150.0099577
PORTLAND	Mt Piper Power Station	350 Boulder ROAD	Other Petroleum	Regulation under CLM Act not required	-33.35581541	150.0350801
PRAIRIEWOOD	7-Eleven (former Caltex) Service Station	485-487 Smithfield ROAD	Service Station	Regulation under CLM Act not required	-33.87102509	150.9031383
PROSPECT	7-Eleven (former Mobil) Service Station Prospect	354 Flushcombe ROAD	Service Station	Regulation under CLM Act not required	-33.79541624	150.9049417
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 under CLM Act not required	-33.82608091	151.1003966

Albion Park Fire and Rescue NSW	Airport Road, Albion Park, 2527	PFAS investigation site
Alexandria Fire and Rescue NSW	189 Wyndham Street Alexandria	PFAS investigation site
Argenton Mines Rescue Services	533 Lake Road, Argenton NSW 2284	PFAS investigation site
Armidale Fire and Rescue NSW	10 Mann Street, Armidale, 2350	PFAS investigation site
Bankstown Airport	3 Avro St, Bankstown NSW 2200	PFAS investigation site
Bathurst airport	P J Moodie Memorial Dr, Raglan NSW 2795	PFAS investigation site
Blamey Barracks Kapooka	Kapooka Dr, Kapooka NSW 2661	PFAS investigation site
Botany Bay area		PFAS investigation site
Botany Industrial Park	Dent Street, Botany, 2019	PFAS investigation site
Camden Airport	Aerodrome Rd, Cobbitty NSW 2570	PFAS investigation site
Currambene Creek		PFAS investigation site
Deniliquin Fire and Rescue NSW		PFAS investigation site
Fuchs	2 Holland St, Wickham NSW 2293	PFAS investigation site
Gold Coast Airport	Eastern Avenue, Coolangatta, QLD 4225	PFAS investigation site
Greenacre Fire and Rescue	1 and 1A Amarina Avenue, Greenacre	PFAS investigation site
Hawkesbury River		PFAS investigation site
Heatherbrae: Total Fire Solutions	15 Giggins Rd, Heatherbrae NSW 2324	PFAS investigation site
HMAS Albatross	Nowra Hill, 2540	PFAS investigation site
Holsworthy Barracks	Macarthur Drive, Holsworthy, 2173	PFAS investigation site
Jervis Bay range facility	Jervis Bay Territory, 2540	PFAS investigation site
Kemps Creek NSW Rural Fire Service	245 Devonshire Rd, Kemps Creek NSW 2178	PFAS investigation site
Kurnell: Caltex	2 Solander St, Kurnell, 2231	PFAS investigation site
Lake Macquarie		PFAS investigation site
Lake Toolooma	Heathcote National Park	PFAS investigation site
Lithgow: Mines Rescue	3 Proto Ave, Lithgow NSW 2790	PFAS investigation site
Londonderry TestSafe & Fire and Rescue NSW	667 The Northern Road, Londonderry, 2753	PFAS investigation site
Lord Howe Island		PFAS investigation site
Mulwala - Thales	Bayly St, Mulwala NSW 2647	PFAS investigation site
Munmorah and Colongra Power Stations	Station Road, Colongra NSW 2262	PFAS investigation site
Orange Airport	136 Aerodrome Road, Orange NSW 2800	PFAS investigation site
Quirindi Airport	Quirindi NSW 2343	PFAS investigation site
Richmond RAAF Base	Middleton Avenue, Richmond, 2753	PFAS investigation site
Rutherford, Truegain	62 Kyle St, Rutherford NSW 2320	PFAS investigation site
Salt Ash weapons range	Salt Ash NSW	PFAS investigation site
Shoalhaven River		PFAS investigation site
Singleton Heights: Mines Rescue Services	6 Lachland Avenue, Singleton Heights NSW 2330	PFAS investigation site
Singleton Military Area		PFAS investigation site
Singleton NSW Rural Fire Service		PFAS investigation site
South Nowra NSW Rural Fire Service	92 Albatross Road, South Nowra	PFAS investigation site
Springwood, St Columba's Catholic College	168 Hawkesbury Rd, Springwood, 2777	PFAS investigation site

Swanson Industries	2 Georgetown Road, Broadmeadow, 2292	PFAS investigation site
Tamworth Regional Airport	Shand Cir, Tamworth, 2340	PFAS investigation site
Tarro, Our Lady of Lourdes Primary School	Anderson Drive Tarro, NSW 2322	PFAS investigation site
Wagga Wagga RAAF Base	Sturt Highway, Wagga Wagga, 2650	PFAS investigation site
Wellington Fire and Rescue NSW	67 Falls Road, Wellington, 2820	PFAS investigation site
Westleigh NSW Rural Fire Service	12 Warrigal Drive, Westleigh	PFAS investigation site
Williamtown RAAF Base	49 Medowie Road, Williamtown, 2314	PFAS investigation site

Environment Protection Licence

Licence - 4664

Licence Details	
Number:	4664
Anniversary Date:	01-April

Licensee
AUSTRAL MASONRY (NSW) PTY LTD
PO BOX 502
BEENLEIGH QLD 4207

Premises
AUSTRAL MASONRY (NSW) PTY LTD
CLUNIES ROSS STREET
PROSPECT NSW 2148

Scheduled Activity
Concrete Works

Fee Based Activity	Scale
Concrete works	> 50000 m3 produced

Region
Metropolitan - Sydney Industry
Level 13, 10 Valentine Ave PARRAMATTA NSW 2150
Phone: (02) 9995 5000
Fax: (02) 9995 6900
PO Box 668 PARRAMATTA
NSW 2124

Environment Protection Licence

Licence - 4664

INFORMATION ABOUT THIS LICENCE ---- 3

Dictionary ---- 3

Responsibilities of licensee ---- 3

Variation of licence conditions ---- 3

Duration of licence ---- 3

Licence review ---- 3

Fees and annual return to be sent to the EPA ---- 3

Transfer of licence ---- 4

Public register and access to monitoring data ---- 4

1 ADMINISTRATIVE CONDITIONS ---- 5

A1 What the licence authorises and regulates ---- 5

A2 Premises or plant to which this licence applies ---- 5

A3 Information supplied to the EPA ---- 5

2 LIMIT CONDITIONS ---- 5

L1 Pollution of waters ---- 5

3 OPERATING CONDITIONS ---- 6

O1 Activities must be carried out in a competent manner ---- 6

O2 Maintenance of plant and equipment ---- 6

O3 Dust ---- 6

4 MONITORING AND RECORDING CONDITIONS ---- 6

M1 Monitoring records ---- 6

M2 Recording of pollution complaints ---- 6

M3 Telephone complaints line ---- 7

5 REPORTING CONDITIONS ---- 7

R1 Annual return documents ---- 7

R2 Notification of environmental harm ---- 8

R3 Written report ---- 8

6 GENERAL CONDITIONS ---- 9

G1 Copy of licence kept at the premises or plant ---- 9

DICTIONARY ---- 10

General Dictionary ---- 10

Environment Protection Licence

Licence - 4664

Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Environment Protection Licence

Licence - 4664

The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

AUSTRAL MASONRY (NSW) PTY LTD
PO BOX 502
BEENLEIGH QLD 4207

subject to the conditions which follow.

Environment Protection Licence

Licence - 4664

1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Concrete Works	Concrete works	> 50000 m3 produced

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
AUSTRAL MASONRY (NSW) PTY LTD
CLUNIES ROSS STREET
PROSPECT
NSW 2148
PART LOT 10 DP 1022044

A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:
a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

Environment Protection Licence

Licence - 4664

3 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.
This includes:
a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
a) must be maintained in a proper and efficient condition; and
b) must be operated in a proper and efficient manner.

O3 Dust

O3.1 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.

4 Monitoring and Recording Conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:
a) in a legible form, or in a form that can readily be reduced to a legible form;
b) kept for at least 4 years after the monitoring or event to which they relate took place; and
c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
a) the date(s) on which the sample was taken;
b) the time(s) at which the sample was collected;
c) the point at which the sample was taken; and
d) the name of the person who collected the sample.

M2 Recording of pollution complaints

M2.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M2.2 The record must include details of the following:
a) the date and time of the complaint;
b) the method by which the complaint was made;
c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
d) the nature of the complaint;
e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
f) if no action was taken by the licensee, the reasons why no action was taken.

M2.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M2.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M3 Telephone complaints line

M3.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M3.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M3.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

5 Reporting Conditions

R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
a) a Statement of Compliance; and
b) a Monitoring and Complaints Summary.
At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

R1.3 Where this licence is transferred from the licensee to a new licensee:
a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

R1.7 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
a) the licence holder; or
b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R2 Notification of environmental harm

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
a) where this licence applies to premises, an event has occurred at the premises; or
b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:
a) the cause, time and duration of the event;
b) the type, volume and concentration of every pollutant discharged as a result of the event;
c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

6 General Conditions

G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Environment Protection Licence

Licence - 4664

Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

Environment Protection Licence

Licence - 4664

flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder describe d at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 mo nths. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.

Environment Protection Licence

Licence - 4664

TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-putrescible), special waste or hazardous waste

Mr Tim Gilbert

Environment Protection Authority

(By Delegation)

Date of this edition: 09-June-2000

End Notes

1	Licence varied by notice 1006588, issued on 21-May-2001, which came into effect on 15-Jun-2001.
2	Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
3	Licence transferred through application 1512412 approved on 04-Mar-2013 , which came into effect on 04-Mar-2013
4	Licence varied by notice 1534725 issued on 15-Oct-2015
5	Licence varied by notice 1534773 issued on 15-Oct-2015

Appendix G Heritage Records

Search Results

5 results found.

CSIRO Division of Animal Production Clunies Ross St	Prospect, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
CSIRO Division of Animal Production Clunies Ross St	Prospect, NSW, Australia	(Ineligible place) Commonwealth Heritage List
Prospect Reservoir Area	Prospect, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Site of Veteran Hall Reservoir Rd	Prospect, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
St Bartholomews Anglican Church (former) Prospect Hwy	Prospect, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Report Produced: Tue Mar 19 10:00:45 2019

Search Results

No results found.

Enter at least one search criterion.

Search Hints

Search Reset form

Place name

Street name

Town or suburb
pemulwuy

State
New South Wales

Country

Advanced search options

List
All Lists

Different lists will provide different status and class options

Local Government Area

Place ID number

Legal status
--All--

Class
--All--

Keyword Search

☑ Description ☑ Statement of Significance ☑ Place history

Latitude/Longitude

N

Latitude 1

Longitude 1 S Longitude 2

W E Latitude 2 E **E**

S

Wholly within region
Wholly or partially within region

Longitude coordinates should be entered as ddd.mm.ss
Latitude coordinates should be entered as dd.mm.ss

Map Ref No

1:100,000 eg 2357
1:250,000 eg SF-50-01

Search Hints

- Not all fields need to be filled in. The fewer you fill in the more results you will get.
- If you cannot find a place, check spelling and try alternative names. Reduce the number of words that you include and use fewer fields.
- The Local Government field used on its own will provide a comprehensive list of places in an area.

Report Produced: Tue Mar 19 09:57:40 2019

Place Details

Send Feedback

CSIRO Division of Animal Production, Clunies Ross St, Prospect, NSW, Australia

Photographs	None
List	Commonwealth Heritage List
Class	Historic
Legal Status	Ineligible place
Place ID	105481
Place File No	1/14/015/0006

Summary Statement of Significance Not Available

Official Values Not Available

Description

HISTORY

It has been written that Governor Phillip explored Prospect Hill in April 1788, however there is doubt as to the accuracy of this. It is known that Watkin Tench, an officer of the Marines on the First Fleet, led a party from Parramatta to the summit of Prospect Hill, then across to the Nepean River on 26 June 1789. The hill became known as Prospect Hill as it was an important fixed guiding point for other early explorers.

First European settlement of the area occurred in 1791 on the eastern and southern slopes of Prospect Hill. Within the CSIRO site are four (some only in part) 1791 land grants. These grants were to emancipated convicts from the First Fleet: John Nichols, a gardener (Portion 33, 30 acres); William Butler, a seaman and his wife (Portion 32, 50 acres); George Lisk, a watchmaker (Portion 31, 50 acres) and William Parish, a seaman with his wife and child (Portion 27, 60 acres). These first grants comprise the core of the CSIRO site.

Driftways had been left between grants throughout the County of Cumberland as stock routes. A number of such routes were left between the early grants at Prospect Hill. A driftway 5 chains wide ran throught the middle of what is now the CSIRO site, along the eastern boundaries of the Lisk, Butler and Nichols grants. In 1872 this land was purchased by Walter Lamb, the then owner of land at Prospect Hill. Another driftway ran along the western boundary of the CSIRO site.

The area generally is believed to be the site of significant Aboriginal skirmishes in the early years of the Colony and the property the location of subsequent reconciliation meetings in 1805 involving Rev. Samuel Marsden and Prospect Aboriginal groups.

In 1819 a large area of 550 acres (part in the subject site) was granted to D'Arcy Wentworth. Wentworth was a surgeon and father of William Wentworth explorer and political activist. The land remained in the family during the 19th century.

Most of the land had been cleared for agricultural practices by the 1820s. By the 1870s most of the early farm dwellings had been removed and the land was devoted to livestock. By 1883 a quarry is noted at the south west corner of Butler's grant. By 1901 a blue metal quarry was in operation on the subject site and a private rail line connected it with Toongabbie. Quarrying firms had acquired ownership of the subject site by the early twentieth century. Near the end of WWII the US established a

Military Camp at an unknown location on or near the site.

CSIRO

In 1920 the Commonwealth Institute of Science and Industry was established, in 1926 new legislation established the Council for Scientific and Industrial Research. The CSIRO we know today was reconstituted in 1949. It undertook research into almost every field of primary, secondary and tertiary industry.

By 1943, H.B Carter, a wool biologist with CSIRO McMaster laboratory was promoting the need for the acquisition of a rural laboratory complex and field station, as the rented laboratory in Sydney had limitations for wool research. In 1944 the first specific proposal for a comprehensive program on sheep and wool production, including the concept of a central biological laboratory for physiological and genetic work on sheep was developed. H.B Carter searched for a site and chose the Prospect property because of its suitable location, close to Sydney and residential areas.

Through the Wool Use Promotion Act 1945 and the Wool Industry Fund Act 1946 the Commonwealth made provision for additional funds to be devoted to the expansion of sheep and wool research, particularly to improve the productivity and fertility of the animals.

The Commonwealth acquired 48 hectares of land at Prospect Hill for CSIRO under the Lands Acquisition Act 1906 on 5 September 1946. Partly used as a model was a similar complex "Babraham" in Cambridge, England.
Originally the site was acquired as the primary field station for the Sheep Biology Laboratory of the then Division of Animal Health & Production with early research focussed on wool biology, reproductive physiology and ruminant digestion and physiology, the aim being to improve the efficiency of wool production.

Fencing was erected for small .7 hectare paddocks and larger paddocks were left on the margins. Construction of the buildings commenced in 1952 with the erection of the Fleece Analysis Building (Blg 9) followed by the Animal House (Blg 7). In 1953, the Feed Store (Blg 8) and Workshop (Blg 10) were constructed. Rough roadways were constructed through the site, bituminised near the buildings and entries, unsurfaced through the paddocks. Entry was from the east via the Great Western Highway.

In 1959, the Prospect site was renamed the Ian Clunies Ross Animal Research Laboratory after the first Chairman of CSIRO (1949-1959). Clunies Ross (1899-1959) oversaw the growth of the CSIRO into a world renowned scientific research organisation. He was knighted for his work in 1954. Clunies Ross was Chairman until his death in 1959 and the change of name of the Prospect site followed his death. At this time the Ian Clunies Ross Animal Research Laboratory became the headquarters of the Division of Animal Physiology. Research from the Division enjoyed international repute, particularly for its achievements in improving lamb survival and developing feeding and reproductive strategies for sheep and cattle.

Research into sheep biology at Prospect was integrated with research on pastures at the Pastoral Research Laboratory, Armidale, to develop new pasture management systems for wool production enterprises.

The Administration/Laboratory Building (Blg 1) was designed by Stephenson & Turner in the Post War International Style, and completed in 1959. In 1937 D.K. Turner joined Arthur Stephenson as partner, and the architectural firm Stephenson and Turner was formed. They were renowned institutional and commercial architects and were key practitioners of the Post War International Style, designing the former IBM Centre, Sydney (1964) and the General Motors Holden Complex, Melbourne (1956) as well as the CSIRO Building 1.

The application of the post war international style to laboratory buildings appears relatively rare. Similarly designed buildings included the Weston Electronics Building (former Boots Pure Drug Company) building, Eastern Valley Way, Roseville East, Sydney by Stafford, Moor and Farrington and J. Torzillo Architects (1954) and Anzac Hall, College Street, Sydney, both now demolished.

Building 1 was opened by the Governor-General Lord Casey in early 1960.
It is a one and two storey building in a T shape. This building is the largest on the site, and when constructed was the first building on the original entry road, accessed from the Great Western Highway. It was orientated to the north and located on the southern side of the main entry road. The ground floor is laboratories located off both

sides of a central corridor. Sympathetic additions occurred in 1994 and 1995.

Building 1 is associated with a number of significant scientific outcomes subsequently implemented by industry including: 1982 the commercialisation of Fecundin (Registered) (a vaccine to increase lambing percentage; 1983 the pioneering of the development of "protected" proteins, marketed as Norpro to improve body weight gain, wool growth and milk production; 1990 developed anti-LHRH vaccine, Vaxstrate, for immunocastration of livestock and for fertility control. Fecudin, Norpro and Vaxtrate were developed in the laboratories of Building 1.

The building complex continued to expand after its establishment, more buildings were constructed higher up the slope towards Prospect Hill and to the east of Building 1.

A further 14.97 hectares of land was purchased by the Australian Wool Corporation in 1963 bringing the total holding to 62.95 hectares.

In 1975, the Divisions of Animal Physiology and Animal Genetics were amalgamated to become the Division of Animal Production. This created a very large Division with laboratories in Townsville, Rockhampton, Perth, Armidale, North Ryde and Prospect. Research on the Prospect site has focussed on sheep, cattle, kangaroos, goats and rabbits. Research on animal production has also been undertaken at Armidale and in Western Australia.

The Genetic Building (Blg 35) was completed in 1982 resulting in a substantial shift of research focus towards molecular biology and its application to the animal industries. It is a large two storey red brick laboratory building with mansard roof. The Building is currently vacant but contains laboratory equipment including stainless steel benches, laboratory basins, taps, gas outlets, fume cupboards and ventilation. Building 35 is associated with the genetic engineering of livestock. The first genetically engineered sheep - containing extra growth hormone genes was born at the site in 1986. This development led CSIRO to be internationally recognised for genetic engineering expertise.

Also in 1982, the Division of Animal Production was split into two sections with the Queensland laboratories joining parts of Division of Animal Health (as it was then known) to become the Division of Tropical Animal Production.

A stock dam was constructed, presumably in the 1950s, this was increased in the 1990s for flood control, following a flood in the 1980s.

In 1931 Sir Frederick D. McMaster a NSW grazier donated 20 000 pounds to the Council for Scientific and Industrial Research, with which they built the McMaster Laboratory within the grounds of Sydney University in the Veterinary Precinct. In 1989 the University sought to take over the CSIRO's occupation of the McMaster Laboratory and planning commenced to relocate laboratory operations to the Prospect site. The McMaster Laboratory (Blg 42) was designed by Collard Clarke & Jackson and constructed in 1994 to accommodate the relocation. The building has interesting design features including a curved corrugated iron roof, steel frame with off white metal panel walling, sun shading over northern windows and turnbuckle tension rods expressing its structural system, all signature design features of 1990s Australian architecture. Most ongoing scientific research is being undertaken in the McMaster Laboratory.

In 1990, 6 hectares of the property were resumed for the construction of the M4 Motorway.

In 2000, the CSIRO's Agribusiness Industries Sector was focussed on research to improve the global competitiveness and sustainability of Australia's livestock production and rural based manufacturing industries. The research also influenced food production systems and consumption choices to promote the good health of Australians. The Agribusiness Industries Sector is made up of six divisions comprising Animal Health, Animal Production, Plant Industry, Food Science Australia, Textile and Fibre Technology and Tropical Agriculture. Parts of the Division of Animal Production (DAP) have been located at the Prospect site over the time of CSIRO's occupation. The Division of Animal Health moved to the site in 1994 with the relocation of the McMaster Laboratory from Sydney University.

In 2000 the Prospect facility was used for the following disciplines and research areas: Animal Breeding; Animal Health and Welfare; Immunology; Mathematical Modelling; Microbiology; Molecular Genetics Parasitology; Ruminant Nutrition & Research - Aqua Centre; Animal Health & Welfare; Biotechnology; Livestock Systems Modelling; Pig Industry Research; Sheep Meat Industry Research and Wool Industry Research.

In May 2000, CSIRO announced a rationalisation and revitalisation of its national livestock research operations centred on a major new commitment to biotechnology at the Institute of Molecular Bioscience in Brisbane. Other rural and regional laboratories at Armidale, Rockhampton, and Geelong would be integrated as part of a new CSIRO Division dealing with livestock related research. The CSIRO propose to release the site for sale and the work currently located at Prospect will be progressively moved to other centres, with the McMaster Laboratory being transferred to Armidale.

The site has been used by CSIRO continuously since 1946 for research into animal behaviour under experimental conditions. The Prospect facility has targeted its research efforts into national priorities focussed on the pastoral industry. Aside from the significant work detailed above undertaken relating to livestock production, recent work by CSIRO at Prospect in transgenics, genomics, other DNA technologies and integrated parasite control is important for the future of these industries as well as significant to science.

In 2001 there are forty buildings on the site. A full list of buildings and their construction dates is included in the description. The Administration/ Laboratory Building (Blg 1), Genetics Building (Blg 37t) and the McMaster Laboratory (Blg 42) together represent the development and changing design of laboratories over a forty year period. Inherent in the CSIRO ownership and use of these buildings is a degree of scientific and technical interest. They were built as state of the art research laboratories for CSIRO who were at the forefront of Australian Scientific Research. These buildings represent the nature of the use of the site by CSIRO for Animal Research.

DESCRIPTION

The site is approximately 57 hectares and is bounded by the M4 Motorway to the north, Clunies Ross Street and Boral Brickworks to the west, residential development to the east and a quarry to the south (land to the south is to be converted for employment and residential use).

The place has largely been cleared except for remnants of Sydney River Flat Forest and Cumberland Plain Woodland scattered across the place, notably on the eastern side of the property. No detailed flora surveys have been carried out at the site, however 58 fauna species occur in the vicinity of the place, including 43 birds, seven mammals, four reptiles and three frogs.

Prospect Hill is a key element of the site, its apex defining the south-western corner of the property. It is Sydney's largest body of igneous rock, rising to 117 metres above sea level. A portion of the hill is located within land owned by Boral Brickworks. On the slope of the hill, north of the hilltop, is an abandoned quarry dating to the latter part of the 19th century. Prospect Hill provides views of the Cumberland Plain from Sydney City in the east to the Blue Mountains in the west. From Prospect Hill remnant boundaries associated with the Lisk, Butler and Nichols grants which coincide with the CSIRO western boundary and part of the CSIRO southern boundary which coincides with the dividing boundary between the List and Parish grants can be seen. Prospect Hill is formed of a large igenous body that may be of geoheritage significance, however no information was available at the time of assessment. Part of the curtilage of Prospect Hill is located on the adjoining Boral site. Whilst the heritage significance of Prospect Hill relates to all of the Hill, this assessment only relates to that section in Commonwealth ownership.

The northwest corner of the site is occupied by a mixed group of forty CSIRO buildings and sheds dating from 1952 through to the present. The buildings were positioned here to be accessible from the original site entry from the Great Western Highway. They occupy approximately seven hectares in total. Building 1 is orientated to the north and located on the southern side of the main entry road. The other buildings are positioned behind Building 1.

A complete list of buildings, their completion dates, construction type and building number follow: Blg 9 Fleece Analysis Building (1952) one storey of concrete and brick construction; Blg 7 Animal House (1952) two storey of brick construction;Blg 8 Feed Store (1953) two storey, brick veneer; Blg 10 Workshop (1953) one storey of brick construction; Blg 6 Climate Control Building (1954) two storey brick construction; Blg 13 Flammable Liquids Store (1954) one storey brick; Blg 14 Small Animal Colony (1954) one storey brick; Blg 11 Amenities Building (1955) one store brick; Blg 15 Flea House (1955) one storey timber/FC; Blg 4 Animal House (1956) one storey brick veneer; Blg 28 Store (1958) one storey brick; Blg 1 Administration Library (1959) two storey brick; Blg 5 Isotope Laboratory (1961) one storey brick; Blg 17 Farm Machinery (1961) one storey timber/corrugated iron; Blg 20 Shearing Shed (1961) one storey timber/corrugated iron; Blg 12 Process Bay (1968) single storey timber/corrugated iron; Blg 24 Sheep Barn (1970) one storey corrugated GI; Blg 27 Dairy (1970) single storey corrugated GI; Blg 29 Covered Sheep Yards (1970) one storey timber; Blg 33 Feed Store (1973) one storey timber/AC; Blg 30 Cattle Complex (1975) one storey corrugated GI; Blg 32 Carcase Incinerator (1976) one storey brick veneer; Blg 34 Quarantine Yards (1978) one storey steel; Blg 36 Gene Transfer Facility (1979) one storey corrugated iron/GI; Blg 37 Sub Station (1979) one storey brick;

Blg 38 Photoperiod facility (1980) one storey concrete/brick; Blg 35 Genetics Building (1982) two storey brick veneer; Blg 39 Process bay Store (1986) one storey corrugated/GI; Blg 40 Caretakers Residence (1988) one storey brick veneer; Blg 41 Post Mortem Facility (1990) one storey brick/steel; Blg 39a Storage Shed (1992) one storey gal steel; Blg 1a Library (1994) one storey brick; Blg 42 McMaster Laboratory (1994) two storey steel/FC Sheet; Blg 43 Animal House (1994) two storey steel; Blg 1b Theatre (1995) two storey brick; Blg 41a Extension (1995) one storey brick; Blg 45 Farm Shed (1995) one storey galvanised steel construction.

The Administration/Laboratory Building (Blg 1), Genetic Building (Blg 35), and the McMaster Laboratory (Blg 42) are of interest.

The Administration/Laboratory Building (Blg 1) (also known as the Clunies Ross Building) is of particular significance designed by Stephenson & Turner in the Post War International Style, and completed in 1959. It is a one and two storey building in a T shape. The main entry to the building is at the junction of the T. the central two storey portion contains the entrance, reception, stair case and general accommodation for scientists and executives. The entry foyer is of interest, the floor of terrazzo with brass dividing strips. There is also an impressive open tread timber stairway. The ceiling of the corridor is made of perforated metal panels.

A single storey wing stretches for a hundred metres, parallel to a driveway, orientated to the north. It contains a central corridor with laboratories either side. The wing has a skillion metal tray roof. The length of the wing is emphasised on the south facade by a continuous metal clad fascia, which bears the CSIRO name, logo and motto. In contrast, the walling below the fascia, and on the south facade has a repetitive modular form which follows the structural grid. Concrete columns, rendered and painted white, are the most prominent element. Between each pair of columns there is a panel of light coloured face brickwork with aluminium framed window walling above.

The two storey wing of the building is the vertical bar of the T. It has a long butterfly roof of unequal pitch. This wing is similar to the other wing in its face brick construction, the size of the structural grid, and the glazing design of the windows. The walls are generally flat planes. The laboratories have high level plaster ceilings. Window eaves protect the laboratories from the northern sun. At the ground floor level the corridor connects to a cafeteria. The walls are window walls between concrete blade columns, faced in exposed aggregate. There is a roof terrace above the cafeteria.

A number of the laboratories are now used by the NSW Police Forensic Section for sample examination and photographic processing, others have been converted to offices. The remaining laboratories have timber benching and shelving. Sympathetic additions occurred in 1994 and 1995. This building is the largest on the site, and when constructed was the first building on the original entry road, accessed from the Great Western Highway.

The Genetic Building (Blg 35) 1982 designed by the Department of Housing and Construction, is a large red brick laboratory building, with two attached wings, each with a rectangular plan. One wing is two storeys, the other is single storey. Both wings have gabled mansard roofs, clad in metal tray sheeting. The Building is currently vacant but contains laboratory equipment including stainless steel benches, laboratory basins, taps, gas outlets, fume cupboards and ventilation. The internal partitions are full height brick work.

Also of note is the McMaster Laboratory (Blg 42), designed by Collard Clarke & Jackson and constructed in 1994 to accommodated the relocation of the McMaster Laboratory from Sydney University. It is the second largest building on the site. It has a steel frame and is clad with fibre cement sheeting, with a recessed edge profile. It is two storeys and the floor plan is rectangular. The main roof consisits of two segmental curves, each clad with steel sheeting in a custom orb profile. There is a large skylight in the main roof over the full height entry foyer. The longer north and south facades have aluminium framed strip windows. Some windows have curved hoods, clad with custom orb sheeting as sun shading. The roof to the porte cochere is of similar construction. Turnbuckle tension rods express its structural system. The building is fully occupied.

Amenity Planting from the 1960s and early 1970s is laid out around the building group. A notable group and row planting of Lemonscented Gums are located behind the Administration Building (1) and in a row along the internal road to the east. A sparse avenue of Scoparia Gums line the earlier entry road from the east. A few mature New England Peppermints are set around the Administration Building particularly the rear courtyard. Three Pencil Cypress Pines, an Olive and a remnant Narrow Leaf Ironbark are also located in the courtyard. Historical archaeological remains could survive in this area, however there is no surviving above ground evidence for the location of former structures. At the present western entrance is a mature Hills Fig.

In a south east courtyard are two semi mature Peppercorns. Near the south east courtyard is a row of Red Ash. Other amenity plantings include a Chinese Elm, Chinese

Ash and Claret Ash, Lombardy Poplar c. 17 metres, Jacarandas, Silky Oak, Black Wattle, Callistemon and banks of shrubs.

The route of an early tramway from the Prospect Hill quarries, now a bitumen road, was recorded in the north west portion of the site.

Most of the site is cleared for pasture grasses, Kikuyu is the principal improved pasture grass. Two rows of fenced paddocks form a grid running north-west parallel to the contours. The remainder of the site is divided into a number of much larger paddocks.

A small shallow creek runs almost the length of the site, north to south, eventually joining the Parramatta River. A stock dam (retention basin) of 3 hectares lies in a central location on the creek line. Remnant stands of native vegetation are located along the creek.

Cultural windbreak and screen planting occurs along the southern boundaries, screening the site from the Boral quarry site to the south and residential properties to the east and Greystanes Road. A row of Radiata Pines front Greystanes Road. On the southern boundary is screen planting composed of Swamp Sheoaks and screen plantings of Silky Oaks and Eucalyptus and some wattles. More recent screening is located on the northern embankment fronting the M4 Motorway. There is no surviving evidence on the site of cultural planting prior to the 1960s.

The site has been in continuous agricultural use since 1791. Except for the boundaries of these earlier grants coinciding with the CSIRO boundaries in certain areas, there is no other above ground evidence of the earlier settlement of the land. The long term pastoral use of the site has ensured the site retains archaeological potential.

The current site is 57 hectares after 6 hectares of the property were resumed for the construction of the M4 Motorway in 1990.

It should be noted that the heritage significance of Prospect Hill relates to all of the Hill, although this assessment only relates to that in Commonwealth ownership.

The Register of the National Estate listing includes: Prospect Hill and 1791 grant boundaries.

History Not Available

Condition and Integrity

In 2000 the buildings were all in good condition, although not all utilised.
Most of the buildings have had alterations since their construction.

The section of Prospect Hill in CSIRO ownership is in fair condition; the original surface form has been largely retained except for the impact of the retention dam, the expressway and its embankment and a small abandoned 19th century quarry on the western boundary.

The landscape is in fair condition. There are some invading species, including willows along the creek line.

Location

About 6ha, off Clunies Ross Street, Prospect, comprising the following: 1. that part of the south west corner of the CSIRO site to the west of the 74 metre ASL contour. 2. The western fenceline boundary that extends from the south west corner (approximate AMG point:07965625) to the northern most corner of the site (approximate AMG point: 08165718). 3. the original southern fenceline boundary extending easterly from the same south west corner of the site for approximately 300 metres. 4. the entry road and 10 metre on either side of the centreline extending easterly from its intersection with Clunies Ross Street (approximate AMG point 08085708) for approximately 300 metres.

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Web sites:

Ian Clunies Ross Memorial Foundation - hhtp://www.cluniesross.org.au

CSIRO - hhtp://www.csiro.au

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Place Details

Send Feedback

CSIRO Division of Animal Production, Clunies Ross St, Prospect, NSW, Australia

Photographs	None
List	Register of the National Estate (Non-statutory archive)
Class	Historic
Legal Status	Registered (20/05/2003)
Place ID	102272
Place File No	1/14/015/0006

Statement of Significance

Within the CSIRO Division of Animal Production site, the significant elements are Prospect Hill and the 1791 grant boundaries.

Prospect Hill is of historical, geological, topographical, archaeological and aesthetic significance. Prospect Hill is a rare geological and landmark topographic feature, being a dolerite outcrop rising to a height of 117 metres above sea level, and lying centrally within the Cumberland Plain.
It is a key element in the landscape and provides important views of the Cumberland Plain, from Sydney City in the east to the Blue Mountains in the west (Criteria B.1, B.2 & E1).

It is of historical significance having first been explored in the early years of settlement and used as a reference point by other explorers from 1788.
The property is significant to the Darug Aboriginal community as the location for the 1805 reconciliation meeting between Reverend Samuel Marsden and Prospect Aboriginal groups and through its associations with Pemulwuy, and early leader of Aboriginal resistance in the area.
It was the location of a number of the earliest farms and land grants in NSW, which were established in 1791. Boundaries from the 1791 land grants to Nichols, Butler, Lisk, Parish are located within the site. Remnant boundaries associated with the Lisk, Butler and Nichols grants align with the CSIRO western boundary, part of the CSIRO southern boundary aligns with the dividing boundary between the 1791 Lisk and Parish grants, and the CSIRO entry road roughly aligns with the dividing boundary between the Nichols and Butler grants. These provide a record of surveying principles in the early colonial period (Criteria A.4, B.2, & G.1).

Due to its ongoing pastoral and rural use the site has the potential to provide archaeological evidence of early farming practice and settlement even though the site has experienced some disturbance (Criterion C.2).

The site is of historical significance for its use by the CSIRO Division of Animal Production. The work of CSIRO at Prospect is associated with scientific agricultural research programs which have had a significant role in the agricultural development of Australia in the post war period, particularly in relation to the sheep and wool industry. CSIRO acquired the site in 1946 and have used it continuously for animal and agricultural research.

The site is significant for its association with Ian Clunies Ross. In 1959 the site was named in honour of Clunies Ross who made a major contribution to the development of CSIRO into a world renowned scientific research organisation, serving as its Chairman (1949-1959). The site has a special association with CSIRO scientists who have carried out work of importance to Australia's scientific research (Criterion H.1).

Australian Historic Themes: 3.5 Developing primary production; 4.6 Remembering significant phases in the development of settlements, towns and cities; 8.10.5 Advancing knowledge in science and technology.

Official Values Not Available

Description

The site is approximately 57 hectares and is bounded by the M4 Motorway to the north, Clunies Ross Street and Boral Brickworks to the west, residential development to the east and a quarry to the south (land to the south is to be converted for employment and residential use).

The place has largely been cleared except for remnants of Sydney River Flat Forest and Cumberland Plain Woodland scattered across the place, notably on the eastern side of the property. No detailed flora surveys have been carried out at the site, however 58 fauna species occur in the vicinity of the place, including 43 birds, seven mammals, four reptiles and three frogs.

Prospect Hill is a key element of the site, its apex defining the south-western corner of the property. It is Sydney's largest body of igneous rock, rising to 117 metres above sea level. A portion of the hill is located within land owned by Boral Brickworks. On the slope of the hill, north of the hilltop, is an abandoned quarry dating to the latter part of the 19th century. Prospect Hill provides views of the Cumberland Plain from Sydney City in the east to the Blue Mountains in the west. From Prospect Hill remnant boundaries associated with the Lisk, Butler and Nichols grants, which coincide with the CSIRO western boundary and part of the CSIRO southern boundary, which coincides with the dividing boundary between the List and Parish grants can be seen. Prospect Hill is formed of a large igneous body that may be of geo-heritage significance, however no information was available at the time of assessment. Part of the curtilage of Prospect Hill is located on the adjoining Boral site. Whilst the heritage significance of Prospect Hill relates to all of the Hill, this assessment only relates to that section in Commonwealth ownership.

The northwest corner of the site is occupied by a mixed group of forty CSIRO buildings and sheds dating from 1952 through to the present. The buildings were positioned here to be accessible from the original site entry from the Great Western Highway. They occupy approximately seven hectares in total. Building 1 is orientated to the north and located on the southern side of the main entry road. The other buildings are positioned behind Building 1.

A complete list of buildings, their completion dates, construction type and building number follow:

Blg 9 Fleece Analysis Building (1952) one storey of concrete and brick construction;
Blg 7 Animal House (1952) two storey of brick construction;
Blg 8 Feed Store (1953) two storey, brick veneer;
Blg 10 Workshop (1953) one storey of brick construction;
Blg 6 Climate Control Building (1954) two storey brick construction;
Blg 13 Flammable Liquids Store (1954) one storey brick;
Blg 14 Small Animal Colony (1954) one storey brick;
Blg 11 Amenities Building (1955) one store brick;
Blg 15 Flea House (1955) one storey timber/FC;
Blg 4 Animal House (1956) one storey brick veneer;
Blg 28 Store (1958) one storey brick;
Blg 1 Administration Library (1959) two storey brick;
Blg 5 Isotope Laboratory (1961) one storey brick;
Blg 17 Farm Machinery (1961) one storey timber/corrugated iron;
Blg 20 Shearing Shed (1961) one storey timber/corrugated iron;
Blg 12 Process Bay (1968) single storey timber/corrugated iron;
Blg 24 Sheep Barn (1970) one storey corrugated GI;
Blg 27 Dairy (1970) single storey corrugated GI;
Blg 29 Covered Sheep Yards (1970) one storey timber;
Blg 33 Feed Store (1973) one storey timber/AC;
Blg 30 Cattle Complex (1975) one storey corrugated GI;
Blg 32 Carcase Incinerator (1976) one storey brick veneer;
Blg 34 Quarantine Yards (1978) one storey steel;
Blg 36 Gene Transfer Facility (1979) one storey corrugated iron/GI;
Blg 37 Sub Station (1979) one storey brick;
Blg 38 Photoperiod facility (1980) one storey concrete/brick;
Blg 35 Genetics Building (1982) two storey brick veneer;
Blg 39 Process bay Store (1986) one storey corrugated/GI;
Blg 40 Caretakers Residence (1988) one storey brick veneer;
Blg 41 Post Mortem Facility (1990) one storey brick/steel;
Blg 39a Storage Shed (1992) one storey gal steel;
Blg 1a Library (1994) one storey brick;
Blg 42 McMaster Laboratory (1994) two storey steel/FC Sheet;
Blg 43 Animal House (1994) two storey steel;
Blg 1b Theatre (1995) two storey brick;
Blg 41a Extension (1995) one storey brick;
Blg 45 Farm Shed (1995) one storey galvanised steel construction.

The Administration/Laboratory Building (Blg 1), Genetic Building (Blg 35), and the McMaster Laboratory (Blg 42) are of interest.

The Administration/Laboratory Building (Blg 1) (also known as the Clunies Ross Building) is of particular significance, designed by Stephenson & Turner in the Post War International Style, and completed in 1959. It is a one and two storey building in a T shape. The main entry to the building is at the junction of the T. The central two storey portion contains the entrance, reception, stair case and general accommodation for scientists and executives. The entry foyer is of interest, the floor of terrazzo with brass dividing strips. There is also an impressive open tread timber stairway. The ceiling of the corridor is made of perforated metal panels.

A single storey wing stretches for a hundred metres, parallel to a driveway, orientated to the north. It contains a central corridor with laboratories either side. The wing has a skillion metal tray roof. The length of the wing is emphasised on the south facade by a continuous metal clad fascia, which bears the CSIRO name, logo and motto. In contrast, the walling below the fascia, and on the south facade has a repetitive modular form, which follows the structural grid. Concrete columns, rendered and painted white, are the most prominent element. Between each pair of columns there is a panel of light coloured face brickwork with aluminium framed window walling above.

The two storey wing of the building is the vertical bar of the T. It has a long butterfly roof of unequal pitch. This wing is similar to the other wing in its face brick construction, the size of the structural grid, and the glazing design of the windows. The walls are generally flat planes. The laboratories have high level plaster ceilings. Window eaves protect the laboratories from the northern sun. At the ground floor level the corridor connects to a cafeteria. The walls are window walls between concrete blade columns, faced in exposed aggregate. There is a roof terrace above the cafeteria.

A number of the laboratories are now used by the NSW Police Forensic Section for sample examination and photographic processing, others have been converted to offices. The remaining laboratories have timber benching and shelving. Sympathetic additions occurred in 1994 and 1995. This building is the largest on the site, and when constructed was the first building on the original entry road, accessed from the Great Western Highway.

The Genetic Building (Blg 35), 1982 designed by the Department of Housing and Construction, is a large red brick laboratory building, with two attached wings, each with a rectangular plan. One wing is two storeys, the other is single storey. Both wings have gabled mansard roofs, clad in metal tray sheeting. The Building is currently vacant but contains laboratory equipment including stainless steel benches, laboratory basins, taps, gas outlets, fume cupboards and ventilation. The internal partitions are full height brick work.

Also of note is the McMaster Laboratory (Blg 42), designed by Collard Clarke & Jackson and constructed in 1994 to accommodate the relocation of the McMaster Laboratory from Sydney University. It is the second largest building on the site. It has a steel frame and is clad with fibre cement sheeting, with a recessed edge profile. It is two storeys and the floor plan is rectangular. The main roof consists of two segmental curves, each clad with steel sheeting in a custom orb profile. There is a large skylight in the main roof over the full height entry foyer. The longer north and south facades have aluminium framed strip windows. Some windows have curved hoods, clad with custom orb sheeting as sun shading. The roof to the porte cochere is of similar construction. Turnbuckle tension rods express its structural system. The building is fully occupied.

Amenity Planting from the 1960s and early 1970s is laid out around the building group. A notable group and row planting of Lemon scented Gums are located behind the Administration Building (1) and in a row along the internal road to the east. A sparse avenue of Scoparia Gums line the earlier entry road from the east. A few mature New England Peppermints are set around the Administration Building, particularly the rear courtyard. Three Pencil Cypress Pines, an Olive and a remnant Narrow Leaf Ironbark are also located in the courtyard. Historical archaeological remains could survive in this area, however there is no surviving above ground evidence for the location of former structures. At the present western entrance is a mature Hills Fig.

In a south east courtyard are two semi mature Peppercorns. Near the south east courtyard is a row of Red Ash. Other amenity plantings include a Chinese Elm, Chinese Ash and Claret Ash, Lombardy Poplar c. 17 metres, Jacarandas, Silky Oak, Black Wattle, Callistemon and banks of shrubs.

The route of an early tramway from the Prospect Hill quarries, now a bitumen road, was recorded in the north west portion of the site.

Most of the site is cleared for pasture grasses, Kikuyu is the principal improved pasture grass. Two rows of fenced paddocks form a grid running north-west parallel to the contours. The remainder of the site is divided into a number of much larger paddocks.

A small shallow creek runs almost the length of the site, north to south, eventually joining the Parramatta River. A stock dam (retention basin) of 3 hectares lies in a central location on the creek line. Remnant stands of native vegetation are located along the creek.

Cultural windbreak and screen planting occurs along the southern boundaries, screening the site from the Boral quarry site to the south and residential properties to the east and Greystanes Road. A row of Radiata Pines front Greystanes Road. On the southern boundary is screen planting composed of Swamp Sheoaks and screen plantings of Silky Oaks and Eucalyptus and some wattles. More recent screening is located on the northern embankment fronting the M4 Motorway. There is no surviving evidence on the site of cultural planting prior to the 1960s.

The site has been in continuous agricultural use since 1791. Except for the boundaries of these earlier grants coinciding with the CSIRO boundaries in certain areas, there is no other above ground evidence of the earlier settlement of the land. The long term pastoral use of the site has ensured the site retains archaeological potential.

The current site is 57 hectares after 6 hectares of the property were resumed for the construction of the M4 Motorway in 1990.

It should be noted that the heritage significance of Prospect Hill relates to all of the Hill, although this assessment only relates to that in Commonwealth ownership.

The Register of the National Estate listing includes: Prospect Hill and 1791 grant boundaries.

History

It has been written that Governor Phillip explored Prospect Hill in April 1788, however there is doubt as to the accuracy of this. It is known that Watkin Tench, an officer of the Marines on the First Fleet, led a party from Parramatta to the summit of Prospect Hill, then across to the Nepean River on 26 June 1789. The hill became known as Prospect Hill as it was an important fixed guiding point for other early explorers.

First European settlement of the area occurred in 1791 on the eastern and southern slopes of Prospect Hill. Within the CSIRO site are four (some only in part) 1791 land grants. These grants were to emancipated convicts from the First Fleet: John Nichols, a gardener (Portion 33, 30 acres); William Butler, a seaman and his wife (Portion 32, 50 acres); George Lisk, a watchmaker (Portion 31, 50 acres) and William Parish, a seaman with his wife and child (Portion 27, 60 acres). These first grants comprise the core of the CSIRO site.

Driftways had been left between grants throughout the County of Cumberland as stock routes. A number of such routes were left between the early grants at Prospect Hill. A driftway 5 chains wide ran through the middle of what is now the CSIRO site, along the eastern boundaries of the Lisk, Butler and Nichols grants. In 1872, this land was purchased by Walter Lamb, the then owner of land at Prospect Hill. Another driftway ran along the western boundary of the CSIRO site.

The area generally is believed to be the site of significant Aboriginal skirmishes in the early years of the Colony and the property the location of subsequent reconciliation meetings in 1805 involving Rev. Samuel Marsden and Prospect Aboriginal groups.

In 1819 a large area of 550 acres (part in the subject site) was granted to D'Arcy Wentworth. Wentworth was a surgeon and father of William Wentworth explorer and political activist. The land remained in the family during the 19th century.

Most of the land had been cleared for agricultural practices by the 1820s. By the 1870s, most of the early farm dwellings had been removed and the land was devoted to livestock. By 1883, a quarry is noted at the south west corner of Butler's grant. By 1901, a blue metal quarry was in operation on the subject site and a private rail line connected it with Toongabbie. Quarrying firms had acquired ownership of the subject site by the early twentieth century. Near the end of WWII the US established a Military Camp at an unknown location on or near the site.

CSIRO

In 1920 the Commonwealth Institute of Science and Industry was established, in 1926 new legislation established the Council for Scientific and Industrial Research. The

CSIRO we know today was reconstituted in 1949. It undertook research into almost every field of primary, secondary and tertiary industry.

By 1943, H.B Carter, a wool biologist with CSIRO McMaster laboratory was promoting the need for the acquisition of a rural laboratory complex and field station, as the rented laboratory in Sydney had limitations for wool research. In 1944, the first specific proposal for a comprehensive program on sheep and wool production, including the concept of a central biological laboratory for physiological and genetic work on sheep was developed. H.B Carter searched for a site and chose the Prospect property because of its suitable location, close to Sydney and residential areas.

Through the Wool Use Promotion Act 1945 and the Wool Industry Fund Act 1946, the Commonwealth made provision for additional funds to be devoted to the expansion of sheep and wool research, particularly to improve the productivity and fertility of the animals.

The Commonwealth acquired 48 hectares of land at Prospect Hill for CSIRO under the Lands Acquisition Act 1906 on 5 September 1946. Partly used as a model was a similar complex "Babraham" in Cambridge, England.

Originally, the site was acquired as the primary field station for the Sheep Biology Laboratory of the then Division of Animal Health & Production with early research focused on wool biology, reproductive physiology and ruminant digestion and physiology, the aim being to improve the efficiency of wool production.

Fencing was erected for small, 7 hectare paddocks and larger paddocks were left on the margins. Construction of the buildings commenced in 1952 with the erection of the Fleece Analysis Building (Blg 9), followed by the Animal House (Blg 7). In 1953, the Feed Store (Blg 8) and Workshop (Blg 10) were constructed. Rough roadways were constructed through the site, bituminised near the buildings and entries, unsurfaced through the paddocks. Entry was from the east via the Great Western Highway.

In 1959, the Prospect site was renamed the Ian Clunies Ross Animal Research Laboratory after the first Chairman of CSIRO (1949-1959). Clunies Ross (1899-1959) oversaw the growth of the CSIRO into a world renowned scientific research organisation. He was knighted for his work in 1954. Clunies Ross was Chairman until his death in 1959 and the change of name of the Prospect site followed his death. At this time, the Ian Clunies Ross Animal Research Laboratory became the headquarters of the Division of Animal Physiology. Research from the Division enjoyed international repute, particularly for its achievements in improving lamb survival and developing feeding and reproductive strategies for sheep and cattle.

Research into sheep biology at Prospect was integrated with research on pastures at the Pastoral Research Laboratory, Armidale, to develop new pasture management systems for wool production enterprises.

The Administration/Laboratory Building (Blg 1) was designed by Stephenson & Turner in the Post War International Style, and completed in 1959. In 1937, D.K. Turner joined Arthur Stephenson as partner, and the architectural firm Stephenson and Turner was formed. They were renowned institutional and commercial architects and were key practitioners of the Post War International Style, designing the former IBM Centre, Sydney (1964) and the General Motors Holden Complex, Melbourne (1956) as well as the CSIRO Building 1.

The application of the post war international style to laboratory buildings appears relatively rare. Similarly designed buildings included the Weston Electronics Building (former Boots Pure Drug Company) building, Eastern Valley Way, Roseville East, Sydney by Stafford, Moor and Farrington and J. Torzillo Architects (1954) and Anzac Hall, College Street, Sydney, both now demolished.

Building 1 was opened by the Governor-General Lord Casey in early 1960. It is a one and two storey building in a T shape. This building is the largest on the site, and when constructed was the first building on the original entry road, accessed from the Great Western Highway. It was orientated to the north and located on the southern side of the main entry road. The ground floor is laboratories located off both sides of a central corridor. Sympathetic additions occurred in 1994 and 1995.

Building 1 is associated with a number of significant scientific outcomes subsequently implemented by industry including: 1982 the commercialisation of Fecundin (Registered) (a vaccine to increase lambing percentage); 1983 the pioneering of the development of "protected" proteins, marketed as Norpro to improve body weight gain, wool growth and milk production; 1990 developed anti-LHRH vaccine, Vaxstrate, for immunocastration of livestock and for fertility control. Fecudin, Norpro and

Vaxtrate were developed in the laboratories of Building 1.

The building complex continued to expand after its establishment, more buildings were constructed higher up the slope towards Prospect Hill and to the east of Building 1.

A further 14.97 hectares of land was purchased by the Australian Wool Corporation in 1963 bringing the total holding to 62.95 hectares.

In 1975, the Divisions of Animal Physiology and Animal Genetics were amalgamated to become the Division of Animal Production. This created a very large Division with laboratories in Townsville, Rockhampton, Perth, Armidale, North Ryde and Prospect. Research on the Prospect site has focused on sheep, cattle, kangaroos, goats and rabbits. Research on animal production has also been undertaken at Armidale and in Western Australia.

The Genetic Building (Blg 35) was completed in 1982 resulting in a substantial shift of research focus towards molecular biology and its application to the animal industries. It is a large two storey red brick laboratory building with mansard roof. The Building is currently vacant but contains laboratory equipment including stainless steel benches, laboratory basins, taps, gas outlets, fume cupboards and ventilation. Building 35 is associated with the genetic engineering of livestock. The first genetically engineered sheep - containing extra growth hormone genes was born at the site in 1986. This development led CSIRO to be internationally recognised for genetic engineering expertise.

Also in 1982, the Division of Animal Production was split into two sections with the Queensland laboratories joining parts of Division of Animal Health (as it was then known) to become the Division of Tropical Animal Production.

A stock dam was constructed, presumably in the 1950s, this was increased in the 1990s for flood control, following a flood in the 1980s.

In 1931, Sir Frederick D. McMaster, a NSW grazier donated 20 000 pounds to the Council for Scientific and Industrial Research, with which they built the McMaster Laboratory within the grounds of Sydney University in the Veterinary Precinct. In 1989, the University sought to take over the CSIRO's occupation of the McMaster Laboratory and planning commenced to relocate laboratory operations to the Prospect site. The McMaster Laboratory (Blg 42) was designed by Collard Clarke & Jackson and constructed in 1994 to accommodate the relocation. The building has interesting design features including a curved corrugated iron roof, steel frame with off white metal panel walling, sun shading over northern windows and turnbuckle tension rods expressing its structural system, all signature design features of 1990s Australian architecture. Most ongoing scientific research is being undertaken in the McMaster Laboratory.

In 1990, 6 hectares of the property were resumed for the construction of the M4 Motorway.

In 2000, the CSIRO's Agribusiness Industries Sector was focused on research to improve the global competitiveness and sustainability of Australia's livestock production and rural based manufacturing industries. The research also influenced food production systems and consumption choices to promote the good health of Australians. The Agribusiness Industries Sector is made up of six divisions, comprising Animal Health, Animal Production, Plant Industry, Food Science Australia, Textile and Fibre Technology and Tropical Agriculture. Parts of the Division of Animal Production (DAP) have been located at the Prospect site over the time of CSIRO's occupation. The Division of Animal Health moved to the site in 1994 with the relocation of the McMaster Laboratory from Sydney University.

In 2000, the Prospect facility was used for the following disciplines and research areas: Animal Breeding; Animal Health and Welfare; Immunology; Mathematical Modelling; Microbiology; Molecular Genetics Parasitology; Ruminant Nutrition & Research - Aqua Centre; Animal Health & Welfare; Biotechnology; Livestock Systems Modelling; Pig Industry Research; Sheep Meat Industry Research and Wool Industry Research.

In May 2000, CSIRO announced a rationalisation and revitalisation of its national livestock research operations centred on a major new commitment to biotechnology at the Institute of Molecular Bioscience in Brisbane. Other rural and regional laboratories at Armidale, Rockhampton, and Geelong would be integrated as part of a new CSIRO Division dealing with livestock related research. The CSIRO propose to release the site for sale and the work currently located at Prospect will be progressively moved to other centres, with the McMaster Laboratory being transferred to Armidale.

The site has been used by CSIRO continuously since 1946 for research into animal behaviour under experimental conditions. The Prospect facility has targeted its research efforts into national priorities focused on the pastoral industry. Aside from the significant work detailed above undertaken relating to livestock production, recent work by CSIRO at Prospect in transgenics, genomics, other DNA technologies and integrated parasite control is important for the future of these industries as well as significant to science.

In 2001, there are forty buildings on the site. A full list of buildings and their construction dates is included in the description. The Administration/ Laboratory Building (Blg 1), Genetics Building (Blg 37t) and the McMaster Laboratory (Blg 42) together represent the development and changing design of laboratories over a forty year period. Inherent in the CSIRO ownership and use of these buildings is a degree of scientific and technical interest. They were built as state of the art research laboratories for CSIRO, who were at the forefront of Australian Scientific Research. These buildings represent the nature of the use of the site by CSIRO for Animal Research.

Condition and Integrity

In 2000 the buildings were all in good condition, although not all utilised.
Most of the buildings have had alterations since their construction.

The section of Prospect Hill in CSIRO ownership is in fair condition; the original surface form has been largely retained except for the impact of the retention dam, the expressway and its embankment and a small abandoned 19th century quarry on the western boundary.

The landscape is in fair condition. There are some invading species, including willows along the creek line.

Location

About 6ha, off Clunies Ross Street, Prospect, comprising the following: 1. that part of the south west corner of the CSIRO site to the west of the 74 metre ASL contour. 2. The western fenceline boundary that extends from the south west corner (approximate AMG point:07965625) to the northern most corner of the site (approximate AMG point: 08165718). 3. the original southern fenceline boundary extending easterly from the same south west corner of the site for approximately 300 metres. 4. the entry road and 10 metre on either side of the centreline extending easterly from its intersection with Clunies Ross Street (approximate AMG point 08085708) for approximately 300 metres.

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Web sites:

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CSIRO - hhtp://www.csiro.au

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Office of Environment & Heritage

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 9 records.

Item name	Address	Suburb	LGA	SHR
Former Great Western Road, Prospect	Reservoir Road	Prospect	Blackto	01911

			wn	
Prospect Hill	Clunies Ross Street	Prospect	Holroyd	01662
Prospect Post Office (former)	23 Tarlington Place	Prospect	Blackto wn	01385
Prospect Reservoir and surrounding area	Reservoir Road	Prospect	Blackto wn	01370
Prospect Reservoir Valve House	East Of Reservoir	Prospect	Fairfield	01371
Royal Cricketers Arms Inn	385 Reservoir Road	Prospect	Blackto wn	00660
St. Bartholomew's Anglican Church (former) & Cemetery	Ponds Road	Prospect	Blackto wn	00037
Upper Canal System (Pheasants Nest Weir to Prospect Reservoir)		Prospect	Blackto wn	01373
Veteran Hall - House Remains	Great Western Highway	Prospect	Blackto wn	01351

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

Your search returned 22 records.

Item name	Address	Suburb	LGA	Information source
Bridestowe	568 Reservoir Road	Prospect	Blackt own	LGOV
Electricity Substation	426 - 428 Blacktown Road	Prospect	Blackt own	LGOV

Electricity Substation	432 Blacktown Road	Prospect	Blacktown	LGOV
Former Great Western Highway Alignment	Tarlington Place to Boiler Close	Prospect / Blacktown	Blacktown	LGOV
Former Prospect Post Office	23 Tarlington Place	Prospect	Blacktown	LGOV
House and Original School Building	441 Blacktown Road	Prospect	Blacktown	LGOV
Milestone - Ponds Road and Bartholomews Place	Great Western Highway	Prospect	Blacktown	SGOV
Milestones	Great Western Highway	Prospect, Huntingwood, Minchinbury, Mount Druitt	Blacktown	LGOV
Prospect Hill Reservoir (Elevated) (WS 0095)	Prospect Reservoir, off Reservoir Road	Prospect	Blacktown	SGOV
Prospect Post Office (Former)	23 Tarlington Place	Prospect	Blacktown	SGOV
Prospect Reservoir (operational land)	Reservoir Road	Prospect	Fairfield	SGOV
Prospect Reservoir (operational land)	Reservoir Road	Prospect	Blacktown	SGOV
Prospect Reservoir and surrounding area	1 Picrite Close	Prospect	Holroyd	LGOV
Prospect Reservoir Group	Reservoir Road	Prospect	Blacktown	LGOV
Prospect-Thornleigh Pumping Station (WPS 138)	Reservoir Road	Prospect	Blacktown	SGOV

Royal Cricketers Arms Inn	385 Reservoir Road	Prospect	Blacktown	LGOV
Royal Cricketers Arms Inn	385 Reservoir Road	Prospect	Blacktown	SGOV
Site of Veteran Hall	Reservoir Road	Prospect	Blacktown	LGOV
St Bartholomews Church & Cemetery	Ponds Road	Prospect	Blacktown	LGOV
Upper Nepean Scheme	From Pheasants Nest To Prospect Reservoir	Prospect	Multiple LGAs	SGOV
Veteran Hall Archaeological Site	Reservoir Road	Prospect	Blacktown	SGOV
Veteran Hall remains & site	Reservoir Road (1km south of)	Prospect	Blacktown	GAZ

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

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

Office of Environment & Heritage

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
Prospect Reservoir and surrounding area	Reservoir Road	Prospect	Blacktown	01370

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

Your search returned 6 records.

Item name	Address	Suburb	LGA	Information source
Aboriginal Flaked Stone Artefacts	Clunies Ross Street	Pemulwuy	Holroyd	LGOV
Aboriginal Scarred Tree	Shown by a yellow outline and identified as AH3	Pemulwuy	Holroyd	LGOV
Aboriginal scarred tree and Aboriginal flaked stone artefacts	Shown by a yellow outline and identified as AH1	Pemulwuy	Holroyd	LGOV
Boothtown Aquaduct Aquaduct Valve House No 1 & 2	Albert Street	Guildford West	Holroyd	LGOV
Main Gate - Boral	Greystanes Road	Pemulwuy	Holroyd	LGOV
Prospect Hill	Clunies Ross Street	Pemulwuy	Holroyd	LGOV

There was a total of 7 records matching your search criteria.

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Office of Environment & Heritage

Search for NSW heritage

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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
Prospect Hill	Clunies Ross Street	Prospect	Holroyd	01662

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

Your search returned 2 records.

Item name	Address	Suburb	LGA	Information source
Aboriginal Flaked Stone Artefacts	Clunies Ross Street	Pemulwuy	Holroyd	LGOV
Prospect Hill	Clunies Ross Street	Pemulwuy	Holroyd	LGOV

There was a total of 3 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.
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Prospect Hill

Item details

Name of item:	Prospect Hill
Other name/s:	Bellevue (Hill); Mar-Rong Reserve
Type of item:	Landscape
Group/Collection:	Landscape - Cultural
Category:	Historic Landscape
Location:	Lat: -33.8126561749 Long: 150.9300527660
Primary address:	Clunies Ross Street, Prospect, NSW 2148
Parish:	Prospect
County:	Cumberland
Local govt. area:	Holroyd
Local Aboriginal Land Council:	Deerubbin

Property description

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
PART LOT	5		DP	235064
LOT	B		DP	33023
LOT	3		DP	802794

All addresses

Street Address	Suburb/town	LGA	Parish	County	Type
Clunies Ross Street	Prospect	Holroyd	Prospect	Cumberland	Primary Address
Great Western Highway	Prospect	Holroyd	Prospect	Cumberland	Alternate Address
Butu-Wargun Drive	Greystanes	Holroyd	Prospect	Cumberland	Alternate Address
Reconciliation Road	Prospect	Holroyd	Prospect	Cumberland	Alternate Address

Owner/s

Organisation Name	Owner Category	Date Ownership Updated

Boral Limited	Private	
CSIRO	Private	
Cumberland Council	Local Government	

Statement of significance:

The Prospect Hill area has state significance due to its unique combination of significant landscape feature, potential archaeological site, and association with important historical phases. As a dolerite outcrop rising to a height of 117 metres above sea level, Prospect Hill is a rare geological and significant topographic feature providing expansive views across the Cumberland Plain (Ashton, 2000).

The site is significant as a major reference point for early explorers from 1788, and as the site of a number of the earliest farms in New South Wales, which were established in 1791 (Higginbotham, 2000). Prospect Hill is also associated with Aboriginal frontier warfare during the early days of the colony, and as the site of one of the first Aboriginal/ European reconciliation meetings held in 1805 involving Samuel Marsden and Prospect Aboriginal groups (Flynn 1997).

Through its ongoing pastoral and rural use, the site has the potential to provide archaeological evidence of early farming practice and settlement (Higginbotham 2000). The landscape of Prospect Hill is likely to be one of the only remaining areas of rural land within the local and regional area that has retained its long-term pastoral use since the earliest days of the colony.

Date significance updated: 19 Feb 01

Note: The State Heritage Inventory provides information about heritage items listed by local and State government agencies. The State Heritage Inventory is continually being updated by local and State agencies as new information becomes available. Read the OEH ***copyright and disclaimer****.*

Description

Physical description:

Prospect Hill is Sydney's largest body of igneous rock and rises to a height of 117metres above sea level. The hill is located between the south-west corner of CSIRO Division of Animal Production site and the south-east corner of the Boral Resources (NSW) site at Greystanes. The CSIRO portion of Prospect Hill is generally cleared for pasture grasses, with remnant stands of native vegetation along a creek line that runs from north to south along the site. The portion of Prospect Hill located within the Boral site has remnant stands of trees and has been partially used as part of the Boral Brickworks operation.

The first settlement of the area occurred in 1791 on the eastern and southern slopes of Prospect Hill, however no buildings dating from the 18th or 19th centuries remain above ground (Higginbotham 2000). A number of the original boundaries of the Prospect land grants of 1791can be identified when looking east across the CSIRO site from Prospect Hill (Ashton 2000). On the slope of Prospect Hill, north of the hilltop, is an abandoned quarry dating to the later part of the 19th century (Ashton 2000).

Physical condition and/or Archaeological potential:

The southern portion of Prospect Hill, located within the Boral Brickworks site has been extensively quarried; however the CSIRO site has largely retained its original surface form. Archaeological potential high within the CSIRO site.

Date condition updated:19 Feb 01

Modifications and dates: Various modifications, extensions and refurbishment of buildings within CSIRO research complex over time.

Current use: Public park and reserve (SHR item). Grazing, brick quarry, industry, housing (adjacent lands).

Former use: Rural, quarry, research facility, industry, pastoral and agricultural farms,

History

Historical notes: Aboriginal & European settler history:

The area of Prospect Reservoir is an area of known Aboriginal occupation, with favourable camping locations along the Eastern Creek and Prospect Creek catchments, and in elevated landscapes to the south. There is also evidence to suggest that the occupation of these lands continued after European contact, through discovery of intermingled glass and stone flakes in archaeological surveys of the place. The area was settled by Europeans by 1789.

Prospect Hill, Sydney's largest body of igneous rock, lies centrally in the Cumberland Plain and dominates the landscape of the area (Ashton, 2000). Very early after first settlement, on 26 April 1788, an exploration party heading west led by Governor Phillip, climbed Prospect Hill. An account by Phillip states that the exploration party saw from Prospect Hill, 'for the first time since we landed Carmathen Hills (Blue Mountains) as likewise the hills to the southward'. Phillip's 'Bellevue' (Prospect Hill) acquired considerable significance for the new settlers. Prospect Hill provided a point from which distances could be meaningfully calculated, and became a major reference point for other early explorers (Karskens 1991). When Watkin Tench made another official journey to the west in 1789, he began his journey with reference to Prospect Hill, which commanded a view of the great chain of mountains to the west. A runaway convict, George Bruce, used Prospect Hill as a hideaway from soldiers in the mid-1790s.

During the initial struggling years of European settlement in NSW, Governor Phillip began to settle time-expired convicts on the land as farmers, after the success of James Ruse at Rose Hill (Higginbotham 2000). On 18 July 1791 Phillip placed a number of men on the eastern and southern slopes of Prospect Hill, as the soils weathered from the basalt cap were richer than the sandstone derived soils of the Cumberland Plain. The grants, mostly 30 acres, encircled Prospect Hill (Ashton 2000). The settlers included William Butler, James Castle, Samuel Griffiths, John Herbert, George Lisk, Joseph Morley, John Nicols, William Parish and Edward Pugh (Higginbotham 2000).

The arrival of the first settlers prompted the first organised Aboriginal resistance to the spread of settlement, with the commencement of a violent frontier conflict in which Pemulwuy and his Bidjigal clan played a central role (Flynn 1997). On 1 May 1801 Governor King took drastic action, issuing a public order requiring that Aboriginal people around Parramatta, Prospect Hill and Georges River should be 'driven back from the settlers' habitations by firing at them'. Kings edicts appear to have encouraged a shoot-on-sight attitude whenever any Aboriginal men, women or children appeared (Flynn 1997).

With the death of Pemulwuy, the main resistance leader, in 1802, Aboriginal resistance gradually diminished near Parramatta, although outer areas were still subject to armed hostilities. Prompted by suggestions to the Reverend Marsden by local Prospect Aboriginal groups that a conference should take place 'with a view of opening the way to reconciliation', Marsden promptly organised a meeting near Prospect Hill. (ibid 1997). At the meeting, held on 3 May 1805, local Aboriginal representatives discussed with Marsden ways of ending the restrictions and indiscriminate reprisals inflicted on them by soldiers and settlers in response to atrocities committed by other Aboriginal clans (ibid 1997). The

meeting was significant because a group of Aboriginal women and a young free settler at Prospect named John Kennedy acted as intermediaries. The conference led to the end of the conflict for the Aboriginal clans around Parramatta and Prospect (Karskens 1991). This conference at Prospect on Friday 3 May 1805 is a landmark in Aboriginal/European relations. Macquarie's 'Native Feasts' held at Parramatta from 1814 followed the precedent set in 1805. The Sydney Gazette report of the meeting is notable for the absence of the sneering tone that characterised its earlier coverage of Aboriginal matters (ibid 1997).

From its commencement in 1791 with the early settlement of the area, agricultural use of the land continued at Prospect Hill. Much of the land appears to have been cleared by the 1820s and pastoral use of the land was well established by then. When Governor Macquarie paid a visit to the area in 1810, he was favourably impressed by the comfortable conditions that had been created (Pollon & Healy, 1988, 210).

Nelson Lawson, third son of explorer William Lawson (1774-1850), married Honoria Mary Dickinson and before 1837 built "Greystanes House" as their future family home on the western side of Prospect Hill. Lawson had received the land from his father, who had been granted 500 acres here by the illegal government that followed the overthrow of Governor Bligh in 1808.

Governor Macquarie confirmed the grant, where William Lawson had built a house, which he called "Veteran Hall", because he had a commission in the NSW Veterans Company. The house was demolished in 1928 and the site is now partly covered by the waters of Prospect Reservoir. Greystanes was approached by a long drive lined with an avenue of English trees - elms (Ulmus procera), hawthorns (Crataegus sp.), holly (Ilex aquifolium), and woodbine (Clematis sp.) mingling with jacarandas (J.mimosifolia). It had a wide, semi-circular front verandah supported by 4 pillars. The foundations were of stone ,the roof of slate, and the doors and architraves of heavy red cedar. It was richly furnished with articles of the best quality available and was the scene of many glittering soirees attended by the elite of the colony. Honoria Lawson died in 1845, Nelson remarried a year later, but died in 1849, and the property reverted to his father. Greystanes house was demolished in the 1940s (Pollon, 1988, 116, amended Read, S.,2006 - the house can't have been 'on the crest' of Prospect Hill as Pollon states, if its site was covered by the Reservoir).

By the 1870s, with the collapse of the production of cereal grains across the Cumberland Plain, the Prospect Hill area appears to have largely been devoted to livestock. The dwellings of the earliest settlers largely appear to have been removed by this stage. By the time that any mapping was undertaken in this vicinity, most of these structures had disappeared, making their locations difficult to pinpoint (Higginbotham 2000).

The land was farmed from 1806-1888 when the Prospect Reservoir was built. In 1867, the Governor of NSW appointed a Commission to recommend a scheme for Sydney's water supply, and by 1869 it was recommended that construction commence on the Upper Nepean Scheme. This consisted of two diversion weirs, located at Pheasant's Nest and Broughton's Pass, in the Upper Nepean River catchment, with water feeding into a series of tunnels, canals and aqueducts known as the Upper Canal. It was intended that water be fed by gravity from the catchment into a reservoir at Prospect. This scheme was to be Sydney's fourth water supply system, following the Tank Stream, Busby's Bore and the Botany (Lachlan) Swamps.

Designed and constructed by the Public Works Department of NSW, Prospect Reservoir was built during the 1880s and completed in 1888. Credit for the Upper Nepean Scheme is largely given to Edward Orpen Moriarty, the Engineer in Chief of the Habours and Rivers Branch of the Public Works Department from 1858-88 (B Cubed Sustainability, 2005, 7).

Quarrying of the basalt plug at Prospect Hill was well underway by the mid-nineteenth century (Higginbotham 2000). By the early twentieth century, Prospect Hill land had been acquired by quarrying firms anxious to expand their land holdings near this valuable source of raw material. The bulk of the present CSIRO site was acquired by the Commonwealth in

1946, and a further 15 hectares was acquired in 1963. In the early 1950s the site became operational and sheep were pastured for research purposes. In 2000, the CSIRO site has an area of 57.15 hectares and is the primary research centre of the Division of Animal Production, with some 40 buildings and sheds having been constructed over the last 40 years (Perumal Murphy Wu, 2000).

In 1998 Boral reviewed its holdings with a view to future redevelopment as its quarry neared the end of its life. SEPP59 was gazetted in 1999 applying to a number of Western Sydney holdings including Greystanes Estate, Nelsons Ridge, rezoning land on the hill's west for employment and on the hill's eastern side for housing and regional open space and providing precinct planning controls. Boral developed two precinct plans. Holroyd City Council adopted the residential precinct plan in 2002. The then Minister for Urban Affairs & Planning took over planning powers for the employment area in November 2000 and approved the Employment Precinct Plan in June 2001, approving subdivision and associated works in the northern employment lands later in June 2001. Since, parts of the employment land have been sold and further subdivideed and sold.

In 2002 Delfin Lend Lease entered a joint venture with Boral to develop the residential lands. This part of the estate is now known as Nelson's Ridge (after Nelson Lawson who owned the Greystanes Estate and commissioned Greystanes House in 1837). Nelson's Ridge is being developed by Lend Lease in two stages with the first comprising the northern employment and northern residential lands and the second comprising the southern equivalents.

The former CSIRO site to the north of Nelson's Ridge was vacated in 1/2002 and sold to Stockland in March 2002. SEPP 59 also rezoned it for residential and employment uses. This site has its own precinct plan, now adopted into the Holroyd City Council's Development Control Plan: Part P Pemulwuy Residential Lands. It will eventually be integrated with the Nelson's Ridge development through Driftway Drive as well as cycleways and pedestian links being established between the two (Whelans InSites, 2010, 5).

Prospect Hill was entered on the NSW State Heritage Register in October 2003. A conservation management plan prepared for the hill in 2006 has guided its staged development as a public parkland since. Staged subdivision of Boral lands into both housing areas and public parklands has proceeded in the past decade, c2006-2018.

In December 2018 Cumberland Council unveiled plans for future upgrades to Prospect Hill (Mar-Rong Reserve) as it seeks to prioritise upgrades and asset management (including visitor services provision, facililties for visitors and residents into the future)(Taylor, 2018, abridged).

Historic themes

Australian theme (abbrev)	New South Wales theme	Local theme
1. Environment-Tracing the evolution of a continent's special environments	Environment - naturally evolved-Activities associated with the physical surroundings that support human life and influence or shape human cultures.	Other open space-

1. Environment-Tracing the evolution of a continent's special environments	Environment - naturally evolved-Activities associated with the physical surroundings that support human life and influence or shape human cultures.	Parks-
1. Environment-Tracing the evolution of a continent's special environments	Environment - naturally evolved-Activities associated with the physical surroundings that support human life and influence or shape human cultures.	Changing the environment-
2. Peopling-Peopling the continent	Aboriginal cultures and interactions with other cultures-Activities associated with maintaining, developing, experiencing and remembering Aboriginal cultural identities and practices, past and present.	All nations - reconciliation events-
2. Peopling-Peopling the continent	Aboriginal cultures and interactions with other cultures-Activities associated with maintaining, developing, experiencing and remembering Aboriginal cultural identities and practices, past and present.	Daruk nation - sites of first contact or early interaction with colonisers-
2. Peopling-Peopling the continent	Aboriginal cultures and interactions with other cultures-Activities associated with maintaining, developing, experiencing and remembering Aboriginal cultural identities and practices, past and present.	All nations - place of first contact between Aboriginal and European peoples-
2. Peopling-Peopling the continent	Aboriginal cultures and interactions with other cultures-Activities associated with maintaining, developing, experiencing and remembering Aboriginal cultural identities and practices, past and present.	Daruk Nation - massacre and battle sites-
2. Peopling-Peopling the continent	Aboriginal cultures and interactions with other cultures-Activities associated with maintaining, developing, experiencing and remembering Aboriginal cultural identities and practices, past and present.	All nations - places of battle or other early interactions between Aboriginal and non-Aboriginal peoples-
2. Peopling-Peopling the continent	Aboriginal cultures and interactions with other cultures-Activities associated with maintaining, developing, experiencing and remembering Aboriginal cultural identities and practices, past and present.	All nations - sites evidencing occupation-
2. Peopling-Peopling the continent	Aboriginal cultures and interactions with other cultures-Activities associated with maintaining, developing, experiencing and remembering Aboriginal cultural identities and practices, past and present.	Aboriginal post-contact-May include sites of contact with Europeans, conflict, resistance, interaction and

		urban life.
2. Peopling-Peopling the continent	Convict-Activities relating to incarceration, transport, reform, accommodation and working during the convict period in NSW (1788-1850) - does not include activities associated with the conviction of persons in NSW that are unrelated to the imperial 'convict system': use the theme of Law & Order for such activities	Creating a gentleman's estate-
2. Peopling-Peopling the continent	Convict-Activities relating to incarceration, transport, reform, accommodation and working during the convict period in NSW (1788-1850) - does not include activities associated with the conviction of persons in NSW that are unrelated to the imperial 'convict system': use the theme of Law & Order for such activities	Farming by emancipated convicts on land grants-
3. Economy-Developing local, regional and national economies	Agriculture-Activities relating to the cultivation and rearing of plant and animal species, usually for commercial purposes, can include aquaculture	Orchards-
3. Economy-Developing local, regional and national economies	Agriculture-Activities relating to the cultivation and rearing of plant and animal species, usually for commercial purposes, can include aquaculture	Private farming-
3. Economy-Developing local, regional and national economies	Agriculture-Activities relating to the cultivation and rearing of plant and animal species, usually for commercial purposes, can include aquaculture	Ancillary structures fencing-
3. Economy-Developing local, regional and national economies	Agriculture-Activities relating to the cultivation and rearing of plant and animal species, usually for commercial purposes, can include aquaculture	Cropping-
3. Economy-Developing local, regional and national economies	Agriculture-Activities relating to the cultivation and rearing of plant and animal species, usually for commercial purposes, can include aquaculture	Attempting to transplant European farming practices to Australian environments-
3. Economy-Developing local,	Agriculture-Activities relating to the cultivation and rearing of plant and animal species, usually for commercial purposes, can include	Clearing land for farming-

regional and national economies	aquaculture	
3. Economy-Developing local, regional and national economies	Environment - cultural landscape-Activities associated with the interactions between humans, human societies and the shaping of their physical surroundings	Landscapes of mining-
3. Economy-Developing local, regional and national economies	Environment - cultural landscape-Activities associated with the interactions between humans, human societies and the shaping of their physical surroundings	Landscapes of cultural and natural interaction-
3. Economy-Developing local, regional and national economies	Environment - cultural landscape-Activities associated with the interactions between humans, human societies and the shaping of their physical surroundings	Landscapes and countryside of rural charm-
3. Economy-Developing local, regional and national economies	Environment - cultural landscape-Activities associated with the interactions between humans, human societies and the shaping of their physical surroundings	Landscapes of institutions - productive and ornamental-
3. Economy-Developing local, regional and national economies	Environment - cultural landscape-Activities associated with the interactions between humans, human societies and the shaping of their physical surroundings	Landscapes of industrial production-
3. Economy-Developing local, regional and national economies	Environment - cultural landscape-Activities associated with the interactions between humans, human societies and the shaping of their physical surroundings	Landscapes and parklands of distinctive styles-
3. Economy-Developing local, regional and national economies	Environment - cultural landscape-Activities associated with the interactions between humans, human societies and the shaping of their physical surroundings	Landscapes of food production-

3. Economy-Developing local, regional and national economies	Exploration-Activities associated with making places previously unknown to a cultural group known to them.	(none)-
3. Economy-Developing local, regional and national economies	Industry-Activities associated with the manufacture, production and distribution of goods	Mining-
3. Economy-Developing local, regional and national economies	Pastoralism-Activities associated with the breeding, raising, processing and distribution of livestock for human use	Modifying landscapes to increase productivity-
3. Economy-Developing local, regional and national economies	Pastoralism-Activities associated with the breeding, raising, processing and distribution of livestock for human use	Beef cattle breeding and raising-
3. Economy-Developing local, regional and national economies	Pastoralism-Activities associated with the breeding, raising, processing and distribution of livestock for human use	Sheep farming for lamb and mutton-
3. Economy-Developing local, regional and national economies	Pastoralism-Activities associated with the breeding, raising, processing and distribution of livestock for human use	Agisting and fattening stock for slaughter-
3. Economy-Developing local, regional and national economies	Science-Activities associated with systematic observations, experiments and processes for the explanation of observable phenomena	(none)-
4. Settlement-Building settlements,	Land tenure-Activities and processes for identifying forms of ownership and occupancy of land and water, both Aboriginal and non-Aboriginal	(none)-

towns and cities		
7. Governing-Governing	Government and Administration-Activities associated with the governance of local areas, regions, the State and the nation, and the administration of public programs - includes both principled and corrupt activities.	Colonial government-
7. Governing-Governing	Government and Administration-Activities associated with the governance of local areas, regions, the State and the nation, and the administration of public programs - includes both principled and corrupt activities.	State government-
7. Governing-Governing	Government and Administration-Activities associated with the governance of local areas, regions, the State and the nation, and the administration of public programs - includes both principled and corrupt activities.	Federal Government-
7. Governing-Governing	Government and Administration-Activities associated with the governance of local areas, regions, the State and the nation, and the administration of public programs - includes both principled and corrupt activities.	Developing roles for government - scientific research-
7. Governing-Governing	Government and Administration-Activities associated with the governance of local areas, regions, the State and the nation, and the administration of public programs - includes both principled and corrupt activities.	Developing roles for government - facilitating agriculture-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with Governor (later Adm.) Arthur Phillip, 1788-1792,-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with Rev. Samuel Marsden, archbishop of colony-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with Lt. William Lawson, explorer, Commandant of Govt.Stores, grazier-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with Governor (Captn.) Phillip Gidley King RN, 1800-1806-

9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with Governor (later Maj-Gen.) Lachlan Macquarie, 1810-1821-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with Lt.-Col. George Johnston, soldier, farmer, rebel leader-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with Captain-Lieutenant Watkin Tench, Marine Naval officer-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with William Butler, settler farmer-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with George Bruce, convict-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with James Castle, settler farmer-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with Samuel Griffiths, settler farmer-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with John Herbert, settler farmer-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with George Lisk, settler farmer-
9. Phases of Life-Marking the	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with Joseph Morley, settler farmer-

phases of life		
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with John Nicols, settler farmer-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with William Parish, settler farmer-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with Edward Pugh, settler farmer-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with John Kennedy, settler farmer, reconciliation agent-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with Nelson Lawson, grazier-
9. Phases of Life-Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with Honoria Lawson, gentlewoman, farmer-

Assessment of significance

SHR Criteria a) [Historical significance]

Prospect Hill is historically significant as the site of a number of the earliest farms in New South Wales, with a number of time-expired convicts settled on the land in 1791 by Governor Phillip (Higginbotham 2000). As a significant landmark on the Cumberland Plain, Prospect Hill provided an important reference point for early explorers from 1788, and played a role in the earliest exploration of the east coast of Australia (Ashton 2000). Prospect Hill is also associated with an important phase of Aboriginal/European contact; firstly through Pemulwuy's guerilla warfare in the area between 1797 and 1802, and in 1805 as the site of a reconciliation meeting involving Samuel Marsden (Flynn 1997).

Prospect Hill has historical associations arising from the use of the site over time; including the Aboriginal frontier leader Pemulwuy, Samuel Marsden and those earliest former convicts who settled at Prospect Hill including William Butler, Samuel Griffiths and William Parish.

SHR Criteria c) [Aesthetic significance]

Prospect Hill has aesthetic significance as Sydney's largest body of igneous rock, which rises to a height of 117 metres and provides expansive views across the Cumberland Plain. The large dolerite formation of Prospect Hill is a rare geological and landmark topographic

feature, lying centrally within the Cumberland Plain. (Ashton 2000). Through the long-term use of the site for pastoral use, the landscape retains an essentially rural character, which is becoming rare in the locality.

SHR Criteria d) [Social significance]
Through its continued use for research purposes over the last 40 years, the CSIRO complex, which is located at the foot of Prospect Hill, has significance for those employees who have worked at the research facility, and in particular for those scientists who have carried out work which is of importance to Australia';s cultural history (Perumal Murphy Wu 2000).

SHR Criteria e) [Research potential]
Through its continual pastoral/rural use since 1791, Prospect Hill has the potential to provide archaeological evidence of early historical settlement or agricultural techniques used (Higginbotham 2000).

SHR Criteria f) [Rarity]
Prospect Hill is unique as a significant landmark site, and through its ability to demonstrate historical links with early European exploration and settlement as well as Aboriginal conflict and reconciliation, with the landscape retaining its continual pastoral use since the early days of the colony.

Integrity/Intactness:
Long-term pastoral use on much of Prospect Hill has ensured the site retains its historical links and archaeological potential. However, Prospect Hill is under immediate threat from development, which has the potential to impact upon the significance of the site. This includes the rezoning of the site as part of SEPP 59 and development for residential/employment purposes, the continual quarrying of the southern portion of the hill; and new development proposals including a proposed flagpole to be erected on Prospect Hill commemorating Federation.

Assessment criteria:
Items are assessed against the **State Heritage Register (SHR) Criteria** to determine the level of significance. Refer to the Listings below for the level of statutory protection.

Procedures /Exemptions

Section of act	Description	Title	Comments	Action date
57(2)	Exemption to allow work	Heritage Act - Site Specific Exemptions	HERITAGE ACT, 1977 ORDER UNDER SECTION 57(2) Prospect Hill SHR No. 1662 I, the Minister Assisting the Minister for Infrastructure and Planning (Planning Administration), on the recommendation of the Heritage Council of New South Wales, in pursuance of section 57(2) of the Heritage Act, 1977, do, by this my order, grant an exemption from section 57(1) of the said Act in respect of the engaging in or carrying out of any activities described in Schedule C by the owner, mortgagee or lessee of the land described in Schedule B on the item described in Schedule A. Diane Beamer	Mar 5 2004

			Minister Assisting the Minister for Infrastructure and Planning (Planning Administration) Sydney, 16th Day of February 2004 SCHEDULE A The item known as the Prospect Hill, situated on the land described in Schedule B. SCHEDULE B All those pieces or parcels of land shown edged heavy black on the plan catalogued HC 1907 in the office of the Heritage Council of New South Wales. SCHEDULE C The staged removal of pine trees planted on Prospect Hill and replacement of removed vegetation with appropriate native flora, representative of the Cumberland Plain is permitted. NSW Government Gazette No. 51, Page 1097, 5 March 2004	
21(1)(b)	Conservation Plan submitted for comment	CMP by Conybeare Morrison Pty Ltd for Holroyd City Council, dated November 2005	Conservation Management Plan endorsed by Heritage Council 12 May 2006 for a period of five years, expires 5 May 2011	May 12 2006
57(2)	Exemption to allow work	Standard Exemptions	SCHEDULE OF STANDARD EXEMPTIONS HERITAGE ACT 1977 Notice of Order Under Section 57 (2) of the Heritage Act 1977 I, the Minister for Planning, pursuant to subsection 57(2) of the Heritage Act 1977, on the recommendation of the Heritage Council of New South Wales, do by this Order: 1. revoke the Schedule of Exemptions to subsection 57(1) of the Heritage Act made under subsection 57(2) and published in the Government Gazette on 22 February 2008; and 2. grant standard exemptions from subsection 57(1) of the Heritage Act 1977, described in the Schedule attached.	Sep 5 2008

			FRANK SARTOR Minister for Planning Sydney, 11 July 2008 To view the schedule click on the Standard Exemptions for Works Requiring Heritage Council Approval link below.	

Standard exemptions for works requiring Heritage Council approval

Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number	Gazette Page
Heritage Act - State Heritage Register		01662	17 Oct 03	165/2003	10112-1011
Local Environmental Plan	Prospect Hill				

References, internet links & images

Type	Author	Year	Title	Internet Links
Written		2003	It's over the Hill (Parramatta Advertiser 3/12/03)	
Written	Ashton, W.	2000	Landscape Heritage Assessment- CSIRO Division of Animal Production	
Written	Conybeare Morrison	2005	Prospect Hill Conservation Management Plan	
Written	Environmental Resources Management Australia	2002	Greystanes Estate - Residential Lands Precinct Plan	
Written	Flynn, M.	1997	Holroyd History and the Silent Boundary Project	
Written	Government Architect's Office	2008	Prospect Hill - Heritage Landscape Study & Plan - Final Report	

Written	Graham Brooks & Associates	2007	Heritage Impact Statement - State Heritage Register Precinct within the Lakewood Residential Estate, Pemulwuy	
Written	Higginbotham, Edward	2000	Historical and Archaeological Assessment of CSIRO site	
Written	Jo McDonald Cultural Heritage Management	2004	Archaeological Salvage Excavations in the Greystanes Estate	
Written	Karskens, Grace	1991	Holroyd - A social history of Western Sydney	
Written	Lend Lease	2015	Statement of Heritage Impact - Marrong Reserve South, Greystanes Estate, Pemulwuy (Nelsons Ridge Residential Lands)	
Written	Perumal Murphy Wu	2000	Architectural Assessment- CSIRO Division of Animal Production	
Written	Pollen, Francis	1996	Greystanes - in 'The Book of Sydney Suburbs'	
Written	Sturt Noble Associates and Lend Lease, Issue for Public Exhibition, 17 November 2015	2015	Draft Plan of Management – Marrong Reserve, Pemulwuy	
Written	Taylor, Matt	2018	'Prospect Hill growth and preservation plan unveiled by Cumberland Council'	
Written	Whelans InSites	2010	Statement of Environmental Effects - Mar-Rong Reserve, Pemulwuy - Construction of Landscaping and Public Domain Works, Greystanes Esttate, Nelsons Ridge	

Note: internet links may be to web pages, documents or images.






(Click on thumbnail for full size image and image details)

Data source

The information for this entry comes from the following source:

Name:	Heritage Office
Database number:	5051526
File number:	EF14/4745; 09/02310; H00/00504

Return to previous page

Aboriginal Flaked Stone Artefacts

Item details

Name of item: Aboriginal Flaked Stone Artefacts

Type of item: Archaeological-Terrestrial

Group/Collection: Aboriginal

Category: Stone arrangement

Primary address: Clunies Ross Street, Pemulwuy, NSW 2145

Local govt. area: Holroyd

All addresses

Street Address	Suburb/town	LGA	Parish	County	Type
Clunies Ross Street	Pemulwuy	Holroyd			Primary Address

Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number	Gazette Page
Local Environmental Plan	Holroyd LEP 2013	i88	05 Aug 13		

References, internet links & images

None

Note: internet links may be to web pages, documents or images.

Data source

The information for this entry comes from the following source:

Name: Local Government

Database number: 1770168

Return to previous page

Every effort has been made to ensure that information contained in the State Heritage Inventory is correct. If you find any errors or omissions please send your comments to the **Database Manager**.

Appendix H Council Records

Holroyd City
Built Around People

Holroyd City Council

www.holroyd.nsw.gov.au
The Gateway to Western Sydney
Corporate & Financial Services

Our Reference: FOI-2008-25
SD08/6932
Contact: Bert Leonard
Telephone: 9840 9731

RECEIVED
11 JUN 2008
BY:----------

6 June 2008

Geotechnique Pty Ltd
PO Box 880
PENRITH NSW 2751

Dear Ms Kuipers,

REQUEST FOR INFORMATION – FREEDOM OF INFORMATION ACT
LOT 63 DP 752051 – CLUNIES ROSS STREET, PEMULWUY

I refer to your application received at Council's office on 15 May 2008 requesting:

"the following information/records and indicate the period of years relative to each record

- *Development Application (DA) approval records*
- *Building Application (BA) approval records*
- *Council Notices*
- *Council Inspection Records*
- *Neighbourhood complaints*
- *Registered activities*
- *Sewer and Service plans*
- *Product spill*
- *Waste Disposal practice*
- *Chemical Storage and Usage*
- *Underground storage tank(s), interceptor pit(s), sumps and decommissioned underground storage tanks*
- *Any other information that may be useful."*

Staff of Council's Environmental Health Units have advised as follows: -

"The site is a vacant block, which has been partly mowed with the presence of road base or similar being used by vehicles to access the site and partly left overgrown with weeds and grass. It is unknown whether waste material or fill material is located in the overgrown section of the site.

The Environmental Health Unit offers the following information in relation to the environmental health related points outlined in the above letter:

Council Notices:	*As of 2 June 2008 there are no outstanding environmental health related Notices on the abovementioned property.*
Council Inspection Records:	*A part from the inspection carried out as part of this process, the Environmental Health Unit has conducted 1 inspection regarding the parking of vehicles on the property. At the time of the inspection today, there were many vehicles parked on the site.*

Neighbourhood Complaints:	*There has been 1 complaint alleging the property was being used by employees of a neighbouring business to park their vehicles during business hours.* *A review of Council's property file records shows a letter was sent to Boral Bricks, dated 20 December 1995 stating: "There is also extensive use of Council's land, immediately to the south, for access and dumping of waste and fill". It is unclear as to the exact location of where the fill and waste material was located. The author of the letter has since left Council employment.*
Product Spill:	*There is no record of a spill at this site.*
Waste Disposal Practice:	*Given the site is vacant, there has been no waste generated from activities conducted on the site.*
Chemical Storage & Use:	*Given the site is vacant, there has been no chemical storage or use at the site.*
Underground Storage Tanks:	*There is no record of an underground storage tank, interceptor pit or sump at the site."*

In relation to the statement *"Dumping of Waste and Fill"* I have enclosed a plan of the area for your perusal.

Yours faithfully,

Bert Leonard
F.O.I. MANAGER

/Encls.

Council Property
Lot 63 Quarry Rd.

65m

40m

Fence

Fence

Quarry Road.
(Not formed or constructed)

Ditch

Access

Stockpiles of rubbish
waste bricks, rubbish
+ approprate.

Track.

Ditch

Existing Flat Area
60m × 60m
(Very soft soil)

Existing Rubbish Tip
(Approx 3m high)

Fall.

Steep (4m high)

Boral Gravels
Property.

N

OUR REFERENCE **OLC3-03**
CONTACT STRATEGIC PLANNING
TELEPHONE 02 8757 9000

CUMBERLAND COUNCIL

John Price C/Cumberland Council
16 Memorial Avenue
MERRYLANDS NSW 2160

Certificate No: 6270/2018
Date: 08/11/2018
Applicant Reference: -
Receipt Number:

PLANNING CERTIFICATE

Issued under Section 10.7 (2) (5) of the
Environmental Planning and Assessment Act 1979

PROPERTY DETAILS

Property: 615A Great Western Highway GREYSTANES NSW 2145

Legal Description: Lot: 63 DP: 752051

Parcel No: 31620

Owner(s) Name (as recorded by Council):

Cumberland Council
PO Box 42
MERRYLANDS NSW 2160

In accordance with the requirements of Section 10.7 (2) of the Environmental Planning and Assessment Act, 1979 (as amended), the following prescribed matters relate to the land at the date of this certificate.

Note: The information contained in Planning Certificates issued for a lot within Strata-Titled development relates to the land the development is situated on.

INFORMATION PROVIDED PURSUANT TO SECTION 10.7(2) OF THE ACT

As at the date of this Certificate the subject land is land to which an Environmental Planning Instrument applies. Details are set out as follows:-

1. RELEVANT PLANNING INSTRUMENTS AND DCPS APPLYING TO THE LAND

State Environmental Planning Policies (SEPPs):
State Environmental Planning Policy No. 19 - Bushland in Urban Areas
State Environmental Planning Policy No. 21 - Caravan Parks
State Environmental Planning Policy No. 33 - Hazardous & Offensive Development
State Environmental Planning Policy No. 55 - Remediation of Land
State Environmental Planning Policy No. 64 - Advertising & Signage
State Environmental Planning Policy No. 65 - Design Quality of Residential Flat Development
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007
State Environmental Planning Policy (Infrastructure) 2007
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
State Environmental Planning Policy (Affordable Rental Housing) 2009
STATE ENVIRONMENTAL PLANNING POLICY (WESTERN SYDNEY EMPLOYMENT AREA) 2009 - 21/08/2009

Deemed Statement Environmental Planning Policies
Sydney Regional Environmental Plan No. 9 – Extractive Industry (No. 2 – 1995)
SYDNEY REGIONAL ENVIRONMENTAL PLAN (SYDNEY HARBOUR CATCHMENT) 2005 - 28/09/2005

Proposed State Environmental Planning Policies (SEPPs)
No proposed SEPPs apply to the land.

Local Environmental Plans
Not applicable - refer to State Environmental Planning Policy (Western Sydney Employment Area) 2009

Proposed Local Environmental Plans
Not applicable - refer to State Environmental Planning Policy (Western Sydney Employment Area) 2009

Development Control Plans
Holroyd Development Control Plan 2013

2. Zoning and land uses under relevant LEPs:

Not Applicable - Refer to State Environmental Planning Policy (Western Sydney Employment Area) 2009

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
Refer State Environmental Planning Policy (Western Sydney Employment Area) - 2009

Whether the land includes or comprises critical habitat
Refer State Environmental Planning Policy (Western Sydney Employment Area) 2009

Whether the land is in a conservation area (however described)
Refer State Environmental Planning Policy (Western Sydney Employment Area) 2009

Whether an item of environmental heritage (however described) is situated on the land
Refer State Environmental Planning Policy (Western Sydney Employment Area) 2009

3. Complying Development under SEPP (Exempt and Complying Development Codes) 2008

General Housing Code
The extent to which complying development may or may not be carried out on this land under the General Housing Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land

Rural Housing Code
The extent to which complying development may or may not be carried out on this land under the Rural Housing Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land

Commercial and Industrial (New Buildings and Additions) Code
The extent to which complying development may or may not be carried out on this land under the Commercial and Industrial (New Buildings and Additions) Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

Housing Alterations Code
The extent to which complying development may or may not be carried out on this land under the Housing Alterations Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

General Development Code
The extent to which complying development may or may not be carried out on this land under the General Development Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

Commercial and Industrial Alterations Code
The extent to which complying development may or may not be carried out on this land under the Commercial and Industrial Alterations Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

Subdivisions Code
The extent to which complying development may or may not be carried out on this land under the Subdivisions Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

Demolition Code
The extent to which complying development may or may not be carried out on this land under the Demolition Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

Fire Safety Code
The extent to which complying development may or may not be carried out on this land under the Fire Safety Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

4. Coastal Protection

Whether or not the land is affected by the operation of Section 38 or 39 of the *Coastal Protection Act 1979* but only to the extent that the Council has been so notified by the Department of Services Technology & Administration :	NO

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:*	NO

6. Road widening & road realignment
Whether or not the land is affected by any road widening or road realignment under:

Division 2 of Part 3 of the Roads Act 1992	NO
Any Environmental Planning Instrument	NO
Any resolution of Council	NO

7. Council and other Public Authority policies on hazard risk restrictions

Whether or not the land is affected by a policy adopted by the Council or adopted by any other public authority and notified to the Council, which restricts the development of the land because of the likelihood of:

Bush fire:	NO
Tidal Inundation:	NO
Subsidence:	NO
Acid Sulfate Soils:	NO
Any other risk (other than flooding):	Council has adopted a policy on contaminated land. This policy is implemented when zoning or land use changes are proposed on lands which have previously been used for certain purposes. Consideration of Council's adopted policy and the application of provisions under relevant State Legislation is warranted. Further information in relation to the land is contained in s10.7 (5).

7A. Flood related development controls

Whether or not development on the 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:	NO
Whether or not development on the land or part of the land for any other purposes is subject to flood related development controls:	NO

8. Land reserved for acquisition

Whether or not any environmental planning instrument or proposed environmental planning instrument referred to in item 1 makes provision in relation to the acquisition of the land by a public authority as referred to in section 3.15 of the *Environmental Planning & Assessment Act 1979:* NO

9. Contributions Plans applying to the land

No Section 7.11 Plans apply to this land.

9A. Biodiversity certified land

NOT APPLICABLE

10. Biobanking Agreements

NOT APPLICABLE

11. Bush fire prone land

The land is NOT bush fire prone land as defined in the *Environmental Planning & Assessment Act 1979.*

12. Property Vegetation Plans

NOT APPLICABLE

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

14. Directions under Part 3A

NOT APPLICABLE

15. Site Compatibility Certificates and conditions for seniors housing

There is no current Site Compatibility Certificate (of which Council is aware), issued under clause 25 of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 in respect of proposed development on the land.

There are no terms of a kind referred to in clause 18 (2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 that have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.

16. Site Compatibility Certificates for infrastructure

There is no valid Site Compatibility Certificate (of which Council is aware), issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007 in respect of proposed development on the land.

17. Site Compatibility Certificates and conditions for affordable rental housing

There is no current Site Compatibility Certificate (Affordable Rental Housing), of which the Council is aware, in respect of proposed development on the land.

There are no 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.

18. Matters arising under Section 59(2) of the Contaminated Land Management Act 1997

No matters apply to the land to which the certificate relates.

19. Site Verification Certificates

Whether there is a current site verification certificate, of which the council is aware, in respect of the land: NO

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 is not aware of the land being affected.

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.

(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

(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.

(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

Council is not aware of the land being affected.

ANNEXURE TO APPLICATION **Certificate No:** 6270/2018
Section 10.7(5) Planning Certificate
Environmental Planning & Assessment Act 1979

Tree Management

Whether or not the land is affected by any Tree Management provisions requiring consent for the removal or lopping of trees upon the land:	NO

County or Designated Road

Whether or not the land has frontage to a County or designated road:	NO

Interim Heritage Order

Whether or not the land is affected by an Interim Heritage Order under the provisions of the *Heritage Act 1997:*	NO

Acid Sulfate Soils

Is the land affected by an Acid Sulfate Soils classification under *Holroyd Local Environmental Plan 2013*? If yes, what is the classification of the land?	NO

Contamination

Council's records indicate that Lot 63 in DP 752051 has been used for the dumping of waste and fill as well as for the purposes of car parking. Access to information is in accordance with the Government Information (Public Access) Act 2009. Further information regarding the access for information can be found at www.cumberland.nsw.gov.au The Department of Land and Water Conservation's draft Salinity Hazard Map for Western Sydney (Nov 2000) indicated that there are areas of extensive salinity hazard on the lot

Any other matters?

NO

General Information

When information pursuant to section 10.7(5) is requested the Council is under no obligation to provide that information. Council draws your attention to section 10.7(6) which states that a council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this certificate.

HAMISH McNULTY
GENERAL MANAGER

Per: Monica Cologna
Manager – Strategic Planning - Planning

OUR REFERENCE **OLC3-03**
CONTACT STRATEGIC PLANNING
TELEPHONE 02 8757 9000

CUMBERLAND COUNCIL

Chris Kauffman
lvl 1/50 Margaret St
Sydney NSW 2000

Certificate No:	1064/2019
Date:	27/05/2019
Applicant Reference:	56425
Receipt Number:	2114649

PLANNING CERTIFICATE

Issued under Section 10.7 (2) (5) of the
Environmental Planning and Assessment Act 1979

PROPERTY DETAILS

Property: Clunies Ross Street PEMULWUY NSW 2145

Legal Description: Lot: 107 DP: 1028208

Parcel No: 38013

Owner(s) Name (as recorded by Council):

PGL No. 1 Pty Ltd
C/- LaSalle Investment Management
Level 21 200 George Street
SYDNEY NSW 2000

In accordance with the requirements of Section 10.7 (2) of the Environmental Planning and Assessment Act, 1979 (as amended), the following prescribed matters relate to the land at the date of this certificate.

Note: The information contained in Planning Certificates issued for a lot within Strata-Titled development relates to the land the development is situated on.

INFORMATION PROVIDED PURSUANT TO SECTION 10.7(2) OF THE ACT

As at the date of this Certificate the subject land is land to which an Environmental Planning Instrument applies. Details are set out as follows:-

1. RELEVANT PLANNING INSTRUMENTS AND DCPS APPLYING TO THE LAND

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State Environmental Planning Policy No. 55 - Remediation of Land
State Environmental Planning Policy No. 64 - Advertising & Signage
State Environmental Planning Policy No. 65 - Design Quality of Residential Flat Development
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007
State Environmental Planning Policy (Infrastructure) 2007
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
State Environmental Planning Policy (Affordable Rental Housing) 2009
STATE ENVIRONMENTAL PLANNING POLICY (WESTERN SYDNEY EMPLOYMENT AREA) 2009 - 21/08/2009

Deemed Statement Environmental Planning Policies
Sydney Regional Environmental Plan No. 9 – Extractive Industry (No. 2 – 1995)
SYDNEY REGIONAL ENVIRONMENTAL PLAN (SYDNEY HARBOUR CATCHMENT) 2005 - 28/09/2005

Proposed State Environmental Planning Policies (SEPPs)
No proposed SEPPs apply to the land.

Local Environmental Plans
Not applicable - refer to State Environmental Planning Policy (Western Sydney Employment Area) 2009

Proposed Local Environmental Plans
Not applicable - refer to State Environmental Planning Policy (Western Sydney Employment Area) 2009

Development Control Plans
Holroyd Development Control Plan 2013

2. Zoning and land uses under relevant LEPs:

Not Applicable - Refer to State Environmental Planning Policy (Western Sydney Employment Area) 2009

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
Refer State Environmental Planning Policy (Western Sydney Employment Area) - 2009

Whether the land includes or comprises critical habitat
Refer State Environmental Planning Policy (Western Sydney Employment Area) 2009

Whether the land is in a conservation area (however described)
Refer State Environmental Planning Policy (Western Sydney Employment Area) 2009

Whether an item of environmental heritage (however described) is situated on the land
Refer State Environmental Planning Policy (Western Sydney Employment Area) 2009

3. Complying Development under SEPP (Exempt and Complying Development Codes) 2008

General Housing Code
The extent to which complying development may or may not be carried out on this land under the General Housing Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may not be carried out on any part of the land because the land is land that comprises an item that is listed on the State Heritage Register under Heritage Act 1977 or on which such an item is located.

Rural Housing Code
The extent to which complying development may or may not be carried out on this land under the Rural Housing Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may not be carried out on any part of the land because the land is land that comprises an item that is listed on the State Heritage Register under Heritage Act 1977 or on which such an item is located.

Commercial and Industrial (New Buildings and Additions) Code
The extent to which complying development may or may not be carried out on this land under the Commercial and Industrial (New Buildings and Additions) Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may not be carried out on any part of the land because the land is land that comprises an item that is listed on the State Heritage Register under Heritage Act 1977 or on which such an item is located.

Housing Alterations Code
The extent to which complying development may or may not be carried out on this land under the Housing Alterations Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may not be carried out on any part of the land because the land is land that comprises an item that is listed on the State Heritage Register under Heritage Act 1977 or on which such an item is located.

General Development Code
The extent to which complying development may or may not be carried out on this land under the General Development Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may not be carried out on any part of the land because the land is land that comprises an item that is listed on the State Heritage Register under Heritage Act 1977 or on which such an item is located.

Commercial and Industrial Alterations Code
The extent to which complying development may or may not be carried out on this land under the Commercial and Industrial Alterations Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may not be carried out on any part of the land because the land is land that comprises an item that is listed on the State Heritage Register under Heritage Act 1977 or on which such an item is located.

Subdivisions Code
The extent to which complying development may or may not be carried out on this land under the Subdivisions Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may not be carried out on any part of the land because the land is land that comprises an item that is listed on the State Heritage Register under Heritage Act 1977 or on which such an item is located.

Demolition Code
The extent to which complying development may or may not be carried out on this land under the Demolition Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may not be carried out on any part of the land because the land is land that comprises an item that is listed on the State Heritage Register under Heritage Act 1977 or on which such an item is located.

Fire Safety Code
The extent to which complying development may or may not be carried out on this land under the Fire Safety Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may not be carried out on any part of the land because the land is land that comprises an item that is listed on the State Heritage Register under Heritage Act 1977 or on which such an item is located.

4. Coastal Protection

Whether or not the land is affected by the operation of Section 38 or 39 of the *Coastal Protection Act 1979* but only to the extent that the Council has been so notified by the Department of Services Technology & Administration : NO

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:* NO

6. Road widening & road realignment

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

Division 2 of Part 3 of the Roads Act 1992	NO
Any Environmental Planning Instrument	NO
Any resolution of Council	NO

7. Council and other Public Authority policies on hazard risk restrictions

Whether or not the land is affected by a policy adopted by the Council or adopted by any other public authority and notified to the Council, which restricts the development of the land because of the likelihood of:

Bush fire:	NO
Tidal Inundation:	NO
Subsidence:	NO
Acid Sulfate Soils:	NO
Any other risk (other than flooding):	Council has adopted a policy on contaminated land. This policy is implemented when zoning or land use changes are proposed on lands which have previously been used for certain purposes. Consideration of Council's adopted policy and the application of provisions under relevant State Legislation is warranted. Further information in relation to the land is contained in s10.7 (5).

7A. Flood related development controls

Whether or not development on the 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: NO

Whether or not development on the land or part of the land for any other purposes is subject to flood related development controls: NO

8. Land reserved for acquisition

Whether or not any environmental planning instrument or proposed environmental planning instrument referred to in item 1 makes provision in relation to the acquisition of the land by a public authority as referred to in section 3.15 of the *Environmental Planning & Assessment Act 1979:* NO

9. Contributions Plans applying to the land

No Section 7.11 Plans apply to this land.

9A. Biodiversity certified land

NOT APPLICABLE

10. Biobanking Agreements

NOT APPLICABLE

11. Bush fire prone land

The land is NOT bush fire prone land as defined in the *Environmental Planning & Assessment Act 1979.*

12. Property Vegetation Plans

NOT APPLICABLE

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

14. Directions under Part 3A

NOT APPLICABLE

15. Site Compatibility Certificates and conditions for seniors housing

There is no current Site Compatibility Certificate (of which Council is aware), issued under clause 25 of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 in respect of proposed development on the land.

There are no terms of a kind referred to in clause 18 (2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 that have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.

16. Site Compatibility Certificates for infrastructure

There is no valid Site Compatibility Certificate (of which Council is aware), issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007 in respect of proposed development on the land.

17. Site Compatibility Certificates and conditions for affordable rental housing

There is no current Site Compatibility Certificate (Affordable Rental Housing), of which the Council is aware, in respect of proposed development on the land.

There are no 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.

18. Matters arising under Section 59(2) of the Contaminated Land Management Act 1997

No matters apply to the land to which the certificate relates.

19. Site Verification Certificates

Whether there is a current site verification certificate, of which the council is aware, in respect of the land: NO

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 is not aware of the land being affected.

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.

(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

(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.

(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

Council is not aware of the land being affected.

ANNEXURE TO APPLICATION Certificate No: 1064/2019
Section 10.7(5) Planning Certificate
Environmental Planning & Assessment Act 1979

Tree Management

Whether or not the land is affected by any Tree Management provisions requiring consent for the removal or lopping of trees upon the land: NO

County or Designated Road

Whether or not the land has frontage to a County or designated road: NO

Interim Heritage Order

Whether or not the land is affected by an Interim Heritage Order under the provisions of the *Heritage Act 1997:* NO

Acid Sulfate Soils

Is the land affected by an Acid Sulfate Soils classification under *Holroyd Local Environmental Plan 2013*? If yes, what is the classification of the land? NO

Contamination

Council's records indicate that the subject site has been used for Mining and Extractive Industries. These activities are listed in Table 1 of the Planning Guidelines for SEPP 55 - Remediation of Land as an activity that may cause contamination. Access to information is in accordance with the Government Information (Public Access) Act 2009. Further information regarding the access for information can be found at www.cumberland.nsw.gov.au

Any other matters?

NO

General Information

When information pursuant to section 10.7(5) is requested the Council is under no obligation to provide that information. Council draws your attention to section 10.7(6) which states that a council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this certificate.

HAMISH McNULTY
GENERAL MANAGER

Per: Monica Cologna
Manager – Strategic Planning - Planning

Blacktown City Council

Applicant Details

Your reference DLA-DL4018

INFO TRACK
DX 578
SYDNEY

Certificate Details

Certificate no. PL2016/21479 **Fee: $133.00**

Date issued 22 December 2016 **Urgency fee: N/A**

Receipt no. D000568513

Property information

Property ID 337658 **Land ID** 337658

Legal description LOT 216 DP 1030744

Address CLUNIES ROSS STREET PROSPECT NSW 2148

County CUMBERLAND **Parish** PROSPECT

PLANNING CERTIFICATE (149 Part 2)

Blacktown City Council prepared this Planning Certificate under Section 149 of the *Environmental Planning and Assessment Act 1979*. The form and content of the Certificate is consistent with Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*.

Disclaimer

Blacktown City Council gives notice and points out to all users of the information supplied herein, that the information herein has been compiled by Council from sources outside of Council's control. While the information herein is provided with all due care and in good faith, it is provided on the basis that Council will not accept any responsibility for and will not be liable for its contents or for any consequence arising from its use, and every user of such information is advised to make all necessary enquiries from the appropriate organisations, institutions and the like.

Blacktown City Council also gives notice to all users of the information supplied herein, wherever any particular enquiry herein remains unanswered or has not been elaborated upon, such silence should not be interpreted as meaning or inferring either a negative or a positive response as the case may be.

Section 149(2)

The following information is provided under Section 149(2) of the *Environmental Planning and Assessment Act 1979*. The information relates to the subject land at the date of this Certificate.

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1. Names of relevant planning instruments and development control plans

1.1 Environmental Planning Instrument

As at the date of this certificate the abovementioned land is not affected by Blacktown Local Environmental Plan 2015.

The land is affected by the *State Environmental Planning Policy (Western Sydney Employment Area) 2009.*

1.2 Proposed Local Environmental Plans

Not applicable.

1.3 Other Applicable State Environmental Planning Policies

Attachment 1 contains a list of State Environmental Planning Policies that may apply to the carrying out of development on the subject land.

1.4 Proposed State Environmental Planning Policies

Council is not aware of any proposed State Environmental Planning Policy that is or has been the subject of community consultation or on public exhibition under the Act, applying to the subject land.

1.5 Development control plans

Blacktown Development Control Plan 2015 applies to the subject land.

2. Zoning and land use under relevant environmental planning instruments

The following information will assist in determining how the subject land may be developed. It is recommended that you read this section in conjunction with a full copy of any relevant environmental planning instrument as there may be additional provisions that affect how the land may be developed.

2.1 Zoning

Under *State Environmental Planning Policy (Western Sydney Employment Area) 2009,* the land is zoned:

IN1 General Industrial

For information about the types of development that may or may not be carried out on the land, please refer to a full copy of the Environmental Planning Instrument identified above.

2.2 Minimum land dimensions for the erection of a dwelling house

Not applicable

2.3 Critical habitat

The land does not include or comprise a critical habitat.

Note: Critical habitat registers are kept by the National Parks and Wildlife Service under the *Threatened Species Conservation Act 1995* and the Department of Fisheries under the *Fisheries Management Act 1994*.

2.4 Conservation areas

The land is not within a conservation area.

2.5 Environmental Heritage

The land does not contain an item of environmental heritage under the protection of State Environmental Planning Policy (Western Sydney Employment Area) 2009

3. Complying development

Complying development may or may not be carried out on the subject land under an Environmental Planning Policy. Council does not have sufficient information to determine the extent to which specific complying development may or may not be carried out.

4. Coastal protection

The subject land is not affected by the operation of Sections 38 or 39 of the *Coastal Protection Act, 1979*.

5. Mine subsidence

The subject land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act 1961*.

6. Road widening and road realignment

The subject land is not affected by road widening or road realignment

7. Council and other public authority policies on hazard risk restrictions

7.1 Contaminated Lands Policy and Asbestos Policy

Council has adopted a Contaminated Lands Policy and an Asbestos Policy which may restrict development on the subject land.

The Land Contamination Policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. The Asbestos Policy applies where land contains, or is likely to have contained in the past, buildings or structures that were erected prior to the banning of asbestos. Both policies should be considered in the context of relevant State legislation and guidelines.

Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land.

7.2 Other policies on hazard risk restrictions

Council has not adopted any other policies to restrict the development of the subject land by reason of the likelihood of landslip, bushfire, tidal inundation, subsidence or the occurrence of acid sulphate soils.

Note: Although Council has not adopted a specific policy to restrict development bushfire prone land, it is bound by state-wide bushfire legislation that may restrict development on the subject land. Additional information relating to bushfire prone land is provided at point 11 below.

7a. Flood related development controls information

Council has adopted a Floodplain Management Policy which may restrict the development of the land subject to this Certificate, including development for the purposes of dwelling houses, dual occupancies, multi-dwelling housing, residential flat buildings and any other purpose that requires the placement or erection of any structure on the land. The Flood Risk Precinct Maps prepared under the policy are based on the results of Engineering Flood Studies commissioned by Government Authorities and Council. These maps indicate that the land subject to this Certificate lies partly or wholly within the Medium Flood Risk Precinct. The term Medium Flood Risk Precinct is defined as land below the 100-year flood level that is not within a High Flood Risk Precinct. This is land that is not subject to a high hydraulic hazard or where there are no significant evacuation difficulties. Further details are provided in the NSW Government's Floodplain Development Manual and are available from Council. Council does not warrant that the information provided or made available to you is complete. Council strongly recommends that, in all cases, you seek independent professional advice to supplement your enquiries.

Council has adopted a Floodplain Management Policy which may restrict the development of the land subject to this Certificate, including development for the purposes of dwelling houses, dual occupancies, multi-dwelling housing, residential flat buildings and any other

purpose that requires the placement or erection of any structure on the land. The Flood Risk Precinct Maps prepared under the policy are based on the results of Engineering Flood Studies commissioned by Government Authorities and Council. These maps indicate that the land subject to this Certificate lies partly or wholly within the High Flood Risk Precinct. The term High Flood Risk Precinct is defined as the area of land below the 100-year flood event that is either subject to a high hydraulic hazard or where there are significant evacuation difficulties. Further details are provided in the NSW Government's Floodplain Development Manual and are available from Council. Council does not warrant that the information provided or made available to you is complete. Council strongly recommends that, in all cases, you seek independent professional advice to supplement your enquiries.

8. Land reserved for acquisition

State Environmental Planning Policy (Western Sydney Employment Area) 2009 makes provision for land included on the Land Reservation Acquisition Map to be acquired by a public authority.

9. Contributions plans

Council currently levies contributions under Section 94 of the *Environmental Planning & Assessment Act 1979* for facilities and services. The further development of the subject land may incur such contributions.

9a. Biodiversity certified land

The land is not biodiversity certified land as defined by Part 7AA of the *Threatened Species Conservation Act 1995*.

10. Biobanking agreements

The land is not subject to any biobanking agreement under Part 7A of the *Threatened Species Conservation Act 1995*.

11. Bushfire prone land

The Rural Fires and Environmental Assessment Legislation Amendment Act 2002, which came into force on 1 August 2002, introduced development provisions for bush fire prone land as shown on a Bush Fire Prone Land Map. "Bush fire prone land" is land that has been designated by the Commissioner of the NSW Rural Fire Service as being bush fire prone due to characteristics of vegetation and topography. The land the subject of this certificate has been identified on Council's Bush Fire Prone Land Map as being:

Clear of any bush fire prone land

On land that is bush fire prone, certain development may require further consideration under Section 79BA or Section 91 of the *Environmental Planning & Assessment Act 1979* and under Section 100B of the *Rural Fires Act 1997*.

12. Property vegetation plans

The subject land is not affected by a property vegetation plan under the *Native Vegetation Act 2003*. The Blacktown local government area is excluded from the operation of the *Native Vegetation Act 2003* (refer Schedule 1 Part 3 of that Act).

13. Orders under *Trees (Disputes Between Neighbours) Act 2006*

No. Council has not been notified of any order made under the *Trees (Disputes Between Neighbours) Act 2006* in relation to the subject land.

14. Directions under Part 3A

Land to which this Certificate applies is not subject to the above.

15. Site compatibility certificates and conditions for seniors housing

Land to which this Certificate applies is not subject to the above.

16. Site compatibility certificates for infrastructure

Land to which this Certificate applies is not subject to the above.

17. Site compatibility certificates and conditions for affordable rental housing

Land to which this Certificate applies is not subject to the above.

18. Paper subdivision information

Not applicable

19. Site verification certificates

Council is not aware of any site verification certificate applying to the subject land.

Under the *Contaminated Land Management Act 1997* and *Contaminated Land Management Amendment Act 2008*

(a) The land to which this certificate relates has not been declared to be significantly contaminated land at the date when the certificate was issued

(b) The land to which the certificate relates is not subject to a management order at the date when the certificate was issued

(c) The land to which this certificate relates is not the subject of an approved voluntary management proposal at the date when the certificate was issued

(d) The land to which this certificate relates is not subject to an ongoing maintenance

order as at the date when the certificate was issued

(e) The land to which this certificate relates is not the subject of a site audit statement provided to the Council.

Section 149(5)

The following information is provided under Section 149(5) of the *Environmental Planning & Assessment Act 1979*. As per section 149(6) of the Act, Council shall not incur any liability in respect of any advice provided in good faith under section 149(5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

Planning Instruments and Covenants

The provisions of any covenant, agreement or instrument applying to this land that restrict or prohibit certain development may be inconsistent with the provisions of an environmental planning instrument. In such cases, the provisions of any such covenant, agreement or instrument may be overridden.

Loose-filled Asbestos Insulation

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

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

Contact NSW Fair Trading for further information

Biodiversity and Threatened Species Conservation

The land is affected by a tree preservation control under Clause 5.9 of the Blacktown Local Environmental Plan 2015. A person shall not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree, or cause any tree to be ringbarked, cut down, topped, lopped, injured or wilfully destroyed, except with the consent of the Council.

The provisions of any covenant, agreement or instrument applying to this land purporting to restrict or prohibit certain development may be inconsistent with the provisions of a Regional Environmental Plan, State Environmental Planning Policy or Blacktown Local Environmental Plan 2015, in which case the provisions of any such covenant, agreement or instrument may be overridden.

The *Threatened Species Conservation Act 1995* provides for the conservation of threatened species, populations and ecological communities of animals and plants.

The *Threatened Species Conservation Act 1995* amended the *Environmental Planning and Assessment Act 1979* to require, amongst other things, that:

(a) A critical habitat (as defined in the *Threatened Species Conservation Act 1995*) be identified in environmental planning instruments, and

(b) Consent authorities and determining authorities must, when considering proposed development or an activity, assess whether it is likely to significantly affect threatened species, populations and ecological communities, or their habitats, and, if a significant effect is likely, to require the preparation of a species impact statement in accordance with the requirements of the *Threatened Species Conservation Act 1995*, and

(c) Consent authorities and determining authorities must, when considering proposed development or an activity, have regard to the relevant recovery plans and threat abatement plans.

The *Environment Protection and Biodiversity Conservation Act 1999* provides protection for items of national significance. Items of national environmental significance include nationally threatened animal and plant species and ecological communities.

The Act requires a separate Commonwealth approval to be obtained where an action is likely to have significant impacts on items of national environmental significance.

For further information on this matter, please contact the Australian Government's Department of the Environment.

Attachment 1 – State Environmental Planning Policies

In addition to the principal environmental planning instrument identified in section 2.1 of this Certificate, the following State Environmental Planning Policies may also affect development on the subject land.

SEPP (Affordable Rental Housing) 2009
Establishes a consistent planning regime for the provision of affordable rental housing. The policy provides incentives for new affordable rental housing, facilitates the retention of existing affordable rentals, and expands the role of not-for-profit providers. It also aims to support local centres by providing housing for workers close to places of work, and facilitate development of housing for the homeless and other disadvantaged people.

SEPP Building Sustainability Index (BASIX) 2004
This SEPP operates in conjunction with *Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004* to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans, and specifying that SEPP 1 does not apply in relation to any development standard arising under BASIX. The draft SEPP was exhibited together with draft *Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004*.

SEPP (Exempt and Complying Development Codes) 2008
This policy provides exempt and complying development codes that have State-wide application, identifying, in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent and, in the General Housing Code, types of complying development that may be carried out in accordance with a complying development certificate as defined in the *Environmental Planning and Assessment Act 1979*.

SEPP (Sydney Region Growth Centres) 2006
This policy provides for the coordinated release of land for residential, employment and other urban development in Sydney's North West and South West Growth Centres, in conjunction with the precinct planning provisions contained in the *Environmental Planning and Assessment Regulation 2000*.

SEPP (Housing for Seniors and People with a Disability) 2004
This policy encourages the development of high quality accommodation for the state's ageing population and for people who have disabilities, whilst ensuring development is in keeping with the local neighbourhood. Note the name of this policy was changed from *State Environmental Planning Policy (Seniors Living) 2004* to *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004,* effective 12.10.07.

SEPP (Infrastructure) 2007
The aim of this policy is to facilitate the orderly and economic use and development of rural lands for rural and related purposes. This SEPP Provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.

SEPP (Miscellaneous Consent Provisions) 2007
This SEPP contains provisions for temporary structures, subdivision, the demolition of a building or work, certain change of use and fire alarm link communication works.

SEPP (State Significant Precincts) 2005
The purpose of this Policy is to facilitate the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant precincts for the benefit of the State. It also aims to facilitate service delivery outcomes for a range of public services and to provide for the development of major sites for a public purpose or redevelopment of major sites no longer appropriate or suitable for public purposes.

SEPP (Mining, Petroleum, Production and Extractive Industries) 2007
This Policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State. The Policy establishes appropriate planning controls to encourage ecologically sustainable development.

SEPP No. 1 - Development Standards
Makes development standards more flexible. It allows councils to approve a development proposal that does not comply with a set standard where this can be shown to be unreasonable or unnecessary.

SEPP No. 19 - Bushland in Urban Areas
Protects and preserves bushland within certain urban areas, as part of the natural heritage or for recreational, educational and scientific purposes. The policy is designed to protect bushland in public open space zones and reservations, and to ensure that bush preservation is given a high priority when local environmental plans for urban development are prepared.

SEPP No. 21 - Caravan Parks
Ensures that where caravan parks or camping grounds are permitted under an environmental planning instrument, movable dwellings, as defined in the *Local Government Act 1993*, are also permitted. The specific kinds of movable dwellings allowed under the Local Government Act in caravan parks and camping grounds are subject to the provisions of the Caravan Parks Regulation. The policy ensures that development consent is required for new caravan parks and camping grounds and for additional long-term sites in existing caravan parks. It also enables, with the council's consent, long-term sites in caravan parks to be subdivided by leases of up to 20 years.

SEPP No. 30 - Intensive Agriculture
Requires development consent for cattle feedlots having a capacity of 50 or more cattle or piggeries having a capacity of 200 or more pigs. The policy sets out information and public notification requirements to ensure there are effective planning control over this export-driven rural industry. The policy does not alter if, and where, such development is permitted, or the functions of the consent authority.

SEPP No. 32 - Urban Consolidation
States the Government's intention to ensure that urban consolidation objectives are met in all urban areas throughout the State. The policy focuses on the redevelopment of urban land

that is no longer required for the purpose it is currently zoned or used, and encourages local councils to pursue their own urban consolidation strategies to help implement the aims and objectives of the policy. Councils will continue to be responsible for the majority of rezonings. The policy sets out guidelines for the Minister to follow when considering whether to initiate a regional environmental plan (REP) to make particular sites available for consolidated urban redevelopment. Where a site is rezoned by an REP, the Minister will be the consent authority.

SEPP No. 33 - Hazardous and Offensive Development
Provides new definitions for 'hazardous industry', 'hazardous storage establishment', 'offensive industry' and 'offensive storage establishment'. The definitions apply to all planning instruments, existing and future. The new definitions enable decisions to approve or refuse a development to be based on the merit of proposal. The consent authority must careful consider the specifics the case, the location and the way in which the proposed activity is to be carried out. The policy also requires specified matters to be considered for proposals that are 'potentially hazardous' or 'potentially offensive' as defined in the policy. For example, any application to carry out a potentially hazardous or potentially offensive development is to be advertised for public comment, and applications to carry out potentially hazardous development must be supported by a preliminary hazard analysis (PHA). The policy does not change the role of councils as consent authorities, land zoning, or the designated development provisions of the Environmental Planning and Assessment Act 1979.

SEPP No. 55 - Remediation of Land
Introduces state-wide planning controls for the remediation of contaminated land. The policy states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, remediation must take place before the land is developed. The policy makes remediation permissible across the State, defines when consent is required, requires all remediation to comply with standards, ensures land is investigated if contamination is suspected, and requires councils to be notified of all remediation proposals. To assist councils and developers, the Department, in conjunction with the Environment Protection Authority, has prepared Managing Land Contamination: Planning Guidelines.

SEPP No. 62 - Sustainable Aquaculture
Encourages the sustainable expansion of the industry in NSW. The policy implements the regional strategies already developed by creating a simple approach to identity and categorise aquaculture development on the basis of its potential environmental impact. The SEPP also identifies aquaculture development as a designated development only where there are potential environmental risks.

SEPP No. 64 - Advertising and Signage
Aims to ensure that outdoor advertising is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations and is of high quality design and finish. The SEPP was amended in August 2007 to permit and regulate outdoor advertising in transport corridors (e.g. freeways, tollways and rail corridors). The amended SEPP also aims to ensure that public benefits may be derived from advertising along and adjacent to transport corridors. Transport Corridor Outdoor Advertising and Signage Guidelines (DOP July 2007) provides information on design criteria, road safety and public benefit requirements for SEPP 64 development applications.

SEPP No. 65 - Design Quality of Residential Apartment Development
Raises the design quality of residential flat development across the state through the application of a series of design principles. Provides for the establishment of Design Review Panels to provide independent expert advice to councils on the merit of residential flat development. The accompanying regulation requires the involvement of a qualified designer throughout the design, approval and construction stages.

SREP No. 30 - St Marys
Sydney Regional Environmental Plan 30 - St Marys (SREP 30) provides a statutory framework to plan and develop 1538 hectares of land known as the Australian Defence Industries (ADI) site at St Marys. The plan zones the land for particular types of development: urban, regional park, regional open space, drainage, road/road widening, and employment.

SEPP (Western Sydney Employment Area) 2009
This State Environmental Planning Policy promotes economic development and the creation of employment in the Western Sydney Employment Area by providing for development, including major warehousing, distribution, freight transport, industrial, high technology and research facilities. The policy provides for coordinated planning, development and rezoning of land for employment or environmental conservation purposes.This State Environmental Planning Policy promotes economic development and the creation of employment in the Western Sydney Employment Area by providing for development, including major warehousing, distribution, freight transport, industrial, high technology and research facilities. The policy provides for coordinated planning, development and rezoning of land for employment or environmental conservation purposes.

SEPP (Western Sydney Parklands) 2009
The aim of the policy is to put in place planning controls that will enable the Western Sydney Parklands Trust to develop the Western Parklands into multi-use urban parkland for the region of western Sydney.

SEPP (Western Sydney Recreation Area)
This policy enables development to be carried out for recreational, sporting and cultural purposes within the Western Sydney Recreation Area, including the development of a recreation area of state significance.

General Manager

Per:

End of Certificate

Cumberland Council
www.cumberland.nsw.gov.au

16 Memorial Avenue (PO Box 42)
MERRYLANDS NSW 2160
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PLANNING CERTIFICATE UNDER SECTION 149(2) & (5) ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Certificate No: 3288/2016
Date: 20/12/2016
Applicant Reference: DLA -DL4018
Receipt Number: 1661054

Applicant	**Owner** (as recorded by Council)
infotrack gpo box 4029 sydney 2000 2000	Boral Resources (NSW) Pty Limited PO Box 42 WENTWORTHVILLE NSW 2145

Property Details	
Property:	Foundation Place PEMULWUY NSW 2145
Description:	Lot: 601 DP: 1047403
Parcel No:	39542

INFORMATION PROVIDED PURSUANT TO SECTION 149(2) OF THE ACT

As at the date of this Certificate the abovementioned land is land to which an Environmental Planning Instrument applies. Details are set out as follows:-

1. RELEVANT PLANNING INSTRUMENTS AND DCPS APPLYING TO THE LAND

State Environmental Planning Policies (SEPPs)
State Environmental Planning Policy No. 19 - Bushland in Urban Areas
State Environmental Planning Policy No. 21 - Caravan Parks
State Environmental Planning Policy No. 33 - Hazardous & Offensive Development
State Environmental Planning Policy No. 55 - Remediation of Land
State Environmental Planning Policy No. 64 - Advertising & Signage
State Environmental Planning Policy No. 65 - Design Quality of Residential Flat Development
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007
State Environmental Planning Policy (Infrastructure) 2007
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004

State Environmental Planning Policy (Affordable Rental Housing) 2009
STATE ENVIRONMENTAL PLANNING POLICY (WESTERN SYDNEY EMPLOYMENT AREA) 2009 - 21/08/2009

Deemed Statement Environmental Planning Policies
Sydney Regional Environmental Plan No. 9 – Extractive Industry (No. 2 – 1995)
SYDNEY REGIONAL ENVIRONMENTAL PLAN (SYDNEY HARBOUR CATCHMENT) 2005 - 28/09/2005

Proposed State Environmental Planning Policies (SEPPs)
No proposed SEPPs apply to the land.

Local Environmental Plans
Not applicable - refer to State Environmental Planning Policy (Western Sydney Employment Area) 2009

Proposed Local Environmental Plans
Not applicable - refer to State Environmental Planning Policy (Western Sydney Employment Area) 2009

Development Control Plans
Holroyd Development Control Plan 2013

2. Zoning and land uses under relevant LEPs:

Not Applicable - Refer to State Environmental Planning Policy (Western Sydney Employment Area) 2009

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

Refer State Environmental Planning Policy (Western Sydney Employment Area) - 2009

Whether the land includes or comprises critical habitat

Refer State Environmental Planning Policy (Western Sydney Employment Area) 2009

Whether the land is in a conservation area (however described)

Refer State Environmental Planning Policy (Western Sydney Employment Area) 2009

Whether an item of environmental heritage (however described) is situated on the land

Refer State Environmental Planning Policy (Western Sydney Employment Area) 2009

3. Complying Development under SEPP (Exempt and Complying Development Codes) 2008

General Housing Code
The extent to which complying development may or may not be carried out on this land under the General Housing Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land

Rural Housing Code
The extent to which complying development may or may not be carried out on this land under the Rural Housing Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land

Commercial and Industrial (New Buildings and Additions) Code
The extent to which complying development may or may not be carried out on this land under the Commercial and Industrial (New Buildings and Additions) Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

Housing Alterations Code
The extent to which complying development may or may not be carried out on this land under the Housing Alterations Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

General Development Code
The extent to which complying development may or may not be carried out on this land under the General Development Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

Commercial and Industrial Alterations Code
The extent to which complying development may or may not be carried out on this land under the Commercial and Industrial Alterations Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

Subdivisions Code
The extent to which complying development may or may not be carried out on this land under the Subdivisions Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

Demolition Code
The extent to which complying development may or may not be carried out on this land under the Demolition Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

Fire Safety Code
The extent to which complying development may or may not be carried out on this land under the Fire Safety Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

4. Coastal Protection

Whether or not the land is affected by the operation of Section 38 or 39 of the *Coastal Protection Act 1979* but only to the extent that the Council has been so notified by the Department of Services Technology & Administration:	NO

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:*	NO

6. Road widening & road realignment
Whether or not the land is affected by any road widening or road realignment under:

Division 2 of Part 3 of the Roads Act 1992	NO

Any Environmental Planning Instrument	NO
Any resolution of Council	NO

7. Council and other Public Authority policies on hazard risk restrictions

Whether or not the land is affected by a policy adopted by the Council or adopted by any other public authority and notified to the Council, which restricts the development of the land because of the likelihood of:

Bush fire:	NO
Tidal Inundation:	NO
Subsidence:	NO
Acid Sulfate Soils:	NO
Any other risk (other than flooding):	Council has adopted a policy on contaminated land. This policy is implemented when zoning or land use changes are proposed on lands which have previously been used for certain purposes. Consideration of Council's adopted policy and the application of provisions under relevant State Legislation is warranted. Further information in relation to the land is contained in s149 (5).

7A. Flood related development controls

Whether or not development on the 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:	NO
Whether or not development on the land or part of the land for any other purposes is subject to flood related development controls:	NO

8. Land reserved for acquisition

Whether or not any environmental planning instrument or proposed environmental planning instrument referred to in item 1 makes provision in relation to the acquisition of the land by a public authority as referred to in section 27 of the *Environmental Planning & Assessment Act 1979:*	NO

9. Contributions Plans applying to the land

No Section 94 Plans apply to this land.

9A. Biodiversity certified land

NOT APPLICABLE

10. Biobanking Agreements

NOT APPLICABLE

11. Bush fire prone land

The land is NOT bush fire prone land as defined in the *Environmental Planning & Assessment Act 1979.*

12. Property Vegetation Plans

NOT APPLICABLE

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

14. Directions under Part 3A

NOT APPLICABLE

15. Site Compatibility Certificates and conditions for seniors housing

There is no current Site Compatibility Certificate (of which Council is aware), issued under clause 25 of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 in respect of proposed development on the land.

There are no terms of a kind referred to in clause 18 (2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 that have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.

16. Site Compatibility Certificates for infrastructure

There is no valid Site Compatibility Certificate (of which Council is aware), issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007 in respect of proposed development on the land.

17. Site Compatibility Certificates and conditions for affordable rental housing

There is no current Site Compatibility Certificate (Affordable Rental Housing), of which the Council is aware, in respect of proposed development on the land.

There are no 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.

18. Matters arising under Section 59(2) of the Contaminated Land Management Act 1997

No matters apply to the land to which the certificate relates.

19. Site Verification Certificates

Whether there is a current site verification certificate, of which the council is aware, in respect of the land:	NO

Malcolm Ryan
Interim General Manager
Cumberland Council

per _____

Tree Management

Whether or not the land is affected by any Tree Management provisions requiring consent for the removal or lopping of trees upon the land:	NO

County or Designated Road

Whether or not the land has frontage to a County or designated road:	NO

Interim Heritage Order

Whether or not the land is affected by an Interim Heritage Order under the provisions of the *Heritage Act 1997:*	NO

Acid Sulfate Soils

Is the land affected by an Acid Sulfate Soils classification under *Holroyd Local Environmental Plan 2013*? If yes, what is the classification of the land?	NO

Contamination

Council's records indicate that the subject site has been used for Mining and Extractive Industries. These activities are listed in the attached Table 1 of the Planning Guidelines for SEPP 55 - Remediation of Land as an activity that may cause contamination. Access to information as per section 6.3 of Council's Contaminated Land Policy adopted by Council 3 July 2001.

Any other matters?

SALINITY

The Department of Land and Water Conservation's draft Salinity Hazard map for Western Sydney (Nov 2000) indicates that the land is subject to salinity.

General Information

When information pursuant to section 149(5) is requested the Council is under no obligation to provide that information. Council draws your attention to section 149(6) which states that a council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this certificate.

Malcolm Ryan
Interim General Manager
Cumberland Council

per _____

Cumberland Council
www.cumberland.nsw.gov.au

16 Memorial Avenue (PO Box 42)
MERRYLANDS NSW 2160
T 02 9840 9840 | F 02 9840 9734
DX 25408 MERRYLANDS
TTY 02 9840 9988
ABN 22 798 563 329

PLANNING CERTIFICATE UNDER SECTION 149(2) & (5) ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Certificate No: 3287/2016
Date: 20/12/2016
Applicant Reference: DLA -DL4018
Receipt Number: 1661053

Applicant	**Owner** (as recorded by Council)
INFOTRACK GPO BOX 4029 SYDNEY 2000 2000	Boral Resources (NSW) Pty Ltd C/- Shane Burke PO Box 42 WENTWORTHVILLE NSW 2145

This property is located partly in the local government area of Cumberland and partly in the adjoining local government area. The information contained in this certificate relates only to the part of the property that is located within the local government area of Cumberland. If you require information about the part of the lot that is within the adjoining local government area you will need to obtain a certificate from the Council for that area.

Property Details	
Property:	Clunies Ross Street PEMULWUY NSW 2145
Description:	PLt: 10 DP: 1022044
Parcel No:	37929

INFORMATION PROVIDED PURSUANT TO SECTION 149(2) OF THE ACT

As at the date of this Certificate the abovementioned land is land to which an Environmental Planning Instrument applies. Details are set out as follows:-

1. RELEVANT PLANNING INSTRUMENTS AND DCPS APPLYING TO THE LAND

State Environmental Planning Policies (SEPPs)
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State Environmental Planning Policy No. 55 - Remediation of Land
State Environmental Planning Policy No. 64 - Advertising & Signage
State Environmental Planning Policy No. 65 - Design Quality of Residential Flat Development
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007
State Environmental Planning Policy (Infrastructure) 2007
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
State Environmental Planning Policy (Affordable Rental Housing) 2009
STATE ENVIRONMENTAL PLANNING POLICY (WESTERN SYDNEY EMPLOYMENT AREA) 2009 - 21/08/2009

Deemed Statement Environmental Planning Policies
Sydney Regional Environmental Plan No. 9 – Extractive Industry (No. 2 – 1995)
SYDNEY REGIONAL ENVIRONMENTAL PLAN (SYDNEY HARBOUR CATCHMENT) 2005 - 28/09/2005

Proposed State Environmental Planning Policies (SEPPs)
Draft Coastal Management SEPP 2016 (part of lot).

Local Environmental Plans
Not applicable - refer to State Environmental Planning Policy (Western Sydney Employment Area) 2009

Proposed Local Environmental Plans
Not applicable - refer to State Environmental Planning Policy (Western Sydney Employment Area) 2009

Development Control Plans
Holroyd Development Control Plan 2013

2. Zoning and land uses under relevant LEPs:

Not Applicable - Refer to State Environmental Planning Policy (Western Sydney Employment Area) 2009

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

Refer State Environmental Planning Policy (Western Sydney Employment Area) - 2009

Whether the land includes or comprises critical habitat

Refer State Environmental Planning Policy (Western Sydney Employment Area) 2009

Whether the land is in a conservation area (however described)

Refer State Environmental Planning Policy (Western Sydney Employment Area) 2009

Whether an item of environmental heritage (however described) is situated on the land

Refer State Environmental Planning Policy (Western Sydney Employment Area) 2009

3. Complying Development under SEPP (Exempt and Complying Development Codes) 2008

General Housing Code
The extent to which complying development may or may not be carried out on this land under the General Housing Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

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The extent to which complying development may or may not be carried out on this land under the Rural Housing Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

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The extent to which complying development may or may not be carried out on this land under the Housing Alterations Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

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Subdivisions Code
The extent to which complying development may or may not be carried out on this land under the Subdivisions Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

Demolition Code
The extent to which complying development may or may not be carried out on this land under the Demolition Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

Fire Safety Code
The extent to which complying development may or may not be carried out on this land under the Fire Safety Code because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP:

Complying development may be carried out on the full extent of the land.

4. Coastal Protection

Whether or not the land is affected by the operation of Section 38 or 39 of the *Coastal Protection Act 1979* but only to the extent that the Council has been so notified by the Department of Services Technology & Administration:	NO

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:*	NO

6. Road widening & road realignment
Whether or not the land is affected by any road widening or road realignment under:

Division 2 of Part 3 of the Roads Act 1992	NO

Any Environmental Planning Instrument	NO
Any resolution of Council	NO

7. Council and other Public Authority policies on hazard risk restrictions

Whether or not the land is affected by a policy adopted by the Council or adopted by any other public authority and notified to the Council, which restricts the development of the land because of the likelihood of:

Bush fire:	NO
Tidal Inundation:	NO
Subsidence:	NO
Acid Sulfate Soils:	NO
Any other risk (other than flooding):	Council has adopted a policy on contaminated land. This policy is implemented when zoning or land use changes are proposed on lands which have previously been used for certain purposes. Consideration of Council's adopted policy and the application of provisions under relevant State Legislation is warranted. Further information in relation to the land is contained in s149 (5).

7A. Flood related development controls

Whether or not development on the 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:	YES
Whether or not development on the land or part of the land for any other purposes is subject to flood related development controls:	YES

8. Land reserved for acquisition

Whether or not any environmental planning instrument or proposed environmental planning instrument referred to in item 1 makes provision in relation to the acquisition of the land by a public authority as referred to in section 27 of the *Environmental Planning & Assessment Act 1979:*	NO

9. Contributions Plans applying to the land

No Section 94 Plans apply to this land.

9A. Biodiversity certified land

NOT APPLICABLE

10. Biobanking Agreements

NOT APPLICABLE

11. Bush fire prone land

The land is NOT bush fire prone land as defined in the *Environmental Planning & Assessment Act 1979.*

12. Property Vegetation Plans

NOT APPLICABLE

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

14. Directions under Part 3A

NOT APPLICABLE

15. Site Compatibility Certificates and conditions for seniors housing

There is no current Site Compatibility Certificate (of which Council is aware), issued under clause 25 of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 in respect of proposed development on the land.

There are no terms of a kind referred to in clause 18 (2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 that have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.

16. Site Compatibility Certificates for infrastructure

There is no valid Site Compatibility Certificate (of which Council is aware), issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007 in respect of proposed development on the land.

17. Site Compatibility Certificates and conditions for affordable rental housing

There is no current Site Compatibility Certificate (Affordable Rental Housing), of which the Council is aware, in respect of proposed development on the land.

There are no 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.

18. Matters arising under Section 59(2) of the Contaminated Land Management Act 1997

No matters apply to the land to which the certificate relates.

19. Site Verification Certificates

Whether there is a current site verification certificate, of which the council is aware, in respect of the land:	NO

Malcolm Ryan
Interim General Manager
Cumberland Council

per _____

Tree Management

Whether or not the land is affected by any Tree Management provisions requiring consent for the removal or lopping of trees upon the land:	NO

County or Designated Road

Whether or not the land has frontage to a County or designated road:	NO

Interim Heritage Order

Whether or not the land is affected by an Interim Heritage Order under the provisions of the *Heritage Act 1997:*	NO

Acid Sulfate Soils

Is the land affected by an Acid Sulfate Soils classification under *Holroyd Local Environmental Plan 2013*? If yes, what is the classification of the land?	NO

Contamination

Council's records indicate that the subject site has been used for Mining and Extractive Industries. These activities are listed in the attached Table 1 of the Planning Guidelines for SEPP 55 - Remediation of Land as an activity that may cause contamination. Access to information as per section 6.3 of Council's Contaminated Land Policy adopted by Council 3 July 2001.

Any other matters?

SALINITY

The Department of Land and Water Conservation's draft Salinity Hazard map for Western Sydney (Nov 2000) indicates that the land is subject to salinity.

STORMWATER FLOODING

Council's records suggest that the subject land may be liable to overland stormwater overflow based on information from a study in the area. On written request, Council will supply the designated stormwater overflow levels for the area, which should be used with an appropriate survey plan to better interpret the stormwater overflow affectation of the land.

General Information

When information pursuant to section 149(5) is requested the Council is under no obligation to provide that information. Council draws your attention to section 149(6) which states that a council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this certificate.

Malcolm Ryan
Interim General Manager
Cumberland Council

per _____

TABLE 1

12 WHAT INFORMATION IS NEEDED TO MAKE A DECISION

Table 1 Some Activities that may Cause Contamination

- acid/alkali plant formulation
- agricultural/horticultural activities
- airports
- asbestos production disposal
- chemicals manufacture and formulation
- defence works
- drum re-conditioning works
- dry cleaning establishments
- electrical manufactures (transformers)
- electroplating and heat treatment premises
- engine works
- explosives industry
- gas works
- iron and steel works
- landfill sites
- metal treatment
- mining and extractive industries
- oil production and storage
- paint formulation and manufacture
- pesticide manufacture and formulation
- power stations
- railway yards
- scrap yards
- service stations
- sheep and cattle dips
- smelting and refining
- tanning and associated trades
- waste storage and treatment
- wood preservation

Source: ANZCC & NHMRC 1995 The Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites. For information on chemicals commonly associated with these activities see Appendix A.

Note: It is not sufficient to rely solely on the contents of this Table to determine whether a site is likely to be contaminated or not. The table is a guide only. A conclusive status can only be determined after a review of the site history and, if necessary, sampling and analysis.

Appendix I Boral Letter

Meeting Held at 10.00 on November 9, 1989 to Discuss Flood Retarding Basin by Boral Brick.

Present:
Stephen Lees	- Water Resources Commission
N Benning	- " " "
Dougal Black	- Willing & Partners (Consultant to WRC)
Wal Krivoruchko	- Blacktown Council
David Thomas	- Boral Quarries

SL Explained urgency for meeting due to tender document having been sent out and no permission to enter yet given.

DT Apologised for absence of E Grogan and D kellaher.

DT Advised that because of loss of pine trees area between stream and Boral Bricks now open for industrial development and we have several Boral Companies that could relocate to that area. Therefore WRC proposal with embankment and flood water intruding 100m from boundary would seriously affect lands potential.

Had brief discussion with DB but had been advised that relocation further upstream to west not practicable.

DB Further investigation showed dam could only go downstream but this was restricted by Western Freeway and Quarry road. Where it is, is an ideal location for catchment maximization.

DT Explained that any proposed for development would require our land to be raised (possibly using fill ex MWS & DB).

However based on the usual development conditions of about 30m set back from the boundary what would be WRC's reaction to having the toe of a 1:2 batter to the fill 30m from the boundary. This would seem to reduce the stored flood volume by some 10,000m^3 total flood volume some 80,000 m^3 to offset this 'lost' volume Boral would be prepared to accept 10,000m^3 of fill if the W.R.C decided to increase the amount of excavation proposed to the mouth of the stream.

A general discussion followed covering the reason for the chosen site, the required storage volume, the amount of cut and fill required, costs of excavation and haul to dump compared to increased excavation and minimum haul to dump on Boral land.

WRC Indicated that they would be happy to accept the Boral proposal as it kept the basin in the ideal place and they retained the required volume.

WK indicated that he saw no problem from the cost/construction point of view as it would only require a change in cut/haul volumes which was covered in the tender documents.

.../2

DB Was instructed by WRC to prepare details of changes to basin to allow for the above proposal and to confirm Boral's estimates of volume.

DT Restated that the proposal was for Boral to fill the area from 30m south of the boundary to above the 55.2m flood levels. this area to be from the embankment itself and westward for some 300m. To the east and west of this area we would, if necessary, have the toe of the fill starting at the boundary. the fill would have a batter of 1:2 and would be planted with shrubs and trees to form a visual screen. Boral would also accept fill from the basin at least equal to the 'lost' volume. This fill to be used to raise the site area.

WRC/WK Indicated this was satisfactory.

WK To write to Boral asking for formal approval of this proposal and permission to enter the indicated that site work was expected to start the first week in February, 1990 and that we might expect the first fill to be delivered in late March.

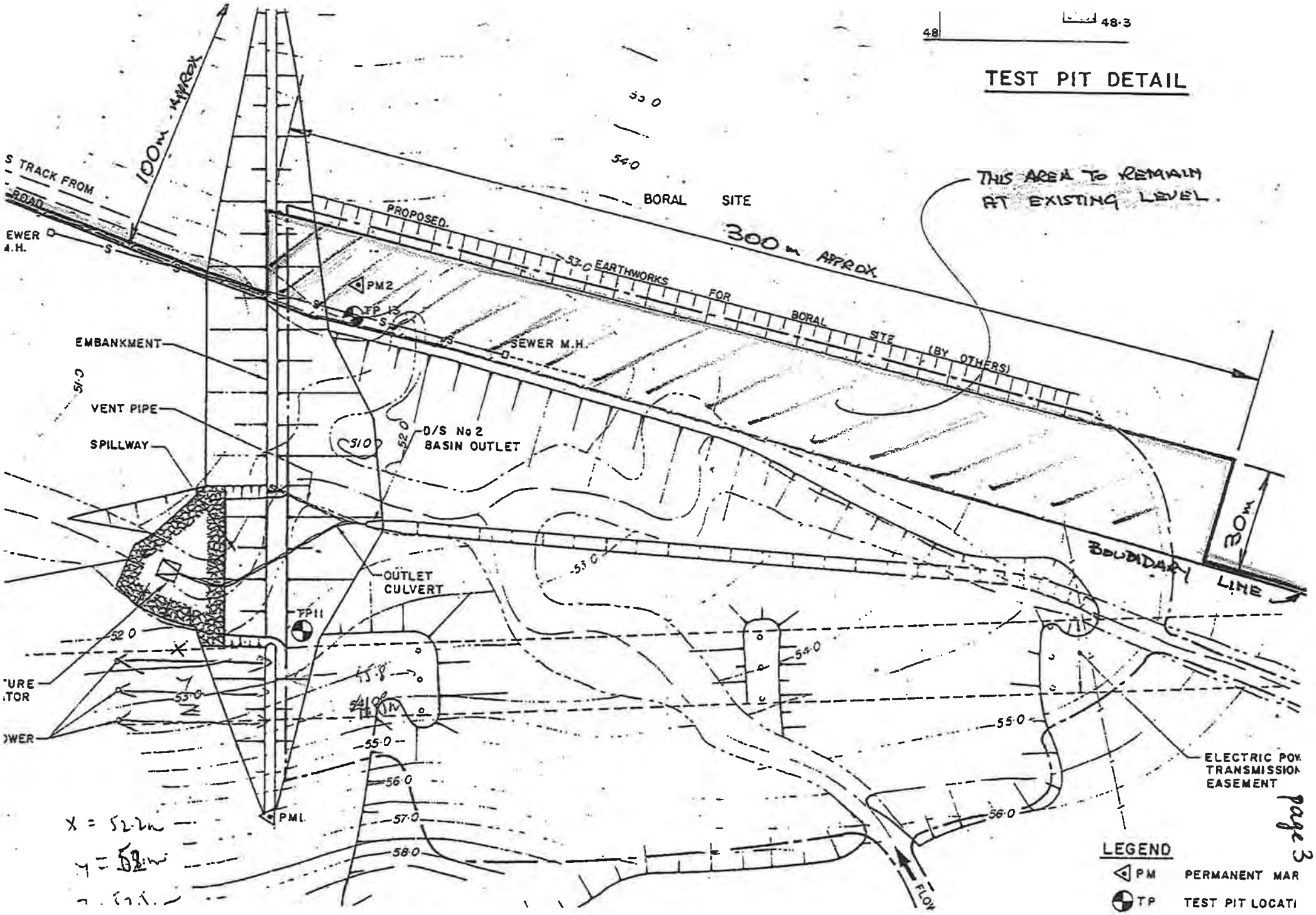
DT Would discuss proposal with E Grogan ready for Blacktown Councils letter and make arrangements for a designated fill dump area.

David Thomas

To E Grogan

c.c. D Kellaher
F Reid

TEST PIT DETAIL



Page 3

File 152/32/1-2
Date 23/1/90

The Town Clerk
Blacktown City Council
Civic Centre
BLACKTOWN 2148

Dear Sir

I, DAVID THOMAS .....hereby give permission for Council employees or contractors employeed by Council to enter the property of Boral Resources Pty Ltd., Lots A and B in D.P. 33023, for the purpose of carrying out works associated with the construction of a retarding basin.

It is understood that the proposed works will be such as indicated on design plans, prepared by Consulting Engineers Willing & Partners, Plan No. 6191B sheets 1-8 and that this work will be done at no cost to Boral Resources Pty. Ltd..

(Signed) D Thomas

FAX - 831-1961
KARL SCHIMKE

Appendix J SafeWork NSW 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: D17/050469
Your Ref: Amy Dorrington

Attention: Amy Dorrington
DLA Environmental Pty Ltd
Unit 3
38 Leighton Pl
Hornsby NSW 2077

Dear Ms Dorrington,

RE SITE: 44 Clunies Ross St Prospect NSW

I refer to your site search request received by SafeWork NSW on 22 December 2016 requesting information on Storage of Hazardous Chemicals for the above site.

Enclosed are copies of the documents that SafeWork NSW holds on record numbers 35/033891 relating to the storage of Hazardous Chemicals at 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

Work Health and Safety Act 2011 (WHS Act) –
Work Health and Safety Regulation 2011 (WHS Regulation)

WorkCover

Site search for Schedule 11 hazardous chemicals on premises

SECTION 5: CURRENT SITE OCCUPIER'S NAME/PREVIOUS OCCUPIER'S NAME (and trading name if applicable)

Current
AUSTRAL MASONRY

Previous

SECTION 6: LODGEMENT FEES

Refer to the WorkCover current fees schedule or call **13 10 50**.

NOTE: Cheques are accepted subject to clearance. The application fee includes GST.

☐ Pay by cheque. Enclose a cheque made payable to WorkCover

☐ Pay by money order. Enclose a money order made payable to WorkCover

☒ Pay by credit card. Please charge $ 293 . 28 to my: ☐ MasterCard ☒ Visa

A payment processing fee of 0.44% applies to credit card payments (MasterCard and Visa).

Card number
4564 8092 0494 2613

Card expiry date (MM/YYYY)
06 / 2019

Cardholder name (please print name as displayed on credit card)
Trudi Stodl

Cardholder signature
Stodl

Date (DD/MM/YYYY)
22/12/16

SECTION 7: NAME OF APPLICANT

Name
AMY DORRINGTON

Applicant's signature

Date (DD/MM/YYYY)
22/12/2016

Catalogue No. WC01274 WorkCover Publications Hotline 1300 799 003
WorkCover NSW, 92–100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252 | Customer Service Centre 13 10 50
Website workcover.nsw.gov.au

ISBN 978 1 74341 515 3

APPLICATION TYPE (select only one box)

☐ New site $100 fee applies.

☑ Further notification To be supplied every 12 months – $100 fee applies.

☐ New occupier of an existing dangerous goods notifiable site (where the notification has expired) $100 fee applies.

Please provide the following for a further notification or, if you are a new occupier of an existing dangerous goods notifiable site.

Acknowledgement number for the site (if known)
35/ 0 3 3 8 9 1

Expiry date (DD/MM/YYYY)
/ / or the site address

Street number/street name (include Lot or DP number if applicable)
LOT 10

Street name
CLUNIES ROSS ST

Suburb
PROSPECT

State NSW

Postcode 2148

2. SITE OCCUPIER'S DETAILS (person in control of the site)

Required for a new site or a new occupier of an existing dangerous goods notifiable site (where the notification period has expired). It is only required for a further notification where details have changed.

2.1 Individual occupier

Title

Family/Surname

Given name

Other names

Date of birth (DD/MM/YYYY)
/ /

Daytime contact number

Mobile number

Fax number

Email

Please go to section 2.4

2.2 Corporation occupier

Legal name
AUSTRAL MASONRY (NSW) PTY LTD

Registered business (trading name)
AUSTRAL MASONRY (NSW) PTY LTD

ABN
45 141 647 092

Please go to section 2.3

E DETAILS (must be completed for both new notifications and further notifications)

nsufficient please provide details on a separate sheet of paper.

cility

Type of storage facility: ABOVE GROUND

or division: 2.1

Maximum storage capacity: 7500

Unit (L or kg or number): L

UN number	Class or division	Typical quantity	Unit (L or kg or number)	Packing group
1075	2.1	5000	L	

Proper shipping name: PETROLEUM GASES, LIQUIFIED

Product or common name: LPG

UN number	Class or division	Typical quantity	Unit (L or kg or number)	Packing group

Proper shipping name

roduct or common name

N number	Class or division	Typical quantity	Unit (L or kg or number)	Packing group

oper shipping name

oduct or common name

l number	Class or division	Typical quantity	Unit (L or kg or number)	Packing group

per shipping name

duct or common name

facility

fier

Type of storage facility: ABOVE GROUND TANK

ass or division: 2.1

Maximum storage capacity: 4500

Unit (L or kg or number): L

UN number: 1075

Class or division: 2.1

Typical quantity: 3000

Unit (L or kg or number): L

Packing group:

Proper shipping name: PETROLEUM GASES, LIQUIFIED

Product or common name: LPG

UN number:

Class or division:

Typical quantity:

Unit (L or kg or number):

Packing group:

Proper shipping name:

Product or common name:

UN number:

Class or division:

Typical quantity:

Unit (L or kg or number):

Packing group:

Proper shipping name:

Product or common name:

UN number:

Class or division:

Typical quantity:

Unit (L or kg or number):

Packing group:

Proper shipping name:

Product or common name:

...age facility
...ntifier
F

Type of storage facility
CYLINDER STORE

Class or division
2.1

Maximum storage capacity
1736

Unit (L or kg or number)
L

UN number
1001

Class or division
2.1

Typical quantity
500

Unit (L or kg or number)
L

Packing group

Proper shipping name
DISSOLVED ACETYLENE

Product or common name
ACETYLENE

UN number
1072

Class or division
2.2

Typical quantity
500

Unit (L or kg or number)
L

Packing group

Proper shipping name
OXYGEN COMPRESSED

Product or common name
OXYGEN COMPRESSED

UN number
1956

Class or division
2.2

Typical quantity
200

Unit (L or kg or number)
L

Packing group

Proper shipping name
ARGON SHIELD UNIVERSAL

Product or common name
ARGOSHIELD UNIVERSAL

UN number
1006

Class or division
2.2

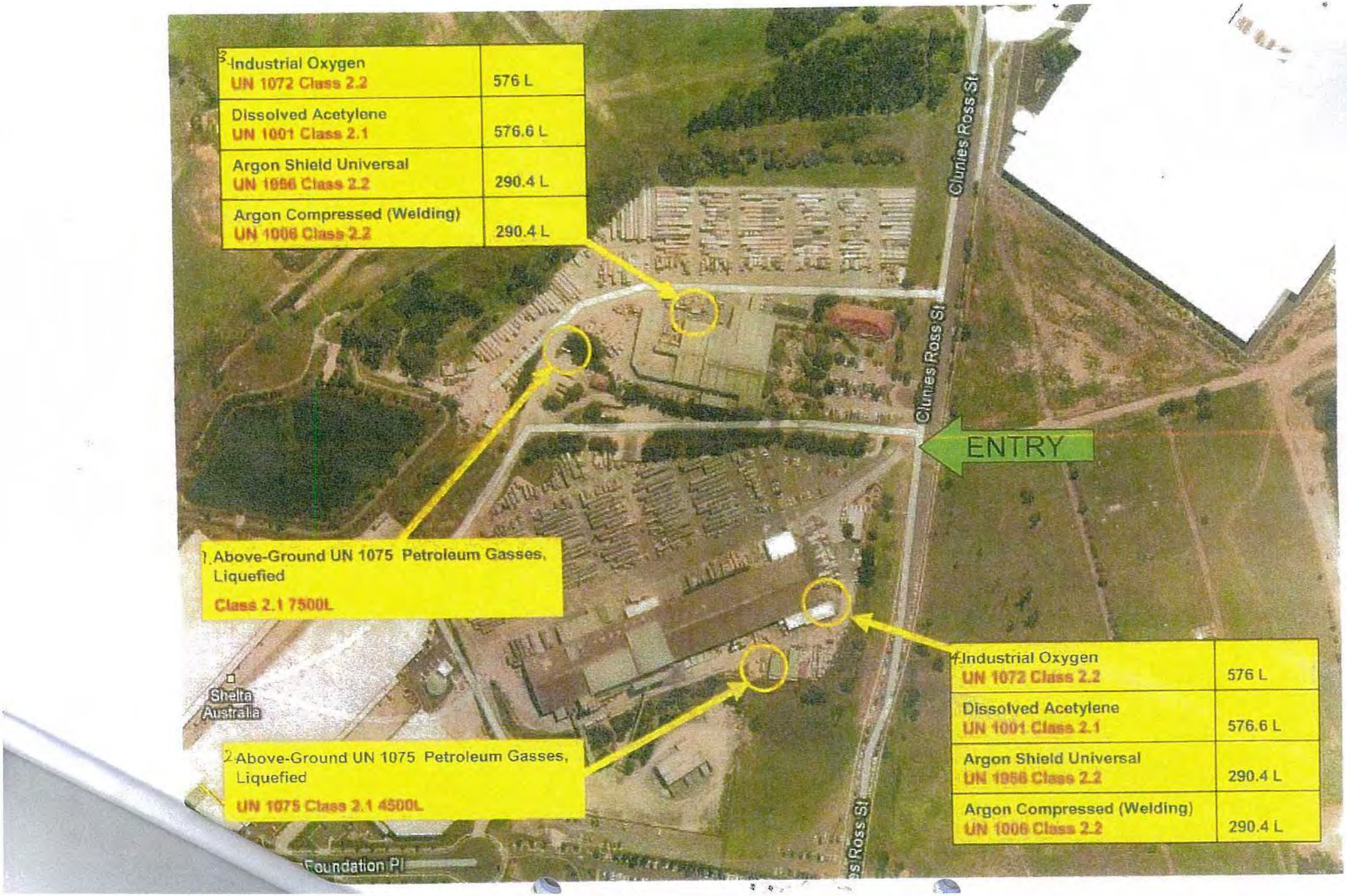
Typical quantity
200

Unit (L or kg or number)
L

Packing group

Proper shipping name
ARGON COMPRESSED

Product or common name
ARGON WELDING


3. Industrial Oxygen
UN 1072 Class 2.2
576 L
Dissolved Acetylene
UN 1001 Class 2.1
576.6 L
Argon Shield Universal
UN 1956 Class 2.2
290.4 L
Argon Compressed (Welding)
UN 1006 Class 2.2
290.4 L
Clunies Ross St
Clunies Ross St
ENTRY
1. Above-Ground UN 1075 Petroleum Gasses, Liquefied
Class 2.1 7500L
Shelta Australia
2. Above-Ground UN 1075 Petroleum Gasses, Liquefied
UN 1075 Class 2.1 4500L
4. Industrial Oxygen
UN 1072 Class 2.2
576 L
Dissolved Acetylene
UN 1001 Class 2.1
576.6 L
Argon Shield Universal
UN 1956 Class 2.2
290.4 L
Argon Compressed (Welding)
UN 1006 Class 2.2
290.4 L
Foundation Pl

CONTACT FOR NOTIFICATION INQUIRIES

Title (Mr) / Miss / Ms / Mrs / Other (please specify) _____ Family name CARR

Given name JIMMY Other names _____

Business phone 0401 892 663 Business fax number 02 9840 2300

Business email address James.carr@boral.com.au

Previous Licence Number or Acknowledgement Number (if known)

35/ 033891

Previous Occupier (if known)

N/A

Site on which dangerous goods are to be kept

Number Street

CLUNIES ROSS STREET

Suburb/Town/Locality Postcode

PROSPECT 2148

Nearest cross Street

GREAT WESTERN HIGHWAY

Lot and DP if no street number

N/A

Is the site staffed? If yes state number of employees 90

Site staffing: Hours per day 24 Days per week 5

$ 100.00
Date: 19.02.10
Rec No. 595440

Site Emergency Contact

Phone number **Name**

(0)401 892 663 JIMMY CARR

Nature of site (eg petrol station, warehouse etc)

CONCRETE MANUFACTURING PLANT

Nature of primary business activity

MASONRY PLANT & REGIONAL OFFICE FACILITY.

ABN Number (if any) Website details (if any)

1300 223 718 WWW.boral.com.au

What is the ANSZIC code most applicable to your business? (see guide for list of codes and further information)

Code Description

263 CONCRETE MANUFACTURING (BLOCK)

Attach a site sketch(s) of the premises. Refer to the Guide GDG01 for information on the requirements for the site sketch.

Attach a legible photocopy page from a local Street Directory or other map showing the locality of the premises. Mark the location of the premises with an X.

List the dangerous goods that will be stored and/or processed on these premises (refer to Guide GDG01). Copy this page and attach additional sheets if there is insufficient space.

Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)
1	ABOVE GROUND TANK	2.1	7500 L

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg
UN 1075	PETROLEUM,	2.1	—	LPGAS	2WE	5000	L
	GASES,						
	LIQUIFIED.						

Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)
2	ABOVE GROUND TANK	2.1	4500 L

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg
UN 1075	PETROLEUM,	2.1	—	LPGAS	2WE	8000	L
	GASES,						
	LIQUIFIED.						

Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)
3	CYLINDER STORE	2.1	576.6 L

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg
UN1001	DISSOLVED	2.1	—	ACETYLENE	2SE	500	L
	ACETYLENE						

Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)
3A	CYLINDER STORE	2.2	576 L

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg
UN 1072	OXYGEN	2.2	—	OXYGEN COMPRESSED	2S	500	L
	COMPRESSED						

Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)
3	CYLINDER STORE	2.2	290.4

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg
UN 1956	ARGOSHIELD 51	2.2	—	ARGOSHIELD	2T	200	L
	(FORMERLY			UNIVERSAL.			
	ARGOSHIELD						
	UNIVERSAL).						

List the dangerous goods that will be stored and/or processed on these premises (refer to Guide GDG01). Copy this page and attach additional sheets if there is insufficient space.

Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)
3	CYLINDER STORE	2.2	290.4

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg
UN 1006	ARGON	2.2	—	ARGON WELDING	2T	200	L
	COMPRESSED						

Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)
4	CYLINDER STORE	2.2	576L

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg
UN 1072	OXYGEN	2.2	—	OXYGEN COMPRESSED	2S	500	L
	COMPRESSED						

Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)
4	CYLINDER STORE	2.1	576.6 L

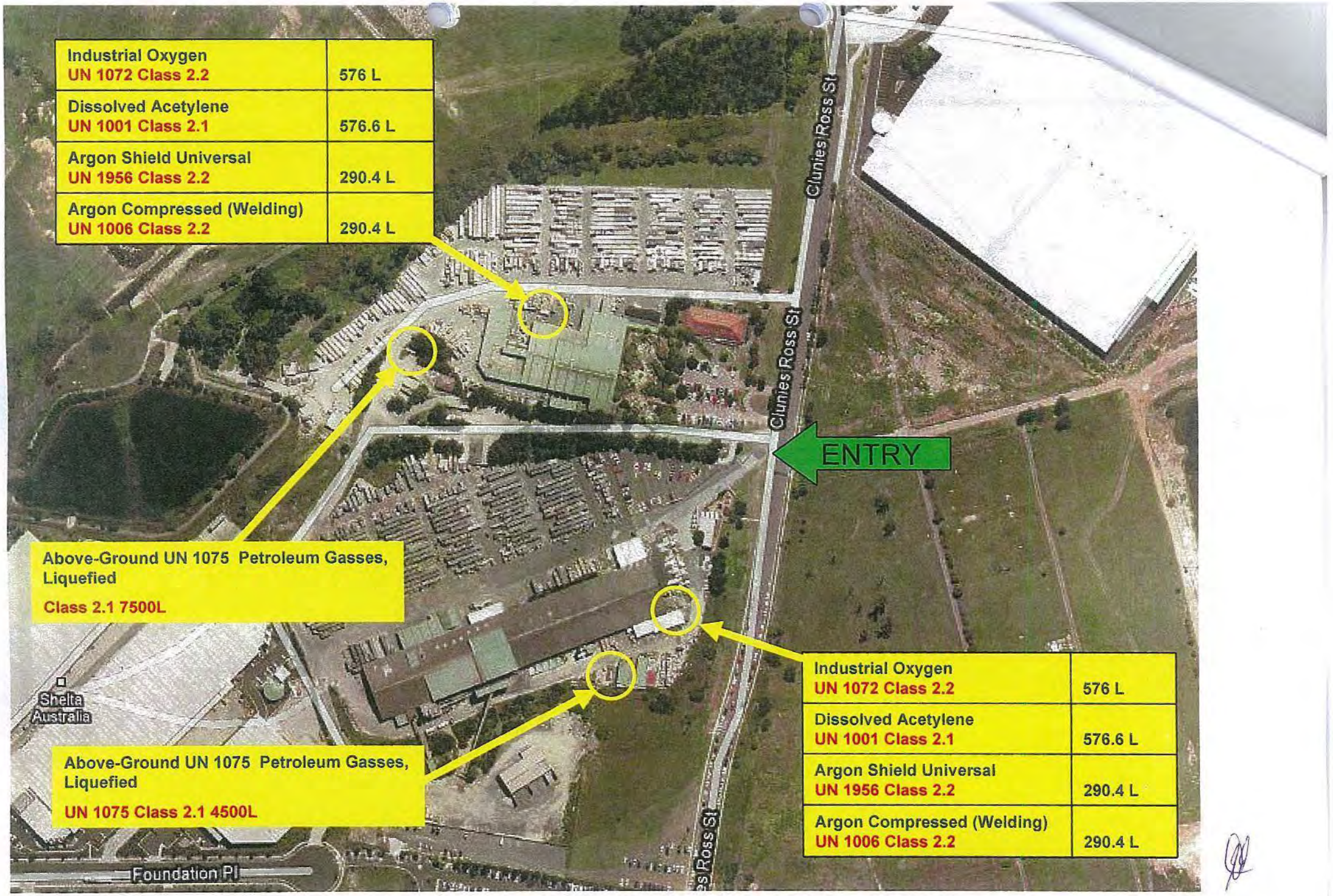
UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg
UN 1001	DISSOLVED	2.1	—	ACETYLENE	2SE	500	L
	ACETYLENE						

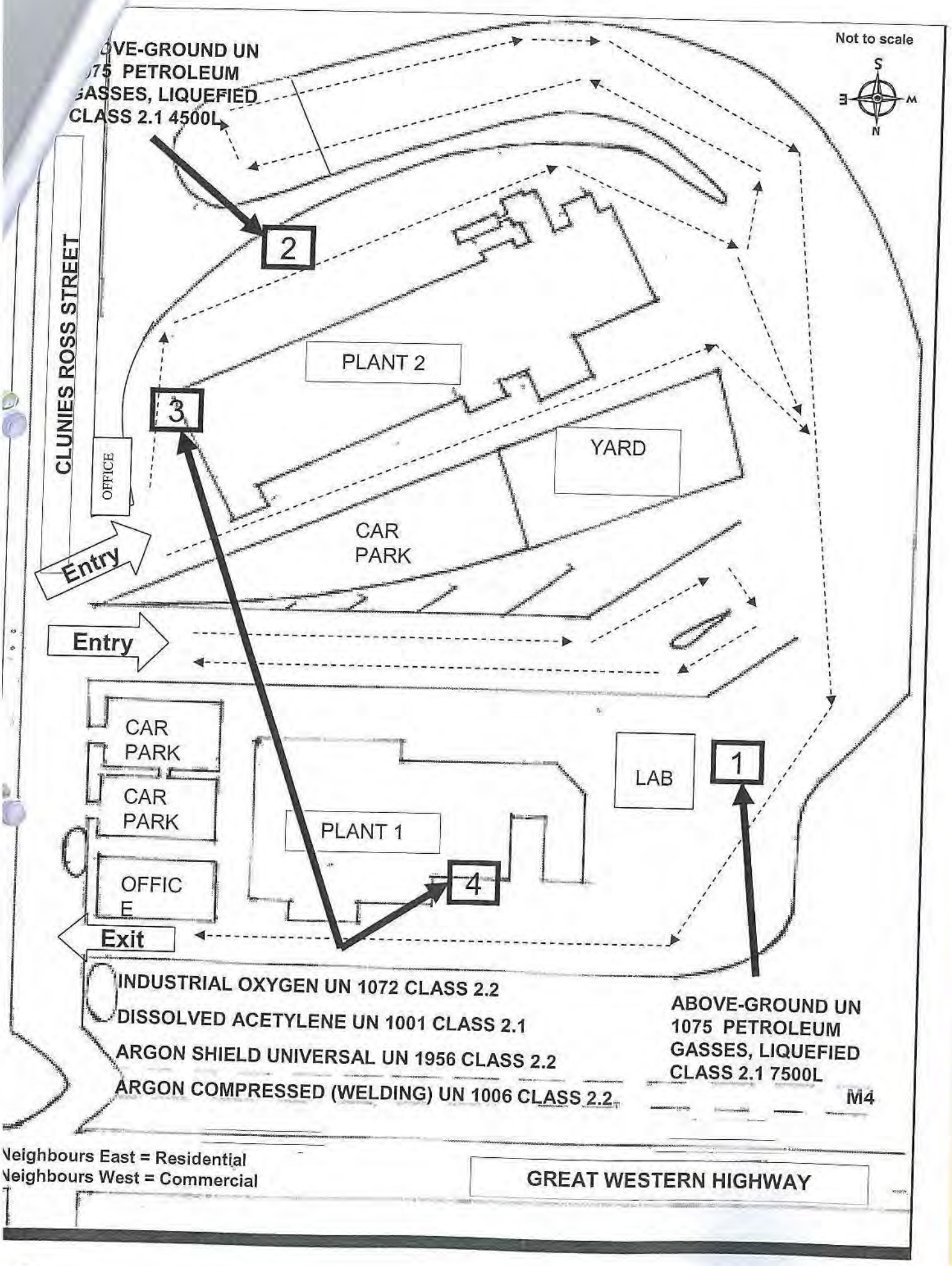
Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)
4S	CYLINDER STORE		

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg
UN 1956	ARGOSHIELD 5I	2.2	—	ARGOSHIELD	2T	200	L
	(FORMERLY			UNIVERSAL			
	ARGOSHIELD						
	UNIVERSAL).						

Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)
4S	CYLINDER STORE	2.2	290.4

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg
UN 1006	ARGON	2.2	—	ARGON WELDING	2T	200	L
	COMPRESSED						


Industrial Oxygen
UN 1072 Class 2.2
576 L
Dissolved Acetylene
UN 1001 Class 2.1
576.6 L
Argon Shield Universal
UN 1956 Class 2.2
290.4 L
Argon Compressed (Welding)
UN 1006 Class 2.2
290.4 L
Clunies Ross St
Clunies Ross St
ENTRY
Above-Ground UN 1075 Petroleum Gasses, Liquefied
Class 2.1 7500L
Shelta Australia
Above-Ground UN 1075 Petroleum Gasses, Liquefied
UN 1075 Class 2.1 4500L
Foundation Pl
Industrial Oxygen
UN 1072 Class 2.2
576 L
Dissolved Acetylene
UN 1001 Class 2.1
576.6 L
Argon Shield Universal
UN 1956 Class 2.2
290.4 L
Argon Compressed (Welding)
UN 1006 Class 2.2
290.4 L


Not to scale
S
E
M
N
VE-GROUND UN
75 PETROLEUM
GASSES, LIQUEFIED
CLASS 2.1 4500L
CLUNIES ROSS STREET
OFFICE
2
3
PLANT 2
YARD
CAR
PARK
Entry
Entry
CAR
PARK
CAR
PARK
OFFIC
E
PLANT 1
4
LAB
1
Exit
INDUSTRIAL OXYGEN UN 1072 CLASS 2.2
DISSOLVED ACETYLENE UN 1001 CLASS 2.1
ARGON SHIELD UNIVERSAL UN 1956 CLASS 2.2
ARGON COMPRESSED (WELDING) UN 1006 CLASS 2.2
ABOVE-GROUND UN
1075 PETROLEUM
GASSES, LIQUEFIED
CLASS 2.1 7500L
M4
Neighbours East = Residential
Neighbours West = Commercial
GREAT WESTERN HIGHWAY

No. 35/033891

APPLICATION FOR RENEWAL

OF LICENCE TO KEEP DANGEROUS GOODS

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

DECLARATION: Please renew licence number 35/033891 to 11/05/2006 . I confirm that all the licence details shown below are correct (amend if necessary).

R.L. Thompson (Signature) for: BORAL MASONRY LTD — Robert K. Thompson (Please print name) — 6-5-05 (Date signed)

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

WorkCover New South Wales
Dangerous Goods Licensing Section
LOCKED BAG 2906
LISAROW NSW 2252

Enquiries:ph (02) 43215500
fax (02) 92875500

Details of licence on 24 March 2005

Licence Number 35/033891 **Expiry Date** 11/05/2005

Licensee BORAL MASONRY LTD ACN 000 223 718

Postal Address: P O BOX 6 SEVEN HILLS NSW 2147

Licensee Contact NEAL VANSLEVE Ph. 9840 2333 Fax. 9840 2344

Premises Licensed to Keep Dangerous Goods
BORAL MASONRY LTD
CLUNIES ROSS ST PROSPECT 2148

Nature of Site MANUFACTURING N.E.C.

Major Supplier of Dangerous Goods UNKNOWN OR OTHER

Emergency Contact for this Site ~~NEAL VANSLEVE~~ Ph. 9840 2333

Site staffing 24HRS 7DAYS Robert Thompson.

Details of Depots

Depot No.	Depot Type	Goods Stored in Depot	Qty
1	**ABOVE-GROUND TANK**	**Class 2.1**	**7500 L**
	UN 1075 PETROLEUM GASES, LIQUEFIED		7500 L
2	**ABOVE-GROUND TANK**	**Class 2.1**	**7500 L**
	UN 1075 PETROLEUM GASES, LIQUEFIED		7500 L

Licensing GEDZ

...e No. 35/033891

** REMINDER NOTICE **

APPLICATION FOR RENEWAL

OF LICENCE TO KEEP DANGEROUS GOODS

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

DECLARATION: Please renew licence number 35/033891 to 2004/2005 . I confirm that all the licence details shown below are correct (amend if necessary).

S S ..... SAM DiGiuseppe 7-8-03

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

for: BORAL MASONRY LTD

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

WorkCover New South Wales
Dangerous Goods Licensing Section
Locked Bag 2906
LISAROW NSW 2252

Enquiries: **ph (02) 4321 5500**
fax (02) 9287 5500

Details of licence on 25 July 2003

~~**Licence Number** 35/033891~~ ~~**Expiry Date** 12/05/2003~~ ~~**No. of Depots** 2~~

Licensee BORAL MASONRY LTD ACN 000 223 718

~~**Postal Address:** BOX 6 P.O. SEVEN HILLS NSW 2147~~

~~**Licensee Contact** SAM GIESEPPE~~ SAM DiGiuseppe Ph. 9840 2333 Fax. 9840 2344

Premises Licensed to Keep Dangerous Goods
BORAL MASONRY LTD
CLUNIES ROSS ST PROSPECT 2148

Nature of Site MANUFACTURING N.E.C.

Major Supplier of Dangerous Goods UNKNOWN OR OTHER

Emergency Contact for this Site ~~ROBERT LENSTRA~~ Ph. 9840 2333

Site staffing 24HRS 7DAYS SAM DiGiuseppe

Details of Depots

Depot No.	Depot Type	Goods Stored in Depot	Qty
1	ABOVE-GROUND TANK	Class 2.1	7500 L
	UN 1075 PETROLEUM GASES, LIQUEFIED		7500 L
2	ABOVE-GROUND TANK	Class 2.1	7500 L
	UN 1075 PETROLEUM GASES, LIQUEFIED		7500 L

ATF

FORM DG10

Store Room

RECEIVED
SERVICE CENTRE
24 MAY 2000
NEW SOUTH WALES

South Wales, 400 Kent Street, Sydney 2000. Tel: 9370 5000 Fax: 9370 5999 ALL MAIL TO GPO BOX 5364 SYDNEY 2001

e No. 35/033891

WorkCover
NEW SOUTH WALES

APPLICATION FOR RENEWAL
OF LICENCE TO KEEP DANGEROUS GOODS

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

DECLARATION: Please renew licence number 35/033891 to 12/05/2001 . I confirm that all the licence details shown below are correct (amend if necessary).

Robert Jelle Lenstra 12/05/00

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

for: BORAL MASONRY LTD

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

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

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

Details of licence on 31 March 2000

Licence Number 35/033891 **Expiry Date** 12/05/2000

Licensee BORAL MASONRY LTD ACN 000 223 718

Postal Address: BOX 6 P O SEVEN HILLS NSW 2147

Licensee Contact ~~M GAUCI~~ S. WILLIAMS Ph. 9840 2333 Fax. 9840 2344

Premises Licensed to Keep Dangerous Goods
BORAL MASONRY LTD
CLUNIES ROSS ST PROSPECT 2148

Nature of Site MANUFACTURING N.E.C.

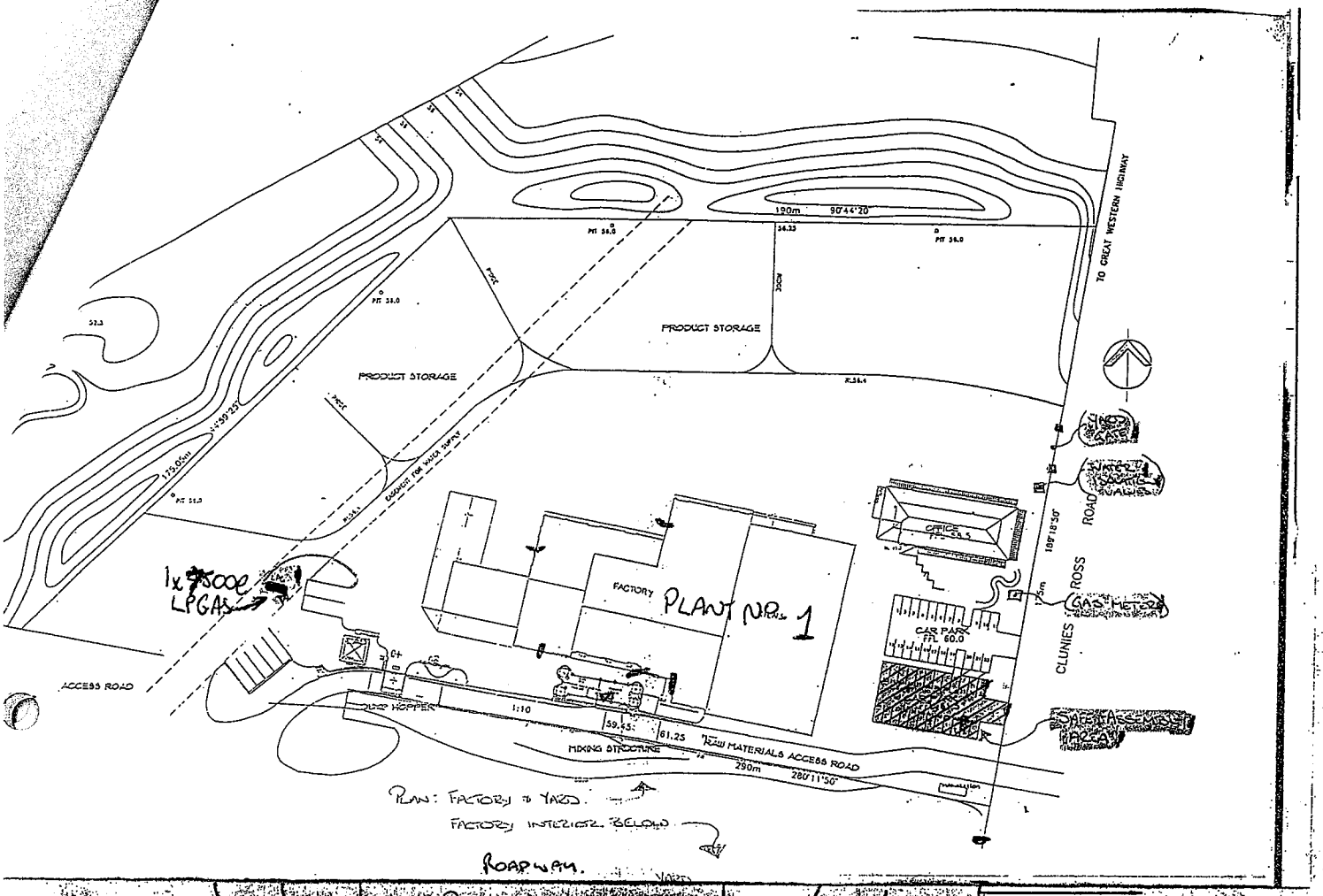
Major Supplier of Dangerous Goods ~~BORAL~~ ORIGIN ENERGY

Emergency Contact for this Site ROBERT LENSTRA Ph. 9840 2333

Site staffing 24HRS 7DAYS

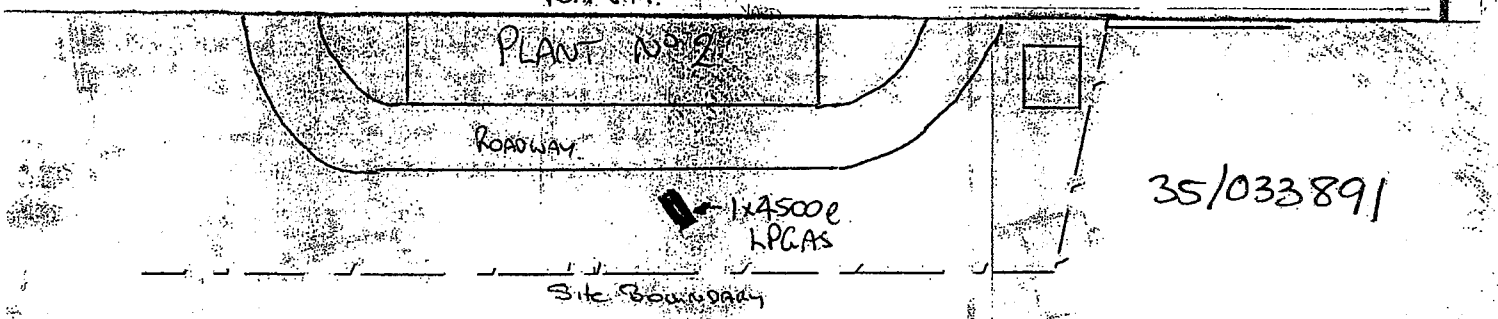
Details of Depots

Depot No.	Depot Type	Goods Stored in Depot	Qty
1	ABOVE-GROUND TANK	Class 2.1	7500 L
	UN 1075 PETROLEUM GASES, LIQUEFIED		7500 L
2	ABOVE-GROUND TANK	Class 2.1	7500 L
	UN 1075 PETROLEUM GASES, LIQUEFIED		7500 L

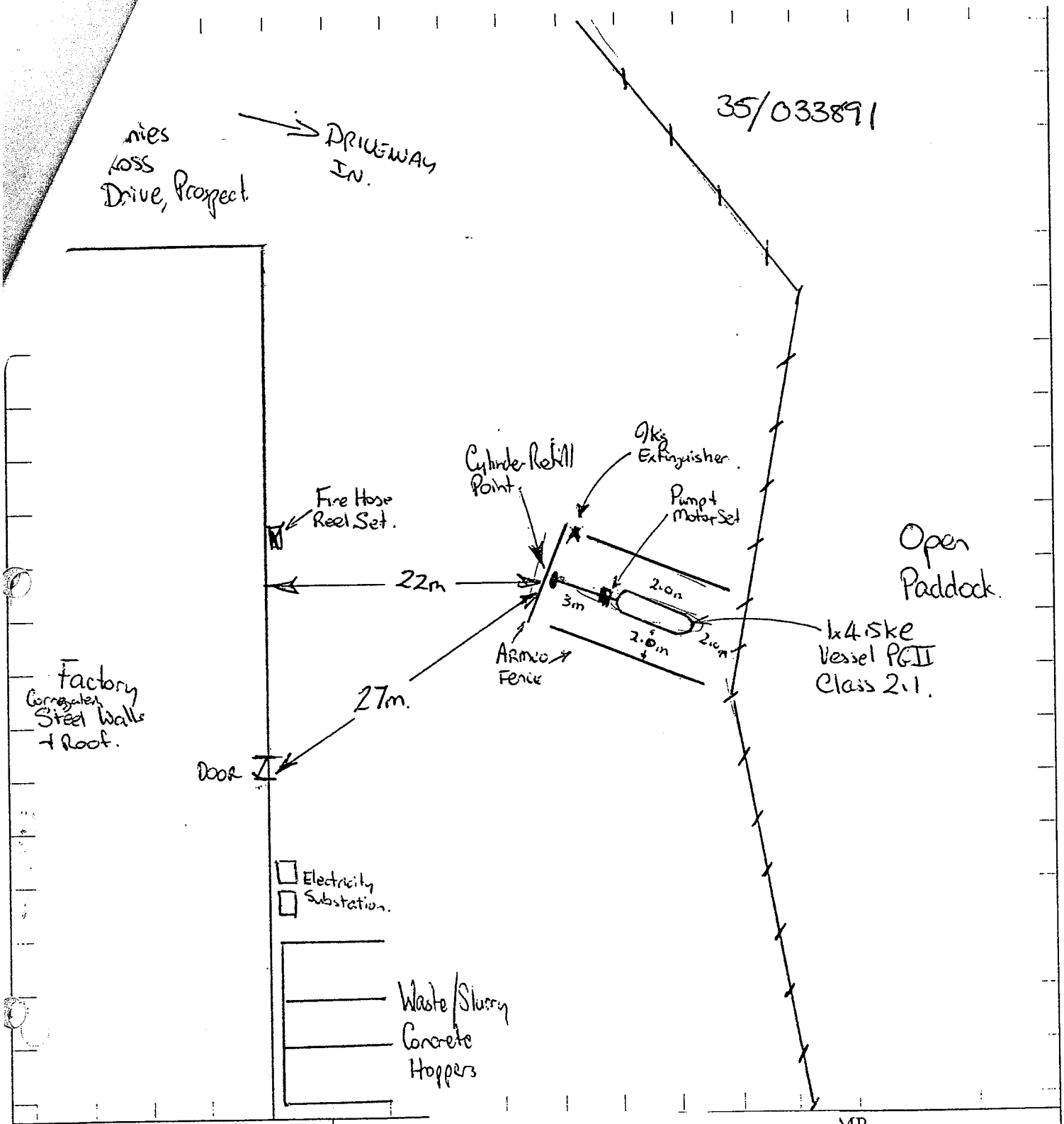


PLAN: FACTORY & YARD.

FACTORY INTERIOR BELOW



35/033891



EQUIPMENT INSTALLED AS PER DRAWING

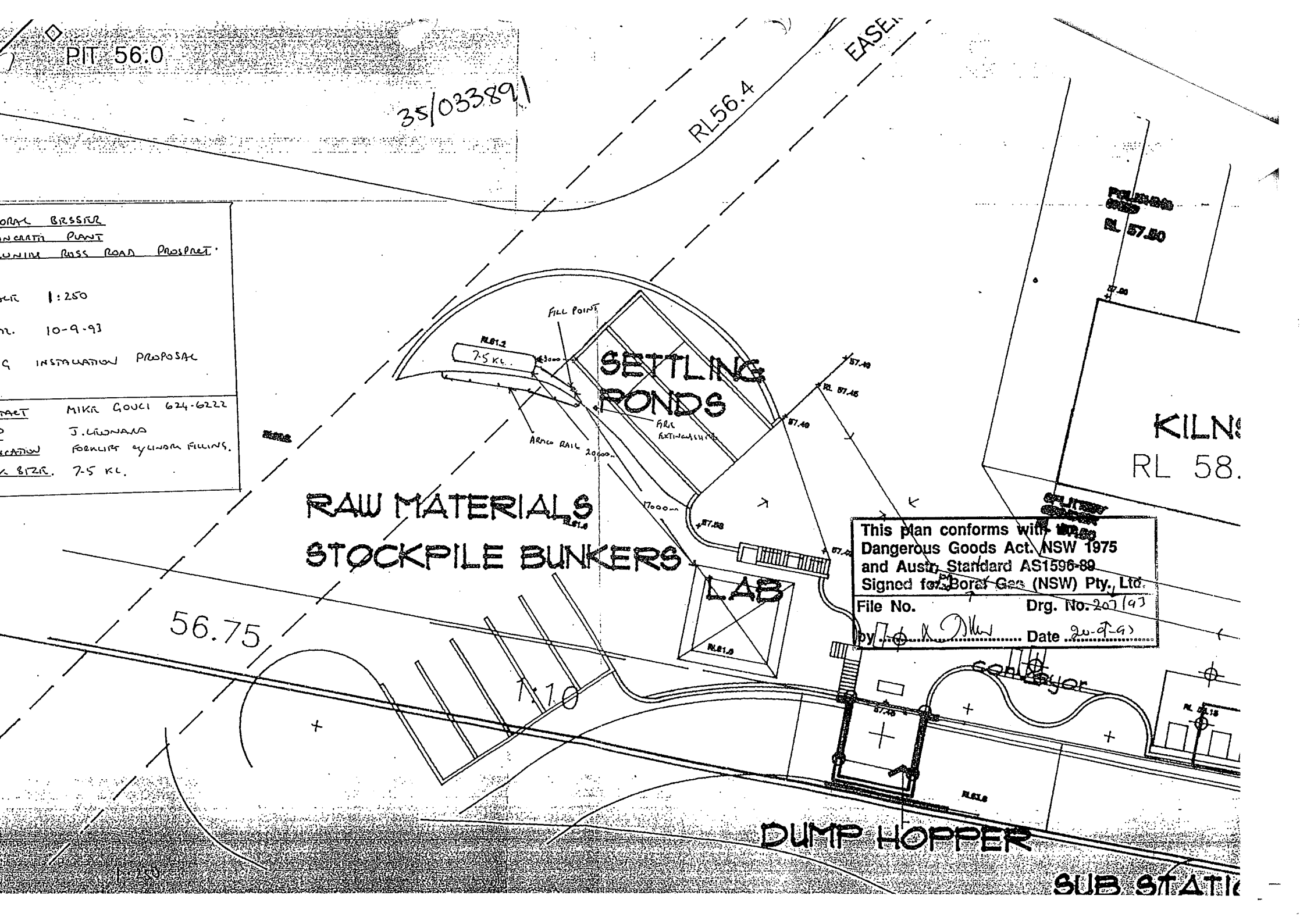
SIGNED: .....

DATE: .....

ON BEHALF OF: .....

CUSTOMER: Boral Besser Masonary Plant 2 Charles Ross Drive PROSPECT.	DATE: 24/2/99.	SCALE: NTS.
	CONTACT: Sam Camilleri	REP: WJSpedding
	TANK SIZE: 1x4.5ke	APPLICATION: Forklift Refilling

BORAL ENERGY, LEVEL 2, 12-14 O'CONNELL STREET, SYDNEY


PIT 56.0
35/033891
RL56.4
EASE
ORAL BRESSER
NCRETE PLANT
UNNING RUSS ROAD PROSPECT.
1:250
10-9-93
INSTALLATION PROPOSAL
TACT MIKE GOUCI 624-6222
J. GIUNANA
CATION FORKLIFT CYLINDER FILLING.
BIZER. 7.5 KL.
FILL POINT
7.5 KL.
SETTLING PONDS
FIRE EXTINGUISHER
ARMCO RAIL 20000
17000
RAW MATERIALS STOCKPILE BUNKERS
LAB
KILN
RL 58.
RL 57.50
This plan conforms with the Dangerous Goods Act. NSW 1975 and Austn. Standard AS1596-89
Signed for Boral Gas (NSW) Pty. Ltd.
File No.
Drg. No. 207/93
by
Date 20-9-93
CONVEYOR
56.75
1:10
DUMP HOPPER
SUB STATIO
1:250

lication for ence to Keep angerous Goods

WORKCOVER NEW SOUTH WALES

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

SAP date 12/5/2000

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

1 Name of applicant: BORAL MASONRY LTD — ACN: 000 223 718

2 Postal address of applicant: P O Box 6 — Suburb/Town: SEVEN HILLS — Postcode: 2147

3 Trading name or site occupier's name: BORAL MASONRY

4 Contact for licence inquiries — Phone: 02. 9840 2333 — Fax: 02 9840 2344 — Name: M. GAUCI

5 Previous licence number (if known): 35/ 033891

6 Previous occupier (if known):

7 Site to be licensed — No: — Street: CLUNIES ROSS ST — Suburb / Town: PROSPECT — Postcode: 2148

8 Main business of site: Manufacture of masonry products 2949

9 Site staffing: Hours per day: 24 — Days per week: 7

10 Site emergency contact — Phone: 02. 9840 2333 — Name: ROBERT LENSTRA

11 Major supplier of dangerous goods: BORAL ENERGY

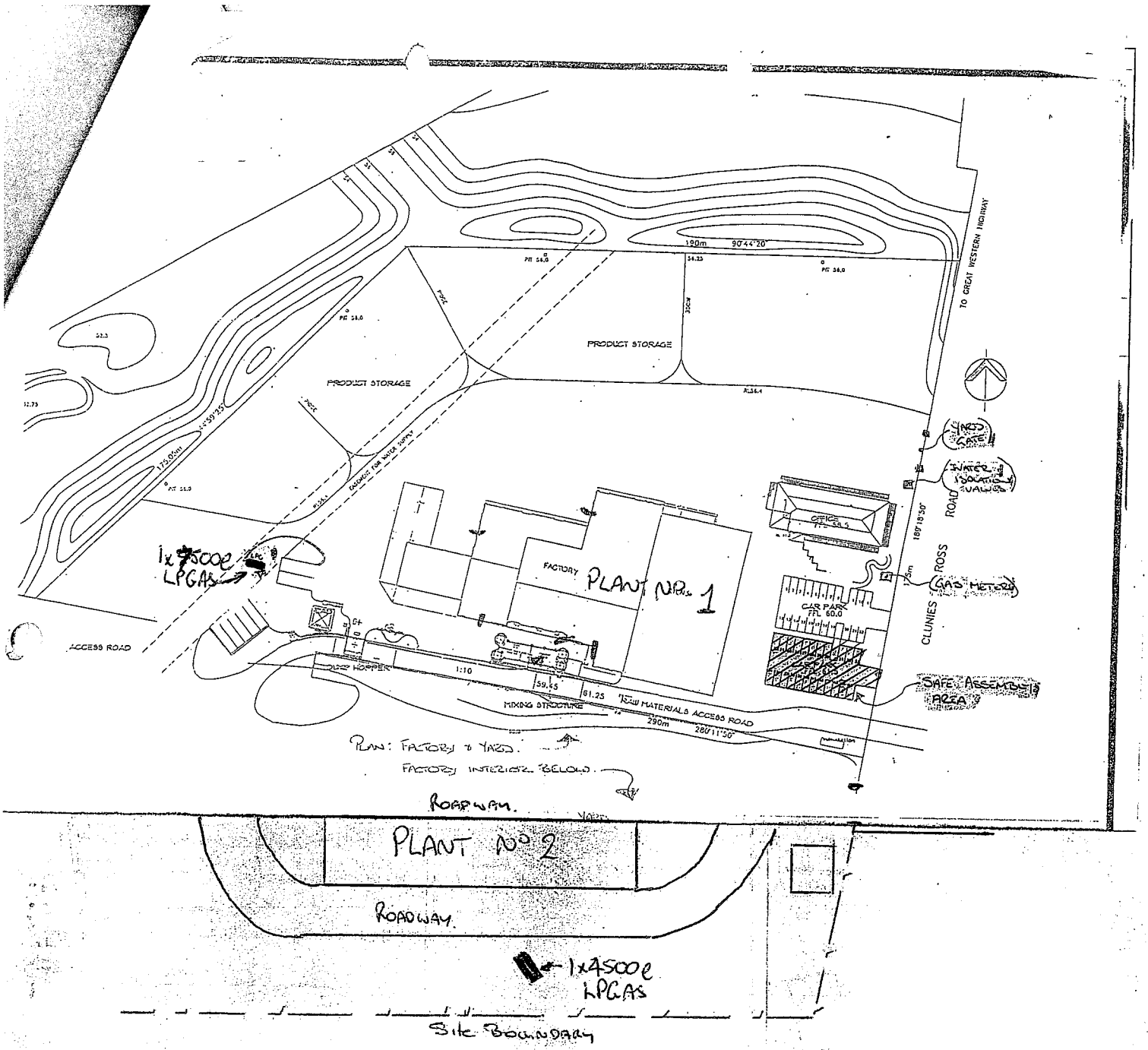
lic issued 29/5/99

12 If a new site or for amendments to depots – see page 4 of Guidance Notes.
Plan stamped by: Name of Accredited Consultant: PA Hurley depot 2; PT Muir depot 1 — Date stamped: 4/3/99; 20/9/95

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

13 Signature of applicant: [signature] — Printed name: MICHAEL GAUCI — Date: 5-/4/99

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


PRODUCT STORAGE
PRODUCT STORAGE
TO GREAT WESTERN HIGHWAY
190m 90°44'20"
FACTORY PLANT NR. 1
OFFICE
CAR PARK
CLUNIES ROSS ROAD
GAS METERS
SAFE ASSEMBLY AREA
ACCESS ROAD
MIXING STRUCTURE
15m MATERIALS ACCESS ROAD
290m
280°11'50"
1x7500ℓ LPGAS
PLAN: FACTORY & YARD.
FACTORY INTERIOR BELOW.
ROADWAY.
PLANT No 2
ROADWAY.
1x4500ℓ LPGAS
Site Boundary

pot? See page 5 of the Guidance Notes.

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

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

epot umber	Type of depot (see page 5)	Depot Class	Maximum storage capacity
1	ABOVE GROUND TANK FORKLIFT REFILLING.	2.1	12,000 e/the

UN Number	Proper Shipping Name	Class (I, II, III)	PG	Product or common name	Typical quantity	Unit, e.g. L, kg, m³
1075	liquefied Petroleum Gas	2.1	II	LP Gas	7500	e
1075	Liquefied Petroleum Gas	2.1	II	LP Gas	4500	e

Depot Number	Type of depot (see page 5)	Depot Class	Maximum storage capacity
1	A/G tank	2.1	7500 L

UN Number	Proper Shipping Name	Class (I, II, III)	PG	Product or common name	Typical quantity	Unit, e.g. L, kg, m³
1075	LPG				7500	L

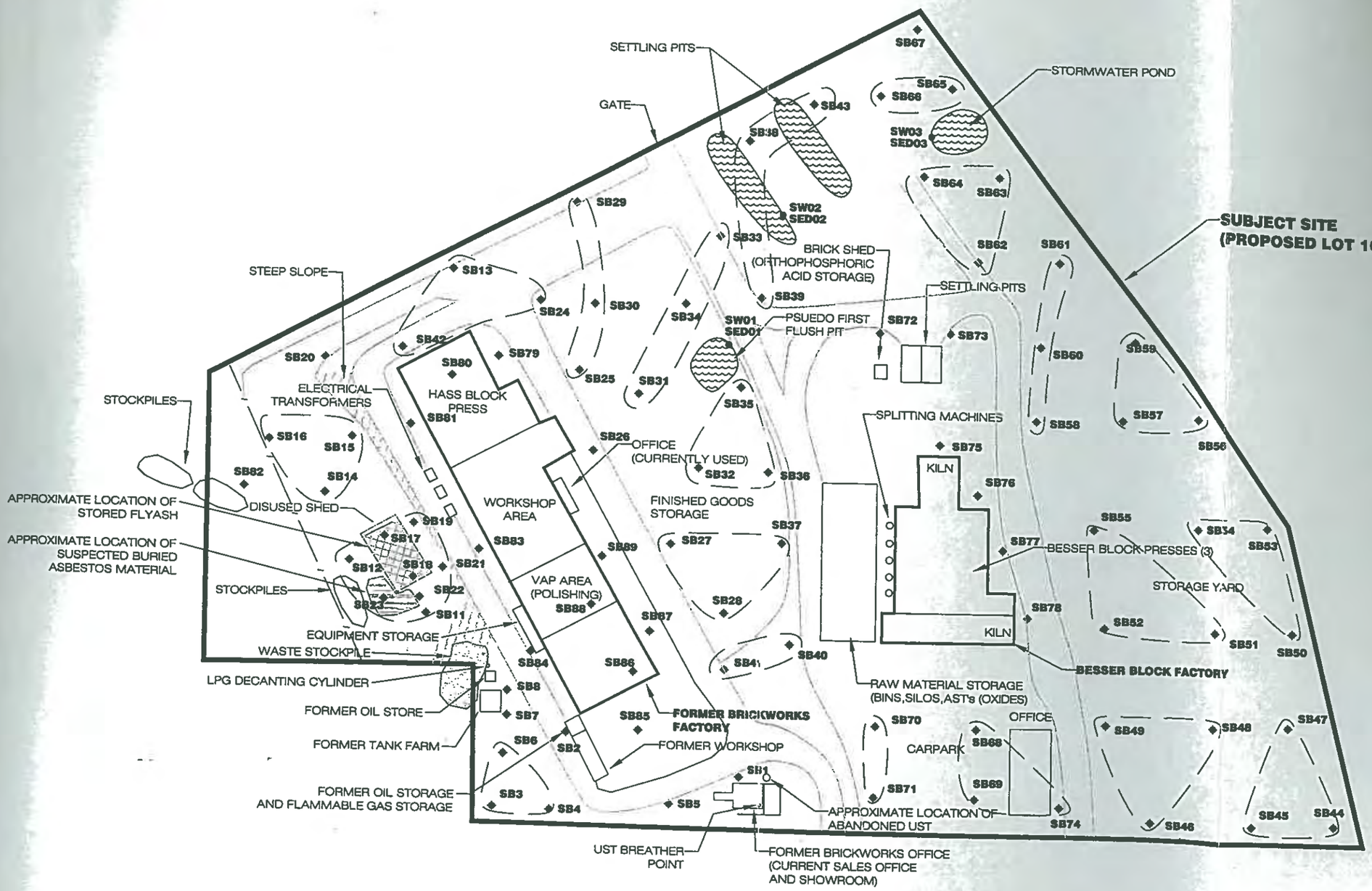
Depot Number	Type of depot (see page 5)	Depot Class	Maximum storage capacity
02	A/G tank	2.1	4500 L

UN Number	Proper Shipping Name	Class (I, II, III)	PG	Product or common name	Typical quantity	Unit, e.g. L, kg, m³
1075	LPG	2.1			4500	L

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

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

Appendix K Woodward-Clyde (2000) Figure



LEGEND

SB SOIL BORING LOCATIONS

COMPOSITED SOIL SAMPLES

CLIENT: **BORAL RESOURCES (NSW) PTY LTD**			TITLE: **SITE PLAN**
PROJECT: **BORAL BESSER MASONARY CLUNIES ROSS ROAD, GREYSTANES**			
0 50 100 metres	DESIGNED: BAD DRAWN: JT CHECKED:	APPROVED: DATE: STATUS: FINAL	PROJECT: 21967-038 CAD FILE: SYD001 REVISION: A
URS			FIGURE 2

Appendix L Detailed QA/QC Assessment

Detailed QA/QC Assessment

QA/QC Results

The QA/QC result for soil samples collected are summarised in **Table L** and discussed below. Detailed QA/QC results are included following the discussion of DQI exceedances below.

Table L QA/QC Results Summary

Data Quality Indicator	Results	DQO met?
Precision		
Blind duplicates (intra laboratory)	N/A[1]	N/A[1]
Blind duplicates (inter laboratory)	N/A[1]	N/A[1]
Laboratory duplicates	<50% RPD Intra laboratory samples were analysed at a rate of 9 in 12 soil samples and 2 of 1 water sample.	Partial[1]
Accuracy		
Laboratory control samples (LCS)	70-130% recovery Laboratory control samples were completed at a suitable density with respect to laboratory batch size and sample analyses.	Yes
Surrogate spikes	54-69% Surrogate spikes were completed for all organic sample analyses.	Partial[1]
Matrix spikes	30-150% recovery Matrix spikes were completed at a suitable density with respect to laboratory batch size and sample analyses.	Partial[1]
Representativeness		
Samples extracted and analysed within holding times	All primary and duplicate samples were extracted within appropriate holding times.	Yes
Sampling appropriate for media and analytes	Samples were collected using appropriate methodology with regard to the sample media and analytes (volatile, semi-volatile and low volatility organics and inorganics).	Yes
Trip spike/trip blank	N/A[1]	N/A[1]
Rinsate blank	<LOR One completed per sampling event and associated laboratory batch.	Yes
Standard operating procedures used for sample collection and handling	Standard operating procedures used as listed in **Section 7** adopted for all sampling events and samples collected.	Yes
Comparability		
Standard analytical methods used for all analyses	Standard analytical methods used as listed in **Appendix N**	Yes
Consistent field conditions, field staff and laboratories	Sampling was conducted by the same field staff member in the investigation. Standard operating procedures were implemented throughout the works. Field conditions remained consistent with those anticipated in development of the SAQP throughout the works.	Yes
Limits of reporting appropriate and consistent	Limits of reporting were consistent and appropriate.	Yes
Completeness		
Soil description and COCs completed and appropriate	All field documentation and COCs were completed appropriately.	Yes
Appropriate documentation	All field documentation was appropriately completed.	Yes
Satisfactory frequency and result for QC samples	The QC results are considered adequate for the purposes of the investigation.	Yes
Data from critical samples	Samples were analysed at locations designed to address the requirements of the investigation such that a suitable data	Yes

Data Quality Indicator	Results	DQO met?
	set could be established. All critical samples were analysed for appropriate COPC and the QA/QC assessment confirmed the reliability of this data.	
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted site assessment criteria	Analytical methods and limits of recovery were considered appropriate for media and adopted site validation criteria for all soil analytes.	Yes

Notes: 1. See discussion below for notes

Discussion of QA/QC Results

Precision

Blind Duplicates

No blind duplicates were prepared as part of the investigation outlined herein, however noting that the COPC were generally reported below the LOR and/or slightly above and noting that the reported results were generally consistent with those reported by previous investigations, this omission is not considered to affect the precision of the results.

Laboratory Duplicates

The rate of laboratory duplicate analysis is within the JBS&G acceptance criteria of 1 in 20 samples. RPDs were generally within the JBS&G DQI of <50 % RPD with the exception of the following:

- Lab duplicate S20-Ma22896-DUP, parent sample TP202 0.0-0.1 with an RPD of 52% for nickel and 57% for zinc;
- Lab duplicate NCP_Ma24797_707966-DUP, parent sample unknown with an RPD of 75% for TRH C15-C28;

Slightly elevated RPDs can be expected due to the heterogeneity of the materials analysed and composition (organic material (sources of TRH) and local bedrock (nickel and zinc) and are therefore not considered to affect the reliability of the data set.

Accuracy

Laboratory Control Samples

A total of 8 LCS were conducted which met the DQIs for soil sampling (1 in 20).

All LCS were reported as having recoveries within the JBS&G acceptable range of 70-130%.

Surrogate Spikes

Surrogate spikes were conducted in conjunction with organic contaminant analysis of all samples. Some of the surrogate spikes reported recoveries were not within the JBS&G acceptable range of 70-130%,(30-150%) yet the surrogate spike recoveries outside of the target range are not considered to affect the analytical data set as concentrations in validation samples were close to or below the laboratory's LOR and/or within the laboratories NATA accredited limits (50-150%).

Matrix Spikes

All matrix spikes reported recoveries were within the JBS&G acceptable range of 70 % – 130 %.

Representativeness

Sampling appropriate for media and analytes

All sampling works completed during the investigation were conducted in accordance with JBS&G standard operating procedures as outlined in the SAQP. Sample locations were undertaken for the

purposes of visual inspection and/or olfactory assessment of soil/rock conditions and the collection of samples was considered appropriate for identified COPC.

All samples were collected wearing a new pair of disposable nitrile gloves. Where possible, disturbance of the sample was minimised during placement within the laboratory supplied sample container and during shipment to reduce the potential for loss of VOCs within the samples.

Holding Times

Copies of Sample Receipt Notes (SRNs) are included in relevant sections of the report (**Appendix N**) and sample extraction/analysis dates were reported in each laboratory report. All soil analyses were undertaken within appropriate holding times for the respective analytes.

Trip Spike and Trip Blank

No trip spikes or blanks were prepared or analysed as part of the additional investigation outlined here. Samples were received by the laboratory in a chilled condition and were immediately transferred to chilled containers in the field. All measures were taken to eliminate the potential loss of volatile contaminates by appropriately experienced field personnel.

Rinsate Blank

Rinsate samples were prepared during the sampling event and subsequently submitted with the sample lab batch for analysis for key COPC. All subsequent contaminant concentrations were below the laboratory LOR with the exception of nickel, reported at 0.002 mg/L, marginally above the LOR (0.001 mg/L). Noting the total contaminant mass reported in soil samples collected as part of the investigation, and in the absence of elevated nickel concentrations exceeding the adopted site criteria, the low level reported nickel result in the rinsate is considered not to effect the representativeness of the data set.

Decontamination Comparability

All non-single use field equipment was decontaminated as per the procedure identified in **Section 7.2**.

Experienced JBS&G personnel undertook all sampling in accordance with standard JBS&G sampling methods as nominated in the validation SAQP.

The laboratory LORs are consistent and are considered appropriate.

Comparability

Eurofins, the primary laboratory were NATA accredited for all analytical methods used. The laboratories used similar analytical methods and the analytical data was considered to be comparable between the laboratory duplicate analyses.

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

Completeness

Documentation

All laboratory documentation is complete and correct. Chain of custody documentation is provided with laboratory reports in **Appendix N.**

Frequency for QC Samples

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

Assessment of QA/QC

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

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

On the basis of the results of the field and laboratory QA/QC program, the soil data is of an acceptable quality in order to achieve the objectives of the current assessment.

Appendix M Soil Borelogs

TP200

Project Number: 58238
Client: ISPT/Aliro Management
Project Name: Prospect Logistics Estate
Site Address: Clunies Ross St

Date: 09-Mar-20
Logged By: RL
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 450

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
Test Pit				Fill	Silt - dark brown, heterogeneous, moist, low plasticity, firm with inclusions of roots	TP200 0.0-0.1	No odours, staining or ACM noted.
		0.15		Fill	Shale - dark grey, heterogeneous, dry, medium density, cobble sized with inclusions of silt	TP200 0.2-0.3	No odours, staining or ACM noted.
		0.40		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, brown, heterogeneous, stiff, dry with inclusions of rootlets and weathered dolerite fragments	TP200 0.5-0.7	No odours, staining or ACM noted.
	0.5						
	1.0						
		1.20			Testpit TP200 terminated at 1.2m		
	1.5						
	2.0						

TP201

Project Number: 58238
Client: ISPT/Aliro Management
Project Name: Prospect Logistics Estate
Site Address: Clunies Ross St

Date: 09-Mar-20
Logged By: RL
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.7
Bore Diameter (mm): 450

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
Test Pit	0.5			Fill	Shale - dark grey, heterogeneous, damp, loose, coarse gravel to cobble sized with inclusions of fine silt	TP201 0.0-0.1	No odours, staining or ACM noted.
						TP201 0.4-0.5	No odours, staining or ACM noted.
	1.0					TP201 0.9-1.0	No odours, staining or ACM noted.
		1.20		Fill	Silt - dark brown, heterogeneous, damp to moist, low plasticity, firm with inclusions of roots	TP201 1.2-1.3	No odours, staining or ACM noted.
	1.5	1.40		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, brown, heterogeneous, stiff, dry with inclusions of rootlets and weathered dolorite fragments	TP201 1.4-1.5	No odours, staining or ACM noted.
	2.0	1.70			Testpit TP201 terminated at 1.7m		

TP202

Project Number: 58238
Client: ISPT/Aliro Management
Project Name: Prospect Logistics Estate
Site Address: Clunies Ross St

Date: 09-Mar-20
Logged By: RL
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.9
Bore Diameter (mm): 450

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
Test Pit				Fill	Shale - dark grey, heterogeneous, moist, loose, coarse gravel to cobble sized with inclusions of fine silt	TP202 0.0-0.1	No odours, staining or ACM noted.
		0.30		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, dark brown, heterogeneous, stiff, dry with inclusions of rootlets and weathered dolorite fragments		
	0.5					TP202 0.4-0.5	No odours, staining or ACM noted.
		0.90			Testpit TP202 terminated at 0.9m		
	1.0						
	1.5						
	2.0						

TP203

Project Number: 58238
Client: **ISPT**/Aliro Management
Project Name: Prospect Logistics Estate
Site Address: Clunies Ross St

Date: 09-Mar-20
Logged By: RL
Contractor: Ken Coles
Total Hole Depth (mbgs): 2
Bore Diameter (mm): 450

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
Test Pit	0.5			Fill	Shale - dark grey, heterogeneous, damp, loose, coarse gravel to cobble sized with inclusions of fine silt	TP203 0.0-0.1	No odours, staining or ACM noted.
	1.0					TP203 0.5-0.6	No odours, staining or ACM noted.
	1.5					TP203 1.0-1.1	No odours, staining or ACM noted.
	2.0	1.50		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, brown, heterogeneous, stiff, dry with inclusions of rootlets and weathered dolerite fragments	TP203 1.6-1.7	No odours, staining or ACM noted.
		2.00			Testpit TP203 terminated at 2m		

TP204

Project Number: 58238
Client: **ISPT**/Aliro Management
Project Name: Prospect Logistics Estate
Site Address: Clunies Ross St

Date: 09-Mar-20
Logged By: RL
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 450

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
Test Pit	0.5			Fill	Shale - dark grey, heterogeneous, dry, medium density, cobble sized with inclusions of silt	TP204 0.0-0.1	No odours, staining or ACM noted.
						TP204 0.5-0.6	No odours, staining or ACM noted.
		0.70		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, brown, heterogeneous, stiff, dry with inclusions of rootlets and weathered dolerite fragments		
	1.0					TP204 0.9-1.0	No odours, staining or ACM noted.
		1.20			Testpit TP204 terminated at 1.2m		
	1.5						
	2.0						

TP205

Project Number: 58238
Client: **ISPT**/Aliro Managment
Project Name: Prospect Logistics Estate
Site Address: Clunies Ross St

Date: 09-Mar-20
Logged By: RL
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.3
Bore Diameter (mm): 450

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
Test Pit	0.5			Fill	Shale - dark grey, heterogeneous, dry, medium density, cobble sized with inclusions of silt	TP205 0.0-0.1	No odours, staining or ACM noted.
						TP205 0.4-0.5	No odours, staining or ACM noted.
	1.0	0.80		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, brown, heterogeneous, stiff, dry with inclusions of rootlets and weathered dolerite fragments	TP205 0.9-1.0	No odours, staining or ACM noted.
	1.5	1.30			Testpit TP205 terminated at 1.3m		
	2.0						

TP206

Project Number: 58238
Client: **ISPT**/Aliro Management
Project Name: Prospect Logistics Estate
Site Address: Clunies Ross St

Date: 09-Mar-20
Logged By: RL
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.9
Bore Diameter (mm): 450

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
Test Pit				Fill	Shale - dark grey, heterogeneous, dry, medium density, cobble sized with inclusions of silt	TP206 0.0-0.1	No odours, staining or ACM noted.
		0.30		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, brown, heterogeneous, stiff, dry with inclusions of rootlets and weathered dolerite fragments		
	0.5					TP206 0.4-0.5	No odours, staining or ACM noted.
		0.90			Testpit TP206 terminated at 0.9m		
	1.0						
	1.5						
	2.0						

TP207

Project Number: 58238
Client: **ISPT**/Aliro Management
Project Name: Prospect Logistics Estate
Site Address: Clunies Ross St

Date: 09-Mar-20
Logged By: RL
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.9
Bore Diameter (mm): 450

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
Test Pit				Fill	Silty CLAY - brown, heterogeneous, dry, low plasticity, firm, with inclusions of wood and grey shale gravels	TP207 0.0-0.1	No odours, staining or ACM noted.
						TP207 0.3-0.4	No odours, staining or ACM noted.
		0.40		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, brown, heterogeneous, stiff, dry with inclusions of rootlets and weathered dolerite fragments		
	0.5					TP207 0.5-0.6	No odours, staining or ACM noted.
		0.90			Testpit TP207 terminated at 0.9m		
	1.0						
	1.5						
	2.0						

TP208

Project Number: 58238
Client: **ISPT**/Aliro Management
Project Name: Prospect Logistics Estate
Site Address: Clunies Ross St

Date: 09-Mar-20
Logged By: RL
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.9
Bore Diameter (mm): 450

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
Test Pit				Fill	Silt - brown, heterogeneous, damp, non plastic, firm with inclusions of rootlets	TP208 0.0-0.1	No odours, staining or ACM noted.
		0.10		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, brown, heterogeneous, stiff, dry with inclusions of roots and weathered dolerite fragments		
	0.5					TP208 0.4-0.5	No odours, staining or ACM noted.
	1.0					TP208 0.9-1.0	No odours, staining or ACM noted.
		1.30		CL	CLAY - dark brown, heterogeneous, damp, low plasticity, stiff		
	1.5					TP208 1.4-1.5	No odours, staining or ACM noted.
		1.90			Testpit TP208 terminated at 1.9m		
	2.0						

TP209

Project Number: 58238
Client: **ISPT**/Aliro Management
Project Name: Prospect Logistics Estate
Site Address: Clunies Ross St

Date: 09-Mar-20
Logged By: RL
Contractor: Ken Coles
Total Hole Depth (mbgs): 2
Bore Diameter (mm): 450

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
Test Pit				Fill	Silt - brown, heterogeneous, damp, non plastic, firm with inclusions of roots	TP209 0.0-0.1	No odours, staining or ACM noted.
		0.15		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, brown, heterogeneous, stiff, low to medium plasticity, dry with inclusions of roots, shale gravels and weathered dolerite fragments		
	0.5					TP209 0.4-0.5	No odours, staining or ACM noted.
	1.0					TP209 0.9-1.0	No odours, staining or ACM noted.
		1.40		CL	CLAY - dark brown, heterogeneous, damp, low plasticity, stiff	TP209 1.4-1.5	No odours, staining or ACM noted.
	1.5						
	2.0						
		2.00			Testpit TP209 terminated at 2m		

TP210

Project Number: 58238
Client: **ISPT**/Aliro Management
Project Name: Prospect Logistics Estate
Site Address: Clunies Ross St

Date: 09-Mar-20
Logged By: RL
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.5
Bore Diameter (mm): 450

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
Test Pit				Fill	Silt - brown, heterogeneous, damp, non plastic, firm with inclusions of roots	TP210 0.0-0.1	No odours, staining or ACM noted.
		0.10		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, brown, heterogeneous, stiff, low to medium plasticity, dry with inclusions of roots, shale gravels and weathered dolerite fragments		
	0.5					TP210 0.4-0.5	No odours, staining or ACM noted.
	1.0					TP210 0.9-1.0	No odours, staining or ACM noted.
		1.30		CL	CLAY - dark brown, heterogeneous, damp, low plasticity, stiff		
	1.5					TP210 1.4-1.5	No odours, staining or ACM noted.
		1.50			Testpit TP210 terminated at 1.5m		
	2.0						

TP211

Project Number: 58238
Client: **ISPT**/Aliro Management
Project Name: Prospect Logistics Estate
Site Address: Clunies Ross St

Date: 09-Mar-20
Logged By: RL
Contractor: Ken Coles
Total Hole Depth (mbgs): 1
Bore Diameter (mm): 450

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
Test Pit				Fill	Silt - brown, heterogeneous, damp, non plastic, firm with inclusions of roots	TP211 0.0-0.1	No odours, staining or ACM noted.
		0.30		CL-GC	Silty CLAY - silty clay, brown, heterogeneous, stiff, non plastic, damp with inclusions of roots and weathered dolerite fragments from 0.6 m bgs	TP211 0.3-0.4	No odours, staining or ACM noted.
	0.5						
						TP211 0.7-0.8	No odours, staining or ACM noted.
	1.0	1.00			Testpit TP211 terminated at 1m		
	1.5						
	2.0						

AQ01

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.5
Pit Dimension (m3): 450

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
Test Pit				Fill	Reworked Topsoil Silty CLAY, dark brown, dry, heterogeneous, with inclusions of roots and rootlets and whole brick at the surface.	AQ01 0-0.1 PID = 0.4 ppm	AQ (0.0-0.1) 10L No ACM. No odours or staining.
		0.10		CL-ML	Silty CLAY, dark brown, mottled, pedal, moist, heterogeneous, firm, low to moderate plasticity.	AQ01 0.1-0.6 PID = 0.4 ppm	No odours, staining or ACM
	0.5						
		0.60		CL-ML	Silty CLAY, light brown-tan, moist, heterogeneous, well consolodated (firm) with inclusions of highly weathered dolorite.	AQ01 0.6-1.3 PID = 1.2 ppm	No odours, staining or ACM
	1.0						
	1.5						
		1.50			Test Pit AQ01 terminated at 1.5m		
	2.0						
	2.5						
	3.0						

TEST PIT JBSG TEST PIT - 2017.GPJ GINT STD AUSTRALIA.GDT 21/3/19

AQ02

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.2
Pit Dimension (m3): 450

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
Test Pit				Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded with inclusions of whole brick at the surface.	AQ02 0.0-0.2 PID = 1.6 ppm	AQ (0-0.1) 10L No ACM. No odours or staining.
		0.20		CL-ML	Silty CLAY, red-brown, moist, heterogeneous, soft, medium plasticity.		
	0.5						AQ 10L (0.2-1.2) No ACM. No odours or staining.
		0.80		CL-ML	Silty CLAY, As above grades to light brown, moist, homogenous, firm at depth	AQ02 0.6-1.1 PID = 1.2 ppm	No ACM. No odours or staining.
	1.0						
		1.20			Test Pit AQ02 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						

AQ03

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.7
Pit Dimension (m3): 450

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
Test Pit				Fill	Reworked Topsoil Silty CLAY, dark brown, dry, heterogeneous, with inclusions of roots and rootlets, shale and whole brick at the surface.	AQ03 0.0-0.1 PID = 0.9 ppm	AQ (0-0.1)10L No ACM. No odours or staining.
		0.10		CL-ML	Silty CLAY, dark brown, mottled, pedal, moist, heterogeneous, firm, low to moderate plasticity.		
	0.5					AQ03 0.1-0.6 PID = 1.1 ppm	AQ (0.1-0.7) 10L No ACM. No odours or staining.
		0.70		CL-ML	Silty CLAY, light brown-tan, moist, heterogeneous, well consolodated (firm) with inclusions of highly weathered dolorite.		
	1.0						
	1.5					AQ03 0.7-1.7 PID = 1 ppm	AQ (0.7-1.7) 10L No ACM. No odours or staining.
		1.70			Test Pit AQ03 terminated at 1.7m		
	2.0						
	2.5						
	3.0						

AQ04

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 3
Pit Dimension (m3): 450

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
Test Pit				Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.	AQ04 0.0-0.2 PID = 3.2 ppm	AQ (0-0.2) 10L No ACM. No odours or staining.
		0.20		Fill	Reworked Silty CLAY, dark brown/black, dry, heterogeneous, medium plasticity, stiff with inclusions of crushed shale and small gravels.	AQ04 0.2-0.6 PID = 2.1 ppm	AQ (0.2-0.6) 10L No ACM. No odours or staining.
	0.5						
		0.60		Fill	Reworked Silty CLAY, red-brown, damp, heterogeneous, low plasticity, stiff with inclusions of crushed shale and small gravels.	AQ04 0.6-1.3 PID = 1.2 ppm	AQ (0.6-1.3) 10L No ACM. No odours or staining.
	1.0						
		1.30		Fill	FILL Silty GRAVEL, medium sized (100 - 200 mm) basalt gravels, rounded - sub angular.		No ACM. No odours or staining.
		1.40		CL-ML	Silty CLAY, light brown-tan, moist, heterogeneous, well consolodated (firm) with inclusions of highly weathered dolorite.	AQ04 1.4-2.4 PID = 8.9 ppm	AQ (1.4-2.4) 10L No ACM. No odours or staining.
	1.5						
	2.0						
	2.5						
	3.0						
		3.00			Test Pit AQ04 terminated at 3m		

AQ05

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 13/03/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.5
Pit Dimension (m3): 450

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
Test Pit				Fill	Fill Silty CLAY, brown, moist, heterogeneous, firm, low plasticity with inclusions of brick plastic, metal, glass and ACM.	AQ05 0.0-0.2 PID = 0.1 ppm	No Surficial ACM AQ (0-0.2) 10L ACM = 0.0110 %w/w. No odours or staining.
		0.20		Fill	Fill Gravelly CLAY, grey, dry, non-plastic, hard, heterogeneous with inclusions of very small well graded lithic gravels.	AQ05 0.2-0.4 PID = 2.3 ppm	AQ (0.2-0.4) 10L No ACM. No odours or staining.
		0.40		Fill	Fill Silty CLAY, brown, moist, heterogeneous, firm, low plasticity with inclusions of mino plastic, metal, glass and ACM.	AQ05 0.4-0.5 PID = 1.2 ppm	AQ (0.4-0.5) 10L ACM = 0.0055 %w/w. No odours or staining.
	0.5						
		0.50		Fill	Reworked Silty CLAY, light brown-tan, moist, heterogeneous, with inclusions of highly weathered dolorite	AQ05 0.5-0.9 PID = 1 ppm	AQ (0.5-0.9) 10L No ACM. No odours or staining.
		0.90		Fill	Reworked Silty CLAY, brown, damp, heterogeneous with inclusions of igneouos (basalt) rock fragments, and shale.	AQ05 0.9-1.0 PID = 0.9 ppm	AQ (0.9-1.0) 10L No ACM. No odours or staining.
	1.0						
		1.00		CL-ML	Silty CLAY, red-brown grading to light brown-tan, moist, heterogeneous, well consolodated (firm) with inclusions of highly weathered dolorite.	AQ05 1.0-2.0 PID = 0.5 ppm	AQ (1.0-2.0) 10L No ACM. No odours or staining.
	1.5						
	2.0						
	2.5						
		2.50			Test Pit AQ05 terminated at 2.5m		
	3.0						

AQ06

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.1
Pit Dimension (m3): 450

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
Test Pit				Fill	Reworked Topsoil Silty CLAY, dark brown, dry, heterogeneous, with inclusions of roots and rootlets and whole brick at the surface.	AQ06 0-0.2 PID = 0.7 ppm	AQ (0-0.2)10L No ACM. No odours or staining.
		0.20		CL-ML	Silty CLAY, dark brown grading to red brown, mottled, pedal, moist, heterogeneous, firm, low to moderate plasticity.	AQ06 0.2-0.6 PID = 0.3 ppm	AQ (0.2-1.1) 10L No ACM. No odours or staining.
	0.5						
	1.0					AQ06 0.6-1.1 PID = 1.3 ppm	No odours, staining or ACM
		1.10			Test Pit AQ06 terminated at 1.1m		
	1.5						
	2.0						
	2.5						
	3.0						

AQ07

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 13/03/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.4
Pit Dimension (m3): 450

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
Test Pit				Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded with inclusions of whole brick at the surface.	AQ07 0.0-0.4 PID = 2.5 ppm	AQ (0-0.4) 10L No ACM. No odours or staining.
	0.5	0.40		CL-ML	Silty CLAY, dark brown, mottled, pedal, moist, heterogeneous, firm, low to moderate plasticity.	AQ07 0.4-0.7 PID = 1.2 ppm	AQ (0.4-0.7) 10L No ACM. No odours or staining.
	1.0	0.70		CL-ML	Silty CLAY, light brown-tan, moist, heterogeneous, well consolodated (firm) with inclusions of highly weathered dolorite.	AQ07 0.7-1.4 PID = 0.4 ppm	No odours, staining or ACM
	1.5	1.40			Test Pit AQ07 terminated at 1.4m		
	2.0						
	2.5						
	3.0						

AQ08

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 13/03/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.2
Pit Dimension (m3): 450

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
Test Pit				Fill	Reworked Topsoil Silty CLAY, brown, dry, heterogeneous, with inclusions of roots and rootlets and whole brick at the surface.	AQ08 0.0-0.1 PID = 0.2 ppm	ACM observed at surface, no odours or staining.
		0.10		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.	AQ08 0.1-0.5 PID = 1.1 ppm	AQ (0.1-0.5) 10L No ACM. No odours or staining.
	0.5						
		0.50		CL-ML	Silty CLAY, red-brown grading to light brown-tan, moist, heterogeneous, well consolodated (firm) with inclusions of highly weathered dolorite.	AQ08 0.5-1.0 PID = 1.5 ppm	AQ (0.5-1.2) 10L No ACM. No odours or staining.
	1.0						
						AQ08 1.0-1.2 PID = 0.4 ppm	No odours, staining or ACM
		1.20			Test Pit AQ08 terminated at 1.2m		
	1.5						
	2.0						
	2.5						
	3.0						

AQ09

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 13/03/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 3
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, moist, heterogeneous, soft, with a high percentage of anthropogenic building waste, brick, concrete, scrap metal, plastic sheeting	AQ09 0-1.0 PID = 0.2 ppm	No Surficial ACM. No odours, staining. AQ (0-1.0) 10L No ACM. No odours or staining.
	1.0					AQ09 1.0-1.5 PID = 0.1 ppm	AQ (1.0-1.5) 10L No ACM. No odours or staining.
	1.5	1.50		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ09 1.5-2.4 PID = 3.4 ppm	AQ (1.5-2.4) 10L No ACM. No odours or staining.
	2.0						
	2.5						
	3.0						
		3.00			Test Pit AQ09 terminated at 3m		

TEST PIT JBSG TEST PIT - 2017.GPJ GINT STD AUSTRALIA.GDT 21/3/19

AQ10

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 13/03/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Silty CLAY, brown, damp, heterogeneous, loose with inclusions of shale and trace road base gravels.	AQ10 0-0.1 PID = 1.2 ppm	ACM observed at surface, no odours or staining.
						AQ10 0.1-0.5 PID = 1.5 ppm	AQ (0.1-0.5) 10L No ACM. No odours or staining.
		0.50		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, damp, heterogeneous, poorly graded.	AQ10 0.5-0.7 PID = 1.3 ppm	AQ (0.5-0.7) 10L No ACM. No odours or staining.
	1.0	0.70		Fill	Reworked Silty CLAY, light brown-tan, moist, heterogeneous, with inclusions of highly weathered dolomite and very minor shale.		
	1.5					AQ10 0.7-1.6 PID = 1.2 ppm	AQ (0.7-1.6) 10L No ACM. No odours or staining.
		1.60		CL-ML	Silty CLAY, red-brown grading, moist, heterogeneous, medium plasticity, well consolodated (firm) with inclusions of highly weathered dolorite toward the base	AQ10 1.6-2.0 PID = 5.2 ppm	No odours, staining or ACM
	2.0	2.00			Test Pit AQ10 terminated at 2m		
	2.5						
	3.0						

AQ11

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.4
Pit Dimension (m3): 450

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
Test Pit				Fill	Fill silty GRAVEL, grey crushed concrete, granular, dry, heterogeneous.	AQ11 0-0.2 PID = 2.3 ppm	AQ (0-0.2) 10L No ACM. No odours or staining.
		0.20		Fill	Reworked Silty CLAY, red-brown, damp, heterogeneous, low plasticity, stiff with inclusions of crushed shale and small gravel.		
	0.5					AQ11 0.2-0.7 PID = 1.3 ppm	AQ (0.2-0.7) 10L No ACM. No odours or staining.
		0.70		CL-ML	Silty CLAY, red-brown, moist, heterogeneous, soft, medium plasticity.		
	1.0					AQ11 0.7-1.4 PID = 0.9 ppm	AQ (0.7-1.4) 10L No ACM. No odours or staining.
		1.40			Test Pit AQ11 terminated at 1.4m		
	1.5						
	2.0						
	2.5						
	3.0						

AQ12

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.5
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Reworked Silty CLAY, dark brown, dry, heterogeneous, stiff with inclusions of shale, roots and rootlets and whole brick at the surface.	AQ12 0-0.6 PID = 2.6 ppm	No Surficial ACM. No odours, staining. AQ (0-0.6) 10L No ACM. No odours or staining.
		0.60		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) with inclusions of highly weathered dolorite.	AQ12 0.6-1.1 PID = 2.1 ppm	AQ (0.6-1.1) 10L No ACM. No odours or staining.
	1.0						
	1.5					AQ12 1.1-1.5 PID = 3.5 ppm	No ACM. No odours, staining.
		1.50			Test Pit AQ12 terminated at 1.5m		
	2.0						
	2.5						
	3.0						

AQ13

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): .7
Pit Dimension (m3): 450

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
Test Pit				Fill	Reworked Topsoil Silty CLAY, dark brown, dry, heterogeneous, with inclusions of roots and rootlets, shale, ceramic and whole brick at the surface.	AQ13 0-0.1 PID = 4.1 ppm	ACM observed at surface, no odours or staining.
						AQ13 0.1-0.3 PID = 1.6 ppm	AQ (0.1-0.3) 10L No ACM. No odours or staining.
		0.30		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.		AQ (0.3-0.7) 10L No ACM. No odours or staining.
	0.5					AQ13 0.3-0.7 PID = 1.3 ppm	
		0.70			Test Pit AQ13 terminated at 0.7 m		
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						

AQ14

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.3
Pit Dimension (m3): 450

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
Test Pit				Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, slag and ACM.	AQ14 0.0-0.1 PID = 1 ppm	ACM observed at surface, no odours or staining.
						AQ14 0.1-0.4 PID = 1.8 ppm	AQ (0.1-0.4) 10L ACM = 0.0515 %w/w. No odours or staining.
	0.5	0.40		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.		
		0.60		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ14 0.6-1.1 PID = 0.3 ppm	AQ (06-0.1.1) 10L No ACM. No odours or staining.
	1.0						
		1.30			Test Pit AQ14 terminated at 1.3m		
	1.5						
	2.0						
	2.5						
	3.0						

AQ15

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 3
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, slag and ACM.	AQ15 0-0.1 PID = 3.4 ppm	ACM observed at surface, no odours or staining.
						AQ15 0.1-0.5 PID = 0.6 ppm	AQ (0.1-0.5) 10L ACM = 0.0497 %w/w. No odours or staining.
	1.0	0.50		CL-ML	Silty CLAY, potentially reworked natural red-brown, moist, heterogeneous, soft, medium plasticity.	AQ15 0.5-1.2 PID = 0.3 ppm	AQ (0.5-1.2) 10L No ACM. No odours or staining.
	1.5	1.20		CL-ML	Silty CLAY, potentially reworked natural, red-brown grading to light brown-tan, moist, heterogeneous	AQ15 1.2-1.6 PID = 1.3 ppm	No odours, staining or ACM
	2.0	1.60		CL-ML	Silty CLAY, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.		
	2.5						
	3.0					AQ15 2.5-3.0 PID = 4.1 ppm	No odours, staining or ACM
		3.00			Test Pit AQ15 terminated at 3m		

AQ16

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.5
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry, heterogeneous, low plasticity with inclusions of shale, asphalt, and road base gravel.	AQ16 0-0.6 PID = 3.1 ppm	No Surficial ACM. No odours, staining. AQ (0-0.6) 10L No ACM. No odours or staining.
		0.60		Fill	Reworked Silty CLAY, dark brown/black, dry, heterogeneous, medium plasticity, stiff with inclusions of crushed shale.	AQ16 0.6-0.8 PID = 3.5 ppm	AQ (0.6-0.8) 10L No ACM. No odours or staining.
	1.0	0.80		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ16 0.8-1.0 PID = 4.3 ppm	AQ (0.8-1.0) 10L No ACM. No odours or staining.
	1.5					AQ16 1.0-1.5 PID = 5.1 ppm	No odours, staining or ACM
		1.50			Test Pit AQ16 terminated at 1.5m		
	2.0						
	2.5						
	3.0						

AQ17

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.8
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, slag and ACM.	AQ17 0-0.1 PID = 2.9 ppm	ACM observed at surface, no odours or staining. QC04/A collected.
						AQ17 0.1-0.6 PID = 2.4 ppm	AQ (0.1-0.6) 10L ACM = 0.0202 %w/w. No odours or staining.
	1.0			CL-ML	Silty CLAY, potentially reworked natural, red-brown grading to light brown-tan, moist, heterogeneous		
	1.5					AQ17 1.5-1.8 PID = 1.4 ppm	No odours, staining or ACM
		1.80			Test Pit AQ17 terminated at 1.8m		
	2.0						
	2.5						
	3.0						

AQ18

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 3
Pit Dimension (m3): 450

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
Test Pit	0.5	0.60		Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, igneous road base gravel, shale and ACM.	AQ18 0-0.1 PID = 2.8 ppm	ACM observed at surface, no odours or staining.
						AQ18 0.1-0.6 PID = 2.6 ppm	AQ (0.1-0.6) 10L ACM = 0.0110 %w/w. No odours or staining.
				CL-ML	Silty CLAY, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolerite.		
	1.0					AQ18 1-1.1 PID = 0.2 ppm	No odours or staining or ACM
	1.5						
	2.0					AQ18 2-2.1 PID = 3.2 ppm	No odours or staining or ACM
	2.5					AQ18 2.4-2.5 PID = 8.5 ppm	No odours or staining or ACM
	3.0						
		3.00			Test Pit AQ18 terminated at 3m		

TEST PIT JBSG TEST PIT - 2017.GPJ GINT STD AUSTRALIA.GDT 21/3/19

AQ19

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.9
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, slag and ACM.	AQ19 0-0.1 PID = 1 ppm AQ19 0.1-0.9 PID = 2 ppm	ACM observed at surface, no odours or staining. AQ (0.1-0.9) 10L ACM = 0.0497 %w/w. No odours or staining.
	1.0	0.90		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ19 0.9-1.9 PID = 3.8 ppm	AQ (0,9-1.9) 10L No ACM. No odours or staining.
	1.5						
		1.90			Test Pit AQ19 terminated at 1.9m		
	2.0						
	2.5						
	3.0						

AQ20

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.1
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, slag and ACM.	AQ20 0-0.1 PID = 4.4 ppm	ACM observed at surface, no odours or staining.
	1.0					AQ20 0.1-1.1 PID = 7.2 ppm	AQ 1(0.1-1.1) 0L ACM = 0.0423 %w/w. No odours or staining.
		1.10		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.		
		1.15		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.		
	1.5					AQ20 1.1-2.1 PID = 6.1 ppm	AQ (1.1-2.1) 10L No ACM. No odours or staining.
	2.0						
		2.10			Test Pit AQ20 terminated at 2.1m		
	2.5						
	3.0						

AQ21

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.5
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of scrap metal, concrete, plastic sheeting and brick.	AQ21 0-0.7 PID = 3.1 ppm	No Surficial ACM. No odours, staining. AQ (0-0.7) 10L No ACM. No odours or staining.
	1.0	0.70		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ21 0.7-1.2 PID = 3.2 ppm	No odours, staining or ACM
	1.5	1.50			Test Pit AQ21 terminated at 1.5m		
	2.0						
	2.5						
	3.0						

AQ21-A

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.4
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of scrap metal, concrete, plastic sheeting and brick.	AQ21-A 0-0.1 PID = 5.1 ppm AQ21-A 0.1-0.6 PID = 2.1 ppm	No Surficial ACM. No odours or staining. AQ (0-0.6) 10L No ACM. No odours or staining.
	1.0	0.60		Fill	Fill Silty CLAY, brown, as above with less anthropogenic material and inclusions of crushed shale..	AQ21-A 0.6-1.1 PID = 3.2 ppm	AQ (0.6-1.1)10L No ACM. No odours or staining.
		1.10		CL-ML	Silty CLAY, dark brown grading to red brown, mottled, pedal, moist, heterogeneous, firm, low to moderate plasticity.	AQ21-A 1.1-1.4 PID = 1.5 ppm	No odours, staining or ACM
	1.5 2.0 2.5 3.0	1.40			Test Pit AQ21-A terminated at 1.4m		

AQ22

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.4
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, slag and ACM.	AQ22 0-0.1 PID = 2.4 ppm	ACM observed at surface, no odours or staining.
						AQ22 0.1-0.5 PID = 2.5 ppm	AQ (0.1-0.5) 10L No ACM. No odours or staining.
		0.50		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.	AQ22 0.5-0.8 PID = 2.8 ppm	AQ (0.5-0.8) 10L No ACM. No odours or staining.
	1.0	0.80		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ22 0.8-1.4 PID = 3.1 ppm	No odours, staining or ACM
	1.5	1.40			Test Pit AQ22 terminated at 1.4m		
	2.0						
	2.5						
	3.0						

AQ23

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.5
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, slag and ACM.	AQ23 0.0-0.1 PID = 1.8 ppm	ACM observed at surface, no odours or staining.
						AQ23 0.1-0.7 PID = 3.8 ppm	AQ (0.1-0.7) 10L No ACM. No odours or staining.
	1.0	0.70		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ23 0.7-1.2 PID = 4.1 ppm	No odours, staining or ACM
	1.5						
		1.50			Test Pit AQ23 terminated at 1.5m		
	2.0						
	2.5						
	3.0						

AQ24

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.1
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, slag and ACM.	AQ24 0.0-0.1 PID = 0.5 ppm	ACM observed at surface, no odours or staining.
	1.0					AQ24 0.1-1.1 PID = 0.5 ppm	AQ (0.1-1.1) 10L ACM = 0.0883 %w/w. No odours or staining.
	1.5					AQ24 1.1-1.5 PID = 1.3 ppm	AQ (1.1-1.5) 10L ACM = 0.0092 %w/w. No odours or staining.
	2.0	1.50		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ24 1.5-2.1 PID = 1.4 ppm	No odours, staining or ACM
	2.5	2.10			Test Pit AQ24 terminated at 2.1m		
	3.0						

AQ25

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.9
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, slag and ACM.	AQ25 0-0.1 PID = 1.2 ppm	ACM observed at surface, no odours or staining.
	1.0					AQ25 0.1-1.1 PID = 0.5 ppm	AQ (0.1-1.1) 10L No ACM. No odours or staining.
						AQ25 1.1-1.4 PID = 1.1 ppm	AQ (1.1-1.4) 10L No ACM. No odours or staining.
	1.5	1.40		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ25 1.4-1.9 PID = 1.1 ppm	No odours, staining or ACM
	2.0	1.90			Test Pit AQ25 terminated at 1.9m		
	2.5						
	3.0						

AQ26

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.8
Pit Dimension (m3): 450

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
Test Pit				Fill	Fill Silty CLAY, grey, dry, heterogeneous, loose, with inclusions of plastic, ceramic,and crushed concrete.	AQ26 0.0-0.2 PID = 1.1 ppm	AQ (0-0.2) 10L No ACM. No odours or staining.
		0.20		Fill	Reworked Silty CLAY, light brown-tan, moist, heterogeneous, moderate plasticity, and minor inclusions of glass and brick.	AQ26 0.2-0.9 PID = 0.5 ppm	AQ (0.2-0.9) 10L No ACM. No odours or staining.
	0.5						
		0.90		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.		No ACM. No odours or staining.
	1.0						
		1.30		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ26 1.3-1.8 PID = 1.4 ppm	AQ (1.3-1.8) 10L No ACM. No odours or staining.
	1.5						
		1.80			Test Pit AQ26 terminated at 1.8m		
	2.0						
	2.5						
	3.0						

AQ27

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.7
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, slag and ACM.	AQ27 0.0-0.1 PID = 1.2 ppm	ACM observed at surface, no odours or staining.
						AQ27 0.1-0.7 PID = 0.5 ppm	AQ (0.1-0.7) 10L ACM = 0.0663 %w/w. No odours or staining.
	1.0	0.70		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.	AQ27 0.7-1.1 PID = 1.3 ppm	AQ (0.7-1.1) 10L No ACM. No odours or staining.
	1.5	1.10		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ27 1.1-1.7 PID = 1.5 ppm	No odours, staining or ACM
	2.0	1.70			Test Pit AQ27 terminated at 1.7m		
	2.5						
	3.0						

AQ28

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.6
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, slag and ACM.	AQ28 0.0-0.1 PID = 0.3 ppm	ACM observed at surface, no odours or staining.
	1.0					AQ28 0.1-1.1 PID = 0.5 ppm	AQ 10L ACM = 0.0257% w/w. No odours or staining.
						AQ28 1.2-1.6 PID = 1 ppm	No odours, staining or ACM
		1.10		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.	AQ28 1.1-1.2 PID = 1.2 ppm	AQ (1.1-1.2) 10L No ACM. No odours or staining.
	1.5	1.20		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.		No ACM. No odours or staining.
		1.60			Test Pit AQ28 terminated at 1.6m		
	2.0						
	2.5						
	3.0						

AQ29

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 3
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, slag and ACM.	AQ29 0-0.1 PID = 0.2 ppm	ACM observed at surface, no odours or staining.
	1.0					AQ29 0.1-1.1 PID = 0.4 ppm	AQ (0.1-1.1) 10L ACM = 0.0166% w/w. No odours or staining.
	1.5					AQ29 1.1-1.7 PID = 1.8 ppm	AQ (1.1-1.7) 10L ACM = 0.0202% w/w. No odours or staining.
		1.70		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ29 1.7-2.0 PID = 3.2 ppm	AQ (1.7-2.0) 10L No ACM. No odours or staining.
	2.0						
	2.5						
	3.0						No ACM. No odours or staining.
		3.00			Test Pit AQ29 terminated at 3m		

AQ30

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.1
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of road base gravels, shale, minor scrap metal, timber, slag and ACM.	AQ30 0-0.1 PID = 0.2 ppm	ACM observed at surface, no odours or staining.
	1.0					AQ30 0.1-1.1 PID = 1.3 ppm	AQ (0.1-1.1) 10L No ACM. No odours or staining.
	1.5					AQ30 1.1-2.1 PID = 1.6 ppm	AQ (1.1-2.1) 10L ACM = 0.0147% w/w. No odours or staining.
	2.0						
		2.10		CL-ML	Silty CLAY, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.		No ACM, no odours or staining.
	2.5						
		2.50			Test Pit AQ30 terminated at 2.5m		
	3.0						

TEST PIT JBSG TEST PIT - 2017.GPJ GINT STD AUSTRALIA.GDT 21/3/19

AQ31

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.8
Pit Dimension (m3): 450

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
Test Pit				Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of road base gravels, shale, minor scrap metal, timber, slag and ACM.	AQ31 0-0.1 PID = 0.3 ppm	ACM observed at surface, no odours or staining.
		0.10		Fill	Reworked Silty CLAY, light brown-tan, moist, heterogeneous, moderate plasticity, and minor inclusions of shale and weathered dolorite.		
	0.5					AQ31 0.1-1.0 PID = 1.4 ppm	AQ (0.1-1.0) 10L No ACM. No odours or staining.
	1.0	1.00		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.	AQ31 1.0-1.4 PID = 1.2 ppm	AQ (1.0-1.4) 10L No ACM. No odours or staining.
	1.5	1.40		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ31 1.4-1.8 PID = 0.5 ppm	No odours, staining or ACM
		1.80			Test Pit AQ31 terminated at 1.8m		
	2.0						
	2.5						
	3.0						

AQ32

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.5
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of road base gravels, shale, minor scrap metal, timber, slag and ACM.	AQ32 0-0.1 PID = 1.1 ppm AQ32 0.1-0.7 PID = 1.1 ppm	ACM observed at surface, no odours or staining. AQ (0.1-0.7) 10L ACM = 0.1546% w/w. No odours or staining.
	1.0	0.70		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.	AQ32 0.7-1.2 PID = 1.1 ppm	AQ (0.7-1.2) 10L No ACM. No odours or staining.
	1.5 2.0 2.5	1.20		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ32 1.2-2.5 PID = 0.5 ppm	No odours, staining or ACM
	3.0	2.50			Test Pit AQ32 terminated at 2.5m		

AQ33

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2
Pit Dimension (m3): 450

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
Test Pit	0			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of road base gravels, shale, minor scrap metal, timber, slag and ACM.	AQ33 0-0.1 PID = 1.4 ppm	ACM observed at surface, no odours or staining.
	0.5					AQ33 .1-1.0 PID = 1.2 ppm	AQ (0.1-1.0) 10L ACM = 0.0165% w/w. No odours or staining.
	1.0	1.00		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.	AQ33 1.0-1.05 PID = 0.5 ppm	AQ (1.0-1.05) 10L No ACM. No odours or staining.
		1.05		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.		
	1.5					AQ33 1.5-2 PID = 1.3 ppm	No odours, staining or ACM
	2.0	2.00			Test Pit AQ33 terminated at 2m		
	2.5						
	3.0						

AQ34

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.8
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of road base gravels, shale, minor scrap metal, timber, slag and ACM.	AQ34 0-1.0 PID = 1.5 ppm	No Surfical ACM. No odours or staining. AQ (0-1.0) 10L ACM = 0.0865% w/w No odours or staining.
	1.0						
	1.5					AQ34 1-1.5 PID = 0.3 ppm	AQ 1(1.0-1.5) 0L ACM = 0.0055 %w/w. No odours or staining.
		1.50		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ34 1.5-1.8 PID = 0.5 ppm	AQ (1.5-1.8) 10L No ACM. No odours or staining.
		1.80			Test Pit AQ34 terminated at 1.8m		
	2.0						
	2.5						
	3.0						

AQ35

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.1
Pit Dimension (m3): 450

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
Test Pit				Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of road base gravels minor shale, minor scrap metal, timber, slag and ACM.	AQ35 0-0.1 PID = 1.2 ppm	ACM observed at surface, no odours or staining.
		0.10		Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of road base gravels, glass, plastic and ACM.		
	0.5					AQ35 .1-1.0 PID = 1.4 ppm	AQ (0.1-1.0) 10L No ACM. ACM observed in fill. No odours or staining.
	1.0						
						AQ35 1-1.4 PID = 1.2 ppm	AQ (1-1.4) 10L No ACM. ACM observed in fill. No odours or staining.
		1.40		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.		
	1.5					AQ35 1.4-2.1 PID = 0.5 ppm	AQ 10L No ACM. No odours or staining.
	2.0						
		2.10			Test Pit AQ35 terminated at 2.1m		
	2.5						
	3.0						

AQ36

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.8
Pit Dimension (m3): 450

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
Test Pit				Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, shale, scrap metal and ACM.	AQ36 0-0.1 PID = 1.1 ppm	ACM observed at surface, no odours or staining.
		0.15		Fill	Reworked Silty CLAY, light brown-tan, moist, heterogeneous, moderate plasticity, and minor inclusions of shale.	AQ36 0.15-0.35 PID = 1.1 ppm	AQ (0.15-0.3) 10L No ACM. No odours or staining.
	0.5	0.35		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.		
	1.0					AQ36 .35-1.45 PID = 1.1 ppm	AQ (0.35-1.45) 10L No ACM. No odours or staining.
	1.5	1.45		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ36 1.45-1.8 PID = 0.5 ppm	No odours, staining or ACM
		1.80			Test Pit AQ36 terminated at 1.8m		
	2.0						
	2.5						
	3.0						

AQ37

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.6
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, shale, scrap metal and ACM.	AQ37 0-0.1 PID = 1.4 ppm	ACM observed at surface, no odours or staining.
						AQ37 0.1-0.5 PID = 1.2 ppm	AQ (0.1-0.5) 10L No ACM. ACM visually identified in fill. No odours or staining.
		0.50		Fill	Reworked Silty CLAY, light brown-tan, moist, heterogeneous, moderate plasticity, and minor inclusions of shale.	AQ37 0.5-0.8 PID = 0.5 ppm	AQ (0.5-0.8) 10L No ACM. No odours or staining.
	1.0	0.80		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.	AQ37 0.8-1.1 PID = 1.3 ppm	AQ (0.8-1.1) 10L No ACM. No odours or staining.
	1.5	1.10		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ37 1.1-1.6 PID = 1.5 ppm	No odours, staining or ACM
	2.0	1.80			Test Pit AQ37 terminated at 1.6m		
	2.5						
	3.0						

AQ38

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 3
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, shale, high percentage of scrap metal/brick and ACM.	AQ38 0.0-0.1 PID = 0.3 ppm	ACM observed at surface, no odours or staining.
	1.0					AQ38 0.1-1.1 PID = 0.5 ppm	AQ (0.1-1.1) 10L ACM = 0.0589 %w/w. No odours or staining.
		1.10		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.		
	1.5					AQ38 1.1-2.1 PID = 1.2 ppm	AQ (1.1-2.1) 10L No ACM. No odours or staining.
	2.0						
	2.5						
	3.0						No ACM. No odours or staining.
		3.00			Test Pit AQ38 terminated at 3m		

AQ39

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, shale, scrap metal/brick and ACM.	AQ39 0-0.1 PID = 1 ppm	No Surficial ACM. No odours or staining.
	1.0					AQ39 0-1.1 PID = 0.6 ppm	AQ (0-1.1) 10L ACM = 0.0257 %w/w. No odours or staining.
		1.10		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.		
	1.5					AQ39 1.1-1.8 PID = 0.4 ppm	AQ (1.1-1.8) 10L No ACM. No odours or staining.
	2.0						
		2.00			Test Pit AQ39 terminated at 2m		
	2.5						
	3.0						

AQ40

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.6
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, mettallurgic slag and ACM. Inclusions of brick toward base.	AQ40 0-0.1 PID = 1.8 ppm	ACM observed at surface, no odours or staining.
	1.0					AQ40 0.1-1.1 PID = 1.4 ppm	AQ (0.1-1.1) 10L ACM = 0.0055 %w/w. No odours or staining.
	1.5	1.10		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ40 1.1-1.6 PID = 1.2 ppm	No odours, staining or ACM
	2.0	1.60			Test Pit AQ40 terminated at 1.6m		
	2.5						
	3.0						

AQ41

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/12/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, moist, heterogeneous, soft, with a high percentage of anthropogenic building waste, brick, concrete, scrap metal, plastic sheeting, timber and minor ACM	AQ41 0-0.9 PID = 3.2 ppm	No ACM. No odours or staining. AQ (0-0.9) 10L ACM = 0.0128 %w/w. No odours or staining.
	1.0	0.90		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.		No ACM. No odours or staining.
	1.5	1.30			Test Pit AQ41 terminated at 1.3m		
	2.0						
	2.5						
	3.0						

AQ42

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 3/11/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.9
Pit Dimension (m3): 450

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
Test Pit				Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, slag and ACM.	AQ42 0-0.1 PID = 3.7 ppm	ACM observed at surface, no odours or staining.
						AQ42 0-0.5 PID = 1.1 ppm	AQ (0-0.5) 10L No ACM. No odours or staining.
	0.5						
		0.50		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.		AQ (0.5-0.6) 10L No ACM. No odours or staining.
		0.60		Fill	Reworked Silty CLAY, brown grading to reddish brown, moist, heterogeneous, moderate plasticity, and minor inclusions of shale.		
	1.0					AQ42 0.6-1.50 PID = 1.1 ppm	AQ (0.6-1.5) 10L No ACM. No odours or staining.
	1.5						
		1.50		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.	AQ42 1.5-1.9 PID = 0.6 ppm	AQ (1.5-1.9) 10L No ACM. No odours or staining.
		1.90			Test Pit AQ42 terminated at 1.9m		
	2.0						
	2.5						
	3.0						

AQ43

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 13/03/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.3
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, moist, heterogeneous, soft, with a high percentage of anthropogenic building waste, brick, concrete, scrap metal, plastic sheeting and trace ACM	AQ43 0-0.6 PID = 1.4 ppm	No Surficial ACM. No odours or staining. AQ (0-0.6) 10L ACM = 0.0052 %w/w. No odours or staining.
	1.0	1.00		CL-ML	Silty CLAY, potentially reworked natural, dark brown, moist, heterogeneous, with inclusions of highly weathered dolorite.		No ACM. No odours or staining.
	1.5	1.30			Test Pit AQ43 terminated at 1.3m		
	2.0						
	2.5						
	3.0						

AQ44

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 13/03/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, moist, heterogeneous, soft, with a high percentage of anthropogenic building waste, brick, concrete, scrap metal, plastic sheeting and minor ACM	AQ44 0-0.1 PID = 0.4 ppm	ACM observed at surface, no odours or staining.
						AQ44 0.1-0.6 PID = 0.5 ppm	AQ (0.1-0.6) 10L No ACM. No odours or staining.
		0.60		CL-ML	Silty CLAY, potentially reworked natural, dark brown, moist, heterogeneous, with inclusions of highly weathered dolorite.	AQ44 0.6-0.9 PID = 1.3 ppm	No odours, staining or ACM
	1.0	0.90		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.		
	1.5					AQ44 0.9-2 PID = 2.3 ppm	No odours, staining or ACM
	2.0						
		2.00			Test Pit AQ44 terminated at 2m		
	2.5						
	3.0						

AQ45

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 13/03/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2
Pit Dimension (m3): 450

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
Test Pit	0.5			Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal, mettallurgic slag and ACM.	AQ45 0-0.1 PID = 0.3 ppm	ACM observed at surface, no odours or staining.
	1.0					AQ45 0.1-1.1 PID = 0.5 ppm	AQ (0.1-1.1) 10L ACM = 0.0312% w/w. No odours or staining.
						AQ45 1.1-1.4 PID = 1.2 ppm	AQ (1.1-1.4) 10L ACM = 0.0128% w/w. No odours or staining.
	1.5	1.40		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.	AQ45 1.4-1.5 PID = 1.7 ppm	AQ (1.4-1.5) 10L No ACM. No odours or staining.
		1.50		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.		
	2.0					AQ45 1.5-2 PID = 0.8 ppm	AQ (1.5-2.0) 10L No ACM. No odours or staining.
		2.00			Test Pit AQ45 terminated at 2m		
	2.5						
	3.0						

AQ46

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 13/03/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.9
Pit Dimension (m3): 450

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
Test Pit				Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of glass, ceramic, igneous road base gravel, scrap metal and ACM.	AQ46 0-0.1 PID = 0.4 ppm	ACM observed at surface, no odours or staining.
						AQ46 0.1-.3 PID = 1.3 ppm	AQ (0.1-0.3) 10L ACM = 0.0092% w/w. No odours or staining.
		0.30		Fill	Reworked Silty CLAY, light brown-tan, moist, heterogeneous, moderate plasticity, and trace inclusions of glass and metal.		
	0.5					AQ46 0.3-0.8 PID = 3.3 ppm	AQ (0.3-0.6) 10L No ACM. No odours or staining.
		0.80		Fill	Fill Silty GRAVEL, grey, unconsolidated crushed SHALE, dry, heterogeneous, poorly graded.		
	1.0					AQ46 0.8-1.2 PID = 0.2 ppm	AQ (0.8-1.2) 10L No ACM. No odours or staining.
		1.20		CL-ML	Silty CLAY, potentially reworked natural, light brown-tan, moist, heterogeneous, well consolodated (firm) toward the base with inclusions of highly weathered dolorite.		
	1.5					AQ46 1.2-1.9 PID = 1.3 ppm	AQ (1.2-1.9) 10L No ACM. No odours or staining.
		1.90			Test Pit AQ46 terminated at 1.9m		
	2.0						
	2.5						
	3.0						

AQ47

Project Number: 56047
Client: Cumberland Council
Project Name: Pemulwuy Detailed Site Investigation
Site Address: 615A Great Western Highway, Pemulwuy

Date: 13/03/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.2
Pit Dimension (m3): 450

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
Test Pit				Fill	Fill Silty GRAVEL, grey, unconsolidated road base gravels, dry, heterogeneous, well graded.	AQ47 0-0.1 PID = 1.6 ppm	AQ (0-0.1) 10L No ACM. No odours or staining.
		0.10		Fill	Fill Silty CLAY, brown, dry-damp, heterogeneous, loose, with inclusions of road base gravels, shale, minor scrap metal, timber, slag and ACM.		
	0.5					AQ47 .1-1.1 PID = 2.1 ppm	AQ (0.1-1.1) 10L No ACM. No odours or staining.
	1.0						
	1.5					AQ47 1.1-1.7 PID = 2.5 ppm	AQ (1.1-1.7) 10L No ACM. No odours or staining.
		1.70		CL-ML	Silty CLAY, potentially reworked natural, dark brown, moist, heterogeneous, with inclusions of highly weathered dolorite.		
	2.0					AQ47 1.7-2.2 PID = 4.5 ppm	AQ (1.7-2.2) 10L No ACM. No odours or staining.
		2.10		DOLERITE	DOLERITE, firm competent weathered dolerite, tan-brown-black.		
		2.20			Test Pit AQ47 terminated at 2.2m		
	2.5						
	3.0						

MW01/BH01

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Numac Drilling
Total Hole Depth (mbgs): 8
Bore Diameter (mm): 200

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Water Level Initial (mbgs):
Surface Finish: Roadbox
Casing / Screen Type: Class 18 PVC - 50mm
Casing Bottom Depth (mbgs): 5
Screen Bottom Depth (mbgs): 8

Method	Water (mbgs)	Well Details	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Solid Flight Auger			0	0.10		Fill	Fill - brown silty Clay, gravelly clay, heterogeneous, dry, low plasticity with inclusions of grey lithic shale fragments, road base gravel, crushed brick, concrete and minor scrap metal.	MW01/BH01 0-0.1 PID = 0.5 ppm	No odours, staining or ACM
						CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, orange brown, heterogeneous, stiff, dry, low plasticity.		
			1					MW01/BH01 0.9-1.0 PID = 0.3 ppm	No odours, staining or ACM
			2					MW01/BH01 1.9-2.0 PID = 0.1 ppm	No odours, staining or ACM
			3					MW01/BH01 2.9-3.0 PID = 0 ppm	No odours, staining or ACM
			4					MW01/BH01 3.9-4.0 PID = 0.2 ppm	No odours, staining or ACM
			5					MW01/BH01 4.9-5.0 PID = 1.2 ppm	No odours, staining or ACM
			6					MW01/BH01 5.9-6.0 PID = 0.3 ppm	No odours, staining or ACM
				6.50		CL-GC	As above, damp, potentially highly weathered dolorite bedrock.		
			7					MW01/BH01 6.9-7.0 PID = 0.6 ppm	No odours, staining or ACM
				7.50		DOLERITE	DOLERITE - weathered, granular, damp.		
			8					MW01/BH01 7.9-8.0 PID = 0.9 ppm	No odours, staining or ACM
				8.00			Borehole MW01/BH01 terminated at 8m		

MW02/BH02

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Numac Drilling
Total Hole Depth (mbgs): 8
Bore Diameter (mm): 200

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Water Level Initial (mbgs):
Surface Finish: Roadbox
Casing / Screen Type: Class 18 PVC - 50mm
Casing Bottom Depth (mbgs): 5
Screen Bottom Depth (mbgs): 8

Method	Water (mbgs)	Well Details	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Solid Flight Auger						Fill	Fill - brown silty Clay, gravelly clay, heterogeneous, dry, granular with inclusions of coarse gravel, clay clasts, concrete, road base gravel and roots/rootlets	MW02/BH02 0-0.1 PID = 1.3 ppm	No odours, staining or ACM
				0.50		Fill	Fill - road base gravel, grey, dry, heterogeneous, poorly sorted crushed igneous gravel, crushed concrete and associated fines.		
			1	0.70		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, orange brown, heterogeneous, stiff, dry with inclusions of weathered dolorite fragments.	MW02/BH02 0.9-1.0 PID = 2.3 ppm	No odours, staining or ACM
				1.50		DOLERITE	DOLERITE - highly weathered, granular, dry.		
			2					MW02/BH02 1.9-2.0 PID = 1.5 ppm	No odours, staining or ACM
			3					MW02/BH02 2.9-3.0 PID = 0.1 ppm	No odours, staining or ACM
			4					MW02/BH02 3.9-4.0 PID = 0.2 ppm	No odours, staining or ACM
			5					MW02/BH02 4.9-5.0 PID = 0.1 ppm	No odours, staining or ACM
			6					MW02/BH02 5.9-6.0 PID = 0 ppm	No odours, staining or ACM
			7					MW02/BH02 6.9-7.0 PID = 0.2 ppm	No odours, staining or ACM
			8					MW02/BH02 7.9-8.0 PID = 1.2 ppm	No odours, staining or ACM
				8.00			Borehole MW02/BH02 terminated at 8m		

MW03/BH03

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Numac Drilling
Total Hole Depth (mbgs): 8
Bore Diameter (mm): 200

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Water Level Initial (mbgs):
Surface Finish: Roadbox
Casing / Screen Type: Class 18 PVC - 50mm
Casing Bottom Depth (mbgs): 5
Screen Bottom Depth (mbgs): 8

Method	Water (mbgs)	Well Details	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Solid Flight Auger				0.10		Fill	Fill - brown silty Clay, gravelly clay, heterogeneous, dry, low plasticity with inclusions of road base gravel and mulch/organic material including leaf litter.	MW03/BH03 0-0.1 PID = 0.3 ppm	No odours, staining or ACM
						CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, orange brown, heterogeneous, stiff, dry with inclusions of weathered dolorite fragments.		
			1					MW03/BH03 0.9-1.0 PID = 1.3 ppm	No odours, staining or ACM
				1.50		DOLERITE	DOLERITE - highly weathered, granular, dry.		
			2					MW03/BH03 1.9-2.0 PID = 2.3 ppm	No odours, staining or ACM
			3					MW03/BH03 2.9-3.0 PID = 1.5 ppm	No odours, staining or ACM
			4					MW03/BH03 3.9-4.0 PID = 0.1 ppm	No odours, staining or ACM
			5					MW03/BH03 4.9-5.0 PID = 1.2 ppm	No odours, staining or ACM
			6					MW03/BH03 5.9-6.0 PID = 0.3 ppm	No odours, staining or ACM
			7					MW03/BH03 6.9-7.0 PID = 0.5 ppm	No odours, staining or ACM
			8					MW03/BH03 7.9-8.0 PID = 0 ppm	No odours, staining or ACM
				8.00			Borehole MW03/BH03 terminated at 8m		

HA01

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: N/A
Total Hole Depth (mbgs): 0.3
Pit Dimension (m3): 150

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	Filll - brown gravelly clay, heterogeneous with inclusions of organic matter, mulch, roots/rootlets and leaf litter.		
		0.10		Fill	Fill - brown gravelly clay, heterogeneous, dry, poorly sorted, loose with inclusions of glass, terracotta and porcelin fragments.	HA01 0.1-0.2 PID = 0.1 ppm	No odours, staining or ACM
		0.30		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, orange brown, heterogeneous, stiff, dry with inclusions of weathered dolorite fragments.		
		0.40			Test Pit HA01 terminated at 0.3m		

0.5
1.0
1.5
2.0
2.5

HA02

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: N/A
Total Hole Depth (mbgs): 0.5
Pit Dimension (m3): 150

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	Filll - brown gravelly clay, heterogeneous with inclusions of organic matter, mulch, roots/rootlets and leaf litter.		
		0.10		Fill	Fill - brown gravelly clay, heterogeneous, dry, poorly sorted, loose with inclusions of glass, terracotta and porcelin fragments.	HA02 0.1-0.2 PID = 2.3 ppm	No odours or staining. ACM observed
	0.5	0.45		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, orange brown, heterogeneous, stiff, dry with inclusions of weathered dolorite fragments.		
		0.50			Test Pit HA02 terminated at 0.5m		
	1.0						
	1.5						
	2.0						
	2.5						

TEST PIT JBSG TEST PIT - 2017.GPJ GINT STD AUSTRALIA.GDT 6/6/19

HA03

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: N/A
Total Hole Depth (mbgs): 0.5
Pit Dimension (m3): 150

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	Filll - brown gravelly clay, heterogeneous with inclusions of organic matter, mulch, roots/rootlets and leaf litter.		
		0.10		Fill	Fill - brown gravelly clay, heterogeneous, dry, poorly sorted, loose with inclusions of glass, terracotta and porcelin fragments, metal scrap and ACM	HA03 0.1-0.2 PID = 1.7 ppm	No odours or staining. ACM observed
	0.5						
		0.50		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, orange brown, heterogeneous, stiff, dry with inclusions of weathered dolorite fragments.		
		0.60			Test Pit HA03 terminated at 0.5m		
	1.0						
	1.5						
	2.0						
	2.5						

TEST PIT JBSG TEST PIT - 2017.GPJ GINT STD AUSTRALIA.GDT 6/6/19

HA04

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: N/A
Total Hole Depth (mbgs): 0.5
Pit Dimension (m3): 150

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	Filll - brown gravelly clay, heterogeneous with inclusions of organic matter, mulch, roots/rootlets and leaf litter.		
		0.10		Fill	Fill - brown gravelly clay, heterogeneous, dry, poorly sorted, loose with inclusions of glass, terracotta and porcelin fragments, metal scrap and ACM	HA04 0.1-0.2 PID = 1.4 ppm	No odours or staining. ACM observed
	0.5						
		0.50		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, orange brown, heterogeneous, stiff, dry with inclusions of weathered dolorite fragments.		
		0.60			Test Pit HA04 terminated at 0.5m		
	1.0						
	1.5						
	2.0						
	2.5						

SS01

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: N/A
Total Hole Depth (mbgs): 0.1
Pit Dimension (m3): 150

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
Auger				Fill	Fill - Gravelly Clay, brown, dry, heterogeneous, loose with inclusions of roots/rootlets and minor igenous road base gravel.	SS01 PID = 0 ppm	No odours, staining or ACM
Hand		0.10			Test Pit SS01 terminated at 0.1m		

0.5
1.0
1.5
2.0
2.5

SS02

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: N/A
Total Hole Depth (mbgs): 0.1
Pit Dimension (m3): 150

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
Auger				Fill	Fill - Gravelly Clay, brown, dry, heterogeneous, loose with inclusions of roots/rootlets and minor igenous road base gravel.	SS02 PID = 0.1 ppm	No odours, staining or ACM
Hand		0.10			Test Pit SS02 terminated at 0.1m		
	0.5						
	1.0						
	1.5						
	2.0						
	2.5						

SS03

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: N/A
Total Hole Depth (mbgs): 0.1
Pit Dimension (m3): 150

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
Auger				Fill	Fill - Gravelly Clay, brown, dry, heterogeneous, loose with inclusions of roots/rootlets and minor igenous road base gravel.	SS03 PID = 0 ppm	No odours, staining or ACM
Hand		0.10			Test Pit SS03 terminated at 0.1m		
	0.5						
	1.0						
	1.5						
	2.0						
	2.5						

SS04

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: N/A
Total Hole Depth (mbgs): 0.1
Pit Dimension (m3): 150

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
Auger				Fill	Fill - Gravelly Clay, brown, dry, heterogeneous, loose with inclusions of roots/rootlets and minor igenous road base gravel.	SS04 PID = 0.2 ppm	No odours, staining or ACM
Hand		0.10			Test Pit SS04 terminated at 0.1m		
	0.5						
	1.0						
	1.5						
	2.0						
	2.5						

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SS05

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: N/A
Total Hole Depth (mbgs): 0.1
Pit Dimension (m3): 150

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
Auger				Fill	Fill - Gravelly Clay, brown, dry, heterogeneous, loose with inclusions of roots/rootlets and minor igenous road base gravel.	SS05 PID = 0.3 ppm	No odours, staining or ACM
Hand		0.10			Test Pit SS05 terminated at 0.1m		
	0.5						
	1.0						
	1.5						
	2.0						
	2.5						

SS06

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 3/06/2019
Logged By: CK
Contractor: N/A
Total Hole Depth (mbgs): 0.1
Pit Dimension (m3): 150

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
Auger				Fill	Fill - Silty Gravel, basecourse comprising crushed recycled aggregate containing terracotta, brick, concrete, scrap metal and igneous road base.	SS06 PID = 1.2 ppm	No odours, staining or ACM
Hand		0.10			Test Pit SS06 terminated at 0.1m		
	0.5						
	1.0						
	1.5						
	2.0						
	2.5						

SS07

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 3/06/2019
Logged By: CK
Contractor: N/A
Total Hole Depth (mbgs): 0.1
Pit Dimension (m3): 150

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
Auger				Fill	Fill - Silty Gravel, basecourse comprising crushed recycled aggregate containing terracotta, brick, concrete, scrap metal and igneous road base.	SS07 PID = 0.9 ppm	No odours, staining or ACM
Hand		0.10			Test Pit SS07 terminated at 0.1m		
	0.5						
	1.0						
	1.5						
	2.0						
	2.5						

TEST PIT JBSG TEST PIT - 2017.GPJ GINT STD AUSTRALIA.GDT 6/6/19

TP01

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.5
Pit Dimension (m3): 500

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
Test Pit	0.5			Fill	Fill - grey brown heteroenous gravelly clay. Dry with inclusions of road base gravel, grey lithic shale fragments, minor plastic (surface) and crushed concrete.	TP01 0-0.1 PID = 1.8 ppm	No odours, staining or ACM
						TP01 0.3-0.4 PID = 0.1 ppm	No odours, staining or ACM
	1.0					TP01 1-1.1 PID = 1.3 ppm	No odours, staining or ACM
	1.5	1.40		CL-ML	Silty CLAY - orange brown, heterogeneous, dry, firm, low plasticity.	TP01 1.4-1.5 PID = 0.5 ppm	No odours, staining or ACM
		1.50			Test Pit TP01 terminated at 1.5m		
	2.0						
	2.5						

TP02

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.5
Pit Dimension (m3): 500

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
Test Pit	0.5			Fill	Fill - dark brown silty, gravelly clay, heterogeneous, moist, medium-high plasticity with inclusions of grey lithic shale fragments, organic material including roots/rootlets and mulch.	TP02 0-0.1 PID = 1.2 ppm	No odours, staining or ACM
						TP02 0.5-0.6 PID = 1.9 ppm	No odours, staining or ACM
		0.90		CL-ML	Silty CLAY - orange brown, heterogeneous, dry, firm, low plasticity.		
	1.0					TP02 1-1.1 PID = 0.3 ppm	No odours, staining or ACM
	1.5						
	2.0					TP02 2-2.1 PID = 0.1 ppm	No odours, staining or ACM
	2.5					TP02 2.4-2.5 PID = 0 ppm	No odours, staining or ACM
		2.50			Test Pit TP02 terminated at 2.5m		

TP03

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.1
Pit Dimension (m3): 500

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
Test Pit				Fill	Fill - dark brown silty, gravelly clay, heterogeneous, moist, medium-high plasticity with inclusions of grey lithic shale fragments, organic material including roots/rootlets	TP03 0-0.1 PID = 0.2 ppm	No odours, staining or ACM
		0.20		CL-ML	Silty CLAY - orange brown, heterogeneous, dry, firm, low plasticity. Granular toward the base with inclusions of weathered dolorite.		
	0.5					TP03 0.5-0.6 PID = 1.2 ppm	No odours, staining or ACM
	1.0					TP03 1-1.1 PID = 0.3 ppm	No odours, staining or ACM
	1.5						
	2.0					TP03 2-2.1 PID = 0.6 ppm	No odours, staining or ACM
		2.10			Test Pit TP03 terminated at 2.1m		
	2.5						

TP04

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.1
Pit Dimension (m3): 500

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
Test Pit				Fill	Fill - Sandy GRAVEL, Stockpiled material at the surface, well sorted, poorly graded gravel comprising angular to sub angular igneous and quartz gravel.	TP04 0-0.1 PID = 0.9 ppm	No odours, staining or ACM
		0.10		Fill	Fill - dark brown silty clay, gravelly clay, heterogeneous, dry, low plasticity with inclusions of grey lithic shale fragments, organic material including roots/rootlets		
		0.30		CL-ML	Silty CLAY - orange brown, heterogeneous, dry, firm, low plasticity. Granular toward the base with inclusions of weathered dolorite.		
	0.5					TP04 0.5-0.6 PID = 1.3 ppm	No odours, staining or ACM
	1.0	1.00				TP04 1-1.1 PID = 2.3 ppm	No odours, staining or ACM
					Test Pit TP04 terminated at 1.1m		
	1.5						
	2.0						
	2.5						

TP05

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.5
Pit Dimension (m3): 500

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
Test Pit				Fill	Fill - dark brown silty clay, gravelly clay, heterogeneous, dry, low plasticity with inclusions of grey lithic shale fragments, organic material including roots/rootlets	TP05 0-0.1 PID = 1 ppm	No odours, staining or ACM
		0.10		CL-ML	Silty CLAY - orange brown, heterogeneous, dry, firm, low plasticity. Granular toward the base with inclusions of weathered dolorite.		
	0.5						
	1.0					TP05 1-1.1 PID = 0.5 ppm	No odours, staining or ACM
	1.5						
	2.0					TP05 2-2.1 PID = 2.3 ppm	No odours, staining or ACM
	2.5					TP05 2.4-2.5 PID = 1.2 ppm	No odours, staining or ACM
		2.50			Test Pit TP05 terminated at 2.5m		

TP06

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.5
Pit Dimension (m3): 500

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
Test Pit				Fill	Fill - dark brown silty clay, gravelly clay, heterogeneous, dry, low plasticity with inclusions of grey lithic shale fragments, organic material including roots/rootlets	TP06 0-0.1 PID = 0.3 ppm	No odours, staining or ACM
		0.10		CL-ML	Silty CLAY - orange brown, heterogeneous, dry, firm, low plasticity. Granular toward the base with inclusions of weathered dolorite.		
	0.5						
	1.0					TP06 1-1.1 PID = 0.4 ppm	No odours, staining or ACM
	1.5					TP06 1.4-1.5 PID = 0 ppm	No odours, staining or ACM
		1.50			Test Pit TP06 terminated at 1.5m		
	2.0						
	2.5						

TP07

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.3
Pit Dimension (m3): 500

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
Test Pit				Fill	Fill - dark brown silty clay, gravelly clay, heterogeneous, dry, low plasticity with inclusions of grey lithic shale fragments, organic material including roots/rootlets	TP07 0-0.1 PID = 0 ppm	No odours, staining or ACM
		0.30			Test Pit TP07 terminated at 0.3m		
	0.5						
	1.0						
	1.5						
	2.0						
	2.5						

TP08

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.2
Pit Dimension (m3): 500

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
Test Pit				Fill	Fill - dark brown silty clay, gravelly clay, heterogeneous, dry, low plasticity with inclusions of grey lithic shale fragments, organic material including roots/rootlets	TP08 0-0.1 PID = 0.1 ppm	No odours, staining or ACM
		0.20			Test Pit TP08 terminated at 0.2m		
	0.5						
	1.0						
	1.5						
	2.0						
	2.5						

TP09

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1
Pit Dimension (m3): 500

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
Test Pit				Fill	Fill - brown silty Clay, gravelly clay, heterogeneous, dry, low plasticity with inclusions of grey lithic shale fragments, road base gravel and roots/rootlets	TP09 0-0.1 PID = 1.2 ppm	No odours, staining or ACM
		0.30		Fill	Fill - road base gravel, grey, dry, heterogeneous, poorly sorted crushed igneous gravel, crushed concrete and associated fines.		
	0.5					TP09 0.4-0.5 PID = 0.3 ppm	No odours, staining or ACM
		0.50		Fill	Fill - reworked natural gravelly clay, orange brown, heterogeneous, stiff, dry with inclusions of competent dolorite fragments and minor lithic shale fragments.		
	1.0					TP09 0.9-1.0 PID = 0.5 ppm	No odours, staining or ACM
		1.00			Test Pit TP09 terminated at 1m		
	1.5						
	2.0						
	2.5						

TP10

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.2
Pit Dimension (m3): 500

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
Test Pit				Fill	Fill - brown silty Clay, gravelly clay, heterogeneous, dry, low plasticity with inclusions of grey lithic shale fragments, road base gravel and roots/rootlets	TP10 0-0.1 PID = 0.3 ppm	No odours, staining or ACM
	0.5	0.40		Fill	Fill - road base gravel, grey, dry, heterogeneous, poorly sorted crushed igneous gravel, crushed concrete and associated fines.	TP10 0.4-0.5 PID = 0.1 ppm	No odours, staining or ACM
		0.55		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, orange brown, heterogeneous, stiff, dry with inclusions of weathered dolorite fragments.		
	1.0					TP10 1-1.1 PID = 0 ppm	No odours, staining or ACM
		1.20			Test Pit TP10 terminated at 1.2m		
	1.5						
	2.0						
	2.5						

TP11

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.8
Pit Dimension (m3): 500

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
Test Pit				Fill	Fill - brown silty Clay, gravelly clay, heterogeneous, dry, low plasticity with inclusions of grey lithic shale fragments, road base gravel and roots/rootlets	TP11 0-0.1 PID = 0.2 ppm	No odours, staining or ACM
		0.30		Fill	Fill - road base gravel, grey, dry, heterogeneous, poorly sorted crushed igneous gravel, crushed concrete and associated fines.	TP11 0.3-0.4 PID = 1.2 ppm	No odours, staining or ACM
	0.5	0.40		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, orange brown, heterogeneous, stiff, dry with inclusions of weathered dolorite fragments.		
	1.0					TP11 1-1.1 PID = 0.3 ppm	No odours, staining or ACM
	1.5						
	2.0					TP11 2-2.1 PID = 0.6 ppm	No odours, staining or ACM
	2.5					TP11 2.7-2.8 PID = 0.9 ppm	
		2.80			Test Pit TP11 terminated at 2.8m		

TP12

Project Number: 56425
Client: Aliro Management
Project Name: Boral House, Clunies Ross St, Pemulwuy
Site Address: Clunies Ross Street, Pemulwuy

Date: 30/05/2019
Logged By: CK
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.5
Pit Dimension (m3): 500

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
Test Pit				Fill	Fill - brown silty Clay, gravelly clay, heterogeneous, dry, low plasticity with inclusions of grey lithic shale fragments, road base gravel and roots/rootlets	TP12 0-0.1 PID = 0.1 ppm	No odours, staining or ACM
		0.10		Fill	Fill - road base gravel, grey, dry, heterogeneous, poorly sorted crushed igneous gravel, crushed concrete and associated fines.		
		0.15		CL-GC	Gravelly CLAY - potentially reworked natural gravelly clay, orange brown, heterogeneous, stiff, dry with inclusions of weathered dolorite fragments.		
	0.5					TP12 0.5-0.6 PID = 0.1 ppm	No odours, staining or ACM
	1.0					TP12 1-1.1 PID = 0.1 ppm	No odours, staining or ACM
	1.5					TP12 1.4-1.5 PID = 0.1 ppm	No odours, staining or ACM
		1.50			Test Pit TP12 terminated at 1.5m		
	2.0						
	2.5						

coffey environments

Environmental Log - Environmental

Borehole No. **BH1**

Sheet 1 of 1

Office Job No.: **ENAURHOD04463AA**

Client: ***AUSTRAL MASONRY (NSW) PTY LTD***

Date started: ***20.2.2013***

Principal:

Date completed: ***20.2.2013***

Project: ***DUE DILIGENCE ESA***

Logged by: ***PD***

Borehole Location: ***CLUNIES ROSS STREET, PROSPECT NSW***

Checked by: ***EW***

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface:

hole diameter: 110 | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
HA				E + 3.9ppm		0.1			**FILL**: Gravelly SAND: medium grained, grey, with fine gravel	D			No odour or staining, picrite, mineral and rock fragments
						0.2							
						0.3							
						0.4							
				E + 4.7ppm		0.5							
									Borehole BH1 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil

C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No. **BH10**

Sheet 1 of 1

Office Job No.: **ENAURHOD04463AA**

Client: ***AUSTRAL MASONRY (NSW) PTY LTD***

Date started: ***20.2.2013***

Principal:

Date completed: ***20.2.2013***

Project: ***DUE DILIGENCE ESA***

Logged by: ***PD***

Borehole Location: ***CLUNIES ROSS STREET, PROSPECT NSW***

Checked by: ***EW***

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface:

hole diameter: 130 | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
DT						0.1			**CONCRETE**				
HA				E + 3.8ppm		0.2			**FILL**: Sandy GRAVEL: fine to medium, angular to sub-angular, dark grey to grey, fine to medium grained sand	D			No odour or staining, picrite fragments
						0.3			Borehole BH10 terminated at 0.3m				
						0.4							
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil

C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH11**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**20.2.2013**
Principal:	
Date completed:	**20.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	130	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
DT						0.1			**CONCRETE**				
HA				E + 3.4ppm (DUP8)		0.2			**FILL**: Sandy GRAVEL: fine to medium, grey, fine to medium grained sand	D			No odour or staining, picrite fragments
						0.3							
						0.4			Borehole BH11 terminated at 0.3m				
						0.5							

ENVIRONMENTAL ENAURHOD04463AA.GPJ COFFEY.GDT 8.4.13

Form GEO 5.12 Issue 3 Rev.0

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH12**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**20.2.2013**
Principal:	
Date completed:	**20.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	130	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
DT						0.1			**CONCRETE**				
						0.2							
HA				E + 4.1ppm		0.3			**FILL**: Gravelly Sandy CLAY: low plasticity, dark brown, fine to medium gravel	D			No odour or staining, some concrete, picrite and brick fragments
						0.4							
				E + 4.0ppm		0.5							
									Borehole BH12 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support: M mud, C casing, N nil

penetration: 1 2 3 4 — no resistance ranging to refusal

water: 10/1/98 water level on date shown; water inflow; water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description: based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH13**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**20.2.2013**
Principal:	
Date completed:	**20.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	130	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
DT						0.1			**CONCRETE**				
HA				E + 3.9ppm		0.2			**FILL**: Gravelly Sandy CLAY: low plasticity, dark brown to brown, fine gravel.	D			No odour or staining, rock and clay fragments
						0.3							
						0.4							
				E + 3.7ppm		0.5							
									Borehole BH13 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No. **BH14**

Sheet 1 of 1

Office Job No.: **ENAURHOD04463AA**

Client: ***AUSTRAL MASONRY (NSW) PTY LTD***

Date started: ***18.2.2013***

Principal:

Date completed: ***18.2.2013***

Project: ***DUE DILIGENCE ESA***

Logged by: ***PD***

Borehole Location: ***CLUNIES ROSS STREET, PROSPECT NSW***

Checked by: ***EW***

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface:

hole diameter: 150 | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
DT						0.1			**CONCRETE**				
HA				E + 0.4ppm		0.2			**FILL**: Gravelly Sandy CLAY: low plasticity, dark brown and dark grey, fine gravel.	D			No odour or staining, some brick fragments
						0.3							
				E + 0.3ppm		0.4							
						0.5			Borehole BH14 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil

C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH15**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**18.2.2013**
Principal:	
Date completed:	**18.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
DT						0.1			**CONCRETE**				
HA				E + 0.3ppm (DUP1, DUP1A)		0.2			**FILL**: Gravelly Sandy CLAY: low plasticity, dark brown and mottled orange, fine gravel	D			No odour or staining, rock and brick fragments
						0.3							
						0.4							
				E + 0.4ppm		0.5							
									Borehole BH15 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support: M mud, C casing, N nil

penetration: 1 2 3 4 — no resistance ranging to refusal

water: 10/1/98 water level on date shown; water inflow; water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description: based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH16**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**20.2.2013**
Principal:	
Date completed:	**20.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
HA				E + 1.7ppm		0.1			**FILL**: Gravelly Clayey SAND: fine grained, dark brown, fine to medium, sub-angular gravel	D			No odour or staining, picrite fragments
						0.2			Borehole BH16 terminated at 0.2m				Hard surface (concrete?) encountered, hand auger refusal
						0.3							
						0.4							
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit
*bit shown by suffix	
e.g.	ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH17**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**19.2.2013**
Principal:	
Date completed:	**19.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Geoprobe 7822DT Track	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	130	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
PTDT				E + 3.3ppm		0.1			**BRICK**				
						0.2			**FILL**: Sandy GRAVEL: fine, brown and grey, fine to medium grained sand	D			No odour or staining, some picrite and ironstone fragments
						0.3							
						0.4							
						0.5							
						0.6							
				E + 5.2ppm (DUP3, DUP3A)		0.7							
						0.8							
						0.9							
				E + 4.8ppm		1.0							
						1.1			**FILL**: GRAVEL: fine to medium, angular, grey	D			No odour or staining, some shale fragments
						1.2							
						1.3							
						1.4							
						1.5							
						1.6							
						1.7							
						1.8							
						1.9							
						2.0							
				E + 4.3ppm		2.1							
						2.2							
						2.3							
						2.4							
						2.5							
						2.6							
						2.7							
						2.8							
						2.9							
						3.0							
				E + 4.2ppm		3.1							
						3.2							
						3.3							
						3.4							
						3.5							
						3.6							
						3.7							
				E + 4.0ppm		3.8							
						3.9							
						4.0			Borehole BH17 terminated at 3.9m				
						4.1							
						4.2							
						4.3							
						4.4							
						4.5							
						4.6							
						4.7							
						4.8							
						4.9							
						5.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support: M mud, C casing, N nil

penetration: 1 2 3 4 — no resistance ranging to refusal

water: 10/1/98 water level on date shown; water inflow; water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description: based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH18**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**20.2.2013**
Principal:	
Date completed:	**20.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
HA				E + 3.6ppm		0.1			**FILL**: Gravelly SILT: dark grey and brown, fine gravel	D			No odour or staining, with some rock fragments
						0.2							
						0.3			Borehole BH18 terminated at 0.3m				
						0.4							
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH19**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**19.2.2013**
Principal:	
Date completed:	**19.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Geoprobe 7822DT Track	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	130	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
PT				E + 0.0ppm		0.1			**TOPSOIL**: Sandy SILT: dark brown	D			No odour or staining, some dry grass
						0.2			**FILL**: Gravelly CLAY: low plasticity, dark grey and dark brown, fine gravel	D			No odour or staining, some picrite and wood fragments
				E + 0.0ppm		0.3							
						0.4							
						0.5			**FILL**: SANDSTONE: medium grained, cream	D			No odour or staining
						0.6			**FILL**: CLAY: low to medium plasticity, dark grey and brown	D			No odour or staining, pieces of plastic
						0.7							
						0.8							
						0.9							
						1.0							
				E + 0.0ppm		1.1							
						1.2							
						1.3							
						1.4							
						1.5							
						1.6			Borehole BH19 terminated at 1.5m				
						1.7							
						1.8							
						1.9							
						2.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH2**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**20.2.2013**
Principal:	
Date completed:	**20.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
HA				E + 1.0ppm		0.1			**FILL**: Sandy GRAVEL: fine, dark grey, with fine sand	D			No odour or staining, rock and some quartz fragments
						0.2			Borehole BH2 terminated at 0.2m				
						0.3							
						0.4							
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH20**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**20.2.2013**
Principal:	
Date completed:	**20.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
HA				E + 3.8ppm (DUP7, DUP7A)		0.1			**FILL**: Gravelly CLAY: low plasticity, dark brown, fine to medium gravel	D			No odour or staining, sandstone and picrite fragments
						0.2			Borehole BH20 terminated at 0.2m				
						0.3							
						0.4							
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH21**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**19.2.2013**
Principal:	
Date completed:	**19.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting: Geoprobe 7822DT Track | Easting: | slope: -90° | R.L. Surface:

hole diameter: 130 | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
PT				E + 0.0ppm		0.1			**FILL**: Sandy GRAVEL: fine to medium, dark grey and red-brown	D			No odour or staining, some rock fragments
						0.2							
						0.3							
SS						0.4			**FILL**: Sandy Gravelly CLAY: low plasticity, brown, cream green-grey and orange, fine gravel	D			No odour or staining, some picrite and mineral fragments
						0.5							
				E + 0.0ppm		0.6							
						0.7							
						0.8							
						0.9							
						1.0							
				E + 0.0ppm		1.1							
						1.2							
						1.3			**FILL**: CLAY: medium to high plasticity, brown (possible reworked natural material)	D	F		No odour or staining
						1.4							
						1.5							
						1.6							
						1.7							
						1.8							
						1.9							
						2.0							
				E + 0.0ppm		2.1							
						2.2							
						2.3							
						2.4							
						2.5							
						2.6							
						2.7							
						2.8							
						2.9							
						3.0							
				E + 0.0ppm		3.1							
						3.2							
						3.3							
						3.4							
						3.5							
						3.6			Becoming low plasticity				
						3.7							
						3.8							
						3.9							
				E + 0.0ppm		4.0							
						4.1			Borehole BH21 terminated at 4m				
						4.2							
						4.3							
						4.4							
						4.5							
						4.6							
						4.7							
						4.8							
						4.9							
						5.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support: M mud, C casing, N nil

penetration: 1 2 3 4 — no resistance ranging to refusal

water: 10/1/98 water level on date shown; water inflow; water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description: based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH22**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**19.2.2013**
Principal:	
Date completed:	**19.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
HA				E + 0.8ppm		0.1			**FILL**: Gravelly CLAY: low plasticity, dark grey, brown, fine gravel	D			No odour or staining, some picrite fragments
						0.2			Borehole BH22 terminated at 0.1m				Hand auger refusal - hard surface encountered
						0.3							
						0.4							
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit
*bit shown by suffix	
e.g.	ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH23**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**19.2.2013**
Principal:	
Date completed:	**19.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Geoprobe 7822DT Track	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	130	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
DT						0.0			**CONCRETE**				
PT				E + 0.6ppm		0.1			**FILL**: Sandy GRAVEL: fine to medium, grey and brown, fine to medium grained sand	D			No odour or staining, picrite fragments
						0.5			becoming clayey and brown in colour	D			No odour or staining
				E + 0.5ppm (DUP5, DUP5A)									
				E + 0.1ppm		1.0							
						1.6			Borehole BH23 terminated at 1.58m				
						2.0							

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Form GEO 5.12 Issue 3 Rev.0

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH24**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**19.2.2013**
Principal:	
Date completed:	**19.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Geoprobe 7822DT Track	Easting:	slope: -90°		R.L. Surface:
hole diameter:	130	Northing	bearing:		datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
DT						0.1			**BRICK**				
PT				E + 0.0ppm		0.2			**FILL**: Sandy GRAVEL: fine to medium, grey, fine to medium grained sand	D			No odour or staining, some picrite fragments
						0.3							
						0.4							
						0.5			**FILL**: Gravelly CLAY, high plasticity, brown and grey, fine gravel	D			No odour or staining, some picrite and ironstone fragments
				E + 0.0ppm		0.6							
						0.7							
						0.8							
						0.9							
						1.0							
						1.1			Becoming low plasticity	D			No odour or staining
				E + 0.1ppm		1.2							
						1.3							
						1.4							Brick fragments observed
						1.5							
						1.6			Borehole BH24 terminated at 1.58m				
						1.7							
						1.8							
						1.9							
						2.0							

method
- AS auger screwing*
- AD auger drilling*
- RR roller/tricone
- W washbore
- CT cable tool
- HA hand auger
- DT diatube
- B blank bit
- V V bit
- T TC bit
- *bit shown by suffix
- e.g. ADT

support
- M mud
- C casing
- N nil

penetration
1 2 3 4 — no resistance ranging to refusal

water
- 10/1/98 water level on date shown
- water inflow
- water outflow

notes, samples, tests
- U_{50} undisturbed sample 50mm diameter
- U_{63} undisturbed sample 63mm diameter
- D disturbed sample
- N standard penetration test (SPT)
- N* SPT - sample recovered
- Nc SPT with solid cone
- V vane shear (kPa)
- P pressuremeter
- Bs bulk sample
- E environmental sample
- R refusal

classification symbols and soil description
based on unified classification system

moisture
- D dry
- M moist
- W wet
- Wp plastic limit
- W_L liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No. **BH25**

Sheet 1 of 1

Office Job No.: **ENAURHOD04463AA**

Client: ***AUSTRAL MASONRY (NSW) PTY LTD***

Date started: ***18.2.2013***

Principal:

Date completed: ***18.2.2013***

Project: ***DUE DILIGENCE ESA***

Logged by: ***PD***

Borehole Location: ***CLUNIES ROSS STREET, PROSPECT NSW***

Checked by: ***EW***

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface:

hole diameter: 150 | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
DT						0.1			**CONCRETE**				
HA				E + 0.3ppm		0.2			**FILL**: Sandy Clayey GRAVEL: fine to medium, dark grey, fine to medium grained sand	D			No odour or staining, some picrite and brick fragments
						0.3							
						0.4			Borehole BH25 terminated at 0.3m				
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil

C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH26**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**18.2.2013**
Principal:	
Date completed:	**18.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	130	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
DT						0.1			**CONCRETE**				
HA				E + 0.3ppm		0.2			**FILL**: Sandy Clayey GRAVEL: fine to medium, dark grey, fine to medium grained sand	D			No odour or staining, picrite fragments
						0.3			Borehole BH26 terminated at 0.3m				
						0.4							
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH27**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**18.2.2013**
Principal:	
Date completed:	**18.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting: Geoprobe 7822DT Track | Easting: | slope: -90° | R.L. Surface:

hole diameter: 150 | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
DT						0.1			**CONCRETE**				
HA				E + 0.4ppm (DUP2)		0.2			**FILL**: Gravelly CLAY: low plasticity, dark brown and dark grey, fine gravel	D			Black staining, very slight oily odour, rock fragments
						0.3							
				E + 0.5ppm		0.4							No odour or staining
						0.5							
						0.6							
PT						0.7			**FILL**: CLAY: medium plasticity, grey				No odour or staining
						0.8							
						0.9							
						1.0							
				E + 0.0ppm		1.1							
						1.2							
						1.3			**FILL**: Gravelly CLAY: low plasticity, dark brown to brown, fine gravel				No odour or staining
						1.4							
						1.5							
						1.6							
						1.7			Borehole BH27 terminated at 1.67m				
						1.8							
						1.9							
						2.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support: M mud, C casing, N nil

penetration: 1 2 3 4 — no resistance ranging to refusal

water: 10/1/98 water level on date shown; water inflow; water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description: based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH28**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**18.2.2013**
Principal:	
Date completed:	**18.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	130	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa (100 200 300 400)	structure and additional observations
DT						0.1			**CONCRETE**				
HA				E + 0.7ppm		0.2			**FILL**: Sandy Clayey GRAVEL: fine to medium, dark grey, fine to medium grained sand	D			No odour or staining, picrite fragments
						0.3			Borehole BH28 terminated at 0.26m				
						0.4							
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support: M mud, C casing, N nil

penetration: 1 2 3 4 — no resistance ranging to refusal

water: 10/1/98 water level on date shown; water inflow; water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description: based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH29**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**18.2.2013**
Principal:	
Date completed:	**18.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	130	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
DT						0.1			**CONCRETE**				
HA				E + 0.5ppm		0.2			**FILL**: CLAY: medium plasticity, dark brown (possible reworked natural material)	D			No odour or staining
						0.3							
						0.4							
				E + 0.8ppm		0.5							
									Borehole BH29 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support: M mud, C casing, N nil

penetration: 1 2 3 4 — no resistance ranging to refusal

water: 10/1/98 water level on date shown; water inflow; water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description: based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH3**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**20.2.2013**
Principal:	
Date completed:	**20.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
HA				E + 14.5ppm		0.1			**FILL**: Gravelly Silty CLAY: low plasticity, brown, fine to medium gravel	D			No odour or staining, rock fragments
						0.2							
						0.3							
									Borehole BH3 terminated at 0.3m				
						0.4							
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH30**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**18.2.2013**
Principal:	
Date completed:	**18.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	130	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
DT						0.1			**CONCRETE**				
HA				E + 0.4ppm		0.2			**FILL**: Gravelly CLAY: low plasticity, dark brown to brown and dark grey, fine gravel	D			No odour or staining, some brick fragments
						0.3			Borehole BH30 terminated at 0.3m				
						0.4							
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH31**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**20.2.2013**
Principal:	
Date completed:	**20.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa (100 200 300 400)	structure and additional observations
HA				E + 3.8ppm		0.1			**FILL**: Silty CLAY: low plasticity, dark brown	D			No odour or staining
						0.2							
						0.3							
						0.4							
				E + 7.6ppm		0.5							
									Borehole BH31 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit
*bit shown by suffix	
e.g.	ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH32**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**20.2.2013**
Principal:	
Date completed:	**20.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
HA									**CONCRETE**				
				E + 10.4ppm		0.1			**FILL**: Sandy GRAVEL: fine to medium, grey and brown	D			No odour or staining, some rock and brick fragments
						0.2			Borehole BH32 terminated at 0.2m				
						0.3							
						0.4							
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH33**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**20.2.2013**
Principal:	
Date completed:	**20.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
HA				E + 5.9ppm		0.1			**FILL**: Gravelly CLAY: medium plasticity, dark brown to brown, fine to medium gravel	D			No odour or staining, rock fragments
						0.2							
						0.3							
						0.4							
				E + 5.7ppm		0.5							
									Borehole BH33 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No. **BH34**

Sheet 1 of 1

Office Job No.: **ENAURHOD04463AA**

Client: ***AUSTRAL MASONRY (NSW) PTY LTD***

Date started: ***19.2.2013***

Principal:

Date completed: ***19.2.2013***

Project: ***DUE DILIGENCE ESA***

Logged by: ***PD***

Borehole Location: ***CLUNIES ROSS STREET, PROSPECT NSW***

Checked by: ***EW***

drill model and mounting: Geoprobe 7822DT Track | Easting: | slope: -90° | R.L. Surface:

hole diameter: 130 | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
DT						0.1			**CONCRETE**				
PT				E + 0.0ppm		0.2			**FILL**: Sandy GRAVEL: fine to medium, grey to dark brown, fine to medium grained sand	D			No odour or staining
						0.3							
						0.4							
						0.5							
				E + 0.0ppm		0.6							
						0.7			**FILL**: Gravelly CLAY: medium plasticity, dark brown and dark grey, fine, angular gravel	D			No odour or staining, picrite fragments
						0.8							
						0.9							
						1.0							
				E + 0.0ppm (DUP4)		1.1							
						1.2							
						1.3							
						1.4							
						1.5							
						1.6			Borehole BH34 terminated at 1.59m				
						1.7							
						1.8							
						1.9							
						2.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil

C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH35**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**18.2.2013**
Principal:	
Date completed:	**18.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	150	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
DT									**BRICK**				
HA				E + 0.4ppm		0.1			**FILL**: Sandy GRAVEL: fine, dark grey and brown, fine grained sand	D			No odour or staining, some rock fragments
						0.2							
						0.3							
						0.4							
				E + 0.4ppm		0.5							
									Borehole BH35 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No. **BH36**

Sheet 1 of 1

Office Job No.: **ENAURHOD04463AA**

Client: ***AUSTRAL MASONRY (NSW) PTY LTD***

Date started: ***20.2.2013***

Principal:

Date completed: ***20.2.2013***

Project: ***DUE DILIGENCE ESA***

Logged by: ***PD***

Borehole Location: ***CLUNIES ROSS STREET, PROSPECT NSW***

Checked by: ***EW***

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface:

hole diameter: 110 | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
HA				E + 1.5ppm		0.1			**FILL**: Gravelly CLAY: low plasticity, dark brown, fine gravel	D			No odour or staining, clay and rock fragments
						0.2							
						0.3							
						0.4							
				E + 1.7ppm		0.5							
									Borehole BH36 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil

C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No. **BH37**

Sheet 1 of 1

Office Job No.: **ENAURHOD04463AA**

Client: ***AUSTRAL MASONRY (NSW) PTY LTD***

Date started: ***21.2.2013***

Principal:

Date completed: ***21.2.2013***

Project: ***DUE DILIGENCE ESA***

Logged by: ***PD***

Borehole Location: ***CLUNIES ROSS STREET, PROSPECT NSW***

Checked by: ***EW***

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface:

hole diameter: 110 | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
HA				E + 3.7ppm		0.1			**FILL**: CLAY: medium plasticity, dark brown (possible reworked natural material)	D			No odour or staining
						0.2							
						0.3			Patches of yellow brown clay	D			No odour or staining
						0.4							
				E + 5.6ppm		0.5			Borehole BH37 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil

C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH38**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**21.2.2013**
Principal:	
Date completed:	**21.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
HA				E + 3.7ppm		0.1			**FILL**: CLAY: medium plasticity, dark brown (possible reworked natural material)	D			No odour or staining
						0.2							
						0.3							
						0.4							
				E + 4.7ppm		0.5							
									Borehole BH38 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH39**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**21.2.2013**
Principal:	
Date completed:	**21.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
HA				E + 0.2ppm (DUP9, DUP9A)		0.1			**FILL**: CLAY: medium plasticity, dark brown (possible reworked natural material)	D			No odour or staining
						0.2							
						0.3							
						0.4							
				E + 0.8ppm		0.5							
									Borehole BH39 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No. **BH4**

Sheet 1 of 1

Office Job No.: **ENAURHOD04463AA**

Client: ***AUSTRAL MASONRY (NSW) PTY LTD***

Date started: ***20.2.2013***

Principal:

Date completed: ***20.2.2013***

Project: ***DUE DILIGENCE ESA***

Logged by: ***PD***

Borehole Location: ***CLUNIES ROSS STREET, PROSPECT NSW***

Checked by: ***EW***

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface:

hole diameter: 110 | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
HA				E + 3.0ppm		0.1			**FILL**: Gravelly SAND: Fine grained, brown, fine to medium gravel.	D			No odour or staining, rock fragments and cream, grey, orange mineral fragments
						0.2			becoming finer grained, dark brown				
						0.3							
						0.4							
				E + 3.4ppm		0.5							
									Borehole BH4 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil

C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH40**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**21.2.2013**
Principal:	
Date completed:	**21.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
HA				E + 1.1ppm		0.1			**FILL**: CLAY: medium plasticity, dark brown (possible reworked natural material)	D			No odour or staining
						0.2							
						0.3							
						0.4			becoming grey-orange mottled				
				E + 1.7ppm		0.5							
									Borehole BH40 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH5**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**20.2.2013**
Principal:	
Date completed:	**20.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
HA				E + 1.8ppm		0.1			**FILL**: Gravelly Silty CLAY: Low plasticity, dark brown and grey, fine gravel	D			No odour or staining, picrite fragments
						0.2							
						0.3							
									Borehole BH5 terminated at 0.3m				
						0.4							
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH6**
Sheet	1 of 5
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**18.2.2013**
Principal:	
Date completed:	**19.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface:

hole diameter: 110 | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
DT						0.1			**CONCRETE**				
SS				E + 1.2ppm		0.2			**FILL**: Sandy GRAVEL: Fine to medium, grey to dark grey	D			No odour or staining, some picrite, ironstone and brick fragments
						0.3			Becoming slightly clayey				
				E + 0.6ppm		0.4							
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support: M mud, C casing, N nil

penetration: 1 2 3 4 — no resistance ranging to refusal

water: 10/1/98 water level on date shown; water inflow; water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description: based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH6**
Sheet	2 of 5
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**18.2.2013**
Principal:	
Date completed:	**19.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
SS						0.6			**FILL**: GRAVEL: Fine to medium, angular to sub-angular, dark brown	D			No odour or staining
						0.7			**FILL**: SANDSTONE, highly weathered, dark brown	D			No odour or staining, backfill natural crushed sandstone (?)
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH6**
Sheet	3 of 5
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**18.2.2013**
Principal:	
Date completed:	**19.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
SS				E + 0.8ppm		1.1			**FILL**: SANDSTONE, highly weathered, dark brown *(continued)*	D			
						1.2							
						1.3							
						1.4							
						1.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH6**
Sheet	4 of 5
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**18.2.2013**
Principal:	
Date completed:	**19.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
SS						1.6			**FILL**: SANDSTONE, highly weathered, dark brown *(continued)*	D			
						1.7							
						1.8							
						1.9							
				E + 1.3ppm		2.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No. **BH6**

Sheet 5 of 5

Office Job No.: **ENAURHOD04463AA**

Client: ***AUSTRAL MASONRY (NSW) PTY LTD***

Date started: ***18.2.2013***

Principal:

Date completed: ***19.2.2013***

Project: ***DUE DILIGENCE ESA***

Logged by: ***PD***

Borehole Location: ***CLUNIES ROSS STREET, PROSPECT NSW***

Checked by: ***EW***

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface:

hole diameter: 110 | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
SS						2.1			**FILL**: SANDSTONE, highly weathered, dark brown *(continued)*	D			
						2.2							
						2.3							
						2.4							
						2.5							

Borehole BH6 terminated at 2.5m

method
AS auger screwing*
AD auger drilling*
RR roller/tricone
W washbore
CT cable tool
HA hand auger
DT diatube
B blank bit
V V bit
T TC bit
*bit shown by suffix
e.g. ADT

support
M mud N nil
C casing

penetration
1 2 3 4 no resistance ranging to refusal

water
10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests
U_{50} undisturbed sample 50mm diameter
U_{63} undisturbed sample 63mm diameter
D disturbed sample
N standard penetration test (SPT)
N* SPT - sample recovered
Nc SPT with solid cone
V vane shear (kPa)
P pressuremeter
Bs bulk sample
E environmental sample
R refusal

classification symbols and soil description
based on unified classification system

moisture
D dry
M moist
W wet
Wp plastic limit
W_L liquid limit

consistency/density index
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Fb friable
VL very loose
L loose
MD medium dense
D dense
VD very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH7**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**18.2.2013**
Principal:	
Date completed:	**18.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
DT									**CONCRETE**				
HA				E + 0.1ppm		0.1			**FILL**: SAND: medium grained, pale cream-grey	D			No odour or staining
						0.2			**FILL**: Sandy GRAVEL: fine to medium, grey, medium grained sand	D			No odour or staining, brick fragments
				E + 0.1ppm		0.3							
						0.4							
				E + 0.3ppm		0.5							
									Borehole BH7 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method
AS auger screwing*
AD auger drilling*
RR roller/tricone
W washbore
CT cable tool
HA hand auger
DT diatube
B blank bit
V V bit
T TC bit
*bit shown by suffix
e.g. ADT

support
M mud N nil
C casing

penetration
1 2 3 4 no resistance ranging to refusal

water
10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests
U_{50} undisturbed sample 50mm diameter
U_{63} undisturbed sample 63mm diameter
D disturbed sample
N standard penetration test (SPT)
N* SPT - sample recovered
Nc SPT with solid cone
V vane shear (kPa)
P pressuremeter
Bs bulk sample
E environmental sample
R refusal

classification symbols and soil description
based on unified classification system

moisture
D dry
M moist
W wet
Wp plastic limit
W_L liquid limit

consistency/density index
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Fb friable
VL very loose
L loose
MD medium dense
D dense
VD very dense

coffey environments

Environmental Log - Environmental

Borehole No.	**BH8**
Sheet	1 of 1
Office Job No.:	**ENAURHOD04463AA**
Client:	**AUSTRAL MASONRY (NSW) PTY LTD**
Date started:	**20.2.2013**
Principal:	
Date completed:	**20.2.2013**
Project:	**DUE DILIGENCE ESA**
Logged by:	**PD**
Borehole Location:	**CLUNIES ROSS STREET, PROSPECT NSW**
Checked by:	**EW**

drill model and mounting:	Hand Auger	Easting:	slope: -90°	R.L. Surface:	
hole diameter:	110	Northing	bearing:	datum:	

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
HA				E + 4.8ppm		0.1			**FILL**: Sandy GRAVEL, fine to medium, brown, fine to medium grained sand.	D			No odour or staining, some picrite and brick fragments
						0.2							
						0.3			Borehole BH8 terminated at 0.3m				
						0.4							
						0.5							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Environmental

Borehole No. **BH9**

Sheet 1 of 1

Office Job No.: **ENAURHOD04463AA**

Client: ***AUSTRAL MASONRY (NSW) PTY LTD***

Date started: ***20.2.2013***

Principal:

Date completed: ***20.2.2013***

Project: ***DUE DILIGENCE ESA***

Logged by: ***PD***

Borehole Location: ***CLUNIES ROSS STREET, PROSPECT NSW***

Checked by: ***EW***

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface:

hole diameter: 110 | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
HA				E + 3.7ppm (DUP6)		0.1			**FILL**: Gravelly SAND: medium grained, grey and brown	D			No odour or staining, some rock and mineral fragments
						0.2			**FILL**: Sandy Gravelly CLAY: low plasticity, dark brown and grey and brown, fine gravel	D			No odour or staining, some picrite, white mineral and brick fragments
				E + 5.9ppm		0.4							
						0.5			Borehole BH9 terminated at 0.5m				
						0.6							
						0.7							
						0.8							
						0.9							
						1.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil

C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

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A Pacific Environment company

Field Borelog

Location BH1

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						PAVERS - concrete				
						FILL - dark brown sandy clay with fine gravels				
	0.5								BH1_0.5-0.6	
	1.0									
	1.5					CLAY - orange, sandy with fine gravels			BH1_1.9-2.0	
	2.0					Borehole terminated at 2.0m and backfilled with arisings.				

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Field Borelog

Location BH2

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						CONCRETE				
						FILL - black aggregate				
						CLAY - orange, sandy with fine gravels				
	0.5								BH2_0.5-0.6	
	1.0									
	1.5								BH2_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

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Field Borelog

Location BH3

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						CONCRETE				
						FILL - grey/black aggregate				
						CLAY - mottled with gravel fragments				
	0.5								BH3_0.5-0.6	
	1.0									
	1.5								BH3_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

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Field Borelog

Location BH4

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						PAVERS - concrete				
						FILL - dark brown coarse sand with concrete fragments				
	0.5								BH4_0.5-0.6	
						CLAY - dark grey, stiff				
	1.0									
	1.5									
	2.0								BH4_1.9-2.0	
						SAND - dark brown with fine to medium sandstone gravel			BH4_5.9-6.0	
	6.0									
						Borehole terminated at 6.0m and backfilled with arisings.				

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Field Borelog

Location HA5

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						ORGANIC MATTER				
						FILL - brown silty clay with large rock fragments			HA5_0.2-0.3	
	0.5								HA5_0.4-0.5	
						Hole terminated at 0.5m and backfilled with arisings.				
	1.0									
	1.5									
	2.0									

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Field Borelog

Location BH6

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						PAVERS - concrete				
						CLAY - brown, silty with minor gravel fragments				
	0.5								BH6_0.5-0.6	
	1.0									
	1.5								BH6_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
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Field Borelog

Location BH7

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						CONCRETE				
						FILL - brown/orange, silty with gravels				
	0.5					CLAY - red/orange with gravels			BH7_0.5-0.6	BH7_0.5-0.6/QC105/QC106
	1.0									
	1.5								BH7_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

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Field Borelog

Location BH8

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						PAVERS - brick				
						SAND - brown/orange, silty wih minor fine gravels				
	0.5								BH8_0.5-0.6	
	1.0									
	1.5								BH8_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

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Field Borelog

Location BH9

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						FILL - brown silty sand with fine gravels				
						FILL - white/brown sand with fine gravels				
	0.5					SAND - brown/orange, silty			BH9_0.5-0.6	
	1.0									
	1.5								BH9_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

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Field Borelog

Location BH10

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						FILL - grey gravelly sand				
						FILL - red silty sand				
						FILL - dark brown gravelly sand				
	0.5								BH10_0.5-0.6	
	1.0					CLAY - orange/brown				
	1.5								BH10_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

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Field Borelog

Location BH11

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						FILL - black/brown gravel				
						FILL - red sandy gravel				
	0.5								BH11_0.5-0.6	
						SHALE - black				
	1.0									
	1.5					CLAY - dark brown			BH11_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH12

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						FILL - grey silt with fine gravels				
						FILL - brown/yellow mottled silty clay				
	0.5								BH12_0.5-0.6	
						SHALE - black				
	1.0									
	1.5								BH12_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH13

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						PAVERS - concrete				
						FILL - brown clayey sand				
	0.5								BH13_0.5-0.6	
	1.0					CLAY - grey/green				
	1.5									
	2.0									
						CLAY - yellow/grey mottled, sandy			BH13_2.5-2.6	BH13_2.5-2.6/QC101
	3.0					SILT - grey/orange with fine rounded gravels				
	6.0					SHALE			BH13_7.4-7.5	
	7.5					Borehole terminated at 7.5m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH14

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						GRASS				
						CLAY - brown, silty				
	0.5								BH14_0.5-0.6	
	1.0									
	1.5								BH14_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location HA15

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						FILL - brown silty sand with medium gravels and fragments of glass, brick, tile			HA15_0-0.2	
	0.5					Hole terminated at 0.4m and backfilled with arisings.			HA15_0.2-0.4	
	1.0									
	1.5									
	2.0									

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH16

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						GRASS				
						FILL - brown silty clay with fine gravels				
	0.5								BH16_0.5-0.6	
						CLAY - dark brown, silty with medium gravels				
	1.0					CLAY - light brown, silty with medium gravels				
	1.5								BH16_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH17

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						PAVERS - concrete				
						FILL - red sand				
						CLAY - dark brown/orange				
	0.5								BH17_0.5-0.6	
	1.0									
	1.5								BH17_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH18

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						BITUMEN				
						FILL - brown silty clay with minor gravels				
	0.5								BH18_0.5-0.6	
						CLAY - brown, silty with large shale fragments				
	1.0									
	1.5								BH18_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH19

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						BITUMEN				
						CONCRETE				
						FILL - brown sandy clay with minor fine gravels				
	0.5								BH19_0.5-0.6	
	1.0					CLAY - red/orange with minor fine gravels				
	1.5								BH19_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location HA20

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						FILL - brown silty clay with minor gravel, brick, tile fragments			HA20_0.2-0.3	
	0.5								HA20_0.5-0.6	
						Hole terminated at 0.6m and backfilled with arisings.				
	1.0									
	1.5									
	2.0									

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH21

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						PAVERS - concrete				
						FILL - red sand				
						SAND - brown, silty with large shale fragments				
	0.5								BH21_0.5-0.6	
	1.0									
	1.5								BH21_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH22

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						FILL - dark brown coarse sand with fine concrete fragments				
	0.5								BH22_0.5-0.6	
						CLAY - dark brown/grey				
	1.0									
	1.5								BH22_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location HA23

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						TOPSOIL - brown silty clay			BH23_0.1-0.2	
						CLAY - brown/orange				
						Hole terminated at 0.3m and backfilled with arisings.				
	0.5								BH23_0.2-0.3	
	1.0									
	1.5									
	2.0									

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH24

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						PAVERS - concrete				
						FILL - brown silty sand				
						CLAY - brown with grey mottling				
	0.5								BH24_0.5-0.6	
						CLAY - dark brown with gravel fragments				
	1.0									
	1.5								BH24_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH25

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						PAVERS - concrete				
						CLAY - brown, sandy with fine/moderate gravels				
	0.5								BH25_0.5-0.6	
						CLAY - yellow/grey mottled				
	1.0									
	1.5								BH25_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH26

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						FILL - grass overlying dark brown sandy gravel, with roots and red brick fragments				
	0.5								BH26_0.5-0.6	BH26_0.5-0.6/QC102/QC103
	1.0									
	1.5					SAND - dark brown, coarse with occassional fine, rounded sandstone gravels			BH26_1.9-2.0	
	2.0					Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH27

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						FILL -grass overlying dark brown sandy gravel with brick and concrete fragments				
	0.5								BH27_0.5-0.6	
	1.0									
	1.5									
						CLAY - dark brown/grey, slightly sandy			BH27_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH28

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						PAVERS - concrete				
						FILL - brown silty clay with minor gravels				
						CLAY - brown				
	0.5								BH28_0.5-0.6	BH28_0.5-0.6/QC104
	1.0					CLAY - grey/yellow mottled				
	1.5								BH28_1.9-2.0	
	2.0					Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH29

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						PAVERS - concrete				
						FILL - brown/orange silty sand				
	0.5								BH29_0.5-0.6	
						CLAY - dark brown/black				
	1.0									
	1.5								BH29_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH30/MW3(

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						FILL - brown fine gravelly sand with brick fragments				
	0.5		CASING						BH30_0.5-0.6	
						CLAY - grey/green, sandy				
	1.0									
	1.5									
						CLAY - light yellow/grey, sandy with fine gravels				
	2.0									
	2.5		SCREEN			SILT - brown			BH30_5.9-6.0	
	6.0									
						Borehole terminated at 6.0m and monitoring well installed.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH31

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						FILL - brown/grey silty sand with minor gravels				
	0.5								BH31_0.5-0.6	
						CLAY - yellow/brown with shale fragments				
	1.0									
	1.5								BH31_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

DLA Environmental Services
A Pacific Environment company

Field Borelog

Location BH32

Client:	Boral	Job Type:	DSI
Project No:	DL4032	Address:	44 Clunies Ross Street, Prospect
Date:	8/02/2017	Logged By:	AD/JD
Contractor:	Rockwell Drilling	Method:	Drill Rig
Hole Size		Co-ordinates:	

Method	Depth (m)	Depth to Water	Monitoring well Details	Graphic Log	USCS Classification	Material Description	Moisture	Density / Stiffness	Sampling	Comments
						FILL - brown silty sand with gravels				
						FILL - red/orange sand with minor gravels				
	0.5								BH32_0.5-0.6	
						SHALE - grey				
	1.0									
	1.5									
						CLAY - brown			BH32_1.9-2.0	
	2.0									
						Borehole terminated at 2.0m and backfilled with arisings.				

Appendix N Detailed Laboratory Certificates

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 58238
PROJECT NAME: Prospect DSI
DATE NEEDED BY: S TAT
LABORATORY BATCH NO.:
SAMPLERS: CK/RL
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) ckauffman@jbsg.com.au; (3) rlill@jbsg.com.au
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

~~Analysis to be emailed~~

707966

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	JBA	pH + CEC	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
TP200_0.0-0.1	Soil	9/3/20		J+B		X	X		X	
0.2-0.3				↓						
0.5-0.7				J						
TP201_0.0-0.1				J+B						
0.4-0.5										
0.9-1.0						X			X	
1.2-1.3				↓						
1.4-1.5				J						
TP202_0.0-0.1				J+B		X			X	
0.4-0.5				J						
TP203_0.0-0.1				J+B						
0.5-0.6						X			X	
1.0-1.1				↓						
1.6-1.7				↓						
TP204_0.0-0.1				J+B		X	X		X	
0.5-0.6				↓						
0.9-1.0				J						
TP205_0.0-0.1				J+B						
0.4-0.5	↓	↓		↓		X			X	

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: DATE: 16.3.20 OF: JBS&G CK	CONSIGNMENT NOTE NO. TRANSPORT CO.	NAME: Rupam DATE: 16/03 OF: 1:49 PM	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C 12.8°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

IMSO Forms013 – Chain of Custody – Generic

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 58238
PROJECT NAME: Prospect DSI
DATE NEEDED BY: STAT
LABORATORY BATCH NO.:
SAMPLERS: CK/RL
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) ckauffman@jbsg.com.au; (3) rlill@jbsg.com.au
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

~~Analysis to be banked~~

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	J724	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
TP205_0.9-1.0	Soil	9/3/20		J					
TP206_0.0-0.1				J+B		X		X	
0.4-0.5				J					
TP207_0.0-0.1				J+B		X		X	
0.3-0.4				↓					
0.5-0.6				J					
TP208_0.0-0.1				J+B					
0.4-0.5				↓					
0.9-1.0				↓		X		X	
1.4-1.5				J					
TP209_0.0-0.1				J+B					
0.4-0.5				↓					
0.9-1.0				↓		X		X	
1.4-1.5				J					
TP210_0.0-0.1				J+B					
0.4-0.5				↓		X		X	
0.9-1.0				↓					
1.4-1.5	↓	↓		J					

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: DATE: 16.3.20	CONSIGNMENT NOTE NO.	NAME: DATE: 16/03	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF:	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

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

IMSO Forms013 – Chain of Custody - Generic

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 58238
PROJECT NAME: Prospect DSI
DATE NEEDED BY: STAT
LABORATORY BATCH NO.:
SAMPLERS: CK/RL
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) .....ckauffman.....@jbsg.com.au; (3) .....rlill.....@jbsg.com.au
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

~~Analysis to be emailed~~

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	TDZA	TBZ	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
TP211_0.0-0.1	Soil	9/3/20		J+B		X			X	
0.3-0.4	↓	↓		J						
0.7-0.8	↓	↓		J						
RINSATE	Water	↓		2xV 1xA 1xM			X			

RELINQUISHED BY:
NAME: CK DATE: 16.3.20
OF: JBS&G
NAME: DATE:
OF:

METHOD OF SHIPMENT:
CONSIGNMENT NOTE NO.
TRANSPORT CO.
CONSIGNMENT NOTE NO.
TRANSPORT CO

RECEIVED BY:
NAME
DATE: 16/03
OF:
NAME: DATE:
OF:

FOR RECEIVING LAB USE ONLY:
COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
COOLER TEMP ..... deg C
COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
COOLER TEMP ..... deg C

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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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:	Chris Kauffman
Project name:	PROSPECT DSI
Project ID:	58238
COC number:	Not provided
Turn around time:	5 Day
Date/Time received:	Mar 16, 2020 1:49 PM
Eurofins reference:	**707966**

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 : 12.8 degrees Celsius.
- ☑ All samples have been received as described on the above COC.
- ☑ COC has been completed correctly.
- ☑ Attempt to chill was evident.
- ☑ Appropriately preserved sample containers have been used.
- ☑ All samples were received in good condition.
- ☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☑ Appropriate sample containers have been used.
- ☑ Sample containers for volatile analysis received with zero headspace.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

NO BAG FOR TP208_0.4-0.5.

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 Chris Kauffman - ckauffman@jbsg.com.au.

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Project Name: PROSPECT DSI
Project ID: 58238

Order No.:
Report #: 707966
Phone: 02 8245 0300
Fax:

Received: Mar 16, 2020 1:49 PM
Due: Mar 23, 2020
Priority: 5 Day
Contact Name: Chris Kauffman

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set	Cation Exchange Capacity	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	TP200_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22894	X		X	X	X	X
2	TP201_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22895	X			X		X
3	TP202_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22896	X			X		X
4	TP203_0.5-0.6	Mar 09, 2020		Soil	S20-Ma22897	X			X		X
5	TP204_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22898	X		X	X	X	X
6	TP205_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22899	X			X		X
7	TP206_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22900	X			X		X
8	TP207_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22901	X			X		X
9	TP208_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22902	X			X		X
10	TP209_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22903	X			X		X

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Received: Mar 16, 2020 1:49 PM
Due: Mar 23, 2020
Priority: 5 Day
Contact Name: Chris Kauffman

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set	Cation Exchange Capacity	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
11	TP210_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22904	X			X		X
12	TP211_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22905	X			X		X
13	RIN201	Mar 09, 2020		Water	S20-Ma22906						X
14	TP200_0.2-0.3	Mar 09, 2020		Soil	S20-Ma22907		X				
15	TP200_0.5-0.7	Mar 09, 2020		Soil	S20-Ma22953		X				
16	TP201_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22954		X				
17	TP201_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22955		X				
18	TP201_1.2-1.3	Mar 09, 2020		Soil	S20-Ma22956		X				
19	TP201_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22957		X				
20	TP202_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22958		X				
21	TP203_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22959		X				
22	TP203_1.0-1.1	Mar 09, 2020		Soil	S20-Ma22960		X				
23	TP203_1.6-1.7	Mar 09, 2020		Soil	S20-Ma22961		X				

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Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
24	TP204_0.5-0.6	Mar 09, 2020		Soil	S20-Ma22962		X				
25	TP204_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22963		X				
26	TP205_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22964		X				
27	TP205_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22965		X				
28	TP206_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22966		X				
29	TP207_0.3-0.4	Mar 09, 2020		Soil	S20-Ma22967		X				
30	TP207_0.5-0.6	Mar 09, 2020		Soil	S20-Ma22968		X				
31	TP208_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22969		X				
32	TP208_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22970		X				
33	TP208_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22971		X				
34	TP209_0.0.-0.1	Mar 09, 2020		Soil	S20-Ma22972		X				
35	TP209_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22973		X				

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Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set	Cation Exchange Capacity	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
36	TP209_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22974		X				
37	TP210_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22975		X				
38	TP210_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22976		X				
39	TP210_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22977		X				
40	TP211_0.3-0.4	Mar 09, 2020		Soil	S20-Ma22978		X				
41	TP211_0.7-0.8	Mar 09, 2020		Soil	S20-Ma22979		X				
Test Counts						12	28	2	12	2	13

Certificate of Analysis

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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:	Chris Kauffman
Report	707966-AID
Project Name	PROSPECT DSI
Project ID	58238
Received Date	Mar 16, 2020
Date Reported	Mar 23, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name PROSPECT DSI
Project ID 58238
Date Sampled Mar 09, 2020
Report 707966-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP200_0.0-0.1	20-Ma22894	Mar 09, 2020	Approximate Sample 272g Sample consisted of: Brown coarse-grained soil, shale and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP201_0.9-1.0	20-Ma22895	Mar 09, 2020	Approximate Sample 427g Sample consisted of: Brown coarse-grained soil, shale and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP202_0.0-0.1	20-Ma22896	Mar 09, 2020	Approximate Sample 352g Sample consisted of: Brown coarse-grained soil, shale and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP203_0.5-0.6	20-Ma22897	Mar 09, 2020	Approximate Sample 255g Sample consisted of: Brown coarse-grained soil, shale and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP204_0.0-0.1	20-Ma22898	Mar 09, 2020	Approximate Sample 381g 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.
TP205_0.4-0.5	20-Ma22899	Mar 09, 2020	Approximate Sample 451g Sample consisted of: Brown coarse-grained soil, shale and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP206_0.0-0.1	20-Ma22900	Mar 09, 2020	Approximate Sample 451g Sample consisted of: Brown coarse-grained soil, shale and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP207_0.0-0.1	20-Ma22901	Mar 09, 2020	Approximate Sample 271g 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.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP208_0.9-1.0	20-Ma22902	Mar 09, 2020	Approximate Sample 410g 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.
TP209_0.9-1.0	20-Ma22903	Mar 09, 2020	Approximate Sample 427g 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.
TP210_0.4-0.5	20-Ma22904	Mar 09, 2020	Approximate Sample 520g 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.
TP211_0.0-0.1	20-Ma22905	Mar 09, 2020	Approximate Sample 380g 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.

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	Mar 16, 2020	Indefinite

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Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set	Cation Exchange Capacity	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	TP200_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22894	X		X	X	X	X
2	TP201_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22895	X			X		X
3	TP202_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22896	X			X		X
4	TP203_0.5-0.6	Mar 09, 2020		Soil	S20-Ma22897	X			X		X
5	TP204_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22898	X		X	X	X	X
6	TP205_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22899	X			X		X
7	TP206_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22900	X			X		X
8	TP207_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22901	X			X		X
9	TP208_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22902	X			X		X
10	TP209_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22903	X			X		X

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Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
11	TP210_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22904	X			X		X
12	TP211_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22905	X			X		X
13	RIN201	Mar 09, 2020		Water	S20-Ma22906						X
14	TP200_0.2-0.3	Mar 09, 2020		Soil	S20-Ma22907		X				
15	TP200_0.5-0.7	Mar 09, 2020		Soil	S20-Ma22953		X				
16	TP201_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22954		X				
17	TP201_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22955		X				
18	TP201_1.2-1.3	Mar 09, 2020		Soil	S20-Ma22956		X				
19	TP201_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22957		X				
20	TP202_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22958		X				
21	TP203_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22959		X				
22	TP203_1.0-1.1	Mar 09, 2020		Soil	S20-Ma22960		X				
23	TP203_1.6-1.7	Mar 09, 2020		Soil	S20-Ma22961		X				

eurofins | Environment Testing

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NATA # 1261 Site # 18217

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NATA # 1261 Site # 20794

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

Project Name: PROSPECT DSI
Project ID: 58238

Order No.:
Report #: 707966
Phone: 02 8245 0300
Fax:

Received: Mar 16, 2020 1:49 PM
Due: Mar 23, 2020
Priority: 5 Day
Contact Name: Chris Kauffman

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set	Cation Exchange Capacity	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
24	TP204_0.5-0.6	Mar 09, 2020		Soil	S20-Ma22962		X				
25	TP204_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22963		X				
26	TP205_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22964		X				
27	TP205_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22965		X				
28	TP206_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22966		X				
29	TP207_0.3-0.4	Mar 09, 2020		Soil	S20-Ma22967		X				
30	TP207_0.5-0.6	Mar 09, 2020		Soil	S20-Ma22968		X				
31	TP208_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22969		X				
32	TP208_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22970		X				
33	TP208_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22971		X				
34	TP209_0.0.-0.1	Mar 09, 2020		Soil	S20-Ma22972		X				
35	TP209_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22973		X				

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

Project Name: PROSPECT DSI
Project ID: 58238

Order No.:
Report #: 707966
Phone: 02 8245 0300
Fax:

Received: Mar 16, 2020 1:49 PM
Due: Mar 23, 2020
Priority: 5 Day
Contact Name: Chris Kauffman

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set	Cation Exchange Capacity	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
36	TP209_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22974		X				
37	TP210_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22975		X				
38	TP210_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22976		X				
39	TP210_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22977		X				
40	TP211_0.3-0.4	Mar 09, 2020		Soil	S20-Ma22978		X				
41	TP211_0.7-0.8	Mar 09, 2020		Soil	S20-Ma22979		X				
Test Counts						12	28	2	12	2	13

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

S20-Ma22894, S20-Ma22895, S20-Ma22896, S20-Ma22897, S20-Ma22898, S20-Ma22899, S20-Ma22900, S20-Ma22901, S20-Ma22902, S20-Ma22903, S20-Ma22905: 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:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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: **Chris Kauffman**

Report **707966-S**
Project name PROSPECT DSI
Project ID 58238
Received Date Mar 16, 2020

Client Sample ID			**TP200_0.0-0.1**	**TP201_0.9-1.0**	**TP202_0.0-0.1**	**TP203_0.5-0.6**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-Ma22894**	**S20-Ma22895**	**S20-Ma22896**	**S20-Ma22897**
Date Sampled			**Mar 09, 2020**	**Mar 09, 2020**	**Mar 09, 2020**	**Mar 09, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	170	93	90	130
TRH C29-C36	50	mg/kg	87	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	257	93	90	130
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	%	86	91	103	98
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	230	100	< 100	130
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	230	100	< 100	130
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			TP200_0.0-0.1	TP201_0.9-1.0	TP202_0.0-0.1	TP203_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma22894	S20-Ma22895	S20-Ma22896	S20-Ma22897
Date Sampled			Mar 09, 2020	Mar 09, 2020	Mar 09, 2020	Mar 09, 2020
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	%	76	81	66	90
p-Terphenyl-d14 (surr.)	1	%	80	91	75	90
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	117	96	110	103
Tetrachloro-m-xylene (surr.)	1	%	126	113	107	111
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	117	96	110	103
Tetrachloro-m-xylene (surr.)	1	%	126	113	107	111

Client Sample ID			TP200_0.0-0.1	TP201_0.9-1.0	TP202_0.0-0.1	TP203_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma22894	S20-Ma22895	S20-Ma22896	S20-Ma22897
Date Sampled			Mar 09, 2020	Mar 09, 2020	Mar 09, 2020	Mar 09, 2020
Test/Reference	LOR	Unit				
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	31	-	-	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	5.6	-	-	-
% Moisture	1	%	12	12	14	12
Heavy Metals						
Arsenic	2	mg/kg	9.3	22	7.9	10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	34	6.7	13	5.5
Copper	5	mg/kg	55	40	24	41
Lead	5	mg/kg	26	26	22	20
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	25	8.8	10	11
Zinc	5	mg/kg	60	41	30	45
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	19	-	-	-

Client Sample ID			TP204_0.0-0.1	TP205_0.4-0.5	TP206_0.0-0.1	TP207_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma22898	S20-Ma22899	S20-Ma22900	S20-Ma22901
Date Sampled			Mar 09, 2020	Mar 09, 2020	Mar 09, 2020	Mar 09, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	95	61	100	84
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	95	61	100	84
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	%	110	102	83	92
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	120	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	120	< 100

Client Sample ID			TP204_0.0-0.1	TP205_0.4-0.5	TP206_0.0-0.1	TP207_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma22898	S20-Ma22899	S20-Ma22900	S20-Ma22901
Date Sampled			Mar 09, 2020	Mar 09, 2020	Mar 09, 2020	Mar 09, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	86	104	73	100
p-Terphenyl-d14 (surr.)	1	%	INT	144	79	71
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	101	102	99	129
Tetrachloro-m-xylene (surr.)	1	%	109	107	104	121

Client Sample ID			TP204_0.0-0.1	TP205_0.4-0.5	TP206_0.0-0.1	TP207_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma22898	S20-Ma22899	S20-Ma22900	S20-Ma22901
Date Sampled			Mar 09, 2020	Mar 09, 2020	Mar 09, 2020	Mar 09, 2020
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	101	102	99	129
Tetrachloro-m-xylene (surr.)	1	%	109	107	104	121
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	16	-	-	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	5.2	-	-	-
% Moisture	1	%	14	14	17	25
Heavy Metals						
Arsenic	2	mg/kg	4.5	9.3	11	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.6	6.7	55	400
Copper	5	mg/kg	75	49	47	65
Lead	5	mg/kg	17	22	26	< 5
Mercury	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	10	8.8	34	180
Zinc	5	mg/kg	37	30	79	89
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	2.9	-	-	-

Client Sample ID			TP208_0.9-1.0	TP209_0.9-1.0	TP210_0.4-0.5	TP211_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma22902	S20-Ma22903	S20-Ma22904	S20-Ma22905
Date Sampled			Mar 09, 2020	Mar 09, 2020	Mar 09, 2020	Mar 09, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 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	%	92	92	98	102

Client Sample ID			TP208_0.9-1.0	TP209_0.9-1.0	TP210_0.4-0.5	TP211_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma22902	S20-Ma22903	S20-Ma22904	S20-Ma22905
Date Sampled			Mar 09, 2020	Mar 09, 2020	Mar 09, 2020	Mar 09, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 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	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 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
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	92	103	89	88
p-Terphenyl-d14 (surr.)	1	%	73	87	131	106
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			TP208_0.9-1.0	TP209_0.9-1.0	TP210_0.4-0.5	TP211_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ma22902	S20-Ma22903	S20-Ma22904	S20-Ma22905
Date Sampled			Mar 09, 2020	Mar 09, 2020	Mar 09, 2020	Mar 09, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	120	110	107	131
Tetrachloro-m-xylene (surr.)	1	%	117	114	96	136
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	120	110	107	131
Tetrachloro-m-xylene (surr.)	1	%	117	114	96	136
% Moisture	1	%	21	18	15	23
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	4.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	280	230	110	170
Copper	5	mg/kg	64	54	57	95
Lead	5	mg/kg	< 5	< 5	< 5	11
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	440	330	280	140
Zinc	5	mg/kg	120	95	93	140

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
JBS&G Suite 2			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Mar 19, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Mar 19, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Mar 19, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Mar 19, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Mar 19, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Mar 19, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	Mar 19, 2020	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Metals M8	Sydney	Mar 19, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Mar 18, 2020	7 Days
- Method: LTM-INO-4030 Conductivity			
Cation Exchange Capacity	Melbourne	Mar 18, 2020	180 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
pH (1:5 Aqueous extract at 25°C as rec.)	Sydney	Mar 19, 2020	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
% Moisture	Sydney	Mar 16, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

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Project Name: PROSPECT DSI
Project ID: 58238

Order No.:
Report #: 707966
Phone: 02 8245 0300
Fax:

Received: Mar 16, 2020 1:49 PM
Due: Mar 23, 2020
Priority: 5 Day
Contact Name: Chris Kauffman

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set	Cation Exchange Capacity	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	TP200_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22894	X		X	X	X	X
2	TP201_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22895	X			X		X
3	TP202_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22896	X			X		X
4	TP203_0.5-0.6	Mar 09, 2020		Soil	S20-Ma22897	X			X		X
5	TP204_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22898	X		X	X	X	X
6	TP205_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22899	X			X		X
7	TP206_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22900	X			X		X
8	TP207_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22901	X			X		X
9	TP208_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22902	X			X		X
10	TP209_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22903	X			X		X

eurofins | Environment Testing

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

Project Name: PROSPECT DSI
Project ID: 58238

Order No.:
Report #: 707966
Phone: 02 8245 0300
Fax:

Received: Mar 16, 2020 1:49 PM
Due: Mar 23, 2020
Priority: 5 Day
Contact Name: Chris Kauffman

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set	Cation Exchange Capacity	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
11	TP210_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22904	X			X		X
12	TP211_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22905	X			X		X
13	RIN201	Mar 09, 2020		Water	S20-Ma22906						X
14	TP200_0.2-0.3	Mar 09, 2020		Soil	S20-Ma22907		X				
15	TP200_0.5-0.7	Mar 09, 2020		Soil	S20-Ma22953		X				
16	TP201_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22954		X				
17	TP201_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22955		X				
18	TP201_1.2-1.3	Mar 09, 2020		Soil	S20-Ma22956		X				
19	TP201_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22957		X				
20	TP202_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22958		X				
21	TP203_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22959		X				
22	TP203_1.0-1.1	Mar 09, 2020		Soil	S20-Ma22960		X				
23	TP203_1.6-1.7	Mar 09, 2020		Soil	S20-Ma22961		X				

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Project Name: PROSPECT DSI
Project ID: 58238

Order No.:
Report #: 707966
Phone: 02 8245 0300
Fax:

Received: Mar 16, 2020 1:49 PM
Due: Mar 23, 2020
Priority: 5 Day
Contact Name: Chris Kauffman

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set	Cation Exchange Capacity	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
24	TP204_0.5-0.6	Mar 09, 2020		Soil	S20-Ma22962		X				
25	TP204_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22963		X				
26	TP205_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22964		X				
27	TP205_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22965		X				
28	TP206_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22966		X				
29	TP207_0.3-0.4	Mar 09, 2020		Soil	S20-Ma22967		X				
30	TP207_0.5-0.6	Mar 09, 2020		Soil	S20-Ma22968		X				
31	TP208_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22969		X				
32	TP208_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22970		X				
33	TP208_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22971		X				
34	TP209_0.0.-0.1	Mar 09, 2020		Soil	S20-Ma22972		X				
35	TP209_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22973		X				

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Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set	Cation Exchange Capacity	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
36	TP209_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22974		X				
37	TP210_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22975		X				
38	TP210_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22976		X				
39	TP210_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22977		X				
40	TP211_0.3-0.4	Mar 09, 2020		Soil	S20-Ma22978		X				
41	TP211_0.7-0.8	Mar 09, 2020		Soil	S20-Ma22979		X				
Test Counts						12	28	2	12	2	13

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	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB*	mg/kg	< 0.5			0.5	Pass	
Method Blank							
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	
Method Blank							
Cation Exchange Capacity							
Cation Exchange Capacity	meq/100g	< 0.05			0.05	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	80			70-130	Pass	
TRH C10-C14	%	114			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	93			70-130	Pass	
Toluene	%	94			70-130	Pass	
Ethylbenzene	%	98			70-130	Pass	
m&p-Xylenes	%	97			70-130	Pass	
o-Xylene	%	98			70-130	Pass	
Xylenes - Total	%	97			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	110			70-130	Pass	
TRH C6-C10	%	81			70-130	Pass	
TRH >C10-C16	%	105			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Acenaphthene	%	115			70-130	Pass	
Acenaphthylene	%	101			70-130	Pass	
Anthracene	%	92			70-130	Pass	
Benz(a)anthracene	%	91			70-130	Pass	
Benzo(a)pyrene	%	103			70-130	Pass	
Benzo(b&j)fluoranthene	%	99			70-130	Pass	
Benzo(g.h.i)perylene	%	100			70-130	Pass	
Benzo(k)fluoranthene	%	101			70-130	Pass	
Chrysene	%	94			70-130	Pass	
Dibenz(a.h)anthracene	%	130			70-130	Pass	
Fluoranthene	%	95			70-130	Pass	
Fluorene	%	99			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	106			70-130	Pass	
Naphthalene	%	122			70-130	Pass	
Phenanthrene	%	101			70-130	Pass	
Pyrene	%	117			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	96			70-130	Pass	
4.4'-DDD	%	104			70-130	Pass	
4.4'-DDE	%	97			70-130	Pass	
4.4'-DDT	%	96			70-130	Pass	
a-BHC	%	89			70-130	Pass	
Aldrin	%	95			70-130	Pass	
b-BHC	%	92			70-130	Pass	
d-BHC	%	97			70-130	Pass	
Dieldrin	%	97			70-130	Pass	
Endosulfan I	%	98			70-130	Pass	
Endosulfan II	%	100			70-130	Pass	
Endosulfan sulphate	%	102			70-130	Pass	
Endrin aldehyde	%	78			70-130	Pass	
Endrin ketone	%	86			70-130	Pass	
g-BHC (Lindane)	%	94			70-130	Pass	
Heptachlor	%	98			70-130	Pass	
Heptachlor epoxide	%	104			70-130	Pass	
Hexachlorobenzene	%	92			70-130	Pass	
Methoxychlor	%	123			70-130	Pass	
Toxaphene	%	98			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	94			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	107			70-130	Pass	
Cadmium	%	107			70-130	Pass	
Chromium	%	105			70-130	Pass	
Copper	%	105			70-130	Pass	
Lead	%	107			70-130	Pass	
Mercury	%	109			70-130	Pass	
Nickel	%	105			70-130	Pass	
Zinc	%	102			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S20-Ma11702	NCP	%	70			70-130	Pass	
TRH C10-C14	S20-Ma26909	NCP	%	108			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-Ma11702	NCP	%	79			70-130	Pass	
Toluene	S20-Ma11702	NCP	%	81			70-130	Pass	
Ethylbenzene	S20-Ma11702	NCP	%	84			70-130	Pass	
m&p-Xylenes	S20-Ma11702	NCP	%	86			70-130	Pass	
o-Xylene	S20-Ma11702	NCP	%	85			70-130	Pass	
Xylenes - Total	S20-Ma11702	NCP	%	86			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-Ma11702	NCP	%	86			70-130	Pass	
TRH C6-C10	S20-Ma11702	NCP	%	71			70-130	Pass	
TRH >C10-C16	S20-Ma26909	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S20-Ma23650	NCP	%	99			70-130	Pass	
Acenaphthylene	S20-Ma23650	NCP	%	92			70-130	Pass	
Anthracene	S20-Ma28854	NCP	%	103			70-130	Pass	
Benz(a)anthracene	S20-Ma23650	NCP	%	94			70-130	Pass	
Benzo(a)pyrene	S20-Ma23650	NCP	%	103			70-130	Pass	
Benzo(b&j)fluoranthene	S20-Ma23650	NCP	%	72			70-130	Pass	
Benzo(k)fluoranthene	S20-Ma23650	NCP	%	70			70-130	Pass	
Chrysene	S20-Ma23650	NCP	%	94			70-130	Pass	
Dibenz(a.h)anthracene	S20-Ma23650	NCP	%	110			70-130	Pass	
Fluoranthene	S20-Ma23650	NCP	%	73			70-130	Pass	
Fluorene	S20-Ma23650	NCP	%	99			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-Ma28854	NCP	%	70			70-130	Pass	
Naphthalene	S20-Ma23650	NCP	%	103			70-130	Pass	
Phenanthrene	S20-Ma23650	NCP	%	85			70-130	Pass	
Pyrene	S20-Ma23650	NCP	%	89			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
b-BHC	S20-Ma30019	NCP	%	129			70-130	Pass	
Endosulfan II	S20-Ma30019	NCP	%	121			70-130	Pass	
Endosulfan sulphate	S20-Ma30019	NCP	%	122			70-130	Pass	
Endrin aldehyde	S20-Ma30019	NCP	%	74			70-130	Pass	
g-BHC (Lindane)	S20-Ma30019	NCP	%	125			70-130	Pass	
Heptachlor	S20-Ma30019	NCP	%	106			70-130	Pass	
Toxaphene	S20-Ma30019	NCP	%	120			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	S20-Ma19944	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-Ma23450	NCP	%	124			70-130	Pass	
Cadmium	S20-Ma23450	NCP	%	121			70-130	Pass	
Chromium	S20-Ma23450	NCP	%	122			70-130	Pass	
Copper	S20-Ma23450	NCP	%	122			70-130	Pass	
Lead	S20-Ma23450	NCP	%	115			70-130	Pass	
Mercury	S20-Ma23450	NCP	%	121			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Nickel	S20-Ma23450	NCP	%	116			70-130	Pass	
Zinc	S20-Ma23450	NCP	%	97			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-Ma11701	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S20-Ma24797	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-Ma24797	NCP	mg/kg	110	< 50	110	30%	Fail	Q15
TRH C29-C36	S20-Ma24797	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-Ma11701	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-Ma11701	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-Ma11701	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-Ma11701	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-Ma11701	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S20-Ma11701	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-Ma11701	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-Ma11701	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S20-Ma24797	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S20-Ma24797	NCP	mg/kg	120	< 100	96	30%	Fail	Q15
TRH >C34-C40	S20-Ma24797	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-Ma26404	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S20-Ma26405	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endosulfan II	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S20-Ma26405	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S20-Ma26405	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Toxaphene	S20-Ma26405	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S20-Ma26405	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S20-Ma26405	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S20-Ma26405	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S20-Ma26405	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S20-Ma26405	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S20-Ma26405	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S20-Ma26405	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (1:5 aqueous extract at 25°C as rec.)	M20-Ma23274	NCP	uS/cm	290	260	7.3	30%	Pass	
pH (1:5 Aqueous extract at 25°C as rec.)	S20-Ma21847	NCP	pH Units	5.8	5.9	Pass	30%	Pass	
Duplicate									
Cation Exchange Capacity				Result 1	Result 2	RPD			
Cation Exchange Capacity	B20-Ma24831	NCP	meq/100g	3.0	2.8	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-Ma22896	CP	mg/kg	7.9	6.2	23	30%	Pass	
Cadmium	S20-Ma22896	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-Ma22896	CP	mg/kg	13	19	40	30%	Fail	Q15
Copper	S20-Ma22896	CP	mg/kg	24	27	12	30%	Pass	
Lead	S20-Ma22896	CP	mg/kg	22	28	22	30%	Pass	
Mercury	S20-Ma22896	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-Ma22896	CP	mg/kg	10	17	48	30%	Fail	Q15
Zinc	S20-Ma22896	CP	mg/kg	30	54	58	30%	Fail	Q02
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-Ma22897	CP	%	12	14	17	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
Q02	The duplicate %RPD is outside the recommended acceptance criteria. Further analysis indicates sample heterogeneity as the cause
Q15	The RPD reported passes Eurofins Environment Testing'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
Andrew Sullivan	Senior Analyst-Organic (NSW)
Emily Rosenberg	Senior Analyst-Metal (VIC)
Gabriele Cordero	Senior Analyst-Inorganic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Scott Beddoes	Senior Analyst-Inorganic (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.

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: **Chris Kauffman**

Report **707966-W**
Project name PROSPECT DSI
Project ID 58238
Received Date Mar 16, 2020

Client Sample ID			**RIN201**
Sample Matrix			**Water**
Eurofins Sample No.			**S20-Ma22906**
Date Sampled			**Mar 09, 2020**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	0.02	mg/L	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	143
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.01	mg/L	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1
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

Client Sample ID			RIN201
Sample Matrix			Water
Eurofins Sample No.			S20-Ma22906
Date Sampled			Mar 09, 2020
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
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	%	130
p-Terphenyl-d14 (surr.)	1	%	118
Organochlorine Pesticides			
Chlordanes - Total	0.001	mg/L	< 0.001
4.4'-DDD	0.0001	mg/L	< 0.0001
4.4'-DDE	0.0001	mg/L	< 0.0001
4.4'-DDT	0.0001	mg/L	< 0.0001
a-BHC	0.0001	mg/L	< 0.0001
Aldrin	0.0001	mg/L	< 0.0001
b-BHC	0.0001	mg/L	< 0.0001
d-BHC	0.0001	mg/L	< 0.0001
Dieldrin	0.0001	mg/L	< 0.0001
Endosulfan I	0.0001	mg/L	< 0.0001
Endosulfan II	0.0001	mg/L	< 0.0001
Endosulfan sulphate	0.0001	mg/L	< 0.0001
Endrin	0.0001	mg/L	< 0.0001
Endrin aldehyde	0.0001	mg/L	< 0.0001
Endrin ketone	0.0001	mg/L	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	< 0.0001
Heptachlor	0.0001	mg/L	< 0.0001
Heptachlor epoxide	0.0001	mg/L	< 0.0001
Hexachlorobenzene	0.0001	mg/L	< 0.0001
Methoxychlor	0.0001	mg/L	< 0.0001
Toxaphene	0.01	mg/L	< 0.01
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.0001
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001
Dibutylchlorendate (surr.)	1	%	85
Tetrachloro-m-xylene (surr.)	1	%	125
Polychlorinated Biphenyls			
Aroclor-1016	0.005	mg/L	< 0.005
Aroclor-1221	0.001	mg/L	< 0.001
Aroclor-1232	0.005	mg/L	< 0.005
Aroclor-1242	0.005	mg/L	< 0.005
Aroclor-1248	0.005	mg/L	< 0.005
Aroclor-1254	0.005	mg/L	< 0.005
Aroclor-1260	0.005	mg/L	< 0.005
Total PCB*	0.001	mg/L	< 0.001
Dibutylchlorendate (surr.)	1	%	85
Tetrachloro-m-xylene (surr.)	1	%	125

Client Sample ID			RIN201
Sample Matrix			**Water**
Eurofins Sample No.			**S20-Ma22906**
Date Sampled			**Mar 09, 2020**
Test/Reference	LOR	Unit	
Heavy Metals			
Arsenic	0.001	mg/L	< 0.001
Cadmium	0.0002	mg/L	< 0.0002
Chromium	0.001	mg/L	< 0.001
Copper	0.001	mg/L	< 0.001
Lead	0.001	mg/L	< 0.001
Mercury	0.0001	mg/L	< 0.0001
Nickel	0.001	mg/L	0.002
Zinc	0.005	mg/L	< 0.005

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
JBS&G Suite 2			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Mar 21, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Mar 16, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Mar 16, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Mar 21, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Mar 21, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Mar 21, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	Mar 21, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Metals M8	Sydney	Mar 20, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

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

Project Name: PROSPECT DSI
Project ID: 58238

Order No.:
Report #: 707966
Phone: 02 8245 0300
Fax:

Received: Mar 16, 2020 1:49 PM
Due: Mar 23, 2020
Priority: 5 Day
Contact Name: Chris Kauffman

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set	Cation Exchange Capacity	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	TP200_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22894	X		X	X	X	X
2	TP201_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22895	X			X		X
3	TP202_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22896	X			X		X
4	TP203_0.5-0.6	Mar 09, 2020		Soil	S20-Ma22897	X			X		X
5	TP204_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22898	X		X	X	X	X
6	TP205_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22899	X			X		X
7	TP206_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22900	X			X		X
8	TP207_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22901	X			X		X
9	TP208_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22902	X			X		X
10	TP209_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22903	X			X		X

eurofins | Environment Testing

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IANZ # 1290

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

Project Name: PROSPECT DSI
Project ID: 58238

Order No.:
Report #: 707966
Phone: 02 8245 0300
Fax:

Received: Mar 16, 2020 1:49 PM
Due: Mar 23, 2020
Priority: 5 Day
Contact Name: Chris Kauffman

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set	Cation Exchange Capacity	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
11	TP210_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22904	X			X		X
12	TP211_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22905	X			X		X
13	RIN201	Mar 09, 2020		Water	S20-Ma22906						X
14	TP200_0.2-0.3	Mar 09, 2020		Soil	S20-Ma22907		X				
15	TP200_0.5-0.7	Mar 09, 2020		Soil	S20-Ma22953		X				
16	TP201_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22954		X				
17	TP201_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22955		X				
18	TP201_1.2-1.3	Mar 09, 2020		Soil	S20-Ma22956		X				
19	TP201_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22957		X				
20	TP202_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22958		X				
21	TP203_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22959		X				
22	TP203_1.0-1.1	Mar 09, 2020		Soil	S20-Ma22960		X				
23	TP203_1.6-1.7	Mar 09, 2020		Soil	S20-Ma22961		X				

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

Project Name: PROSPECT DSI
Project ID: 58238

Order No.:
Report #: 707966
Phone: 02 8245 0300
Fax:

Received: Mar 16, 2020 1:49 PM
Due: Mar 23, 2020
Priority: 5 Day
Contact Name: Chris Kauffman

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set	Cation Exchange Capacity	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
24	TP204_0.5-0.6	Mar 09, 2020		Soil	S20-Ma22962		X				
25	TP204_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22963		X				
26	TP205_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22964		X				
27	TP205_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22965		X				
28	TP206_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22966		X				
29	TP207_0.3-0.4	Mar 09, 2020		Soil	S20-Ma22967		X				
30	TP207_0.5-0.6	Mar 09, 2020		Soil	S20-Ma22968		X				
31	TP208_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22969		X				
32	TP208_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22970		X				
33	TP208_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22971		X				
34	TP209_0.0.-0.1	Mar 09, 2020		Soil	S20-Ma22972		X				
35	TP209_0.4-0.5	Mar 09, 2020		Soil	S20-Ma22973		X				

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Order No.:
Report #: 707966
Phone: 02 8245 0300
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Received: Mar 16, 2020 1:49 PM
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Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set	Cation Exchange Capacity	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271										X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
36	TP209_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22974		X				
37	TP210_0.0-0.1	Mar 09, 2020		Soil	S20-Ma22975		X				
38	TP210_0.9-1.0	Mar 09, 2020		Soil	S20-Ma22976		X				
39	TP210_1.4-1.5	Mar 09, 2020		Soil	S20-Ma22977		X				
40	TP211_0.3-0.4	Mar 09, 2020		Soil	S20-Ma22978		X				
41	TP211_0.7-0.8	Mar 09, 2020		Soil	S20-Ma22979		X				
Test Counts						12	28	2	12	2	13

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/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/L	< 0.005			0.005	Pass	
Aroclor-1221	mg/L	< 0.001			0.001	Pass	
Aroclor-1232	mg/L	< 0.005			0.005	Pass	
Aroclor-1242	mg/L	< 0.005			0.005	Pass	
Aroclor-1248	mg/L	< 0.005			0.005	Pass	
Aroclor-1254	mg/L	< 0.005			0.005	Pass	
Aroclor-1260	mg/L	< 0.005			0.005	Pass	
Total PCB*	mg/L	< 0.001			0.001	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S20-Ma23472	NCP	%	82			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-Ma23472	NCP	%	96			70-130	Pass	
Toluene	S20-Ma23472	NCP	%	100			70-130	Pass	
Ethylbenzene	S20-Ma23472	NCP	%	102			70-130	Pass	
m&p-Xylenes	S20-Ma23472	NCP	%	105			70-130	Pass	
o-Xylene	S20-Ma23472	NCP	%	105			70-130	Pass	
Xylenes - Total	S20-Ma23472	NCP	%	105			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-Ma23472	NCP	%	110			70-130	Pass	
TRH C6-C10	S20-Ma23472	NCP	%	79			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-Ma23471	NCP	%	98			70-130	Pass	
Cadmium	S20-Ma23471	NCP	%	98			70-130	Pass	
Chromium	S20-Ma23471	NCP	%	98			70-130	Pass	
Copper	S20-Ma23471	NCP	%	98			70-130	Pass	
Lead	S20-Ma23471	NCP	%	104			70-130	Pass	
Mercury	S20-Ma23471	NCP	%	107			70-130	Pass	
Nickel	S20-Ma23471	NCP	%	98			70-130	Pass	
Zinc	S20-Ma23471	NCP	%	90			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-Ma23471	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-Ma23471	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S20-Ma23471	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S20-Ma23471	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S20-Ma23471	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S20-Ma23471	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	S20-Ma23471	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-Ma23471	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S20-Ma23471	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-Ma23470	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	S20-Ma23470	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S20-Ma23470	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S20-Ma23470	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	S20-Ma23470	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S20-Ma23470	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S20-Ma23470	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	S20-Ma23470	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Ursula Long	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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CERTIFICATE OF ANALYSIS 218764

Client Details

Client	JBS & G (NSW & WA) Pty Ltd
Attention	C Kauffman
Address	Level 1, 50 Margaret St, Sydney, NSW, 2000

Sample Details

Your Reference	**56425, Clunies Ross St**
Number of Samples	2 soil
Date samples received	31/05/2019
Date completed instructions received	31/05/2019

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	04/06/2019
Date of Issue	04/06/2019

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Asbestos Approved By
Analysed by Asbestos Approved Identifier: Panika Wongchanda
Authorised by Asbestos Approved Signatory: Matt Tang

Results Approved By
Giovanni Agosti, Group Technical Manager
Matthew Tang, Asbsestos Supervisor
Steven Luong, Organics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

VOCs in soil			
Our Reference		218764-1	218764-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30.05.2019	30.05.2019
Type of sample		soil	soil
Date extracted	-	03/06/2019	03/06/2019
Date analysed	-	04/06/2019	04/06/2019
Dichlorodifluoromethane	mg/kg	<1	<1
Chloromethane	mg/kg	<1	<1
Vinyl Chloride	mg/kg	<1	<1
Bromomethane	mg/kg	<1	<1
Chloroethane	mg/kg	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1
trans-1,2-dichloroethene	mg/kg	<1	<1
1,1-dichloroethane	mg/kg	<1	<1
cis-1,2-dichloroethene	mg/kg	<1	<1
bromochloromethane	mg/kg	<1	<1
chloroform	mg/kg	<1	<1
2,2-dichloropropane	mg/kg	<1	<1
1,2-dichloroethane	mg/kg	<1	<1
1,1,1-trichloroethane	mg/kg	<1	<1
1,1-dichloropropene	mg/kg	<1	<1
Cyclohexane	mg/kg	<1	<1
carbon tetrachloride	mg/kg	<1	<1
Benzene	mg/kg	<0.2	<0.2
dibromomethane	mg/kg	<1	<1
1,2-dichloropropane	mg/kg	<1	<1
trichloroethene	mg/kg	<1	<1
bromodichloromethane	mg/kg	<1	<1
trans-1,3-dichloropropene	mg/kg	<1	<1
cis-1,3-dichloropropene	mg/kg	<1	<1
1,1,2-trichloroethane	mg/kg	<1	<1
Toluene	mg/kg	<0.5	<0.5
1,3-dichloropropane	mg/kg	<1	<1
dibromochloromethane	mg/kg	<1	<1
1,2-dibromoethane	mg/kg	<1	<1
tetrachloroethene	mg/kg	<1	<1
1,1,1,2-tetrachloroethane	mg/kg	<1	<1
chlorobenzene	mg/kg	<1	<1
Ethylbenzene	mg/kg	<1	<1

VOCs in soil			
Our Reference		218764-1	218764-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30.05.2019	30.05.2019
Type of sample		soil	soil
bromoform	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
styrene	mg/kg	<1	<1
1,1,2,2-tetrachloroethane	mg/kg	<1	<1
o-Xylene	mg/kg	<1	<1
1,2,3-trichloropropane	mg/kg	<1	<1
isopropylbenzene	mg/kg	<1	<1
bromobenzene	mg/kg	<1	<1
n-propyl benzene	mg/kg	<1	<1
2-chlorotoluene	mg/kg	<1	<1
4-chlorotoluene	mg/kg	<1	<1
1,3,5-trimethyl benzene	mg/kg	<1	<1
tert-butyl benzene	mg/kg	<1	<1
1,2,4-trimethyl benzene	mg/kg	<1	<1
1,3-dichlorobenzene	mg/kg	<1	<1
sec-butyl benzene	mg/kg	<1	<1
1,4-dichlorobenzene	mg/kg	<1	<1
4-isopropyl toluene	mg/kg	<1	<1
1,2-dichlorobenzene	mg/kg	<1	<1
n-butyl benzene	mg/kg	<1	<1
1,2-dibromo-3-chloropropane	mg/kg	<1	<1
1,2,4-trichlorobenzene	mg/kg	<1	<1
hexachlorobutadiene	mg/kg	<1	<1
1,2,3-trichlorobenzene	mg/kg	<1	<1
Surrogate Dibromofluorometha	%	113	112
Surrogate aaa-Trifluorotoluene	%	102	101
Surrogate Toluene-d_8	%	91	91
Surrogate 4-Bromofluorobenzene	%	89	87

TRH in Soil (C6-C9) NEPM			
Our Reference		218764-1	218764-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30.05.2019	30.05.2019
Type of sample		soil	soil
Date extracted	-	03/06/2019	03/06/2019
Date analysed	-	04/06/2019	04/06/2019
TRH C_6 - C_9	mg/kg	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25
Surrogate aaa-Trifluorotoluene	%	102	101

svTRH (C10-C40) in Soil			
Our Reference		218764-1	218764-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30.05.2019	30.05.2019
Type of sample		soil	soil
Date extracted	-	03/06/2019	03/06/2019
Date analysed	-	04/06/2019	04/06/2019
TRH C_{10} - C_{14}	mg/kg	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50
Surrogate o-Terphenyl	%	89	87

PAHs in Soil			
Our Reference		218764-1	218764-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30.05.2019	30.05.2019
Type of sample		soil	soil
Date extracted	-	03/06/2019	03/06/2019
Date analysed	-	04/06/2019	04/06/2019
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	91	92

Organochlorine Pesticides in soil			
Our Reference		218764-1	218764-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30.05.2019	30.05.2019
Type of sample		soil	soil
Date extracted	-	03/06/2019	03/06/2019
Date analysed	-	04/06/2019	04/06/2019
HCB	mg/kg	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1
Surrogate TCMX	%	108	107

PCBs in Soil			
Our Reference		218764-1	218764-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30.05.2019	30.05.2019
Type of sample		soil	soil
Date extracted	-	03/06/2019	03/06/2019
Date analysed	-	04/06/2019	04/06/2019
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate TCLMX	%	108	107

Acid Extractable metals in soil			
Our Reference	UNITS	218764-1	218764-2
Your Reference		QC01	QC02
Date Sampled		30.05.2019	30.05.2019
Type of sample		soil	soil
Date prepared	-	03/06/2019	03/06/2019
Date analysed	-	03/06/2019	03/06/2019
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	220	34
Copper	mg/kg	36	44
Lead	mg/kg	6	3
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	160	140
Zinc	mg/kg	65	42

Moisture			
Our Reference		218764-1	218764-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30.05.2019	30.05.2019
Type of sample		soil	soil
Date prepared	-	03/06/2019	03/06/2019
Date analysed	-	04/06/2019	04/06/2019
Moisture	%	21	12

Asbestos ID - soils NEPM - ASB-001			
Our Reference		218764-1	218764-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30.05.2019	30.05.2019
Type of sample		soil	soil
Date analysed	-	03/06/2019	03/06/2019
Sample mass tested	g	470.85	692.02
Sample Description	-	Brown clayey soil & rocks	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	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected
Total Asbestos[#1]	g/kg	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–
FA and AF Estimation*	g	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<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.

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	218764-2
Date extracted	-			03/06/2019	1	03/06/2019	03/06/2019		03/06/2019	03/06/2019
Date analysed	-			04/06/2019	1	04/06/2019	04/06/2019		04/06/2019	04/06/2019
Dichlorodifluoromethane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Chloromethane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Bromomethane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Chloroethane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
trans-1,2-dichloroethene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	mg/kg	1	Org-014	<1	1	<1	<1	0	88	115
cis-1,2-dichloroethene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
bromochloromethane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
chloroform	mg/kg	1	Org-014	<1	1	<1	<1	0	98	126
2,2-dichloropropane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	mg/kg	1	Org-014	<1	1	<1	<1	0	92	121
1,1,1-trichloroethane	mg/kg	1	Org-014	<1	1	<1	<1	0	81	105
1,1-dichloropropene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
carbon tetrachloride	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-014	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
dibromomethane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
trichloroethene	mg/kg	1	Org-014	<1	1	<1	<1	0	86	113
bromodichloromethane	mg/kg	1	Org-014	<1	1	<1	<1	0	100	131
trans-1,3-dichloropropene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-014	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
1,3-dichloropropane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
dibromochloromethane	mg/kg	1	Org-014	<1	1	<1	<1	0	95	128
1,2-dibromoethane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
tetrachloroethene	mg/kg	1	Org-014	<1	1	<1	<1	0	89	114
1,1,1,2-tetrachloroethane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
chlorobenzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
bromoform	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-014	<2	1	<2	<2	0	[NT]	[NT]
styrene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	218764-2
o-Xylene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichloropropane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
isopropylbenzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
bromobenzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
n-propyl benzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
2-chlorotoluene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
4-chlorotoluene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
tert-butyl benzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
sec-butyl benzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
n-butyl benzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
hexachlorobutadiene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluorometha	%		Org-014	113	1	113	113	0	110	112
Surrogate aaa-Trifluorotoluene	%		Org-014	100	1	102	101	1	92	109
Surrogate Toluene-d_8	%		Org-014	102	1	91	93	2	91	92
Surrogate 4-Bromofluorobenzene	%		Org-014	79	1	89	89	0	91	92

QUALITY CONTROL: TRH in Soil (C6-C9) NEPM						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	218764-2
Date extracted	-			03/06/2019	1	03/06/2019	03/06/2019		03/06/2019	03/06/2019
Date analysed	-			04/06/2019	1	04/06/2019	04/06/2019		04/06/2019	04/06/2019
TRH C_6 - C_9	mg/kg	25	Org-016	<25	1	<25	<25	0	77	100
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	1	<25	<25	0	77	100
Surrogate aaa-Trifluorotoluene	%		Org-016	100	1	102	101	1	92	109

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	218764-2
Date extracted	-			03/06/2019	1	03/06/2019	03/06/2019		03/06/2019	03/06/2019
Date analysed	-			04/06/2019	1	04/06/2019	04/06/2019		04/06/2019	04/06/2019
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	1	<50	<50	0	89	90
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	1	<100	<100	0	91	96
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	1	<100	<100	0	90	78
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	1	<50	<50	0	89	90
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	1	<100	<100	0	91	96
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	1	<100	<100	0	90	78
Surrogate o-Terphenyl	%		Org-003	90	1	89	89	0	95	96

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	218764-2
Date extracted	-			03/06/2019	1	03/06/2019	03/06/2019		03/06/2019	03/06/2019
Date analysed	-			04/06/2019	1	04/06/2019	04/06/2019		04/06/2019	04/06/2019
Naphthalene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	108	112
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	96	102
Phenanthrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	94	98
Anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	88	94
Pyrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	92	98
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	94	102
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	1	<0.05	<0.05	0	92	100
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	93	1	91	91	0	85	90

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	218764-2
Date extracted	-			03/06/2019	1	03/06/2019	03/06/2019		03/06/2019	03/06/2019
Date analysed	-			04/06/2019	1	04/06/2019	04/06/2019		04/06/2019	04/06/2019
HCB	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	93	96
gamma-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	97	97
Heptachlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	95	98
delta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	103	92
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	101	105
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	104	107
Dieldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	110	113
Endrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	106	108
pp-DDD	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	93	95
Endosulfan II	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	98	102
Methoxychlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	108	1	108	114	5	96	99

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			03/06/2019	1	03/06/2019	03/06/2019		03/06/2019	[NT]
Date analysed	-			04/06/2019	1	04/06/2019	04/06/2019		04/06/2019	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	108	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	108	1	108	114	5	111	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	218764-2
Date prepared	-			03/06/2019	1	03/06/2019	03/06/2019		03/06/2019	03/06/2019
Date analysed	-			03/06/2019	1	03/06/2019	03/06/2019		03/06/2019	03/06/2019
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	108	77
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	104	72
Chromium	mg/kg	1	Metals-020	<1	1	220	170	26	109	82
Copper	mg/kg	1	Metals-020	<1	1	36	29	22	106	97
Lead	mg/kg	1	Metals-020	<1	1	6	5	18	110	77
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	81	95
Nickel	mg/kg	1	Metals-020	<1	1	160	120	29	108	72
Zinc	mg/kg	1	Metals-020	<1	1	65	56	15	113	72

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.

Note: All samples analysed as received. However, sample 218764-1 was below the minimum 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

019331

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: S6925	LABORATORY BATCH NO.:
PROJECT NAME: Clunies Ross St	SAMPLERS: CK + TF
DATE NEEDED BY: 48hr TAT	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) .....ckaufman.....@jbsg.com.au; (3) .....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

	SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	14 Metals	PAH	OCP/PCB	TRH/BTEX	Asbestos	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
1	QC01	Soil	30.5.19		J+B		X	X	X	X	X		X	
2	QC02	↓	↓		↓		X	X	X	X	X		X	

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 218764

Date Received: 31/5/19
Time Received: 16:55
Received by: ICS
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: DATE: 31.5.19	CONSIGNMENT NOTE NO.	NAME: IC Springer	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G CK	TRANSPORT CO.	DATE: 31/5/19 OF:	COOLER TEMP 6.2 deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

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

IMSO Forms013 – Chain of Custody - Generic

017287

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: S6425	LABORATORY BATCH NO.:
PROJECT NAME: Clunies Ross St	SAMPLERS: CK + TF
DATE NEEDED BY: 48 hour TAT	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) ckaufman@jbsg.com.au; (3) .....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	HM	PAH	TRH/VOC	OCP/PCB	Asbestos	PH/CEC	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
SS01	Soil	30.5.19		J+B		X	X	X	X	X			X	
SS02	↓	↓		↓		X	X	X	X	X			X	
SS03						X	X			X			X	
SS04						X	X			X			X	
SS05						X	X		X	X			X	
EMB1	↓			↓		X	X	X	X	X				
FRAG01	Building Mat			B						X		X		
HA01	Soil			J+B		X	X			X			X	
HA02	↓			↓		X	X	X	X	X			X	
HA03						X	X	X	X	X			X	
HA04						X	X			X			X	
TP01 0-0.1				J+B		X	X	X	X	X			X	
↓ 0.3-0.4				↓							X			
1-1.1								X						
↓ 1.4-1.5											X			
TP02 0-0.1									X	X			X	
↓ 0.5-0.6														
1-1.1				J		X	X			Hold			Hold	
↓ 2-2.1	↓			J										

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: CK DATE: 31.5.19	CONSIGNMENT NOTE NO.	NAME: ULONG DATE: 31/5 5:28pm	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF:	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

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

658838

017288

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 56425	LABORATORY BATCH NO.:
PROJECT NAME: Lonie, Ross St	SAMPLERS:
DATE NEEDED BY: 48hr TAT	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) ...elizabeth.....@jbsg.com.au; (3) .....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	HM	PAH	TRH/VOC	OCP/PCB	Asbestos	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
TP02 2.4-2.5	Soil	30.5.19		J									
TP03 0-0.1				J+B		X	X			X		X	
0.5-0.6				↓									
1-1.1				J									
2-2.1				J									
TP04 0-0.1				J+B		X	X	X	X	X		X	
0.5-0.6				J+B		X	X			X		X	
1-1.1				J									
TP05 0-0.1				J+B		X	X			X		X	
1-1.1				J									
2-2.2									X				
2.4-2.5				↓									
TP06 0-0.1				J+B		~~X~~	~~X~~	X	X	X		X	← Analyse all (HM/PAH/TRH, VOC/OCP/PCB + Asbestos)
1-1.1													
1.4-1.5				J		X	X						
TP07 0-0.1				J+B		X	X	X	X	X		X	
TP08 0-0.1						X	X			X		X	
TP09 0-0.1													
0.4-0.5				↓		X	X			X		X	

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: Cloe DATE: 31/5	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF: 5:28pm	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

017289

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 56425	LABORATORY BATCH NO.:
PROJECT NAME: Clunies Ross St	SAMPLERS: CK + TF
DATE NEEDED BY: 48 hour TAT	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) ckauffman@jbsg.com.au; (3) .....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	HM	PAH	TRH/VOC	OCP/PCB	Asbestos	TRS	BTEX	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
TP09 0.9-1.0	Soil	30.5.19		J+B											
TP10 0-0.1						X	X			X				X	
0.4-0.5															
1-1.1						X	X	X	X	X				X	
TP11 0-0.1						X	X			X				X	
0.3-0.4								X							
1-1.1															
2-2.1															
2.7-2.8						X	X			X				X	
TP12 0-0.1						X	X	X	X	X				X	
0.5-0.6						X	X			X				X	
1-1.1															
1.4-1.5															
QA01				J+B		X	X	X	X	X					
QA02				J+B		X	X	X	X	X					
RIN01	H20			2x vial, 1x P, 1x Amb							X				
TS				2x vial								X			
TB												X			

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: CK DATE: 31.5.19	CONSIGNMENT NOTE NO.	NAME: DATE: 31/5 5-28	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF:	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

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

017290

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: S6425
PROJECT NAME: Cluniea Ross St
DATE NEEDED BY: 48 hour TAT
LABORATORY BATCH NO.:
SAMPLERS: CK + TF
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) charlton.....@jbsg.com.au; (3) .....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	HM	PAH	TRH/VOC	OCP/PCB	Asbestos	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
MW01 0-0.1	Soil	30.5.19		J+B				X	X	X		X	
0.9-1.0										X			
1.9-2.0												X	
2.9-3.0													
3.9-4.0													
4.9-5.0													
5.9-6.0													
6.9-7.0						X	X						
7.9-8.0													
MW02 0-0.1				J+B					X				
0.9-1.0						X	X			Y		X	
1.9-2.0													
2.9-3.0													
3.9-4.0													
4.9-5.0				J									
5.9-6.0													
6.9-7.0													
7.9-8.0	✓	✓											

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G CK 31.5.19	TRANSPORT CO.	DATE: 31/5 5:20pm	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

017291

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: S6425	LABORATORY BATCH NO.:
PROJECT NAME: Clunies Ross St	SAMPLERS: CK & TF
DATE NEEDED BY: 48 hr TAT	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) ckaulton@jbsg.com.au; (3) .....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	HM	PAH	TRH/VOC	OCP/PCB	As bestos	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
MW03 0-0.1	Soil	30.5.19		J+B									
0.9-1.0						X	X	X	X	X		X	
1.9-2.0													
2.9-3.0													
3.9-4.0													
4.9-5.0													
5.9-6.0													
6.0-7.0													
7.9-8.0						X	X	X					

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: CK DATE: 31.5.19	CONSIGNMENT NOTE NO.	NAME: Wong DATE: 31/5 OF: 5:28pm	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.		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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Site # 1254 & 14271

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Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**JBS & G Australia (NSW) P/L**
Contact name:	Chris Kauffman
Project name:	CLUNIES ROSS ST
Project ID:	56425
COC number:	Not provided
Turn around time:	2 Day
Date/Time received:	May 31, 2019 5:28 PM
Eurofins | mgt reference:	**658838**

Sample information

- ☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☑ Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 3.5 degrees Celsius.
- ☑ All samples have been received as described on the above COC.
- ☑ COC has been completed correctly.
- ☑ Attempt to chill was evident.
- ☑ Appropriately preserved sample containers have been used.
- ☑ All samples were received in good condition.
- ☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☑ Appropriate sample containers have been used.
- ☑ Sample containers for volatile analysis received with zero headspace.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

TP05 1-1.1 jar received broken. TP06 1-1.1, HA01 - jar received broken - salvaged. TP12 1.4-1.5 - bag not received. TP12 0.5-0.6 - 2 bags received.

Contact notes

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

Nibha Vaidya on Phone : +61 (2) 9900 8415 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to Chris Kauffman - ckauffman@jbsg.com.au.

Note: A copy of these results will also be delivered to the general JBS & G Australia (NSW) P/L email address.

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Address: Level 1, 50 Margaret St
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Project Name: CLUNIES ROSS ST
Project ID: 56425

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Phone: 02 8245 0300
Fax:

Received: May 31, 2019 5:28 PM
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Priority: 2 Day
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
External Laboratory																				
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**															
1	SS01	May 30, 2019		Soil	S19-My49731	X					X	X	X	X		X	X		X	
2	SS02	May 30, 2019		Soil	S19-My49732	X					X	X	X	X		X	X		X	
3	SS03	May 30, 2019		Soil	S19-My49733	X					X			X			X			
4	SS04	May 30, 2019		Soil	S19-My49734	X					X			X			X			
5	SS05	May 30, 2019		Soil	S19-My49735	X					X	X	X	X			X			
6	EMB1	May 30, 2019		Soil	S19-My49736	X					X	X	X	X		X	X		X	
7	FRAG01	May 30, 2019		Building Materials	S19-My49737		X													
8	HA01	May 30, 2019		Soil	S19-My49738	X					X			X			X			
9	HA02	May 30, 2019		Soil	S19-My49739	X					X	X	X	X		X	X		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
10	HA03	May 30, 2019		Soil	S19-My49740	X					X	X	X	X		X	X		X	
11	HA04	May 30, 2019		Soil	S19-My49741	X					X			X			X			
12	TP01 0-0.1	May 30, 2019		Soil	S19-My49742	X					X	X	X	X		X	X		X	
13	TP01 0.3-0.4	May 30, 2019		Soil	S19-My49743					X							X	X		
14	TP01 1-1.1	May 30, 2019		Soil	S19-My49744											X	X		X	
15	TP01 1.4-1.5	May 30, 2019		Soil	S19-My49745					X							X	X		
16	TP02 0-0.1	May 30, 2019		Soil	S19-My49746	X						X	X				X			
17	TP02 0.5-0.6	May 30, 2019		Soil	S19-My49747				X											
18	TP02 1-1.1	May 30, 2019		Soil	S19-My49748						X			X			X			
19	TP02 2-2.1	May 30, 2019		Soil	S19-My49749				X											
20	TP02 2.4-2.5	May 30, 2019		Soil	S19-My49771				X											
21	TP03 0-0.1	May 30, 2019		Soil	S19-My49772	X					X			X			X			

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
22	TP03 0.5-0.6	May 30, 2019		Soil	S19-My49773				X											
23	TP03 1-1.1	May 30, 2019		Soil	S19-My49774				X											
24	TP03 2-2.1	May 30, 2019		Soil	S19-My49775				X											
25	TP04 0-0.1	May 30, 2019		Soil	S19-My49776	X					X	X	X	X		X	X		X	
26	TP04 0.5-0.6	May 30, 2019		Soil	S19-My49777	X					X			X			X			
27	TP04 1-1.1	May 30, 2019		Soil	S19-My49778				X											
28	TP05 0-0.1	May 30, 2019		Soil	S19-My49779	X					X			X			X			
29	TP05 1-1.1	May 30, 2019		Soil	S19-My49780			X												
30	TP05 2-2.2	May 30, 2019		Soil	S19-My49781							X	X				X			
31	TP05 2.4-2.5	May 30, 2019		Soil	S19-My49782				X											
32	TP06 0-0.1	May 30, 2019		Soil	S19-My49783	X					X	X	X	X		X	X		X	
33	TP06 1-1.1	May 30, 2019		Soil	S19-My49784				X											

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
34	TP06 1.4-1.5	May 30, 2019		Soil	S19-My49785						X			X			X			
35	TP07 0-0.1	May 30, 2019		Soil	S19-My49786	X					X	X	X	X		X	X		X	
36	TP08 0-0.1	May 30, 2019		Soil	S19-My49787	X					X			X			X			
37	TP09 0-0.1	May 30, 2019		Soil	S19-My49788				X											
38	TP09 0.4-0.5	May 30, 2019		Soil	S19-My49789	X					X			X			X			
39	TP09 0.9-1.0	May 30, 2019		Soil	S19-My49790				X											
40	TP10 0-0.1	May 30, 2019		Soil	S19-My49791	X					X			X			X			
41	TP10 0.4-0.5	May 30, 2019		Soil	S19-My49792				X											
42	TP10 1-1.1	May 30, 2019		Soil	S19-My49793	X					X	X	X	X		X	X		X	
43	TP11 0-0.1	May 30, 2019		Soil	S19-My49794	X					X			X			X			
44	TP11 0.3-0.4	May 30, 2019		Soil	S19-My49795											X	X		X	
45	TP11 1-1.1	May 30, 2019		Soil	S19-My49796				X											

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
46	TP11 2-2.1	May 30, 2019		Soil	S19-My49797				X											
47	TP11 2.7-2.8	May 30, 2019		Soil	S19-My49798	X					X			X			X			
48	TP12 0-0.1	May 30, 2019		Soil	S19-My49799	X					X	X	X	X		X	X		X	
49	TP12 0.5-0.6	May 30, 2019		Soil	S19-My49800	X					X			X			X			
50	TP12 1-1.1	May 30, 2019		Soil	S19-My49801				X											
51	TP12 1.4-1.5	May 30, 2019		Soil	S19-My49802				X											
52	QA01	May 30, 2019		Soil	S19-My49803	X					X	X	X	X		X	X		X	
53	QA02	May 30, 2019		Soil	S19-My49804	X					X	X	X	X		X	X		X	
54	RIN01	May 30, 2019		Water	S19-My49805															X
55	TS	May 30, 2019		Water	S19-My49806										X					
56	TB	May 30, 2019		Water	S19-My49807										X					
57	MW01 0-0.1	May 30, 2019		Soil	S19-My49808	X						X	X			X	X		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
58	MW01 0.9-1.0	May 30, 2019		Soil	S19-My49809				X											
59	MW01 1.9-1.0	May 30, 2019		Soil	S19-My49810	X														
60	MW01 2.9-3.0	May 30, 2019		Soil	S19-My49811				X											
61	MW01 3.9-4.0	May 30, 2019		Soil	S19-My49812				X											
62	MW01 4.9-5.0	May 30, 2019		Soil	S19-My49813				X											
63	MW01 5.9-6.0	May 30, 2019		Soil	S19-My49814				X											
64	MW01 6.9-7.0	May 30, 2019		Soil	S19-My49815						X			X			X			
65	MW01 7.9-8.0	May 30, 2019		Soil	S19-My49816				X											
66	MW02 0-0.1	May 30, 2019		Soil	S19-My49817							X	X				X			
67	MW02 0.9-1.0	May 30, 2019		Soil	S19-My49818	X					X			X			X			
68	MW02 1.9-2.0	May 30, 2019		Soil	S19-My49819				X											
69	MW02 2.9-3.0	May 30, 2019		Soil	S19-My49820				X											

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
70	MW02 3.9-4.0	May 30, 2019		Soil	S19-My49821				X											
71	MW02 4.9-5.0	May 30, 2019		Soil	S19-My49822				X											
72	MW02 5.9-6.0	May 30, 2019		Soil	S19-My49823				X											
73	MW02 6.9-7.0	May 30, 2019		Soil	S19-My49824				X											
74	MW02 7.9-8.0	May 30, 2019		Soil	S19-My49825				X											
75	MW03 0-0.1	May 30, 2019		Soil	S19-My49826				X											
76	MW03 0.9-1.0	May 30, 2019		Soil	S19-My49827	X					X	X	X	X		X	X		X	
77	MW03 1.9-2.0	May 30, 2019		Soil	S19-My49828				X											
78	MW03 2.9-3.0	May 30, 2019		Soil	S19-My49829				X											
79	MW03 3.9-4.0	May 30, 2019		Soil	S19-My49830				X											
80	MW03 4.9-5.0	May 30, 2019		Soil	S19-My49831				X											
81	MW03 5.9-6.0	May 30, 2019		Soil	S19-My49832				X											

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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: CLUNIES ROSS ST
Project ID: 56425

Order No.:
Report #: 658838
Phone: 02 8245 0300
Fax:

Received: May 31, 2019 5:28 PM
Due: Jun 4, 2019
Priority: 2 Day
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
82	MW03 6.9-7.0	May 30, 2019		Soil	S19-My49833				X											
83	MW03 7.9-8.0	May 30, 2019		Soil	S19-My49834						X			X		X	X		X	
Test Counts						32	1	1	36	2	33	19	19	33	2	18	41	2	18	1

Certificate of Analysis

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

Attention:	Chris Kauffman
Report	658838-AID
Project Name	CLUNIES ROSS ST
Project ID	56425
Received Date	May 31, 2019
Date Reported	Jun 07, 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.*

Project Name CLUNIES ROSS ST
Project ID 56425
Date Sampled May 30, 2019
Report 658838-AID

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
SS01	19-My49731	May 30, 2019	Approximate Sample 484g 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 respirable fibres detected.
SS02	19-My49732	May 30, 2019	Approximate Sample 490g 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 respirable fibres detected.
SS03	19-My49733	May 30, 2019	Approximate Sample 577g 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 respirable fibres detected.
SS04	19-My49734	May 30, 2019	Approximate Sample 492g 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 respirable fibres detected.
SS05	19-My49735	May 30, 2019	Approximate Sample 560g 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 respirable fibres detected.
EMB1	19-My49736	May 30, 2019	Approximate Sample 561g Sample consisted of: Brown coarse-grained soil, rocks and cement	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
FRAG01	19-My49737	May 30, 2019	Approximate Sample 77g / 140x60x7mm Sample consisted of: Grey compressed fibre cement	Chrysotile and amosite asbestos detected.
HA01	19-My49738	May 30, 2019	Approximate Sample 548g 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 respirable fibres detected.

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
HA02	19-My49739	May 30, 2019	Approximate Sample 747g Sample consisted of: Brown coarse-grained soil, rocks and fragments of glass	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
HA03	19-My49740	May 30, 2019	Approximate Sample 615g Sample consisted of: Brown coarse-grained soil, rocks and fragments of glass	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
HA04	19-My49741	May 30, 2019	Approximate Sample 845g Sample consisted of: Brown coarse-grained soil, rocks and fragments of glass	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
TP01 0-0.1	19-My49742	May 30, 2019	Approximate Sample 660g 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 respirable fibres detected.
TP02 0-0.1	19-My49746	May 30, 2019	Approximate Sample 487g 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 respirable fibres detected.
TP03 0-0.1	19-My49772	May 30, 2019	Approximate Sample 492g 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 respirable fibres detected.
TP04 0-0.1	19-My49776	May 30, 2019	Approximate Sample 1069g 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 respirable fibres detected.
TP04 0.5-0.6	19-My49777	May 30, 2019	Approximate Sample 530g 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 respirable fibres detected.
TP05 0-0.1	19-My49779	May 30, 2019	Approximate Sample 490g 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 respirable fibres detected.
TP06 0-0.1	19-My49783	May 30, 2019	Approximate Sample 549g 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 respirable fibres detected.
TP07 0-0.1	19-My49786	May 30, 2019	Approximate Sample 758g 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 respirable fibres detected.
TP08 0-0.1	19-My49787	May 30, 2019	Approximate Sample 612g 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 respirable fibres detected.
TP09 0.4-0.5	19-My49789	May 30, 2019	Approximate Sample 888g 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 respirable fibres detected.

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
TP10 0-0.1	19-My49791	May 30, 2019	Approximate Sample 713g 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 respirable fibres detected.
TP10 1-1.1	19-My49793	May 30, 2019	Approximate Sample 846g 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 respirable fibres detected.
TP11 0-0.1	19-My49794	May 30, 2019	Approximate Sample 532g 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 respirable fibres detected.
TP11 2.7-2.8	19-My49798	May 30, 2019	Approximate Sample 764g 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 respirable fibres detected.
TP12 0-0.1	19-My49799	May 30, 2019	Approximate Sample 465g 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 respirable fibres detected.
TP12 0.5-0.6	19-My49800	May 30, 2019	Approximate Sample 1410g 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 respirable fibres detected.
QA01	19-My49803	May 30, 2019	Approximate Sample 534g 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 respirable fibres detected.
QA02	19-My49804	May 30, 2019	Approximate Sample 809g 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 respirable fibres detected.
MW01 0-0.1	19-My49808	May 30, 2019	Approximate Sample 359g Sample consisted of: Brown coarse-grained soil, rocks and organic debris	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
MW01 1.9-1.0	19-My49810	May 30, 2019	Approximate Sample 825g 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 respirable fibres detected.
MW02 0.9-1.0	19-My49818	May 30, 2019	Approximate Sample 877g 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 respirable fibres detected.
MW03 0.9-1.0	19-My49827	May 30, 2019	Approximate Sample 136g Sample consisted of: Organic debris and brown soil residue	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres 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 (regarding both quality and NATA accreditation).

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Jun 05, 2019	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Jun 05, 2019	Indefinite

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Phone: 02 8245 0300
Fax:

Received: May 31, 2019 5:28 PM
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Priority: 2 Day
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
External Laboratory																				
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**															
1	SS01	May 30, 2019		Soil	S19-My49731	X					X	X	X	X		X	X		X	
2	SS02	May 30, 2019		Soil	S19-My49732	X					X	X	X	X		X	X		X	
3	SS03	May 30, 2019		Soil	S19-My49733	X					X			X			X			
4	SS04	May 30, 2019		Soil	S19-My49734	X					X			X			X			
5	SS05	May 30, 2019		Soil	S19-My49735	X					X	X	X	X			X			
6	EMB1	May 30, 2019		Soil	S19-My49736	X					X	X	X	X		X	X		X	
7	FRAG01	May 30, 2019		Building Materials	S19-My49737		X													
8	HA01	May 30, 2019		Soil	S19-My49738	X					X			X			X			
9	HA02	May 30, 2019		Soil	S19-My49739	X					X	X	X	X		X	X		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
10	HA03	May 30, 2019		Soil	S19-My49740	X					X	X	X	X		X	X		X	
11	HA04	May 30, 2019		Soil	S19-My49741	X					X			X			X			
12	TP01 0-0.1	May 30, 2019		Soil	S19-My49742	X					X	X	X	X		X	X		X	
13	TP01 0.3-0.4	May 30, 2019		Soil	S19-My49743					X							X	X		
14	TP01 1-1.1	May 30, 2019		Soil	S19-My49744											X	X		X	
15	TP01 1.4-1.5	May 30, 2019		Soil	S19-My49745					X							X	X		
16	TP02 0-0.1	May 30, 2019		Soil	S19-My49746	X						X	X				X			
17	TP02 0.5-0.6	May 30, 2019		Soil	S19-My49747				X											
18	TP02 1-1.1	May 30, 2019		Soil	S19-My49748						X			X			X			
19	TP02 2-2.1	May 30, 2019		Soil	S19-My49749				X											
20	TP02 2.4-2.5	May 30, 2019		Soil	S19-My49771				X											
21	TP03 0-0.1	May 30, 2019		Soil	S19-My49772	X					X			X			X			

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
22	TP03 0.5-0.6	May 30, 2019		Soil	S19-My49773				X											
23	TP03 1-1.1	May 30, 2019		Soil	S19-My49774				X											
24	TP03 2-2.1	May 30, 2019		Soil	S19-My49775				X											
25	TP04 0-0.1	May 30, 2019		Soil	S19-My49776	X					X	X	X	X		X	X		X	
26	TP04 0.5-0.6	May 30, 2019		Soil	S19-My49777	X					X			X			X			
27	TP04 1-1.1	May 30, 2019		Soil	S19-My49778				X											
28	TP05 0-0.1	May 30, 2019		Soil	S19-My49779	X					X			X			X			
29	TP05 1-1.1	May 30, 2019		Soil	S19-My49780			X												
30	TP05 2-2.2	May 30, 2019		Soil	S19-My49781							X	X				X			
31	TP05 2.4-2.5	May 30, 2019		Soil	S19-My49782				X											
32	TP06 0-0.1	May 30, 2019		Soil	S19-My49783	X					X	X	X	X		X	X		X	
33	TP06 1-1.1	May 30, 2019		Soil	S19-My49784				X											

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
34	TP06 1.4-1.5	May 30, 2019		Soil	S19-My49785						X			X			X			
35	TP07 0-0.1	May 30, 2019		Soil	S19-My49786	X					X	X	X	X		X	X		X	
36	TP08 0-0.1	May 30, 2019		Soil	S19-My49787	X					X			X			X			
37	TP09 0-0.1	May 30, 2019		Soil	S19-My49788				X											
38	TP09 0.4-0.5	May 30, 2019		Soil	S19-My49789	X					X			X			X			
39	TP09 0.9-1.0	May 30, 2019		Soil	S19-My49790				X											
40	TP10 0-0.1	May 30, 2019		Soil	S19-My49791	X					X			X			X			
41	TP10 0.4-0.5	May 30, 2019		Soil	S19-My49792				X											
42	TP10 1-1.1	May 30, 2019		Soil	S19-My49793	X					X	X	X	X		X	X		X	
43	TP11 0-0.1	May 30, 2019		Soil	S19-My49794	X					X			X			X			
44	TP11 0.3-0.4	May 30, 2019		Soil	S19-My49795											X	X		X	
45	TP11 1-1.1	May 30, 2019		Soil	S19-My49796				X											

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Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
46	TP11 2-2.1	May 30, 2019		Soil	S19-My49797				X											
47	TP11 2.7-2.8	May 30, 2019		Soil	S19-My49798	X					X			X			X			
48	TP12 0-0.1	May 30, 2019		Soil	S19-My49799	X					X	X	X	X		X	X		X	
49	TP12 0.5-0.6	May 30, 2019		Soil	S19-My49800	X					X			X			X			
50	TP12 1-1.1	May 30, 2019		Soil	S19-My49801				X											
51	TP12 1.4-1.5	May 30, 2019		Soil	S19-My49802				X											
52	QA01	May 30, 2019		Soil	S19-My49803	X					X	X	X	X		X	X		X	
53	QA02	May 30, 2019		Soil	S19-My49804	X					X	X	X	X		X	X		X	
54	RIN01	May 30, 2019		Water	S19-My49805															X
55	TS	May 30, 2019		Water	S19-My49806										X					
56	TB	May 30, 2019		Water	S19-My49807										X					
57	MW01 0-0.1	May 30, 2019		Soil	S19-My49808	X						X	X			X	X		X	

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

Project Name: CLUNIES ROSS ST
Project ID: 56425

Order No.:
Report #: 658838
Phone: 02 8245 0300
Fax:

Received: May 31, 2019 5:28 PM
Due: Jun 4, 2019
Priority: 2 Day
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
58	MW01 0.9-1.0	May 30, 2019		Soil	S19-My49809				X											
59	MW01 1.9-1.0	May 30, 2019		Soil	S19-My49810	X														
60	MW01 2.9-3.0	May 30, 2019		Soil	S19-My49811				X											
61	MW01 3.9-4.0	May 30, 2019		Soil	S19-My49812				X											
62	MW01 4.9-5.0	May 30, 2019		Soil	S19-My49813				X											
63	MW01 5.9-6.0	May 30, 2019		Soil	S19-My49814				X											
64	MW01 6.9-7.0	May 30, 2019		Soil	S19-My49815						X			X			X			
65	MW01 7.9-8.0	May 30, 2019		Soil	S19-My49816				X											
66	MW02 0-0.1	May 30, 2019		Soil	S19-My49817							X	X				X			
67	MW02 0.9-1.0	May 30, 2019		Soil	S19-My49818	X					X			X			X			
68	MW02 1.9-2.0	May 30, 2019		Soil	S19-My49819				X											
69	MW02 2.9-3.0	May 30, 2019		Soil	S19-My49820				X											

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
70	MW02 3.9-4.0	May 30, 2019		Soil	S19-My49821				X											
71	MW02 4.9-5.0	May 30, 2019		Soil	S19-My49822				X											
72	MW02 5.9-6.0	May 30, 2019		Soil	S19-My49823				X											
73	MW02 6.9-7.0	May 30, 2019		Soil	S19-My49824				X											
74	MW02 7.9-8.0	May 30, 2019		Soil	S19-My49825				X											
75	MW03 0-0.1	May 30, 2019		Soil	S19-My49826				X											
76	MW03 0.9-1.0	May 30, 2019		Soil	S19-My49827	X					X	X	X	X		X	X		X	
77	MW03 1.9-2.0	May 30, 2019		Soil	S19-My49828				X											
78	MW03 2.9-3.0	May 30, 2019		Soil	S19-My49829				X											
79	MW03 3.9-4.0	May 30, 2019		Soil	S19-My49830				X											
80	MW03 4.9-5.0	May 30, 2019		Soil	S19-My49831				X											
81	MW03 5.9-6.0	May 30, 2019		Soil	S19-My49832				X											

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
82	MW03 6.9-7.0	May 30, 2019		Soil	S19-My49833				X											
83	MW03 7.9-8.0	May 30, 2019		Soil	S19-My49834						X			X		X	X		X	
Test Counts						32	1	1	36	2	33	19	19	33	2	18	41	2	18	1

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. 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

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:

Authorised by:

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.

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
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NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Chris Kauffman**

Report **658838-S**
Project name CLUNIES ROSS ST
Project ID 56425
Received Date May 31, 2019

Client Sample ID			**SS01**	**SS02**	**SS03**	**SS04**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S19-My49731**	**S19-My49732**	**S19-My49733**	**S19-My49734**
Date Sampled			**May 30, 2019**	**May 30, 2019**	**May 30, 2019**	**May 30, 2019**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	< 20	30	-	-
TRH C15-C28	50	mg/kg	130	180	-	-
TRH C29-C36	50	mg/kg	110	210	-	-
TRH C10-36 (Total)	50	mg/kg	240	420	-	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	-	-
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromoform	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	-	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	-	-

Client Sample ID			SS01	SS02	SS03	SS04
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49731	S19-My49732	S19-My49733	S19-My49734
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Chloroform	0.5	mg/kg	< 0.5	< 0.5	-	-
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Styrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	-	-
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	-	-
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Bromofluorobenzene (surr.)	1	%	107	82	-	-
Toluene-d8 (surr.)	1	%	108	87	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	-
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	210	340	-	-
TRH >C34-C40	100	mg/kg	< 100	130	-	-
TRH >C10-C40 (total)*	100	mg/kg	210	470	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.9
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	1.1
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.5
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	0.7
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.9
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.7

Client Sample ID			SS01	SS02	SS03	SS04
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49731	S19-My49732	S19-My49733	S19-My49734
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.7
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	0.7
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	4.2
2-Fluorobiphenyl (surr.)	1	%	76	59	63	62
p-Terphenyl-d14 (surr.)	1	%	58	103	110	107
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	-
Toxaphene	1	mg/kg	< 1	< 1	-	-
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	< 0.2	< 0.2	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	-
Dibutylchlorendate (surr.)	1	%	149	108	-	-
Tetrachloro-m-xylene (surr.)	1	%	INT	105	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	-

Client Sample ID			SS01	SS02	SS03	SS04
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49731	S19-My49732	S19-My49733	S19-My49734
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Dibutylchlorendate (surr.)	1	%	149	108	-	-
Tetrachloro-m-xylene (surr.)	1	%	INT	105	-	-
% Moisture	1	%	9.4	12	21	15
Heavy Metals						
Arsenic	2	mg/kg	3.2	2.5	< 2	2.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	140	91	170	99
Copper	5	mg/kg	66	49	84	67
Lead	5	mg/kg	16	18	20	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	120	66	120	84
Zinc	5	mg/kg	92	80	100	98

Client Sample ID			SS05	EMB1	HA01	HA02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49735	S19-My49736	S19-My49738	S19-My49739
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	< 20
TRH C10-C14	20	mg/kg	-	22	-	< 20
TRH C15-C28	50	mg/kg	-	57	-	53
TRH C29-C36	50	mg/kg	-	91	-	< 50
TRH C10-36 (Total)	50	mg/kg	-	170	-	53
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	-	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	-	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	-	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	-	< 0.5
Allyl chloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzene	0.1	mg/kg	-	< 0.1	-	< 0.1

Client Sample ID			SS05	EMB1	HA01	HA02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49735	S19-My49736	S19-My49738	S19-My49739
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
Bromobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromochloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromodichloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromoform	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Carbon disulfide	0.5	mg/kg	-	< 0.5	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Chlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
Chloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Chloroform	0.5	mg/kg	-	< 0.5	-	< 0.5
Chloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibromochloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibromomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	< 0.1
Iodomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	-	< 0.5
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	< 0.2
Methylene Chloride	0.5	mg/kg	-	< 0.5	-	< 0.5
o-Xylene	0.1	mg/kg	-	< 0.1	-	< 0.1
Styrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Tetrachloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
Toluene	0.1	mg/kg	-	< 0.1	-	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	< 0.5
Trichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Vinyl chloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	< 0.3
Total MAH*	0.5	mg/kg	-	< 0.5	-	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	< 0.5	-	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	< 0.5	-	< 0.5
4-Bromofluorobenzene (surr.)	1	%	-	95	-	96
Toluene-d8 (surr.)	1	%	-	98	-	97
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	< 20
TRH >C10-C16	50	mg/kg	-	< 50	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	-	< 50
TRH >C16-C34	100	mg/kg	-	120	-	< 100
TRH >C34-C40	100	mg/kg	-	< 100	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	120	-	< 100

Client Sample ID			SS05	EMB1	HA01	HA02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49735	S19-My49736	S19-My49738	S19-My49739
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	11	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	11	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	11	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	0.6	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	1.2	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	3.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	7.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	7.1	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	8.4	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	6.6	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	3.4	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	5.9	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	1.3	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	15	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	0.6	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	5.2	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	10	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	13	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	89.3	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	61	71	58	71
p-Terphenyl-d14 (surr.)	1	%	96	124	99	124
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	-	< 1
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	< 0.2	< 0.2	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	< 0.2
Dibutylchlorendate (surr.)	1	%	92	98	-	86
Tetrachloro-m-xylene (surr.)	1	%	93	92	-	89

Client Sample ID			SS05	EMB1	HA01	HA02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49735	S19-My49736	S19-My49738	S19-My49739
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibutylchlorendate (surr.)	1	%	92	98	-	86
Tetrachloro-m-xylene (surr.)	1	%	93	92	-	89
% Moisture	1	%	9.5	9.0	6.8	9.4
Heavy Metals						
Arsenic	2	mg/kg	2.9	< 2	13	22
Cadmium	0.4	mg/kg	< 0.4	< 0.4	2.4	4.0
Chromium	5	mg/kg	86	190	130	120
Copper	5	mg/kg	69	66	220	360
Lead	5	mg/kg	23	11	430	930
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.2	0.3
Nickel	5	mg/kg	78	130	150	170
Zinc	5	mg/kg	89	160	1300	2400

Client Sample ID			HA03	HA04	TP01 0-0.1	TP01 0.3-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49740	S19-My49741	S19-My49742	S19-My49743
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	< 20	-
TRH C10-C14	20	mg/kg	20	-	< 20	-
TRH C15-C28	50	mg/kg	120	-	< 50	-
TRH C29-C36	50	mg/kg	110	-	< 50	-
TRH C10-36 (Total)	50	mg/kg	250	-	< 50	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-

Client Sample ID			HA03	HA04	TP01 0-0.1	TP01 0.3-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49740	S19-My49741	S19-My49742	S19-My49743
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	-	< 0.5	-
Allyl chloride	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Bromobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromochloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromodichloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromoform	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Carbon disulfide	0.5	mg/kg	< 0.5	-	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	-	< 0.5	-
Chlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Chloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Chloroform	0.5	mg/kg	< 0.5	-	< 0.5	-
Chloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibromochloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibromomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Iodomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	-	< 0.5	-
m&p-Xylenes	0.2	mg/kg	0.3	-	< 0.2	-
Methylene Chloride	0.5	mg/kg	< 0.5	-	< 0.5	-
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	-
Styrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Tetrachloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	< 0.5	-
Trichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Vinyl chloride	0.5	mg/kg	< 0.5	-	< 0.5	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	< 0.3	-
Total MAH*	0.5	mg/kg	< 0.5	-	< 0.5	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	-	< 0.5	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Bromofluorobenzene (surr.)	1	%	92	-	72	-
Toluene-d8 (surr.)	1	%	95	-	73	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-

Client Sample ID			HA03	HA04	TP01 0-0.1	TP01 0.3-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49740	S19-My49741	S19-My49742	S19-My49743
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	< 50	-
TRH >C16-C34	100	mg/kg	180	-	< 100	-
TRH >C34-C40	100	mg/kg	< 100	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	180	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	70	61	62	-
p-Terphenyl-d14 (surr.)	1	%	122	106	107	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2	-
Toxaphene	1	mg/kg	< 1	-	< 1	-

Client Sample ID			HA03	HA04	TP01 0-0.1	TP01 0.3-0.4
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S19-My49740**	**S19-My49741**	**S19-My49742**	**S19-My49743**
Date Sampled			**May 30, 2019**	**May 30, 2019**	**May 30, 2019**	**May 30, 2019**
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
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	< 0.2	-	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	< 0.2	-
Dibutylchlorendate (surr.)	1	%	82	-	106	-
Tetrachloro-m-xylene (surr.)	1	%	92	-	108	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	< 0.1	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PCB*	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	82	-	106	-
Tetrachloro-m-xylene (surr.)	1	%	92	-	108	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	5	uS/cm	-	-	-	94
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	-	-	7.1
% Moisture	1	%	13	9.4	16	13
Heavy Metals						
Arsenic	2	mg/kg	15	4.5	2.2	-
Cadmium	0.4	mg/kg	2.0	0.7	< 0.4	-
Chromium	5	mg/kg	160	160	280	-
Copper	5	mg/kg	250	120	62	-
Lead	5	mg/kg	1100	150	5.2	-
Mercury	0.1	mg/kg	0.2	< 0.1	< 0.1	-
Nickel	5	mg/kg	180	140	180	-
Zinc	5	mg/kg	1200	380	100	-
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	-	-	45

Client Sample ID			TP01 1-1.1	TP01 1.4-1.5	TP02 0-0.1	TP02 1-1.1
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S19-My49744**	**S19-My49745**	**S19-My49746**	**S19-My49748**
Date Sampled			**May 30, 2019**	**May 30, 2019**	**May 30, 2019**	**May 30, 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 C10-36 (Total)	50	mg/kg	< 50	-	-	-

Client Sample ID			TP01 1-1.1	TP01 1.4-1.5	TP02 0-0.1	TP02 1-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49744	S19-My49745	S19-My49746	S19-My49748
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	-	-	-
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	-	-	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	-	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	-	-	-
Allyl chloride	0.5	mg/kg	< 0.5	-	-	-
Benzene	0.1	mg/kg	< 0.1	-	-	-
Bromobenzene	0.5	mg/kg	< 0.5	-	-	-
Bromochloromethane	0.5	mg/kg	< 0.5	-	-	-
Bromodichloromethane	0.5	mg/kg	< 0.5	-	-	-
Bromoform	0.5	mg/kg	< 0.5	-	-	-
Bromomethane	0.5	mg/kg	< 0.5	-	-	-
Carbon disulfide	0.5	mg/kg	< 0.5	-	-	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	-	-	-
Chlorobenzene	0.5	mg/kg	< 0.5	-	-	-
Chloroethane	0.5	mg/kg	< 0.5	-	-	-
Chloroform	0.5	mg/kg	< 0.5	-	-	-
Chloromethane	0.5	mg/kg	< 0.5	-	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	-
Dibromochloromethane	0.5	mg/kg	< 0.5	-	-	-
Dibromomethane	0.5	mg/kg	< 0.5	-	-	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
Iodomethane	0.5	mg/kg	< 0.5	-	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
Methylene Chloride	0.5	mg/kg	< 0.5	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Styrene	0.5	mg/kg	< 0.5	-	-	-
Tetrachloroethene	0.5	mg/kg	< 0.5	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	-

Client Sample ID			TP01 1-1.1	TP01 1.4-1.5	TP02 0-0.1	TP02 1-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49744	S19-My49745	S19-My49746	S19-My49748
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
Trichloroethene	0.5	mg/kg	< 0.5	-	-	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	-	-	-
Vinyl chloride	0.5	mg/kg	< 0.5	-	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	-
Total MAH*	0.5	mg/kg	< 0.5	-	-	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	-	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	-	-	-
4-Bromofluorobenzene (surr.)	1	%	97	-	-	-
Toluene-d8 (surr.)	1	%	101	-	-	-
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	%	-	-	-	123
p-Terphenyl-d14 (surr.)	1	%	-	-	-	146
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	-

Client Sample ID Sample Matrix Eurofins | mgt Sample No. Date Sampled Test/Reference	LOR	Unit	TP01 1-1.1 Soil S19-My49744 May 30, 2019	TP01 1.4-1.5 Soil S19-My49745 May 30, 2019	TP02 0-0.1 Soil S19-My49746 May 30, 2019	TP02 1-1.1 Soil S19-My49748 May 30, 2019
Organochlorine Pesticides						
d-BHC	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.2	mg/kg	-	-	< 0.2	-
Toxaphene	1	mg/kg	-	-	< 1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 0.2	-
Dibutylchlorendate (surr.)	1	%	-	-	123	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	112	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1232	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	-
Total PCB*	0.5	mg/kg	-	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	-	-	123	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	112	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	530	-	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	7.1	-	-
% Moisture	1	%	11	14	17	13
Heavy Metals						
Arsenic	2	mg/kg	-	-	-	< 2
Cadmium	0.4	mg/kg	-	-	-	< 0.4
Chromium	5	mg/kg	-	-	-	160
Copper	5	mg/kg	-	-	-	51
Lead	5	mg/kg	-	-	-	< 5
Mercury	0.1	mg/kg	-	-	-	< 0.1
Nickel	5	mg/kg	-	-	-	430
Zinc	5	mg/kg	-	-	-	110
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	62	-	-

Client Sample ID			TP03 0-0.1	TP04 0-0.1	TP04 0.5-0.6	TP05 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49772	S19-My49776	S19-My49777	S19-My49779
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 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 C10-36 (Total)	50	mg/kg	-	< 50	-	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	-
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	-
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	-	-
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	-	-
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	-	-
Allyl chloride	0.5	mg/kg	-	< 0.5	-	-
Benzene	0.1	mg/kg	-	< 0.1	-	-
Bromobenzene	0.5	mg/kg	-	< 0.5	-	-
Bromochloromethane	0.5	mg/kg	-	< 0.5	-	-
Bromodichloromethane	0.5	mg/kg	-	< 0.5	-	-
Bromoform	0.5	mg/kg	-	< 0.5	-	-
Bromomethane	0.5	mg/kg	-	< 0.5	-	-
Carbon disulfide	0.5	mg/kg	-	< 0.5	-	-
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	-	-
Chlorobenzene	0.5	mg/kg	-	< 0.5	-	-
Chloroethane	0.5	mg/kg	-	< 0.5	-	-
Chloroform	0.5	mg/kg	-	< 0.5	-	-
Chloromethane	0.5	mg/kg	-	< 0.5	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	-
Dibromochloromethane	0.5	mg/kg	-	< 0.5	-	-
Dibromomethane	0.5	mg/kg	-	< 0.5	-	-
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
Iodomethane	0.5	mg/kg	-	< 0.5	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
Methylene Chloride	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID			TP03 0-0.1	TP04 0-0.1	TP04 0.5-0.6	TP05 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49772	S19-My49776	S19-My49777	S19-My49779
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Styrene	0.5	mg/kg	-	< 0.5	-	-
Tetrachloroethene	0.5	mg/kg	-	< 0.5	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	-
Trichloroethene	0.5	mg/kg	-	< 0.5	-	-
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	-	-
Vinyl chloride	0.5	mg/kg	-	< 0.5	-	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	-
Total MAH*	0.5	mg/kg	-	< 0.5	-	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	< 0.5	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	< 0.5	-	-
4-Bromofluorobenzene (surr.)	1	%	-	91	-	-
Toluene-d8 (surr.)	1	%	-	93	-	-
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	< 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
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	%	66	64	60	60
p-Terphenyl-d14 (surr.)	1	%	112	113	110	106

Client Sample ID			TP03 0-0.1	TP04 0-0.1	TP04 0.5-0.6	TP05 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49772	S19-My49776	S19-My49777	S19-My49779
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
d-BHC	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.2	mg/kg	-	< 0.2	-	-
Toxaphene	1	mg/kg	-	< 1	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.2	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2	-	-
Dibutylchlorendate (surr.)	1	%	-	102	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	105	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	-
Total PCB*	0.5	mg/kg	-	< 0.5	-	-
Dibutylchlorendate (surr.)	1	%	-	102	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	105	-	-
% Moisture	1	%	17	< 1	11	16
Heavy Metals						
Arsenic	2	mg/kg	4.9	< 2	3.0	5.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	130	15	270	510
Copper	5	mg/kg	38	5.2	37	95
Lead	5	mg/kg	11	5.4	6.5	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	110	6.7	270	440
Zinc	5	mg/kg	100	30	85	190

Client Sample ID			TP05 2-2.2	TP06 0-0.1	TP06 1.4-1.5	TP07 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49781	S19-My49783	S19-My49785	S19-My49786
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	< 20
TRH C10-C14	20	mg/kg	-	< 20	-	< 20
TRH C15-C28	50	mg/kg	-	< 50	-	< 50
TRH C29-C36	50	mg/kg	-	< 50	-	< 50
TRH C10-36 (Total)	50	mg/kg	-	< 50	-	< 50
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	-	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	-	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	-	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	-	< 0.5
Allyl chloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzene	0.1	mg/kg	-	< 0.1	-	< 0.1
Bromobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromochloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromodichloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromoform	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Carbon disulfide	0.5	mg/kg	-	< 0.5	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Chlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
Chloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Chloroform	0.5	mg/kg	-	< 0.5	-	< 0.5
Chloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibromochloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibromomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	< 0.1
Iodomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	-	< 0.5
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	< 0.2
Methylene Chloride	0.5	mg/kg	-	< 0.5	-	< 0.5

Client Sample ID			TP05 2-2.2	TP06 0-0.1	TP06 1.4-1.5	TP07 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49781	S19-My49783	S19-My49785	S19-My49786
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	-	< 0.1	-	< 0.1
Styrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Tetrachloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
Toluene	0.1	mg/kg	-	< 0.1	-	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	< 0.5
Trichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Vinyl chloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	< 0.3
Total MAH*	0.5	mg/kg	-	< 0.5	-	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	< 0.5	-	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	< 0.5	-	< 0.5
4-Bromofluorobenzene (surr.)	1	%	-	90	-	87
Toluene-d8 (surr.)	1	%	-	92	-	91
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	< 20
TRH >C10-C16	50	mg/kg	-	< 50	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	-	< 50
TRH >C16-C34	100	mg/kg	-	< 100	-	< 100
TRH >C34-C40	100	mg/kg	-	< 100	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	-	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	65	60	70
p-Terphenyl-d14 (surr.)	1	%	-	116	107	129

Client Sample ID			TP05 2-2.2	TP06 0-0.1	TP06 1.4-1.5	TP07 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49781	S19-My49783	S19-My49785	S19-My49786
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	-	< 1
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	< 0.2	< 0.2	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	< 0.2
Dibutylchlorendate (surr.)	1	%	97	100	-	111
Tetrachloro-m-xylene (surr.)	1	%	98	97	-	105
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibutylchlorendate (surr.)	1	%	97	100	-	111
Tetrachloro-m-xylene (surr.)	1	%	98	97	-	105
% Moisture	1	%	13	19	16	16
Heavy Metals						
Arsenic	2	mg/kg	-	3.1	< 2	< 2
Cadmium	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	-	550	200	150
Copper	5	mg/kg	-	87	47	36
Lead	5	mg/kg	-	7.3	< 5	< 5
Mercury	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	-	550	510	130
Zinc	5	mg/kg	-	240	100	70

Client Sample ID			TP08 0-0.1	TP09 0.4-0.5	TP10 0-0.1	TP10 1-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49787	S19-My49789	S19-My49791	S19-My49793
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 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 C10-36 (Total)	50	mg/kg	-	-	-	< 50
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	-	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	-	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	-	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	-	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	-	-	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	-	-	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	-	-	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	-	< 0.5
Allyl chloride	0.5	mg/kg	-	-	-	< 0.5
Benzene	0.1	mg/kg	-	-	-	< 0.1
Bromobenzene	0.5	mg/kg	-	-	-	< 0.5
Bromochloromethane	0.5	mg/kg	-	-	-	< 0.5
Bromodichloromethane	0.5	mg/kg	-	-	-	< 0.5
Bromoform	0.5	mg/kg	-	-	-	< 0.5
Bromomethane	0.5	mg/kg	-	-	-	< 0.5
Carbon disulfide	0.5	mg/kg	-	-	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	-	-	< 0.5
Chlorobenzene	0.5	mg/kg	-	-	-	< 0.5
Chloroethane	0.5	mg/kg	-	-	-	< 0.5
Chloroform	0.5	mg/kg	-	-	-	< 0.5
Chloromethane	0.5	mg/kg	-	-	-	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	-	< 0.5
Dibromochloromethane	0.5	mg/kg	-	-	-	< 0.5
Dibromomethane	0.5	mg/kg	-	-	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	-	-	< 0.5
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
Iodomethane	0.5	mg/kg	-	-	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	-	< 0.5
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
Methylene Chloride	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			TP08 0-0.1	TP09 0.4-0.5	TP10 0-0.1	TP10 1-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49787	S19-My49789	S19-My49791	S19-My49793
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Styrene	0.5	mg/kg	-	-	-	< 0.5
Tetrachloroethene	0.5	mg/kg	-	-	-	< 0.5
Toluene	0.1	mg/kg	-	-	-	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	-	< 0.5
Trichloroethene	0.5	mg/kg	-	-	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	-	-	< 0.5
Vinyl chloride	0.5	mg/kg	-	-	-	< 0.5
Xylenes - Total	0.3	mg/kg	-	-	-	< 0.3
Total MAH*	0.5	mg/kg	-	-	-	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	-	-	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	-	-	< 0.5
4-Bromofluorobenzene (surr.)	1	%	-	-	-	88
Toluene-d8 (surr.)	1	%	-	-	-	87
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	< 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
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	%	122	126	116	149
p-Terphenyl-d14 (surr.)	1	%	124	125	117	INT

Client Sample ID			TP08 0-0.1	TP09 0.4-0.5	TP10 0-0.1	TP10 1-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49787	S19-My49789	S19-My49791	S19-My49793
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-BHC	0.05	mg/kg	-	-	-	< 0.05
d-BHC	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	-	< 0.2
Toxaphene	1	mg/kg	-	-	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	< 0.2
Dibutylchlorendate (surr.)	1	%	-	-	-	83
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	88
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	-	< 0.5
Total PCB*	0.5	mg/kg	-	-	-	< 0.5
Dibutylchlorendate (surr.)	1	%	-	-	-	83
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	88
% Moisture	1	%	11	7.3	7.4	9.5
Heavy Metals						
Arsenic	2	mg/kg	6.5	2.2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	160	49	110	150
Copper	5	mg/kg	55	41	85	52
Lead	5	mg/kg	17	14	12	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	180	86	100	340
Zinc	5	mg/kg	130	65	120	100

Client Sample ID			TP11 0-0.1	TP11 0.3-0.4	TP11 2.7-2.8	TP12 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49794	S19-My49795	S19-My49798	S19-My49799
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	< 20
TRH C10-C14	20	mg/kg	-	< 20	-	< 20
TRH C15-C28	50	mg/kg	-	< 50	-	< 50
TRH C29-C36	50	mg/kg	-	< 50	-	< 50
TRH C10-36 (Total)	50	mg/kg	-	< 50	-	< 50
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	-	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	-	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	-	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	-	< 0.5
Allyl chloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzene	0.1	mg/kg	-	< 0.1	-	< 0.1
Bromobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromochloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromodichloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromoform	0.5	mg/kg	-	< 0.5	-	< 0.5
Bromomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Carbon disulfide	0.5	mg/kg	-	< 0.5	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Chlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
Chloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Chloroform	0.5	mg/kg	-	< 0.5	-	< 0.5
Chloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibromochloromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibromomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	< 0.1
Iodomethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	-	< 0.5
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	< 0.2
Methylene Chloride	0.5	mg/kg	-	< 0.5	-	< 0.5

Client Sample ID			TP11 0-0.1	TP11 0.3-0.4	TP11 2.7-2.8	TP12 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49794	S19-My49795	S19-My49798	S19-My49799
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	-	< 0.1	-	< 0.1
Styrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Tetrachloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
Toluene	0.1	mg/kg	-	< 0.1	-	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	< 0.5
Trichloroethene	0.5	mg/kg	-	< 0.5	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Vinyl chloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	< 0.3
Total MAH*	0.5	mg/kg	-	< 0.5	-	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	< 0.5	-	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	< 0.5	-	< 0.5
4-Bromofluorobenzene (surr.)	1	%	-	96	-	80
Toluene-d8 (surr.)	1	%	-	88	-	66
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	< 20
TRH >C10-C16	50	mg/kg	-	< 50	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	-	< 50
TRH >C16-C34	100	mg/kg	-	< 100	-	< 100
TRH >C34-C40	100	mg/kg	-	< 100	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	-	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	123	-	123	128
p-Terphenyl-d14 (surr.)	1	%	123	-	123	126

Client Sample ID			TP11 0-0.1	TP11 0.3-0.4	TP11 2.7-2.8	TP12 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49794	S19-My49795	S19-My49798	S19-My49799
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-BHC	0.05	mg/kg	-	-	-	< 0.05
d-BHC	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	-	< 0.2
Toxaphene	1	mg/kg	-	-	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	< 0.2
Dibutylchlorendate (surr.)	1	%	-	-	-	72
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	69
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	-	< 0.5
Total PCB*	0.5	mg/kg	-	-	-	< 0.5
Dibutylchlorendate (surr.)	1	%	-	-	-	72
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	69
% Moisture	1	%	11	9.1	5.7	15
Heavy Metals						
Arsenic	2	mg/kg	< 2	-	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	-	< 0.4	< 0.4
Chromium	5	mg/kg	170	-	120	160
Copper	5	mg/kg	90	-	44	71
Lead	5	mg/kg	6.0	-	< 5	14
Mercury	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Nickel	5	mg/kg	130	-	320	150
Zinc	5	mg/kg	120	-	92	110

Client Sample ID			TP12 0.5-0.6	QA01	QA02	MW01 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49800	S19-My49803	S19-My49804	S19-My49808
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 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	230
TRH C29-C36	50	mg/kg	-	< 50	< 50	160
TRH C10-36 (Total)	50	mg/kg	-	< 50	< 50	390
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	0.6
Iodomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	3.2
Methylene Chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5

Client Sample ID			TP12 0.5-0.6	QA01	QA02	MW01 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49800	S19-My49803	S19-My49804	S19-My49808
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	1.2
Styrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Xylenes - Total	0.3	mg/kg	-	< 0.3	< 0.3	4.4
Total MAH*	0.5	mg/kg	-	< 0.5	< 0.5	5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	-	82	85	94
Toluene-d8 (surr.)	1	%	-	81	84	83
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	350
TRH >C34-C40	100	mg/kg	-	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	< 100	350
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	123	139	135	-
p-Terphenyl-d14 (surr.)	1	%	121	137	134	-

Client Sample ID			TP12 0.5-0.6	QA01	QA02	MW01 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49800	S19-My49803	S19-My49804	S19-My49808
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Toxaphene	1	mg/kg	-	< 1	< 1	< 1
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	-	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	-	119	95	131
Tetrachloro-m-xylene (surr.)	1	%	-	122	105	127
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	-	119	95	131
Tetrachloro-m-xylene (surr.)	1	%	-	122	105	127
% Moisture	1	%	9.6	16	8.2	12
Heavy Metals						
Arsenic	2	mg/kg	< 2	2.3	< 2	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	90	470	94	-
Copper	5	mg/kg	50	65	61	-
Lead	5	mg/kg	< 5	6.7	< 5	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Nickel	5	mg/kg	260	400	280	-
Zinc	5	mg/kg	90	110	100	-

Client Sample ID			MW01 6.9-7.0	[G01]MW02 0-0.1	MW02 0.9-1.0	[G01]MW03 0.9-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-My49815	S19-My49817	S19-My49818	S19-My49827
Date Sampled			May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 40
TRH C10-C14	20	mg/kg	-	-	-	52
TRH C15-C28	50	mg/kg	-	-	-	420
TRH C29-C36	50	mg/kg	-	-	-	340
TRH C10-36 (Total)	50	mg/kg	-	-	-	812
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	-	< 1
1.1-Dichloroethene	0.5	mg/kg	-	-	-	< 1
1.1.1-Trichloroethane	0.5	mg/kg	-	-	-	< 1
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	-	< 1
1.1.2-Trichloroethane	0.5	mg/kg	-	-	-	< 1
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	-	< 1
1.2-Dibromoethane	0.5	mg/kg	-	-	-	< 1
1.2-Dichlorobenzene	0.5	mg/kg	-	-	-	< 1
1.2-Dichloroethane	0.5	mg/kg	-	-	-	< 1
1.2-Dichloropropane	0.5	mg/kg	-	-	-	< 1
1.2.3-Trichloropropane	0.5	mg/kg	-	-	-	< 1
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	-	< 1
1.3-Dichlorobenzene	0.5	mg/kg	-	-	-	< 1
1.3-Dichloropropane	0.5	mg/kg	-	-	-	< 1
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	-	< 1
1.4-Dichlorobenzene	0.5	mg/kg	-	-	-	< 1
2-Butanone (MEK)	0.5	mg/kg	-	-	-	< 1
2-Propanone (Acetone)	0.5	mg/kg	-	-	-	< 1
4-Chlorotoluene	0.5	mg/kg	-	-	-	< 1
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	-	< 1
Allyl chloride	0.5	mg/kg	-	-	-	< 1
Benzene	0.1	mg/kg	-	-	-	< 0.2
Bromobenzene	0.5	mg/kg	-	-	-	< 1
Bromochloromethane	0.5	mg/kg	-	-	-	< 1
Bromodichloromethane	0.5	mg/kg	-	-	-	< 1
Bromoform	0.5	mg/kg	-	-	-	< 1
Bromomethane	0.5	mg/kg	-	-	-	< 1
Carbon disulfide	0.5	mg/kg	-	-	-	< 1
Carbon Tetrachloride	0.5	mg/kg	-	-	-	< 1
Chlorobenzene	0.5	mg/kg	-	-	-	< 1
Chloroethane	0.5	mg/kg	-	-	-	< 1
Chloroform	0.5	mg/kg	-	-	-	< 1
Chloromethane	0.5	mg/kg	-	-	-	< 1
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	-	< 1
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	-	< 1
Dibromochloromethane	0.5	mg/kg	-	-	-	< 1
Dibromomethane	0.5	mg/kg	-	-	-	< 1
Dichlorodifluoromethane	0.5	mg/kg	-	-	-	< 1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.2
Iodomethane	0.5	mg/kg	-	-	-	< 1
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	-	< 1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.4
Methylene Chloride	0.5	mg/kg	-	-	-	< 1

Client Sample ID			MW01 6.9-7.0	[G01]MW02 0-0.1	MW02 0.9-1.0	[G01]MW03 0.9-1.0
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S19-My49815**	**S19-My49817**	**S19-My49818**	**S19-My49827**
Date Sampled			**May 30, 2019**	**May 30, 2019**	**May 30, 2019**	**May 30, 2019**
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	-	-	-	< 0.2
Styrene	0.5	mg/kg	-	-	-	< 1
Tetrachloroethene	0.5	mg/kg	-	-	-	< 1
Toluene	0.1	mg/kg	-	-	-	< 0.2
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	-	< 1
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	-	< 1
Trichloroethene	0.5	mg/kg	-	-	-	< 1
Trichlorofluoromethane	0.5	mg/kg	-	-	-	< 1
Vinyl chloride	0.5	mg/kg	-	-	-	< 1
Xylenes - Total	0.3	mg/kg	-	-	-	< 0.6
Total MAH*	0.5	mg/kg	-	-	-	< 1
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	-	-	< 1
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	-	-	< 1
4-Bromofluorobenzene (surr.)	1	%	-	-	-	89
Toluene-d8 (surr.)	1	%	-	-	-	82
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	-	< 1
TRH C6-C10	20	mg/kg	-	-	-	< 40
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	-	< 40
TRH >C10-C16	50	mg/kg	-	-	-	87
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	-	87
TRH >C16-C34	100	mg/kg	-	-	-	660
TRH >C34-C40	100	mg/kg	-	-	-	170
TRH >C10-C40 (total)*	100	mg/kg	-	-	-	917
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	2.2
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	-	< 0.5	2.2
2-Fluorobiphenyl (surr.)	1	%	133	-	142	149
p-Terphenyl-d14 (surr.)	1	%	135	-	141	143

Client Sample ID			MW01 6.9-7.0	[G01]MW02 0-0.1	MW02 0.9-1.0	[G01]MW03 0.9-1.0
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S19-My49815**	**S19-My49817**	**S19-My49818**	**S19-My49827**
Date Sampled			**May 30, 2019**	**May 30, 2019**	**May 30, 2019**	**May 30, 2019**
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 1	-	< 1
4.4'-DDD	0.05	mg/kg	-	< 0.5	-	< 0.5
4.4'-DDE	0.05	mg/kg	-	< 0.5	-	< 0.5
4.4'-DDT	0.05	mg/kg	-	< 0.5	-	< 0.5
a-BHC	0.05	mg/kg	-	< 0.5	-	< 0.5
Aldrin	0.05	mg/kg	-	< 0.5	-	< 0.5
b-BHC	0.05	mg/kg	-	< 0.5	-	< 0.5
d-BHC	0.05	mg/kg	-	< 0.5	-	< 0.5
Dieldrin	0.05	mg/kg	-	< 0.5	-	< 0.5
Endosulfan I	0.05	mg/kg	-	< 0.5	-	< 0.5
Endosulfan II	0.05	mg/kg	-	< 0.5	-	< 0.5
Endosulfan sulphate	0.05	mg/kg	-	< 0.5	-	< 0.5
Endrin	0.05	mg/kg	-	< 0.5	-	< 0.5
Endrin aldehyde	0.05	mg/kg	-	< 0.5	-	< 0.5
Endrin ketone	0.05	mg/kg	-	< 0.5	-	< 0.5
g-BHC (Lindane)	0.05	mg/kg	-	< 0.5	-	< 0.5
Heptachlor	0.05	mg/kg	-	< 0.5	-	< 0.5
Heptachlor epoxide	0.05	mg/kg	-	< 0.5	-	< 0.5
Hexachlorobenzene	0.05	mg/kg	-	< 0.5	-	< 0.5
Methoxychlor	0.2	mg/kg	-	< 2	-	< 2
Toxaphene	1	mg/kg	-	< 10	-	< 10
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.5	-	< 0.5
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.5	-	< 0.5
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 2	-	< 2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 2	-	< 2
Dibutylchlorendate (surr.)	1	%	-	114	-	107
Tetrachloro-m-xylene (surr.)	1	%	-	74	-	140
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	< 5	-	< 5
Aroclor-1221	0.1	mg/kg	-	< 1	-	< 1
Aroclor-1232	0.5	mg/kg	-	< 5	-	< 5
Aroclor-1242	0.5	mg/kg	-	< 5	-	< 5
Aroclor-1248	0.5	mg/kg	-	< 5	-	< 5
Aroclor-1254	0.5	mg/kg	-	< 5	-	< 5
Aroclor-1260	0.5	mg/kg	-	< 5	-	< 5
Total PCB*	0.5	mg/kg	-	< 5	-	< 5
Dibutylchlorendate (surr.)	1	%	-	114	-	107
Tetrachloro-m-xylene (surr.)	1	%	-	74	-	140
% Moisture	1	%	9.0	7.5	11	14
Heavy Metals						
Arsenic	2	mg/kg	< 2	-	4.0	< 2
Cadmium	0.4	mg/kg	< 0.4	-	< 0.4	< 0.4
Chromium	5	mg/kg	94	-	220	36
Copper	5	mg/kg	53	-	70	22
Lead	5	mg/kg	< 5	-	20	7.3
Mercury	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Nickel	5	mg/kg	310	-	270	53
Zinc	5	mg/kg	98	-	140	75

Client Sample ID			MW03 7.9-8.0
Sample Matrix			Soil
Eurofins | mgt Sample No.			S19-My49834
Date Sampled			May 30, 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 C10-36 (Total)	50	mg/kg	< 50
Volatile Organics			
1.1-Dichloroethane	0.5	mg/kg	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5
Benzene	0.1	mg/kg	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5
Bromoform	0.5	mg/kg	< 0.5
Bromomethane	0.5	mg/kg	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5
Chloroethane	0.5	mg/kg	< 0.5
Chloroform	0.5	mg/kg	< 0.5
Chloromethane	0.5	mg/kg	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1
Iodomethane	0.5	mg/kg	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5

Client Sample ID			MW03 7.9-8.0
Sample Matrix			Soil
Eurofins | mgt Sample No.			S19-My49834
Date Sampled			May 30, 2019
Test/Reference	LOR	Unit	
Volatile Organics			
o-Xylene	0.1	mg/kg	< 0.1
Styrene	0.5	mg/kg	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5
Toluene	0.1	mg/kg	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5
Xylenes - Total	0.3	mg/kg	< 0.3
Total MAH*	0.5	mg/kg	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5
4-Bromofluorobenzene (surr.)	1	%	91
Toluene-d8 (surr.)	1	%	87
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	%	124
p-Terphenyl-d14 (surr.)	1	%	122
% Moisture	1	%	6.7

Client Sample ID			MW03 7.9-8.0
Sample Matrix			**Soil**
Eurofins | mgt Sample No.			**S19-My49834**
Date Sampled			**May 30, 2019**
Test/Reference	LOR	Unit	
Heavy Metals			
Arsenic	2	mg/kg	< 2
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	120
Copper	5	mg/kg	46
Lead	5	mg/kg	< 5
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	340
Zinc	5	mg/kg	98

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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

Description	Testing Site	Extracted	Holding Time
JBS&G Suite 2			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jun 01, 2019	14 Day
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 01, 2019	14 Day
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 01, 2019	14 Day
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jun 01, 2019	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Jun 01, 2019	14 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	Jun 01, 2019	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Metals M8	Sydney	Jun 01, 2019	28 Day
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Jun 01, 2019	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
pH (1:5 Aqueous extract at 25°C as rec.)	Sydney	Jun 01, 2019	7 Day
- Method: LTM-GEN-7090 pH in soil by ISE			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Jun 11, 2019	7 Day
- Method: LTM-INO-4030 Conductivity			
Cation Exchange Capacity	Melbourne	Jun 05, 2019	180 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
% Moisture	Sydney	May 31, 2019	14 Day
- Method: LTM-GEN-7080 Moisture			

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

Project Name: CLUNIES ROSS ST
Project ID: 56425

Order No.:
Report #: 658838
Phone: 02 8245 0300
Fax:

Received: May 31, 2019 5:28 PM
Due: Jun 4, 2019
Priority: 2 Day
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
External Laboratory																				
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**															
1	SS01	May 30, 2019		Soil	S19-My49731	X					X	X	X	X		X	X		X	
2	SS02	May 30, 2019		Soil	S19-My49732	X					X	X	X	X		X	X		X	
3	SS03	May 30, 2019		Soil	S19-My49733	X					X			X			X			
4	SS04	May 30, 2019		Soil	S19-My49734	X					X			X			X			
5	SS05	May 30, 2019		Soil	S19-My49735	X					X	X	X	X			X			
6	EMB1	May 30, 2019		Soil	S19-My49736	X					X	X	X	X		X	X		X	
7	FRAG01	May 30, 2019		Building Materials	S19-My49737		X													
8	HA01	May 30, 2019		Soil	S19-My49738	X					X			X			X			
9	HA02	May 30, 2019		Soil	S19-My49739	X					X	X	X	X		X	X		X	

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Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
10	HA03	May 30, 2019		Soil	S19-My49740	X					X	X	X	X		X	X		X	
11	HA04	May 30, 2019		Soil	S19-My49741	X					X			X			X			
12	TP01 0-0.1	May 30, 2019		Soil	S19-My49742	X					X	X	X	X		X	X		X	
13	TP01 0.3-0.4	May 30, 2019		Soil	S19-My49743					X							X	X		
14	TP01 1-1.1	May 30, 2019		Soil	S19-My49744											X	X		X	
15	TP01 1.4-1.5	May 30, 2019		Soil	S19-My49745					X							X	X		
16	TP02 0-0.1	May 30, 2019		Soil	S19-My49746	X						X	X				X			
17	TP02 0.5-0.6	May 30, 2019		Soil	S19-My49747				X											
18	TP02 1-1.1	May 30, 2019		Soil	S19-My49748						X			X			X			
19	TP02 2-2.1	May 30, 2019		Soil	S19-My49749				X											
20	TP02 2.4-2.5	May 30, 2019		Soil	S19-My49771				X											
21	TP03 0-0.1	May 30, 2019		Soil	S19-My49772	X					X			X			X			

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Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
22	TP03 0.5-0.6	May 30, 2019		Soil	S19-My49773				X											
23	TP03 1-1.1	May 30, 2019		Soil	S19-My49774				X											
24	TP03 2-2.1	May 30, 2019		Soil	S19-My49775				X											
25	TP04 0-0.1	May 30, 2019		Soil	S19-My49776	X					X	X	X	X		X	X		X	
26	TP04 0.5-0.6	May 30, 2019		Soil	S19-My49777	X					X			X			X			
27	TP04 1-1.1	May 30, 2019		Soil	S19-My49778				X											
28	TP05 0-0.1	May 30, 2019		Soil	S19-My49779	X					X			X			X			
29	TP05 1-1.1	May 30, 2019		Soil	S19-My49780			X												
30	TP05 2-2.2	May 30, 2019		Soil	S19-My49781							X	X				X			
31	TP05 2.4-2.5	May 30, 2019		Soil	S19-My49782				X											
32	TP06 0-0.1	May 30, 2019		Soil	S19-My49783	X					X	X	X	X		X	X		X	
33	TP06 1-1.1	May 30, 2019		Soil	S19-My49784				X											

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Address: Level 1, 50 Margaret St
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Project Name: CLUNIES ROSS ST
Project ID: 56425

Order No.:
Report #: 658838
Phone: 02 8245 0300
Fax:

Received: May 31, 2019 5:28 PM
Due: Jun 4, 2019
Priority: 2 Day
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
34	TP06 1.4-1.5	May 30, 2019		Soil	S19-My49785						X			X			X			
35	TP07 0-0.1	May 30, 2019		Soil	S19-My49786	X					X	X	X	X		X	X		X	
36	TP08 0-0.1	May 30, 2019		Soil	S19-My49787	X					X			X			X			
37	TP09 0-0.1	May 30, 2019		Soil	S19-My49788				X											
38	TP09 0.4-0.5	May 30, 2019		Soil	S19-My49789	X					X			X			X			
39	TP09 0.9-1.0	May 30, 2019		Soil	S19-My49790				X											
40	TP10 0-0.1	May 30, 2019		Soil	S19-My49791	X					X			X			X			
41	TP10 0.4-0.5	May 30, 2019		Soil	S19-My49792				X											
42	TP10 1-1.1	May 30, 2019		Soil	S19-My49793	X					X	X	X	X		X	X		X	
43	TP11 0-0.1	May 30, 2019		Soil	S19-My49794	X					X			X			X			
44	TP11 0.3-0.4	May 30, 2019		Soil	S19-My49795											X	X		X	
45	TP11 1-1.1	May 30, 2019		Soil	S19-My49796				X											

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
46	TP11 2-2.1	May 30, 2019		Soil	S19-My49797				X											
47	TP11 2.7-2.8	May 30, 2019		Soil	S19-My49798	X					X			X			X			
48	TP12 0-0.1	May 30, 2019		Soil	S19-My49799	X					X	X	X	X		X	X		X	
49	TP12 0.5-0.6	May 30, 2019		Soil	S19-My49800	X					X			X			X			
50	TP12 1-1.1	May 30, 2019		Soil	S19-My49801				X											
51	TP12 1.4-1.5	May 30, 2019		Soil	S19-My49802				X											
52	QA01	May 30, 2019		Soil	S19-My49803	X					X	X	X	X		X	X		X	
53	QA02	May 30, 2019		Soil	S19-My49804	X					X	X	X	X		X	X		X	
54	RIN01	May 30, 2019		Water	S19-My49805															X
55	TS	May 30, 2019		Water	S19-My49806										X					
56	TB	May 30, 2019		Water	S19-My49807										X					
57	MW01 0-0.1	May 30, 2019		Soil	S19-My49808	X						X	X			X	X		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
58	MW01 0.9-1.0	May 30, 2019		Soil	S19-My49809				X											
59	MW01 1.9-1.0	May 30, 2019		Soil	S19-My49810	X														
60	MW01 2.9-3.0	May 30, 2019		Soil	S19-My49811				X											
61	MW01 3.9-4.0	May 30, 2019		Soil	S19-My49812				X											
62	MW01 4.9-5.0	May 30, 2019		Soil	S19-My49813				X											
63	MW01 5.9-6.0	May 30, 2019		Soil	S19-My49814				X											
64	MW01 6.9-7.0	May 30, 2019		Soil	S19-My49815						X			X			X			
65	MW01 7.9-8.0	May 30, 2019		Soil	S19-My49816				X											
66	MW02 0-0.1	May 30, 2019		Soil	S19-My49817							X	X				X			
67	MW02 0.9-1.0	May 30, 2019		Soil	S19-My49818	X					X			X			X			
68	MW02 1.9-2.0	May 30, 2019		Soil	S19-My49819				X											
69	MW02 2.9-3.0	May 30, 2019		Soil	S19-My49820				X											

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
70	MW02 3.9-4.0	May 30, 2019		Soil	S19-My49821				X											
71	MW02 4.9-5.0	May 30, 2019		Soil	S19-My49822				X											
72	MW02 5.9-6.0	May 30, 2019		Soil	S19-My49823				X											
73	MW02 6.9-7.0	May 30, 2019		Soil	S19-My49824				X											
74	MW02 7.9-8.0	May 30, 2019		Soil	S19-My49825				X											
75	MW03 0-0.1	May 30, 2019		Soil	S19-My49826				X											
76	MW03 0.9-1.0	May 30, 2019		Soil	S19-My49827	X					X	X	X	X		X	X		X	
77	MW03 1.9-2.0	May 30, 2019		Soil	S19-My49828				X											
78	MW03 2.9-3.0	May 30, 2019		Soil	S19-My49829				X											
79	MW03 3.9-4.0	May 30, 2019		Soil	S19-My49830				X											
80	MW03 4.9-5.0	May 30, 2019		Soil	S19-My49831				X											
81	MW03 5.9-6.0	May 30, 2019		Soil	S19-My49832				X											

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
82	MW03 6.9-7.0	May 30, 2019		Soil	S19-My49833				X											
83	MW03 7.9-8.0	May 30, 2019		Soil	S19-My49834						X			X		X	X		X	
Test Counts						32	1	1	36	2	33	19	19	33	2	18	41	2	18	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure, April 2011 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. 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 5.2 2018
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.2 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Benzene	mg/kg	< 0.1			0.1	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB*	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Cation Exchange Capacity							
Cation Exchange Capacity	meq/100g	< 0.05			0.05	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	%	70			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	104			70-130	Pass	
1.1.1-Trichloroethane	%	102			70-130	Pass	
1.2-Dichlorobenzene	%	112			70-130	Pass	
1.2-Dichloroethane	%	102			70-130	Pass	
Benzene	%	99			70-130	Pass	
Ethylbenzene	%	112			70-130	Pass	
m&p-Xylenes	%	104			70-130	Pass	
o-Xylene	%	103			70-130	Pass	
Toluene	%	95			70-130	Pass	
Trichloroethene	%	97			70-130	Pass	
Xylenes - Total	%	104			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	110			70-130	Pass	
TRH >C10-C16	%	72			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	111			70-130	Pass	
Acenaphthylene	%	117			70-130	Pass	
Anthracene	%	119			70-130	Pass	
Benz(a)anthracene	%	121			70-130	Pass	
Benzo(a)pyrene	%	119			70-130	Pass	
Benzo(b&j)fluoranthene	%	126			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(g.h.i)perylene	%	127			70-130	Pass	
Benzo(k)fluoranthene	%	114			70-130	Pass	
Chrysene	%	117			70-130	Pass	
Dibenz(a.h)anthracene	%	130			70-130	Pass	
Fluoranthene	%	119			70-130	Pass	
Fluorene	%	118			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	129			70-130	Pass	
Naphthalene	%	113			70-130	Pass	
Phenanthrene	%	119			70-130	Pass	
Pyrene	%	117			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
4.4'-DDE	%	122			70-130	Pass	
4.4'-DDT	%	115			70-130	Pass	
a-BHC	%	120			70-130	Pass	
Aldrin	%	120			70-130	Pass	
b-BHC	%	112			70-130	Pass	
d-BHC	%	121			70-130	Pass	
Dieldrin	%	120			70-130	Pass	
Endosulfan I	%	119			70-130	Pass	
Endosulfan II	%	123			70-130	Pass	
Endosulfan sulphate	%	122			70-130	Pass	
Endrin	%	115			70-130	Pass	
Endrin aldehyde	%	118			70-130	Pass	
Endrin ketone	%	114			70-130	Pass	
g-BHC (Lindane)	%	120			70-130	Pass	
Heptachlor	%	120			70-130	Pass	
Heptachlor epoxide	%	124			70-130	Pass	
Hexachlorobenzene	%	112			70-130	Pass	
Methoxychlor	%	112			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	95			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	100			70-130	Pass	
Cadmium	%	98			70-130	Pass	
Chromium	%	104			70-130	Pass	
Copper	%	102			70-130	Pass	
Lead	%	102			70-130	Pass	
Mercury	%	98			70-130	Pass	
Nickel	%	104			70-130	Pass	
Zinc	%	102			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-My49741	CP	%	87			70-130	Pass	
Cadmium	S19-My49741	CP	%	93			70-130	Pass	
Chromium	S19-My49741	CP	%	71			70-130	Pass	
Copper	S19-My49741	CP	%	93			70-130	Pass	
Lead	S19-My49741	CP	%	87			70-130	Pass	
Mercury	S19-My49741	CP	%	109			70-130	Pass	
Nickel	S19-My49741	CP	%	75			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	S19-My49786	CP	%	108			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S19-My49787	CP	%	125			70-130	Pass	
Acenaphthylene	S19-My49787	CP	%	125			70-130	Pass	
Anthracene	S19-My49787	CP	%	124			70-130	Pass	
Benz(a)anthracene	S19-My49787	CP	%	125			70-130	Pass	
Benzo(a)pyrene	S19-My49787	CP	%	126			70-130	Pass	
Benzo(k)fluoranthene	S19-My49787	CP	%	120			70-130	Pass	
Chrysene	S19-My49787	CP	%	127			70-130	Pass	
Dibenz(a.h)anthracene	S19-My49787	CP	%	130			70-130	Pass	
Fluoranthene	S19-My49787	CP	%	121			70-130	Pass	
Fluorene	S19-My49787	CP	%	126			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S19-My49787	CP	%	130			70-130	Pass	
Naphthalene	S19-My49787	CP	%	128			70-130	Pass	
Phenanthrene	S19-My49787	CP	%	124			70-130	Pass	
Pyrene	S19-My49787	CP	%	121			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	S19-My49731	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S19-My49731	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S19-My49731	CP	mg/kg	130	150	9.0	30%	Pass	
TRH C29-C36	S19-My49731	CP	mg/kg	110	110	3.0	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzene	S19-My49731	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Bromobenzene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Carbon disulfide	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S19-My49731	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Iodomethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	S19-My49731	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methylene Chloride	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
o-Xylene	S19-My49731	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Styrene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S19-My49731	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1.2-Dichloroethene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes - Total	S19-My49731	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S19-My49731	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S19-My49731	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S19-My49731	CP	mg/kg	210	220	8.0	30%	Pass	
TRH >C34-C40	S19-My49731	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-My49731	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-My49740	CP	mg/kg	15	11	<1	30%	Pass	
Cadmium	S19-My49740	CP	mg/kg	2.0	1.7	16	30%	Pass	
Chromium	S19-My49740	CP	mg/kg	160	140	11	30%	Pass	
Copper	S19-My49740	CP	mg/kg	250	260	4.0	30%	Pass	
Lead	S19-My49740	CP	mg/kg	1100	400	<1	30%	Pass	
Mercury	S19-My49740	CP	mg/kg	0.2	0.2	18	30%	Pass	
Nickel	S19-My49740	CP	mg/kg	180	180	2.0	30%	Pass	
Zinc	S19-My49740	CP	mg/kg	1200	1000	13	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (1:5 aqueous extract at 25°C as rec.)	S19-My49743	CP	uS/cm	94	58	39	30%	Fail	Q15
pH (1:5 Aqueous extract at 25°C as rec.)	S19-My49743	CP	pH Units	7.1	7.3	Pass	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S19-My49786	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S19-My49786	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S19-My49786	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S19-My49786	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S19-My49786	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S19-My49786	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-My49786	CP	mg/kg	< 0.5	< 0.5	<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
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins | mgt's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Nibha Vaidya	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Emily Rosenberg	Senior Analyst-Metal (VIC)
Gabriele Cordero	Senior Analyst-Inorganic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
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.

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: **Chris Kauffman**

Report **658838-W**
Project name CLUNIES ROSS ST
Project ID 56425
Received Date May 31, 2019

Client Sample ID			**RIN01**	[R20]**TS**	**TB**
Sample Matrix			**Water**	**Water**	**Water**
Eurofins | mgt Sample No.			**S19-My49805**	**S19-My49806**	**S19-My49807**
Date Sampled			**May 30, 2019**	**May 30, 2019**	**May 30, 2019**
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	-	-
TRH C10-C14	0.05	mg/L	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-
TRH C10-36 (Total)	0.1	mg/L	< 0.1	-	-
BTEX					
Benzene	0.001	mg/L	< 0.001	100	< 0.001
Toluene	0.001	mg/L	< 0.001	98	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	99	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	96	< 0.002
o-Xylene	0.001	mg/L	< 0.001	99	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	97	< 0.003
4-Bromofluorobenzene (surr.)	1	%	95	67	87
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.01	mg/L	< 0.01	-	-
TRH C6-C10	0.02	mg/L	< 0.02	-	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	-
TRH >C10-C16	0.05	mg/L	< 0.05	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-	-
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	-	-

Client Sample ID			RIN01	[R20]TS	TB
Sample Matrix			**Water**	**Water**	**Water**
Eurofins | mgt Sample No.			**S19-My49805**	**S19-My49806**	**S19-My49807**
Date Sampled			**May 30, 2019**	**May 30, 2019**	**May 30, 2019**
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
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	%	69	-	-
p-Terphenyl-d14 (surr.)	1	%	75	-	-
Organochlorine Pesticides					
Chlordanes - Total	0.001	mg/L	< 0.001	-	-
4.4'-DDD	0.0001	mg/L	< 0.0001	-	-
4.4'-DDE	0.0001	mg/L	< 0.0001	-	-
4.4'-DDT	0.0001	mg/L	< 0.0001	-	-
a-BHC	0.0001	mg/L	< 0.0001	-	-
Aldrin	0.0001	mg/L	< 0.0001	-	-
b-BHC	0.0001	mg/L	< 0.0001	-	-
d-BHC	0.0001	mg/L	< 0.0001	-	-
Dieldrin	0.0001	mg/L	< 0.0001	-	-
Endosulfan I	0.0001	mg/L	< 0.0001	-	-
Endosulfan II	0.0001	mg/L	< 0.0001	-	-
Endosulfan sulphate	0.0001	mg/L	< 0.0001	-	-
Endrin	0.0001	mg/L	< 0.0001	-	-
Endrin aldehyde	0.0001	mg/L	< 0.0001	-	-
Endrin ketone	0.0001	mg/L	< 0.0001	-	-
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	-	-
Heptachlor	0.0001	mg/L	< 0.0001	-	-
Heptachlor epoxide	0.0001	mg/L	< 0.0001	-	-
Hexachlorobenzene	0.0001	mg/L	< 0.0001	-	-
Methoxychlor	0.0001	mg/L	< 0.0001	-	-
Toxaphene	0.01	mg/L	< 0.01	-	-
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.0001	-	-
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001	-	-
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001	-	-
Dibutylchlorendate (surr.)	1	%	INT	-	-
Tetrachloro-m-xylene (surr.)	1	%	INT	-	-
Polychlorinated Biphenyls					
Aroclor-1016	0.005	mg/L	< 0.005	-	-
Aroclor-1221	0.001	mg/L	< 0.001	-	-
Aroclor-1232	0.005	mg/L	< 0.005	-	-
Aroclor-1242	0.005	mg/L	< 0.005	-	-
Aroclor-1248	0.005	mg/L	< 0.005	-	-
Aroclor-1254	0.005	mg/L	< 0.005	-	-
Aroclor-1260	0.005	mg/L	< 0.005	-	-
Total PCB*	0.001	mg/L	< 0.001	-	-
Dibutylchlorendate (surr.)	1	%	INT	-	-
Tetrachloro-m-xylene (surr.)	1	%	INT	-	-

Client Sample ID			RIN01	R20TS	TB
Sample Matrix			**Water**	**Water**	**Water**
Eurofins | mgt Sample No.			**S19-My49805**	**S19-My49806**	**S19-My49807**
Date Sampled			**May 30, 2019**	**May 30, 2019**	**May 30, 2019**
Test/Reference	LOR	Unit			
Heavy Metals					
Arsenic	0.001	mg/L	< 0.001	-	-
Cadmium	0.0002	mg/L	< 0.0002	-	-
Chromium	0.001	mg/L	< 0.001	-	-
Copper	0.001	mg/L	< 0.001	-	-
Lead	0.001	mg/L	< 0.001	-	-
Mercury	0.0001	mg/L	< 0.0001	-	-
Nickel	0.001	mg/L	< 0.001	-	-
Zinc	0.005	mg/L	< 0.005	-	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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

Description	Testing Site	Extracted	Holding Time
JBS&G Suite 2			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	May 31, 2019	7 Day
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	May 31, 2019	14 Day
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 31, 2019	7 Day
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 31, 2019	7 Day
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	May 31, 2019	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	May 31, 2019	7 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	May 31, 2019	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Metals M8	Sydney	May 31, 2019	28 Day
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

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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: CLUNIES ROSS ST
Project ID: 56425

Order No.:
Report #: 658838
Phone: 02 8245 0300
Fax:

Received: May 31, 2019 5:28 PM
Due: Jun 4, 2019
Priority: 2 Day
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
External Laboratory																				
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**															
1	SS01	May 30, 2019		Soil	S19-My49731	X					X	X	X	X		X	X		X	
2	SS02	May 30, 2019		Soil	S19-My49732	X					X	X	X	X		X	X		X	
3	SS03	May 30, 2019		Soil	S19-My49733	X					X			X			X			
4	SS04	May 30, 2019		Soil	S19-My49734	X					X			X			X			
5	SS05	May 30, 2019		Soil	S19-My49735	X					X	X	X	X			X			
6	EMB1	May 30, 2019		Soil	S19-My49736	X					X	X	X	X		X	X		X	
7	FRAG01	May 30, 2019		Building Materials	S19-My49737		X													
8	HA01	May 30, 2019		Soil	S19-My49738	X					X			X			X			
9	HA02	May 30, 2019		Soil	S19-My49739	X					X	X	X	X		X	X		X	

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Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
10	HA03	May 30, 2019		Soil	S19-My49740	X					X	X	X	X		X	X		X	
11	HA04	May 30, 2019		Soil	S19-My49741	X					X			X			X			
12	TP01 0-0.1	May 30, 2019		Soil	S19-My49742	X					X	X	X	X		X	X		X	
13	TP01 0.3-0.4	May 30, 2019		Soil	S19-My49743					X							X	X		
14	TP01 1-1.1	May 30, 2019		Soil	S19-My49744											X	X		X	
15	TP01 1.4-1.5	May 30, 2019		Soil	S19-My49745					X							X	X		
16	TP02 0-0.1	May 30, 2019		Soil	S19-My49746	X						X	X				X			
17	TP02 0.5-0.6	May 30, 2019		Soil	S19-My49747				X											
18	TP02 1-1.1	May 30, 2019		Soil	S19-My49748						X			X			X			
19	TP02 2-2.1	May 30, 2019		Soil	S19-My49749				X											
20	TP02 2.4-2.5	May 30, 2019		Soil	S19-My49771				X											
21	TP03 0-0.1	May 30, 2019		Soil	S19-My49772	X					X			X			X			

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Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
22	TP03 0.5-0.6	May 30, 2019		Soil	S19-My49773				X											
23	TP03 1-1.1	May 30, 2019		Soil	S19-My49774				X											
24	TP03 2-2.1	May 30, 2019		Soil	S19-My49775				X											
25	TP04 0-0.1	May 30, 2019		Soil	S19-My49776	X					X	X	X	X		X	X		X	
26	TP04 0.5-0.6	May 30, 2019		Soil	S19-My49777	X					X			X			X			
27	TP04 1-1.1	May 30, 2019		Soil	S19-My49778				X											
28	TP05 0-0.1	May 30, 2019		Soil	S19-My49779	X					X			X			X			
29	TP05 1-1.1	May 30, 2019		Soil	S19-My49780			X												
30	TP05 2-2.2	May 30, 2019		Soil	S19-My49781							X	X				X			
31	TP05 2.4-2.5	May 30, 2019		Soil	S19-My49782				X											
32	TP06 0-0.1	May 30, 2019		Soil	S19-My49783	X					X	X	X	X		X	X		X	
33	TP06 1-1.1	May 30, 2019		Soil	S19-My49784				X											

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Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
34	TP06 1.4-1.5	May 30, 2019		Soil	S19-My49785						X			X			X			
35	TP07 0-0.1	May 30, 2019		Soil	S19-My49786	X					X	X	X	X		X	X		X	
36	TP08 0-0.1	May 30, 2019		Soil	S19-My49787	X					X			X			X			
37	TP09 0-0.1	May 30, 2019		Soil	S19-My49788				X											
38	TP09 0.4-0.5	May 30, 2019		Soil	S19-My49789	X					X			X			X			
39	TP09 0.9-1.0	May 30, 2019		Soil	S19-My49790				X											
40	TP10 0-0.1	May 30, 2019		Soil	S19-My49791	X					X			X			X			
41	TP10 0.4-0.5	May 30, 2019		Soil	S19-My49792				X											
42	TP10 1-1.1	May 30, 2019		Soil	S19-My49793	X					X	X	X	X		X	X		X	
43	TP11 0-0.1	May 30, 2019		Soil	S19-My49794	X					X			X			X			
44	TP11 0.3-0.4	May 30, 2019		Soil	S19-My49795											X	X		X	
45	TP11 1-1.1	May 30, 2019		Soil	S19-My49796				X											

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Priority: 2 Day
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
46	TP11 2-2.1	May 30, 2019		Soil	S19-My49797				X											
47	TP11 2.7-2.8	May 30, 2019		Soil	S19-My49798	X					X			X			X			
48	TP12 0-0.1	May 30, 2019		Soil	S19-My49799	X					X	X	X	X		X	X		X	
49	TP12 0.5-0.6	May 30, 2019		Soil	S19-My49800	X					X			X			X			
50	TP12 1-1.1	May 30, 2019		Soil	S19-My49801				X											
51	TP12 1.4-1.5	May 30, 2019		Soil	S19-My49802				X											
52	QA01	May 30, 2019		Soil	S19-My49803	X					X	X	X	X		X	X		X	
53	QA02	May 30, 2019		Soil	S19-My49804	X					X	X	X	X		X	X		X	
54	RIN01	May 30, 2019		Water	S19-My49805															X
55	TS	May 30, 2019		Water	S19-My49806										X					
56	TB	May 30, 2019		Water	S19-My49807										X					
57	MW01 0-0.1	May 30, 2019		Soil	S19-My49808	X						X	X			X	X		X	

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

Project Name: CLUNIES ROSS ST
Project ID: 56425

Order No.:
Report #: 658838
Phone: 02 8245 0300
Fax:

Received: May 31, 2019 5:28 PM
Due: Jun 4, 2019
Priority: 2 Day
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Volatile Organics	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	JBS&G Suite 2
Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
58	MW01 0.9-1.0	May 30, 2019		Soil	S19-My49809				X											
59	MW01 1.9-1.0	May 30, 2019		Soil	S19-My49810	X														
60	MW01 2.9-3.0	May 30, 2019		Soil	S19-My49811				X											
61	MW01 3.9-4.0	May 30, 2019		Soil	S19-My49812				X											
62	MW01 4.9-5.0	May 30, 2019		Soil	S19-My49813				X											
63	MW01 5.9-6.0	May 30, 2019		Soil	S19-My49814				X											
64	MW01 6.9-7.0	May 30, 2019		Soil	S19-My49815						X			X			X			
65	MW01 7.9-8.0	May 30, 2019		Soil	S19-My49816				X											
66	MW02 0-0.1	May 30, 2019		Soil	S19-My49817							X	X				X			
67	MW02 0.9-1.0	May 30, 2019		Soil	S19-My49818	X					X			X			X			
68	MW02 1.9-2.0	May 30, 2019		Soil	S19-My49819				X											
69	MW02 2.9-3.0	May 30, 2019		Soil	S19-My49820				X											

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
70	MW02 3.9-4.0	May 30, 2019		Soil	S19-My49821				X											
71	MW02 4.9-5.0	May 30, 2019		Soil	S19-My49822				X											
72	MW02 5.9-6.0	May 30, 2019		Soil	S19-My49823				X											
73	MW02 6.9-7.0	May 30, 2019		Soil	S19-My49824				X											
74	MW02 7.9-8.0	May 30, 2019		Soil	S19-My49825				X											
75	MW03 0-0.1	May 30, 2019		Soil	S19-My49826				X											
76	MW03 0.9-1.0	May 30, 2019		Soil	S19-My49827	X					X	X	X	X		X	X		X	
77	MW03 1.9-2.0	May 30, 2019		Soil	S19-My49828				X											
78	MW03 2.9-3.0	May 30, 2019		Soil	S19-My49829				X											
79	MW03 3.9-4.0	May 30, 2019		Soil	S19-My49830				X											
80	MW03 4.9-5.0	May 30, 2019		Soil	S19-My49831				X											
81	MW03 5.9-6.0	May 30, 2019		Soil	S19-My49832				X											

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Melbourne Laboratory - NATA Site # 1254 & 14271																		X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
82	MW03 6.9-7.0	May 30, 2019		Soil	S19-My49833				X											
83	MW03 7.9-8.0	May 30, 2019		Soil	S19-My49834						X			X		X	X		X	
Test Counts						32	1	1	36	2	33	19	19	33	2	18	41	2	18	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure, April 2011 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. 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 5.2 2018
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.2 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/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/L	< 0.005			0.005	Pass	
Aroclor-1221	mg/L	< 0.001			0.001	Pass	
Aroclor-1232	mg/L	< 0.005			0.005	Pass	
Aroclor-1242	mg/L	< 0.005			0.005	Pass	
Aroclor-1248	mg/L	< 0.005			0.005	Pass	
Aroclor-1254	mg/L	< 0.005			0.005	Pass	
Aroclor-1260	mg/L	< 0.005			0.005	Pass	
Total PCB*	mg/L	< 0.001			0.001	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	98			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C10-C14	%	74			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	101			70-130	Pass	
Toluene	%	102			70-130	Pass	
Ethylbenzene	%	104			70-130	Pass	
m&p-Xylenes	%	101			70-130	Pass	
o-Xylene	%	105			70-130	Pass	
Xylenes - Total	%	103			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	111			70-130	Pass	
TRH C6-C10	%	99			70-130	Pass	
TRH >C10-C16	%	74			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	94			70-130	Pass	
Acenaphthylene	%	95			70-130	Pass	
Anthracene	%	93			70-130	Pass	
Benz(a)anthracene	%	99			70-130	Pass	
Benzo(a)pyrene	%	97			70-130	Pass	
Benzo(b&j)fluoranthene	%	97			70-130	Pass	
Benzo(g.h.i)perylene	%	98			70-130	Pass	
Benzo(k)fluoranthene	%	95			70-130	Pass	
Chrysene	%	98			70-130	Pass	
Dibenz(a.h)anthracene	%	101			70-130	Pass	
Fluoranthene	%	85			70-130	Pass	
Fluorene	%	97			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	102			70-130	Pass	
Naphthalene	%	89			70-130	Pass	
Phenanthrene	%	87			70-130	Pass	
Pyrene	%	93			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	76			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S19-My49286	NCP	%	103			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S19-My49286	NCP	%	102			70-130	Pass	
Toluene	S19-My49286	NCP	%	104			70-130	Pass	
Ethylbenzene	S19-My49286	NCP	%	104			70-130	Pass	
m&p-Xylenes	S19-My49286	NCP	%	104			70-130	Pass	
o-Xylene	S19-My49286	NCP	%	108			70-130	Pass	
Xylenes - Total	S19-My49286	NCP	%	105			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S19-My49286	NCP	%	107			70-130	Pass	
TRH C6-C10	S19-My49286	NCP	%	103			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-My46113	NCP	%	100			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Cadmium	S19-My46113	NCP	%	97			70-130	Pass	
Chromium	S19-My46113	NCP	%	100			70-130	Pass	
Copper	S19-My46113	NCP	%	97			70-130	Pass	
Lead	S19-My46113	NCP	%	98			70-130	Pass	
Mercury	S19-My46113	NCP	%	99			70-130	Pass	
Nickel	S19-My46113	NCP	%	98			70-130	Pass	
Zinc	S19-My46113	NCP	%	96			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	S19-My49257	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S19-My49257	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S19-My49257	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S19-My49257	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S19-My49257	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S19-My49257	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	S19-My49257	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S19-My49257	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S19-My49257	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-My49805	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	S19-My49805	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S19-My49805	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	S19-My49805	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S19-My49805	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S19-My49805	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	S19-My49805	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
R20	This sample is a Trip Spike and therefore all results are reported as a percentage

Authorised By

Nibha Vaidya	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

017292

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: S6425	LABORATORY BATCH NO.: 659015
PROJECT NAME: Clunies Ross St	SAMPLERS: CK + MD
DATE NEEDED BY: 24 hour TAT	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) ckaufmann@jbsg.com.au; (3) mdelandro@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Asbestos	Lead	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
SS06	Soil	3.5.19		J+B		X			X	
SS07	↓	↓		↓		X			X	
BP-001	Material	4.6.19		Bag		X		X		
BP-002	↓	↓		↓		X		X		
BP-003						X		X		
BP-004							X			

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: MDelandro DATE: 4.6.19	CONSIGNMENT NOTE NO.	NAME: Grace DATE: 4/6	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

Melbourne
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Site # 1254 & 14271

Sydney
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NATA # 1261 Site # 18217

Brisbane
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NATA # 1261 Site # 20794

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

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**JBS & G Australia (NSW) P/L**
Contact name:	Chris Kauffman
Project name:	CLUNIES ROSS ST
Project ID:	56425
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Jun 4, 2019 3:26 PM
Eurofins | mgt reference:	**659015**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 12.3 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.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

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

Nibha Vaidya on Phone : +61 (2) 9900 8415 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to Chris Kauffman - ckauffman@jbsg.com.au.

Note: A copy of these results will also be delivered to the general JBS & G Australia (NSW) P/L email address.

ABN – 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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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: CLUNIES ROSS ST
Project ID: 56425

Order No.:
Report #: 659015
Phone: 02 8245 0300
Fax:

Received: Jun 4, 2019 3:26 PM
Due: Jun 5, 2019
Priority: 1 Day
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	Lead
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	SS06	Jun 03, 2019		Soil	S19-Jn01663	X		
2	SS07	Jun 03, 2019		Soil	S19-Jn01664	X		
3	BP-001	Jun 03, 2019		Building Materials	S19-Jn01665		X	
4	BP-002	Jun 03, 2019		Building Materials	S19-Jn01666		X	
5	BP-003	Jun 03, 2019		Building Materials	S19-Jn01667		X	
6	BP-004	Jun 03, 2019		Building Materials	S19-Jn01668			X
Test Counts						2	3	1

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:	Chris Kauffman
Report	659015-AID
Project Name	CLUNIES ROSS ST
Project ID	56425
Received Date	Jun 04, 2019
Date Reported	Jun 06, 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.*

Project Name CLUNIES ROSS ST
Project ID 56425
Date Sampled Jun 03, 2019
Report 659015-AID

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
SS06	19-Jn01663	Jun 03, 2019	Approximate Sample 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 respirable fibres detected.
SS07	19-Jn01664	Jun 03, 2019	Approximate Sample 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 respirable fibres detected.
BP-001	19-Jn01665	Jun 03, 2019	Approximate Sample 1g / 30x30x1mm Sample consisted of: Soft fibrous material	No asbestos detected. Synthetic mineral fibre detected.
BP-002	19-Jn01666	Jun 03, 2019	Approximate Sample 1g / 40x10x1mm Sample consisted of: Scraped fibrous plaster cement	No asbestos detected. Organic fibre detected.
BP-003	19-Jn01667	Jun 03, 2019	Approximate Sample 2g / 30x12x2mm Sample consisted of: Flexible floor covering material	No 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 (regarding both quality and NATA accreditation).

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Jun 04, 2019	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Jun 04, 2019	Indefinite

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web : www.eurofins.com.au

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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: CLUNIES ROSS ST
Project ID: 56425

Order No.:
Report #: 659015
Phone: 02 8245 0300
Fax:

Received: Jun 4, 2019 3:26 PM
Due: Jun 5, 2019
Priority: 1 Day
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	Lead
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	SS06	Jun 03, 2019		Soil	S19-Jn01663	X		
2	SS07	Jun 03, 2019		Soil	S19-Jn01664	X		
3	BP-001	Jun 03, 2019		Building Materials	S19-Jn01665		X	
4	BP-002	Jun 03, 2019		Building Materials	S19-Jn01666		X	
5	BP-003	Jun 03, 2019		Building Materials	S19-Jn01667		X	
6	BP-004	Jun 03, 2019		Building Materials	S19-Jn01668			X
Test Counts						2	3	1

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. 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

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:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Authorised by:

Charl Du Preez	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.

JBS & G Australia (NSW) P/L
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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: **Chris Kauffman**

Report **659015-S**
Project name CLUNIES ROSS ST
Project ID 56425
Received Date Jun 04, 2019

Client Sample ID			**BP-004**
Sample Matrix			**Building Materials**
Eurofins | mgt Sample No.			**S19-Jn01668**
Date Sampled			**Jun 03, 2019**
Test/Reference	LOR	Unit	
Heavy Metals			
Lead	5	mg/kg	< 5

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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

Description	Testing Site	Extracted	Holding Time
Heavy Metals	Sydney	Jun 05, 2019	180 Day

- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS

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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: CLUNIES ROSS ST
Project ID: 56425

Order No.:
Report #: 659015
Phone: 02 8245 0300
Fax:

Received: Jun 4, 2019 3:26 PM
Due: Jun 5, 2019
Priority: 1 Day
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	Lead
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	SS06	Jun 03, 2019		Soil	S19-Jn01663	X		
2	SS07	Jun 03, 2019		Soil	S19-Jn01664	X		
3	BP-001	Jun 03, 2019		Building Materials	S19-Jn01665		X	
4	BP-002	Jun 03, 2019		Building Materials	S19-Jn01666		X	
5	BP-003	Jun 03, 2019		Building Materials	S19-Jn01667		X	
6	BP-004	Jun 03, 2019		Building Materials	S19-Jn01668			X
Test Counts						2	3	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure, April 2011 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. 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 5.2 2018
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.2 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.

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

Authorised By

Nibha Vaidya	Analytical Services Manager
Gabriele Cordero	Senior Analyst-Metal (NSW)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

Enviro Sample NSW

To: Nibha Vaidya; COC NSW
Cc: Alena Bounkeua
Subject: RE: ****1 DAY TAT - FW: 658838: Clunies Ross St (56425) Test results

From: Christopher Kauffman [mailto:ckauffman@jbsg.com.au]
Sent: Wednesday, 5 June 2019 12:30 PM
To: Ursula Long
Cc: Nibha Vaidya; Ursula Long; Charl Du Preez
Subject: RE: 658838: Clunies Ross St (56425) Test results

Hi Ursula,

I need to schedule some additional analysis for this job as a high priority. Could you please let me know that you guys will be able to achieve this? And I not can we please have the appropriate samples couriered to envirolab?

Can we schedule **ASLP and TCLP for PAHs** on sample **SS05.**

Can we schedule **ASLP and TCLP for Heavy Metals** on samples **TP06 0-0.1** and **HA03**

We need these on a 24 hour tat.

Please let me know,

Kind regards,

Chris

From: Ursula Long <ursulalong85@gmail.com>
Sent: Tuesday, 4 June 2019 10:12 PM
To: Christopher Kauffman <ckauffman@jbsg.com.au>
Cc: Nibha Vaidya <nibhavaidya@eurofins.com>; ursulalong@eurofins.com
Subject: 658838: Clunies Ross St (56425) Test results

Dear Chris,

Please find attached results for report 658838.

Kind regards,

Ursula Long

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

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

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

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

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**JBS & G Australia (NSW) P/L**
Contact name:	Chris Kauffman
Project name:	ADDITIONAL - CLUNIES ROSS ST
Project ID:	56425
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Jun 5, 2019 12:30 PM
Eurofins | mgt reference:	**659182**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 3.5 degrees Celsius.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

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

Nibha Vaidya on Phone : +61 (2) 9900 8415 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to Chris Kauffman - ckauffman@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 | mgt

ABN – 50 005 085 521
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web : www.eurofins.com.au

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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: ADDITIONAL - CLUNIES ROSS ST
Project ID: 56425

Order No.:
Report #: 659182
Phone: 02 8245 0300
Fax:

Received: Jun 5, 2019 12:30 PM
Due: Jun 6, 2019
Priority: 1 Day
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Polycyclic Aromatic Hydrocarbons	AUS Leaching Procedure	USA Leaching Procedure	Metals M8
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X	X	X
Brisbane Laboratory - NATA Site # 20794									
Perth Laboratory - NATA Site # 23736									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	SS05	May 30, 2019		US Leachate	S19-Jn02674	X		X	
2	SS05	May 30, 2019		AUS Leachate	S19-Jn02675	X	X		
3	TP06 0-0.1	May 30, 2019		US Leachate	S19-Jn02676			X	X
4	TP06 0-0.1	May 30, 2019		AUS Leachate	S19-Jn02677		X		X
5	HA03	May 30, 2019		US Leachate	S19-Jn02678			X	X
6	HA03	May 30, 2019		AUS Leachate	S19-Jn02679		X		X
Test Counts						2	3	3	4

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: **Chris Kauffman**

Report **659182-L**
Project name ADDITIONAL - CLUNIES ROSS ST
Project ID 56425
Received Date Jun 05, 2019

Client Sample ID **Sample Matrix** **Eurofins | mgt Sample No.** **Date Sampled** Test/Reference	LOR	Unit	**SS05** **US Leachate** **S19-Jn02674** **May 30, 2019**	**SS05** **AUS Leachate** **S19-Jn02675** **May 30, 2019**	**TP06 0-0.1** **US Leachate** **S19-Jn02676** **May 30, 2019**	**TP06 0-0.1** **AUS Leachate** **S19-Jn02677** **May 30, 2019**
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	0.001	-	-
Benzo(a)pyrene	0.001	mg/L	0.002	0.002	-	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	0.002	0.003	-	-
Benzo(g.h.i)perylene	0.001	mg/L	0.002	0.003	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	0.001	-	-
Chrysene	0.001	mg/L	< 0.001	0.001	-	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	-	-
Fluoranthene	0.001	mg/L	0.002	0.003	-	-
Fluorene	0.001	mg/L	< 0.001	< 0.001	-	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	0.001	0.002	-	-
Naphthalene	0.001	mg/L	< 0.001	< 0.001	-	-
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	-	-
Pyrene	0.001	mg/L	0.002	0.003	-	-
Total PAH*	0.002	mg/L	0.011	0.019	-	-
2-Fluorobiphenyl (surr.)	1	%	71	143	-	-
p-Terphenyl-d14 (surr.)	1	%	62	122	-	-
Heavy Metals						
Arsenic	0.01	mg/L	-	-	< 0.01	< 0.01
Cadmium	0.005	mg/L	-	-	< 0.005	0.0006
Chromium	0.05	mg/L	-	-	< 0.05	0.80
Copper	0.05	mg/L	-	-	< 0.05	0.069
Lead	0.01	mg/L	-	-	< 0.01	0.007
Mercury	0.001	mg/L	-	-	< 0.001	< 0.0001
Nickel	0.01	mg/L	-	-	0.12	0.44
Zinc	0.05	mg/L	-	-	0.12	0.31
AUS Leaching Procedure						
Leachate Fluid[C01]		comment	-	4.0	-	4.0
pH (initial)	0.1	pH Units	-	7.2	-	7.3
pH (Leachate fluid)	0.1	pH Units	-	7.0	-	7.0
pH (off)	0.1	pH Units	-	6.5	-	8.9

Client Sample ID			SS05	SS05	TP06 0-0.1	TP06 0-0.1
Sample Matrix			**US Leachate**	**AUS Leachate**	**US Leachate**	**AUS Leachate**
Eurofins | mgt Sample No.			**S19-Jn02674**	**S19-Jn02675**	**S19-Jn02676**	**S19-Jn02677**
Date Sampled			**May 30, 2019**	**May 30, 2019**	**May 30, 2019**	**May 30, 2019**
Test/Reference	LOR	Unit				
USA Leaching Procedure						
Leachate Fluid[C01]		comment	1	-	1	-
pH (initial)	0.1	pH Units	7.0	-	7.0	-
pH (off)	0.1	pH Units	5.3	-	5.2	-
pH (USA HCl addition)	0.1	pH Units	2	-	2	-

Client Sample ID			HA03	HA03
Sample Matrix			**US Leachate**	**AUS Leachate**
Eurofins | mgt Sample No.			**S19-Jn02678**	**S19-Jn02679**
Date Sampled			**May 30, 2019**	**May 30, 2019**
Test/Reference	LOR	Unit		
Heavy Metals				
Arsenic	0.01	mg/L	< 0.01	< 0.01
Cadmium	0.005	mg/L	0.006	0.0005
Chromium	0.05	mg/L	< 0.05	0.17
Copper	0.05	mg/L	0.09	0.11
Lead	0.01	mg/L	0.03	0.23
Mercury	0.001	mg/L	< 0.001	0.0002
Nickel	0.01	mg/L	0.05	0.095
Zinc	0.05	mg/L	1.8	0.67
AUS Leaching Procedure				
Leachate Fluid[C01]		comment	-	4.0
pH (initial)	0.1	pH Units	-	6.9
pH (Leachate fluid)	0.1	pH Units	-	7.0
pH (off)	0.1	pH Units	-	6.1
USA Leaching Procedure				
Leachate Fluid[C01]		comment	1	-
pH (initial)	0.1	pH Units	6.6	-
pH (off)	0.1	pH Units	5.2	-
pH (USA HCl addition)	0.1	pH Units	2	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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

Description	Testing Site	Extracted	Holding Time
Polycyclic Aromatic Hydrocarbons	Sydney	Jun 05, 2019	7 Days
- Method:			
Metals M8	Sydney	Jun 06, 2019	28 Day
- Method:			
AUS Leaching Procedure	Sydney	Jun 05, 2019	7 Days
- Method:			
USA Leaching Procedure	Sydney	Jun 05, 2019	14 Day
- Method:			

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Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**		**Received:**	Jun 5, 2019 12:30 PM
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	659182	**Due:**	Jun 6, 2019
		Phone:	02 8245 0300	**Priority:**	1 Day
		Fax:		**Contact Name:**	Chris Kauffman
Project Name:	ADDITIONAL - CLUNIES ROSS ST				
Project ID:	56425				

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Polycyclic Aromatic Hydrocarbons	AUS Leaching Procedure	USA Leaching Procedure	Metals M8
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X	X	X
Brisbane Laboratory - NATA Site # 20794									
Perth Laboratory - NATA Site # 23736									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	SS05	May 30, 2019		US Leachate	S19-Jn02674	X		X	
2	SS05	May 30, 2019		AUS Leachate	S19-Jn02675	X	X		
3	TP06 0-0.1	May 30, 2019		US Leachate	S19-Jn02676			X	X
4	TP06 0-0.1	May 30, 2019		AUS Leachate	S19-Jn02677		X		X
5	HA03	May 30, 2019		US Leachate	S19-Jn02678			X	X
6	HA03	May 30, 2019		AUS Leachate	S19-Jn02679		X		X
Test Counts						2	3	3	4

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, April 2011 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. 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 5.2 2018
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.2 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							
Heavy Metals							
Arsenic	mg/L	< 0.01			0.01	Pass	
Cadmium	mg/L	< 0.005			0.005	Pass	
Chromium	mg/L	< 0.05			0.05	Pass	
Copper	mg/L	< 0.05			0.05	Pass	
Lead	mg/L	< 0.01			0.01	Pass	
Mercury	mg/L	< 0.001			0.001	Pass	
Nickel	mg/L	< 0.01			0.01	Pass	
Zinc	mg/L	< 0.05			0.05	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	96			70-130	Pass	
Cadmium	%	93			70-130	Pass	
Chromium	%	98			70-130	Pass	
Copper	%	97			70-130	Pass	
Lead	%	93			70-130	Pass	
Mercury	%	101			70-130	Pass	
Nickel	%	98			70-130	Pass	
Zinc	%	94			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-Jn02679	CP	%	92			70-130	Pass	
Cadmium	S19-Jn02679	CP	%	94			70-130	Pass	
Chromium	S19-Jn02679	CP	%	97			70-130	Pass	
Copper	S19-Jn02679	CP	%	97			70-130	Pass	
Lead	S19-Jn02679	CP	%	107			70-130	Pass	
Mercury	S19-Jn02679	CP	%	110			70-130	Pass	
Nickel	S19-Jn02679	CP	%	96			70-130	Pass	
Zinc	S19-Jn02679	CP	%	112			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Jn02114	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Cadmium	S19-Jn02114	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chromium	S19-Jn02114	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Copper	S19-Jn02114	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Lead	S19-Jn02114	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Mercury	S19-Jn02114	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Nickel	S19-Jn02114	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Zinc	S19-Jn02114	NCP	mg/L	0.05	0.05	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

Nibha Vaidya	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

017294

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: S6425	LABORATORY BATCH NO.:
PROJECT NAME: Cunles Ross Street	SAMPLERS: CK + DH
DATE NEEDED BY: Same day	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) ckaufmen@jbsg.com.au; (3) ncwiren@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Same day - Before 9am Monday

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Asbestos	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
AQ01 0-0.6	So.1	14.6.19		B		X		X	
AQ01 0.6-1.6	↓	↓		↓					
AQ02 0.3-1.0						X		X	
↓ 1.0-1.5									
AQ03 0.1-0.95						X		X	
AQ04 0-0.6						X		X	
↓ 0.6-1.5									
AQ05 0-0.1						X		X	
0.1-1.1									
1.1-2.1									
↓ 2.4-3.0						X		X	
AQ06 0.4-1.1						X		X	
↓ 1.1-1.7									
AQ07 0-0.2						X		X	
↓ 0.4-1.2									
1.2-2.1									
AQ08 0-0.9						X		X	
↓ 0.9-1.6						X		X	
AQ09 0-0.3	↓	↓		↓		X		X	

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: C.K DATE: 14.6.19	CONSIGNMENT NOTE NO.	NAME: Lena D. 14/06/19	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	DATE: OF: Envirolab 5:26 pm	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

660830

017295

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: SG425	LABORATORY BATCH NO.:
PROJECT NAME: Clunes Ross Street	SAMPLERS: CK + DH
DATE NEEDED BY: Same Day	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) ...chaseturner.....@jbsg.com.au; (3) ...ncousien.....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Same day (before 9am monday)

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Asbestos	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
AQ09 0.3-1.3	Soil	14.6.19		B		X		X	
↓ 1.5-2.1	↓			↓		X		↓	
AQ10 0-0.4						X			
↓ 0.4-1.0						X			
AQ11 0-0.6						X			
↓ 0.6-1.0						X			
AQ12 0-0.1						X			
↓ 0.1-1.1						X			
AQ13 0-0.6						X			
↓ 0.6-1.0						X			
AQ14 0-1.0						X			
↓ 1-1.5						X			
AQ15 0-0.5						X			
0.5-1.5						X		↓	
QC03									
QA03	↓			↓					

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: CK DATE: 14.6.19	CONSIGNMENT NOTE NO.	NAME: Lina D DATE: 14/06/19	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF: Eurofins mgt 5:20 pm	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

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

IMSO FormsO13 – Chain of Custody - Generic

#660820

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

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

Brisbane
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Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
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Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**JBS & G Australia (NSW) P/L**
Contact name:	Chris Kauffman
Project name:	CLUNIES ROSS STREET
Project ID:	56425
COC number:	Not provided
Turn around time:	Overnight
Date/Time received:	Jun 14, 2019 5:26 PM
Eurofins | mgt reference:	**660830**

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.

N/A Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

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

Nibha Vaidya on Phone : +61 (2) 9900 8415 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to Chris Kauffman - ckauffman@jbsg.com.au.

Note: A copy of these results will also be delivered to the general JBS & G Australia (NSW) P/L email address.

ABN – 50 005 085 521
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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: CLUNIES ROSS STREET
Project ID: 56425

Order No.:
Report #: 660830
Phone: 02 8245 0300
Fax:

Received: Jun 14, 2019 5:26 PM
Due: Jun 17, 2019
Priority: Overnight
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	AQ01 0-0.6	Jun 14, 2019		Soil	S19-Jn16196	X	
2	AQ02 0.3-1.0	Jun 14, 2019		Soil	S19-Jn16197	X	
3	AQ03 0.1-0.95	Jun 14, 2019		Soil	S19-Jn16198	X	
4	AQ04 0-0.6	Jun 14, 2019		Soil	S19-Jn16199	X	
5	AQ05 0-0.1	Jun 14, 2019		Soil	S19-Jn16200	X	
6	AQ05 2.4-3.0	Jun 14, 2019		Soil	S19-Jn16201	X	
7	AQ06 0.4-1.1	Jun 14, 2019		Soil	S19-Jn16202	X	
8	AQ07 0-0.2	Jun 14, 2019		Soil	S19-Jn16203	X	
9	AQ08 0-0.9	Jun 14, 2019		Soil	S19-Jn16204	X	

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Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
10	AQ08 0.9-1.6	Jun 14, 2019		Soil	S19-Jn16205	X	
11	AQ09 0-0.3	Jun 14, 2019		Soil	S19-Jn16206	X	
12	AQ09 0.3-1.3	Jun 14, 2019		Soil	S19-Jn16207	X	
13	AQ09 1.5-2.1	Jun 14, 2019		Soil	S19-Jn16208	X	
14	AQ10 0-0.4	Jun 14, 2019		Soil	S19-Jn16209	X	
15	AQ10 0.4-1.0	Jun 14, 2019		Soil	S19-Jn16210	X	
16	AQ11 0-0.6	Jun 14, 2019		Soil	S19-Jn16211	X	
17	AQ12 0-0.1	Jun 14, 2019		Soil	S19-Jn16212	X	
18	AQ12 0.1-1.1	Jun 14, 2019		Soil	S19-Jn16213	X	
19	AQ13 0-0.6	Jun 14, 2019		Soil	S19-Jn16214	X	
20	AQ13 0.6-1.0	Jun 14, 2019		Soil	S19-Jn16215	X	
21	AQ14 0-1.0	Jun 14, 2019		Soil	S19-Jn16216	X	

eurofins | mgt

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Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
22	AQ14 1-1.5	Jun 14, 2019		Soil	S19-Jn16217	X	
23	AQ15 0-0.5	Jun 14, 2019		Soil	S19-Jn16218	X	
24	AQ15 0.5-1.5	Jun 14, 2019		Soil	S19-Jn16219	X	
25	AQ01 0.6-1.6	Jun 14, 2019		Soil	S19-Jn16220		X
26	AQ02 1.0-1.5	Jun 14, 2019		Soil	S19-Jn16221		X
27	AQ04 0.6-1.5	Jun 14, 2019		Soil	S19-Jn16222		X
28	AQ05 0.1-1.1	Jun 14, 2019		Soil	S19-Jn16223		X
29	AQ05 1.1-2.1	Jun 14, 2019		Soil	S19-Jn16224		X
30	AQ06 1.1-1.7	Jun 14, 2019		Soil	S19-Jn16225		X
31	AQ07 0.4-1.2	Jun 14, 2019		Soil	S19-Jn16226		X
32	AQ07 1.2-2.1	Jun 14, 2019		Soil	S19-Jn16227		X
33	QC03	Jun 14, 2019		Soil	S19-Jn16228		X

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Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	660830	**Due:**	Jun 17, 2019
		Phone:	02 8245 0300	**Priority:**	Overnight
		Fax:		**Contact Name:**	Chris Kauffman
Project Name:	CLUNIES ROSS STREET				
Project ID:	56425				

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
34	QA03	Jun 14, 2019		Soil	S19-Jn16229		X
35	AQ11 0.6-1.0	Jun 14, 2019		Soil	S19-Jn16237	X	
Test Counts						25	10

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:	Chris Kauffman
Report	660830-AID
Project Name	CLUNIES ROSS STREET
Project ID	56425
Received Date	Jun 14, 2019
Date Reported	Jun 17, 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.*

Project Name CLUNIES ROSS STREET
Project ID 56425
Date Sampled Jun 14, 2019
Report 660830-AID

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
AQ01 0-0.6	19-Jn16196	Jun 14, 2019	Approximate Sample 582g 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 respirable fibres detected.
AQ02 0.3-1.0	19-Jn16197	Jun 14, 2019	Approximate Sample 495g 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 respirable fibres detected.
AQ03 0.1-0.95	19-Jn16198	Jun 14, 2019	Approximate Sample 598g 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 respirable fibres detected.
AQ04 0-0.6	19-Jn16199	Jun 14, 2019	Approximate Sample 553g 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 respirable fibres detected.
AQ05 0-0.1	19-Jn16200	Jun 14, 2019	Approximate Sample 585g 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 respirable fibres detected.
AQ05 2.4-3.0	19-Jn16201	Jun 14, 2019	Approximate Sample 612g 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 respirable fibres detected.
AQ06 0.4-1.1	19-Jn16202	Jun 14, 2019	Approximate Sample 773g 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 respirable fibres detected.
AQ07 0-0.2	19-Jn16203	Jun 14, 2019	Approximate Sample 458g 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 respirable fibres detected.

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
AQ08 0-0.9	19-Jn16204	Jun 14, 2019	Approximate Sample 670g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
AQ08 0.9-1.6	19-Jn16205	Jun 14, 2019	Approximate Sample 630g Sample consisted of: Grey coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
AQ09 0-0.3	19-Jn16206	Jun 14, 2019	Approximate Sample 448g 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 respirable fibres detected.
AQ09 0.3-1.3	19-Jn16207	Jun 14, 2019	Approximate Sample 697g 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 respirable fibres detected.
AQ09 1.5-2.1	19-Jn16208	Jun 14, 2019	Approximate Sample 720g 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 respirable fibres detected.
AQ10 0-0.4	19-Jn16209	Jun 14, 2019	Approximate Sample 644g Sample consisted of: Brown coarse-grained soil, rocks, fragments of glass and corroded metal	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
AQ10 0.4-1.0	19-Jn16210	Jun 14, 2019	Approximate Sample 625g Sample consisted of: Brown coarse-grained soil and rocks	AF: Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of AF = 0.0040g Estimated asbestos content in AF = 0.0010g* Total estimated asbestos concentration in AF = 0.00016% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
AQ11 0-0.6	19-Jn16211	Jun 14, 2019	Approximate Sample 740g 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 respirable fibres detected.
AQ12 0-0.1	19-Jn16212	Jun 14, 2019	Approximate Sample 586g 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 respirable fibres detected.
AQ12 0.1-1.1	19-Jn16213	Jun 14, 2019	Approximate Sample 640g 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 respirable fibres detected.
AQ13 0-0.6	19-Jn16214	Jun 14, 2019	Approximate Sample 708g Sample consisted of: Brown coarse-grained soil, rocks and fragments of glass	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
AQ13 0.6-1.0	19-Jn16215	Jun 14, 2019	Approximate Sample 672g Sample consisted of: Brown coarse-grained soil and rocks	AF: Chrysotile asbestos detected in fibre cement fragments and in the form of loose fibre bundles. Approximate raw weight of AF = 0.024g* Estimated asbestos content in AF = 0.011g* Total estimated asbestos concentration in AF = 0.0016% w/w* Organic fibre detected. No respirable fibres detected.
AQ14 0-1.0	19-Jn16216	Jun 14, 2019	Approximate Sample 711g 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 respirable fibres detected.
AQ14 1-1.5	19-Jn16217	Jun 14, 2019	Approximate Sample 720g 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 respirable fibres detected.
AQ15 0-0.5	19-Jn16218	Jun 14, 2019	Approximate Sample 667g Sample consisted of: Brown coarse-grained soil, rocks, glass and corroded metal fragments	AF: Chrysotile asbestos detected in the form of loose fibre bundles. Approximate raw weight of AF = 0.0040g* Estimated asbestos content in AF = 0.0040g* Total estimated asbestos concentration in AF = 0.00060% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
AQ15 0.5-1.5	19-Jn16219	Jun 14, 2019	Approximate Sample 434g 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 respirable fibres detected.
AQ11 0.6-1.0	19-Jn16237	Jun 14, 2019	Approximate Sample 708g 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 respirable fibres 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 (regarding both quality and NATA accreditation).

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Jun 14, 2019	Indefinite

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Project ID: 56425

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Perth Laboratory - NATA Site # 23736							
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3	AQ03 0.1-0.95	Jun 14, 2019		Soil	S19-Jn16198	X	
4	AQ04 0-0.6	Jun 14, 2019		Soil	S19-Jn16199	X	
5	AQ05 0-0.1	Jun 14, 2019		Soil	S19-Jn16200	X	
6	AQ05 2.4-3.0	Jun 14, 2019		Soil	S19-Jn16201	X	
7	AQ06 0.4-1.1	Jun 14, 2019		Soil	S19-Jn16202	X	
8	AQ07 0-0.2	Jun 14, 2019		Soil	S19-Jn16203	X	
9	AQ08 0-0.9	Jun 14, 2019		Soil	S19-Jn16204	X	

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Perth
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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: CLUNIES ROSS STREET
Project ID: 56425

Order No.:
Report #: 660830
Phone: 02 8245 0300
Fax:

Received: Jun 14, 2019 5:26 PM
Due: Jun 17, 2019
Priority: Overnight
Contact Name: Chris Kauffman

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
10	AQ08 0.9-1.6	Jun 14, 2019		Soil	S19-Jn16205	X	
11	AQ09 0-0.3	Jun 14, 2019		Soil	S19-Jn16206	X	
12	AQ09 0.3-1.3	Jun 14, 2019		Soil	S19-Jn16207	X	
13	AQ09 1.5-2.1	Jun 14, 2019		Soil	S19-Jn16208	X	
14	AQ10 0-0.4	Jun 14, 2019		Soil	S19-Jn16209	X	
15	AQ10 0.4-1.0	Jun 14, 2019		Soil	S19-Jn16210	X	
16	AQ11 0-0.6	Jun 14, 2019		Soil	S19-Jn16211	X	
17	AQ12 0-0.1	Jun 14, 2019		Soil	S19-Jn16212	X	
18	AQ12 0.1-1.1	Jun 14, 2019		Soil	S19-Jn16213	X	
19	AQ13 0-0.6	Jun 14, 2019		Soil	S19-Jn16214	X	
20	AQ13 0.6-1.0	Jun 14, 2019		Soil	S19-Jn16215	X	
21	AQ14 0-1.0	Jun 14, 2019		Soil	S19-Jn16216	X	

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Sample Detail						Asbestos - WA guidelines	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
22	AQ14 1-1.5	Jun 14, 2019		Soil	S19-Jn16217	X	
23	AQ15 0-0.5	Jun 14, 2019		Soil	S19-Jn16218	X	
24	AQ15 0.5-1.5	Jun 14, 2019		Soil	S19-Jn16219	X	
25	AQ01 0.6-1.6	Jun 14, 2019		Soil	S19-Jn16220		X
26	AQ02 1.0-1.5	Jun 14, 2019		Soil	S19-Jn16221		X
27	AQ04 0.6-1.5	Jun 14, 2019		Soil	S19-Jn16222		X
28	AQ05 0.1-1.1	Jun 14, 2019		Soil	S19-Jn16223		X
29	AQ05 1.1-2.1	Jun 14, 2019		Soil	S19-Jn16224		X
30	AQ06 1.1-1.7	Jun 14, 2019		Soil	S19-Jn16225		X
31	AQ07 0.4-1.2	Jun 14, 2019		Soil	S19-Jn16226		X
32	AQ07 1.2-2.1	Jun 14, 2019		Soil	S19-Jn16227		X
33	QC03	Jun 14, 2019		Soil	S19-Jn16228		X

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Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**		**Received:**	Jun 14, 2019 5:26 PM
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	660830	**Due:**	Jun 17, 2019
		Phone:	02 8245 0300	**Priority:**	Overnight
		Fax:		**Contact Name:**	Chris Kauffman
Project Name:	CLUNIES ROSS STREET				
Project ID:	56425				

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
34	QA03	Jun 14, 2019		Soil	S19-Jn16229		X
35	AQ11 0.6-1.0	Jun 14, 2019		Soil	S19-Jn16237	X	
Test Counts						25	10

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (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-Jn16197, S19-Jn16203, S19-Jn16206, S19-Jn16219: 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	N/A
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:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

mgt LabMark ENVIRONMENTAL LABORATORIES

Certificate of Analysis

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Edward Wu**

Report **370054-S**
Client Reference BRICKWORKS PROSPECT ENAURHOD04463AA
Received Date Feb 25, 2013

Client Sample ID			**BH1_(0.0-0.2M)**	**BH2_(0.0-0.2M)**	**BH3_(0.0-0.2M)**	**BH4_(0.0-0.1M)**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18699**	**S13-Fe18701**	**S13-Fe18702**	**S13-Fe18703**
Date Sampled			**Feb 20, 2013**	**Feb 19, 2013**	**Feb 20, 2013**	**Feb 20, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	-	-	< 10
TRH C10-C14	50	mg/kg	< 50	-	-	< 50
TRH C15-C28	100	mg/kg	< 100	-	-	< 100
TRH C29-C36	100	mg/kg	< 100	-	-	< 100
TRH C10-36 (Total)	100	mg/kg	< 100	-	-	< 100
BTEX						
Benzene	0.5	mg/kg	< 0.5	-	-	< 0.5
Toluene	0.5	mg/kg	< 0.5	-	-	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
m&p-Xylenes	1	mg/kg	< 1	-	-	< 1
o-Xylene	0.5	mg/kg	< 0.5	-	-	< 0.5
Xylenes - Total	1.5	mg/kg	< 1.5	-	-	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	-	-	< 1.5
4-Bromofluorobenzene (surr.)	1	%	96	-	-	79
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	-	< 0.5
TRH C6-C10	20	mg/kg	< 20	-	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	-	< 20
TRH >C10-C16	50	mg/kg	< 50	-	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	-	< 50
TRH >C16-C34	100	mg/kg	< 100	-	-	< 100
TRH >C34-C40	100	mg/kg	< 100	-	-	< 100
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1232	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	-	< 0.5
Total PCB	0.5	mg/kg	-	-	-	< 0.5
Dibutylchlorendate (surr.)	1	%	-	-	-	72
Organochlorine Pesticides (OC)						
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.2	mg/kg	-	-	-	< 0.2
a-BHC	0.05	mg/kg	-	-	-	< 0.05

Client Sample ID			BH1_(0.0-0.2M)	BH2_(0.0-0.2M)	BH3_(0.0-0.2M)	BH4_(0.0-0.1M)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S13-Fe18699	S13-Fe18701	S13-Fe18702	S13-Fe18703
Date Sampled			Feb 20, 2013	Feb 19, 2013	Feb 20, 2013	Feb 20, 2013
Test/Reference	LOR	Unit				
Organochlorine Pesticides (OC)						
a-Chlordane	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
g-Chlordane	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	-	< 0.2
Dibutylchlorendate (surr.)	1	%	-	-	-	72
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	88
Polyaromatic Hydrocarbons (PAH)						
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)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	< 1	< 1	< 1
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	0.7	< 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	0.6	< 0.5
Total PAH	1	mg/kg	< 1	< 1	1.3	< 1
2-Fluorobiphenyl (surr.)	1	%	102	110	105	108
p-Terphenyl-d14 (surr.)	1	%	96	108	99	104
Heavy Metals						
Arsenic	2	mg/kg	< 2	2.5	5.2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	0.5	< 0.4
Chromium	5	mg/kg	< 5	< 5	24	< 5
Cobalt	5	mg/kg	< 5	6.3	< 5	< 5
Copper	5	mg/kg	13	120	20	5.3
Lead	5	mg/kg	< 5	< 5	20	< 5
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	< 5	< 5	6.6	< 5
Zinc	5	mg/kg	11	21	22	5.9
Titanium	10	mg/kg	220	1100	15	18

Client Sample ID			BH1_(0.0-0.2M)	BH2_(0.0-0.2M)	BH3_(0.0-0.2M)	BH4_(0.0-0.1M)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S13-Fe18699	S13-Fe18701	S13-Fe18702	S13-Fe18703
Date Sampled			Feb 20, 2013	Feb 19, 2013	Feb 20, 2013	Feb 20, 2013
Test/Reference	LOR	Unit				
% Moisture	0.1	%	6.1	17	19	3.2
Asbestos			see attached	-	-	-

Client Sample ID			BH5_(0.0-0.2M)	BH6_(0.16-0.26M)	BH6_(1.0-1.1M)	BH7_(0.08-0.13M)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S13-Fe18705	S13-Fe18706	S13-Fe18708	S13-Fe18710
Date Sampled			Feb 20, 2013	Feb 18, 2013	Feb 19, 2013	Feb 18, 2013
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	-	< 10	-	-
TRH C10-C14	50	mg/kg	-	< 50	-	-
TRH C15-C28	100	mg/kg	-	< 100	-	-
TRH C29-C36	100	mg/kg	-	< 100	-	-
TRH C10-36 (Total)	100	mg/kg	-	< 100	-	-
BTEX						
Benzene	0.5	mg/kg	-	< 0.5	-	-
Toluene	0.5	mg/kg	-	< 0.5	-	-
Ethylbenzene	0.5	mg/kg	-	< 0.5	-	-
m&p-Xylenes	1	mg/kg	-	< 1	-	-
o-Xylene	0.5	mg/kg	-	< 0.5	-	-
Xylenes - Total	1.5	mg/kg	-	< 1.5	-	-
Total BTEX	1.5	mg/kg	-	< 1.5	-	-
4-Bromofluorobenzene (surr.)	1	%	-	76	-	-
Total Recoverable Hydrocarbons - Draft 2010 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	-	-
Heavy Metals						
Arsenic	2	mg/kg	2.8	3.3	6.3	< 2
Cadmium	0.4	mg/kg	0.4	2.3	< 0.4	5.0
Chromium	5	mg/kg	42	13	70	< 5
Cobalt	5	mg/kg	17	99	66	130
Copper	5	mg/kg	34	41	48	7.7
Lead	5	mg/kg	13	< 5	< 5	< 5
Mercury	0.05	mg/kg	0.34	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	57	61	360	< 5
Zinc	5	mg/kg	51	35	68	7.3
Titanium	10	mg/kg	120	690	1200	38
% Moisture	0.1	%	18	23	13	13
Asbestos			see attached	see attached	-	-

Client Sample ID			BH7_(0.2-0.3M)	BH7_(0.4-0.5M)	BH8_(0.0-0.2M)	BH9_(0.0-0.1M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18711**	**S13-Fe18712**	**S13-Fe18713**	**S13-Fe18714**
Date Sampled			**Feb 18, 2013**	**Feb 18, 2013**	**Feb 20, 2013**	**Feb 20, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	-	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	-	< 50	< 50
TRH C15-C28	100	mg/kg	< 100	-	190	< 100
TRH C29-C36	100	mg/kg	< 100	-	340	< 100
TRH C10-36 (Total)	100	mg/kg	< 100	-	530	< 100
BTEX						
Benzene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
m&p-Xylenes	1	mg/kg	< 1	-	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Xylenes - Total	1.5	mg/kg	< 1.5	-	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	-	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	70	-	76	89
Total Recoverable Hydrocarbons - Draft 2010 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	-	480	< 100
TRH >C34-C40	100	mg/kg	< 100	-	210	< 100
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Total PCB	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	82	-	70	76
Organochlorine Pesticides (OC)						
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	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
a-Chlordane	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

mgt LabMark
ENVIRONMENTAL LABORATORIES

Client Sample ID			BH7_(0.2-0.3M)	BH7_(0.4-0.5M)	BH8_(0.0-0.2M)	BH9_(0.0-0.1M)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S13-Fe18711	S13-Fe18712	S13-Fe18713	S13-Fe18714
Date Sampled			Feb 18, 2013	Feb 18, 2013	Feb 20, 2013	Feb 20, 2013
Test/Reference	LOR	Unit				
Organochlorine Pesticides (OC)						
g-Chlordane	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	82	-	70	76
Tetrachloro-m-xylene (surr.)	1	%	102	-	85	99
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	-	< 1	< 1
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Total PAH	1	mg/kg	< 1	-	< 1	< 1
2-Fluorobiphenyl (surr.)	1	%	99	-	92	97
p-Terphenyl-d14 (surr.)	1	%	96	-	90	98
Heavy Metals						
Arsenic	2	mg/kg	2.4	4.4	< 2	3.5
Cadmium	0.4	mg/kg	1.7	2.0	0.5	< 0.4
Chromium	5	mg/kg	24	10	41	< 5
Cobalt	5	mg/kg	31	39	6.8	< 5
Copper	5	mg/kg	40	46	61	19
Lead	5	mg/kg	< 5	< 5	68	< 5
Mercury	0.05	mg/kg	< 0.05	< 0.05	0.39	< 0.05
Nickel	5	mg/kg	75	91	31	7.1
Zinc	5	mg/kg	30	37	190	34
Titanium	10	mg/kg	470	470	310	130
% Moisture	0.1	%	17	15	4.4	16
Asbestos			-	-	see attached	see attached

Client Sample ID			BH10_(0.16-0.26M)	BH11_(0.19-0.29M)	BH12_(0.4-0.5M)	BH13_(0.13-0.23M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18716**	**S13-Fe18717**	**S13-Fe18719**	**S13-Fe18720**
Date Sampled			**Feb 20, 2013**	**Feb 20, 2013**	**Feb 20, 2013**	**Feb 20, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	< 10	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	< 100	< 100	< 100	< 100
TRH C29-C36	100	mg/kg	< 100	< 100	120	< 100
TRH C10-36 (Total)	100	mg/kg	< 100	< 100	120	< 100
BTEX						
Benzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	1	mg/kg	< 1	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	79	79	80	73
Total Recoverable Hydrocarbons - Draft 2010 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
Heavy Metals						
Arsenic	2	mg/kg	4.6	3.4	5.7	5.0
Cadmium	0.4	mg/kg	< 0.4	2.7	1.5	0.9
Chromium	5	mg/kg	41	17	71	130
Cobalt	5	mg/kg	26	48	22	62
Copper	5	mg/kg	64	63	75	56
Lead	5	mg/kg	5.4	< 5	170	< 5
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	91	92	59	290
Zinc	5	mg/kg	56	41	180	72
Titanium	10	mg/kg	470	520	360	1400
% Moisture	0.1	%	6.3	10.0	9.6	20
Asbestos			-	-	-	see attached

Client Sample ID			BH14_(0.19-0.29M)	BH15_(0.15-0.25M)	BH16_(0.0-0.2M)	BH17_(0.5-0.6M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18722**	**S13-Fe18724**	**S13-Fe18726**	**S13-Fe18728**
Date Sampled			**Feb 18, 2013**	**Feb 18, 2013**	**Feb 20, 2013**	**Feb 19, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	< 10	< 10	< 10

Client Sample ID			BH14_(0.19-0.29M)	BH15_(0.15-0.25M)	BH16_(0.0-0.2M)	BH17_(0.5-0.6M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18722**	**S13-Fe18724**	**S13-Fe18726**	**S13-Fe18728**
Date Sampled			**Feb 18, 2013**	**Feb 18, 2013**	**Feb 20, 2013**	**Feb 19, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C10-C14	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	< 100	< 100	< 100	< 100
TRH C29-C36	100	mg/kg	< 100	< 100	< 100	< 100
TRH C10-36 (Total)	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	1	mg/kg	< 1	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	84	75	79	77
Total Recoverable Hydrocarbons - Draft 2010 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	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1232	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	-	< 0.5
Total PCB	0.5	mg/kg	-	-	-	< 0.5
Dibutylchlorendate (surr.)	1	%	-	-	-	72
Organochlorine Pesticides (OC)						
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.2	mg/kg	-	-	-	< 0.2
a-BHC	0.05	mg/kg	-	-	-	< 0.05
a-Chlordane	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
g-Chlordane	0.05	mg/kg	-	-	-	< 0.05

mgt LabMark
ENVIRONMENTAL LABORATORIES

Client Sample ID			BH14_(0.19-0.29M)	BH15_(0.15-0.25M)	BH16_(0.0-0.2M)	BH17_(0.5-0.6M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18722**	**S13-Fe18724**	**S13-Fe18726**	**S13-Fe18728**
Date Sampled			**Feb 18, 2013**	**Feb 18, 2013**	**Feb 20, 2013**	**Feb 19, 2013**
Test/Reference	LOR	Unit				
Organochlorine Pesticides (OC)						
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	-	< 0.2
Dibutylchlorendate (surr.)	1	%	-	-	-	72
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	95
Polyaromatic Hydrocarbons (PAH)						
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)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	-	-	-	< 1
Benzo(g.h.i)perylene	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	1	mg/kg	-	-	-	< 1
2-Fluorobiphenyl (surr.)	1	%	-	-	-	101
p-Terphenyl-d14 (surr.)	1	%	-	-	-	100
Heavy Metals						
Arsenic	2	mg/kg	6.7	4.5	2.1	4.2
Cadmium	0.4	mg/kg	0.6	0.6	< 0.4	< 0.4
Chromium	5	mg/kg	89	160	94	8.6
Cobalt	5	mg/kg	50	50	7.3	< 5
Copper	5	mg/kg	45	42	30	38
Lead	5	mg/kg	5.3	< 5	45	< 5
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	180	250	52	5.1
Zinc	5	mg/kg	94	65	83	17
Titanium	10	mg/kg	810	1500	410	360
% Moisture	0.1	%	23	28	7.3	15
Asbestos			-	-	see attached	see attached

Client Sample ID			BH18_(0.0-0.2M)	BH19_(0.4-0.5M)	BH19_(1.0-1.1M)	BH20_(0.0-0.2M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18733**	**S13-Fe18735**	**S13-Fe18736**	**S13-Fe18737**
Date Sampled			**Feb 20, 2013**	**Feb 19, 2013**	**Feb 19, 2013**	**Feb 20, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	-	< 10	-	-
TRH C10-C14	50	mg/kg	-	< 50	-	-
TRH C15-C28	100	mg/kg	-	< 100	-	-
TRH C29-C36	100	mg/kg	-	< 100	-	-
TRH C10-36 (Total)	100	mg/kg	-	< 100	-	-
BTEX						
Benzene	0.5	mg/kg	-	< 0.5	-	-
Toluene	0.5	mg/kg	-	< 0.5	-	-
Ethylbenzene	0.5	mg/kg	-	< 0.5	-	-
m&p-Xylenes	1	mg/kg	-	< 1	-	-
o-Xylene	0.5	mg/kg	-	< 0.5	-	-
Xylenes - Total	1.5	mg/kg	-	< 1.5	-	-
Total BTEX	1.5	mg/kg	-	< 1.5	-	-
4-Bromofluorobenzene (surr.)	1	%	-	77	-	-
Total Recoverable Hydrocarbons - Draft 2010 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	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	-
Total PCB	0.5	mg/kg	-	< 0.5	-	-
Dibutylchlorendate (surr.)	1	%	-	76	-	-
Organochlorine Pesticides (OC)						
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDT	0.2	mg/kg	-	< 0.2	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
a-Chlordane	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	-	-

mgt LabMark
ENVIRONMENTAL LABORATORIES

Client Sample ID			BH18_(0.0-0.2M)	BH19_(0.4-0.5M)	BH19_(1.0-1.1M)	BH20_(0.0-0.2M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18733**	**S13-Fe18735**	**S13-Fe18736**	**S13-Fe18737**
Date Sampled			**Feb 20, 2013**	**Feb 19, 2013**	**Feb 19, 2013**	**Feb 20, 2013**
Test/Reference	LOR	Unit				
Organochlorine Pesticides (OC)						
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	-
g-Chlordane	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.2	mg/kg	-	< 0.2	-	-
Dibutylchlorendate (surr.)	1	%	-	76	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	99	-	-
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	-	< 0.5
Anthracene	0.5	mg/kg	< 0.5	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	-	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	-	-	< 1
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	-	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	-	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	-	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	-	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	-	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	-	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	-	< 0.5
Total PAH	1	mg/kg	< 1	-	-	< 1
2-Fluorobiphenyl (surr.)	1	%	89	-	-	96
p-Terphenyl-d14 (surr.)	1	%	81	-	-	97
Heavy Metals						
Arsenic	2	mg/kg	3.3	2.4	9.8	2.6
Cadmium	0.4	mg/kg	< 0.4	0.5	< 0.4	< 0.4
Chromium	5	mg/kg	15	8.6	11	38
Cobalt	5	mg/kg	7.8	23	16	15
Copper	5	mg/kg	22	110	43	27
Lead	5	mg/kg	13	< 5	15	7.5
Mercury	0.05	mg/kg	< 0.05	< 0.05	0.07	< 0.05
Nickel	5	mg/kg	19	64	25	38
Zinc	5	mg/kg	50	50	130	31
Titanium	10	mg/kg	110	760	< 10	98
% Moisture	0.1	%	8.2	15	13	10
Asbestos			see attached	see attached	-	see attached

Client Sample ID			BH21_(0.0-0.2M)	BH21_(1.0-1.1M)	BH21_(3.0-3.1M)	BH21_(3.9-4.0M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18738**	**S13-Fe18740**	**S13-Fe18742**	**S13-Fe18743**
Date Sampled			**Feb 19, 2013**	**Feb 19, 2013**	**Feb 19, 2013**	**Feb 19, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	-	-	< 10	-
TRH C10-C14	50	mg/kg	-	-	< 50	-
TRH C15-C28	100	mg/kg	-	-	< 100	-
TRH C29-C36	100	mg/kg	-	-	< 100	-
TRH C10-36 (Total)	100	mg/kg	-	-	< 100	-
BTEX						
Benzene	0.5	mg/kg	-	-	< 0.5	-
Toluene	0.5	mg/kg	-	-	< 0.5	-
Ethylbenzene	0.5	mg/kg	-	-	< 0.5	-
m&p-Xylenes	1	mg/kg	-	-	< 1	-
o-Xylene	0.5	mg/kg	-	-	< 0.5	-
Xylenes - Total	1.5	mg/kg	-	-	< 1.5	-
Total BTEX	1.5	mg/kg	-	-	< 1.5	-
4-Bromofluorobenzene (surr.)	1	%	-	-	78	-
Total Recoverable Hydrocarbons - Draft 2010 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	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-
Total PCB	0.5	mg/kg	< 0.5	-	-	-
Dibutylchlorendate (surr.)	1	%	85	-	-	-
Organochlorine Pesticides (OC)						
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.2	mg/kg	< 0.2	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
a-Chlordane	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	-	-	-

mgt LabMark
ENVIRONMENTAL LABORATORIES

Client Sample ID			BH21_(0.0-0.2M)	BH21_(1.0-1.1M)	BH21_(3.0-3.1M)	BH21_(3.9-4.0M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18738**	**S13-Fe18740**	**S13-Fe18742**	**S13-Fe18743**
Date Sampled			**Feb 19, 2013**	**Feb 19, 2013**	**Feb 19, 2013**	**Feb 19, 2013**
Test/Reference	LOR	Unit				
Organochlorine Pesticides (OC)						
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
g-Chlordane	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Dibutylchlorendate (surr.)	1	%	85	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	90	-	-	-
Polyaromatic Hydrocarbons (PAH)						
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)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	-	-	-
Benzo(g.h.i)perylene	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	1	mg/kg	< 1	-	-	-
2-Fluorobiphenyl (surr.)	1	%	91	-	-	-
p-Terphenyl-d14 (surr.)	1	%	84	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	3.3	< 2	5.0	13
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	0.8
Chromium	5	mg/kg	33	14	99	73
Cobalt	5	mg/kg	10	< 5	99	50
Copper	5	mg/kg	26	12	18	34
Lead	5	mg/kg	< 5	< 5	7.5	12
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	31	6.7	110	62
Zinc	5	mg/kg	22	14	36	93
Titanium	10	mg/kg	330	380	82	97
% Moisture	0.1	%	9.3	13	24	20
Asbestos			see attached	-	-	-

Client Sample ID			BH22_(0.0-0.1M)	BH23_(0.08-0.18M)	BH23_(0.5-0.6M)	BH24_(0.08-0.18M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18744**	**S13-Fe18745**	**S13-Fe18746**	**S13-Fe18748**
Date Sampled			**Feb 19, 2013**	**Feb 19, 2013**	**Feb 19, 2013**	**Feb 19, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	-	< 10	< 10	< 10
TRH C10-C14	50	mg/kg	-	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	-	< 100	< 100	< 100
TRH C29-C36	100	mg/kg	-	< 100	< 100	< 100
TRH C10-36 (Total)	100	mg/kg	-	< 100	< 100	< 100
BTEX						
Benzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
m&p-Xylenes	1	mg/kg	-	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	mg/kg	-	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	-	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	-	80	81	81
Total Recoverable Hydrocarbons - Draft 2010 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
Heavy Metals						
Arsenic	2	mg/kg	2.9	4.8	6.1	4.4
Cadmium	0.4	mg/kg	0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	31	6.3	31	11
Cobalt	5	mg/kg	17	19	22	21
Copper	5	mg/kg	80	110	35	76
Lead	5	mg/kg	53	< 5	13	< 5
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	37	46	65	59
Zinc	5	mg/kg	260	39	66	33
Titanium	10	mg/kg	550	600	57	600
% Moisture	0.1	%	25	4.4	12	4.6
Asbestos			see attached	-	-	-

Client Sample ID			BH24_(0.5-0.6M)	BH24_(1.1-1.2M)	BH25_(0.19-0.29M)	BH26_(0.18-0.28M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18749**	**S13-Fe18750**	**S13-Fe18751**	**S13-Fe18752**
Date Sampled			**Feb 19, 2013**	**Feb 19, 2013**	**Feb 18, 2013**	**Feb 18, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	-	< 10	< 10	< 10

Client Sample ID			BH24_(0.5-0.6M)	BH24_(1.1-1.2M)	BH25_(0.19-0.29M)	BH26_(0.18-0.28M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18749**	**S13-Fe18750**	**S13-Fe18751**	**S13-Fe18752**
Date Sampled			**Feb 19, 2013**	**Feb 19, 2013**	**Feb 18, 2013**	**Feb 18, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C10-C14	50	mg/kg	-	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	-	< 100	< 100	< 100
TRH C29-C36	100	mg/kg	-	< 100	< 100	< 100
TRH C10-36 (Total)	100	mg/kg	-	< 100	< 100	< 100
BTEX						
Benzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
m&p-Xylenes	1	mg/kg	-	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	mg/kg	-	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	-	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	-	97	91	92
Total Recoverable Hydrocarbons - Draft 2010 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
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	-
Total PCB	0.5	mg/kg	-	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	-	-	75	-
Organochlorine Pesticides (OC)						
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDT	0.2	mg/kg	-	-	< 0.2	-
a-BHC	0.05	mg/kg	-	-	< 0.05	-
a-Chlordane	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	-
g-Chlordane	0.05	mg/kg	-	-	< 0.05	-

Client Sample ID			BH24_(0.5-0.6M)	BH24_(1.1-1.2M)	BH25_(0.19-0.29M)	BH26_(0.18-0.28M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18749**	**S13-Fe18750**	**S13-Fe18751**	**S13-Fe18752**
Date Sampled			**Feb 19, 2013**	**Feb 19, 2013**	**Feb 18, 2013**	**Feb 18, 2013**
Test/Reference	LOR	Unit				
Organochlorine Pesticides (OC)						
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.2	mg/kg	-	-	< 0.2	-
Dibutylchlorendate (surr.)	1	%	-	-	75	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	101	-
Polyaromatic Hydrocarbons (PAH)						
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)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	-	-	< 1	-
Benzo(g.h.i)perylene	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	1	mg/kg	-	-	< 1	-
2-Fluorobiphenyl (surr.)	1	%	-	-	109	-
p-Terphenyl-d14 (surr.)	1	%	-	-	103	-
Heavy Metals						
Arsenic	2	mg/kg	4.6	2.6	2.6	2.6
Cadmium	0.4	mg/kg	< 0.4	0.5	2.3	3.2
Chromium	5	mg/kg	20	89	20	17
Cobalt	5	mg/kg	13	73	44	47
Copper	5	mg/kg	29	57	78	70
Lead	5	mg/kg	8.2	< 5	< 5	5.5
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	40	400	110	80
Zinc	5	mg/kg	51	82	49	41
Titanium	10	mg/kg	17	740	750	490
% Moisture	0.1	%	17	12	7.4	9.1

Client Sample ID			BH27_(0.17-0.27M)	BH27_(0.4-0.5M)	BH28_(0.16-0.26M)	BH29_(0.19-0.29M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18753**	**S13-Fe18754**	**S13-Fe18756**	**S13-Fe18757**
Date Sampled			**Feb 18, 2013**	**Feb 18, 2013**	**Feb 18, 2013**	**Feb 18, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	< 10	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	< 100	< 100	< 100	< 100
TRH C29-C36	100	mg/kg	< 100	< 100	< 100	< 100
TRH C10-36 (Total)	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	1	mg/kg	< 1	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	92	94	94	93
Total Recoverable Hydrocarbons - Draft 2010 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	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-
Total PCB	0.5	mg/kg	< 0.5	-	-	-
Dibutylchlorendate (surr.)	1	%	91	-	-	-
Organochlorine Pesticides (OC)						
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.2	mg/kg	< 0.2	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
a-Chlordane	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	-	-	-

mgt LabMark
ENVIRONMENTAL LABORATORIES

Client Sample ID			BH27_(0.17-0.27M)	BH27_(0.4-0.5M)	BH28_(0.16-0.26M)	BH29_(0.19-0.29M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18753**	**S13-Fe18754**	**S13-Fe18756**	**S13-Fe18757**
Date Sampled			**Feb 18, 2013**	**Feb 18, 2013**	**Feb 18, 2013**	**Feb 18, 2013**
Test/Reference	LOR	Unit				
Organochlorine Pesticides (OC)						
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
g-Chlordane	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Dibutylchlorendate (surr.)	1	%	91	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	114	-	-	-
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	-	< 1	< 1
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Total PAH	1	mg/kg	< 1	-	< 1	< 1
2-Fluorobiphenyl (surr.)	1	%	115	-	93	104
p-Terphenyl-d14 (surr.)	1	%	111	-	94	104
Heavy Metals						
Arsenic	2	mg/kg	5.5	5.3	4.0	2.7
Cadmium	0.4	mg/kg	1.3	1.6	5.8	< 0.4
Chromium	5	mg/kg	20	17	13	63
Cobalt	5	mg/kg	58	65	58	47
Copper	5	mg/kg	58	54	100	37
Lead	5	mg/kg	< 5	8.0	< 5	6.0
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	110	74	87	130
Zinc	5	mg/kg	68	67	51	34
Titanium	10	mg/kg	340	120	750	130
% Moisture	0.1	%	17	16	9.8	24

Client Sample ID			BH30_(0.19-0.29M)	BH31_(0.0-0.2M)	BH31_(0.4-0.5M)	BH32_(0.08-0.18M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18759**	**S13-Fe18760**	**S13-Fe18761**	**S13-Fe18762**
Date Sampled			**Feb 18, 2013**	**Feb 20, 2013**	**Feb 20, 2013**	**Feb 20, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	< 10	< 10	-
TRH C10-C14	50	mg/kg	< 50	< 50	< 50	-
TRH C15-C28	100	mg/kg	140	< 100	< 100	-
TRH C29-C36	100	mg/kg	180	< 100	< 100	-
TRH C10-36 (Total)	100	mg/kg	320	< 100	< 100	-
BTEX						
Benzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Toluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
m&p-Xylenes	1	mg/kg	< 1	< 1	< 1	-
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Xylenes - Total	1.5	mg/kg	< 1.5	< 1.5	< 1.5	-
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	< 1.5	-
4-Bromofluorobenzene (surr.)	1	%	95	94	95	-
Total Recoverable Hydrocarbons - Draft 2010 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	320	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
Heavy Metals						
Arsenic	2	mg/kg	23	3.4	-	3.4
Cadmium	0.4	mg/kg	0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	19	14	-	18
Cobalt	5	mg/kg	14	9.8	-	6.9
Copper	5	mg/kg	33	12	-	12
Lead	5	mg/kg	190	11	-	5.1
Mercury	0.05	mg/kg	0.23	< 0.05	-	< 0.05
Nickel	5	mg/kg	27	9.8	-	19
Zinc	5	mg/kg	93	28	-	29
Titanium	10	mg/kg	19	11	-	290
% Moisture	0.1	%	13	13	13	6.8

Client Sample ID			BH33_(0.0-0.2M)	BH34_(0.09-0.19M)	BH34_(1.0-1.1M)	BH35_(0.08-0.18M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18763**	**S13-Fe18765**	**S13-Fe18767**	**S13-Fe18768**
Date Sampled			**Feb 20, 2013**	**Feb 19, 2013**	**Feb 19, 2013**	**Feb 18, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	-	-	< 10	< 10
TRH C10-C14	50	mg/kg	-	-	< 50	< 50

Client Sample ID			BH33_(0.0-0.2M)	BH34_(0.09-0.19M)	BH34_(1.0-1.1M)	BH35_(0.08-0.18M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18763**	**S13-Fe18765**	**S13-Fe18767**	**S13-Fe18768**
Date Sampled			**Feb 20, 2013**	**Feb 19, 2013**	**Feb 19, 2013**	**Feb 18, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C15-C28	100	mg/kg	-	-	< 100	< 100
TRH C29-C36	100	mg/kg	-	-	< 100	< 100
TRH C10-36 (Total)	100	mg/kg	-	-	< 100	< 100
BTEX						
Benzene	0.5	mg/kg	-	-	< 0.5	< 0.5
Toluene	0.5	mg/kg	-	-	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
m&p-Xylenes	1	mg/kg	-	-	< 1	< 1
o-Xylene	0.5	mg/kg	-	-	< 0.5	< 0.5
Xylenes - Total	1.5	mg/kg	-	-	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	-	-	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	-	-	93	95
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	-	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	< 20
TRH >C10-C16	50	mg/kg	-	-	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	< 50
TRH >C16-C34	100	mg/kg	-	-	< 100	< 100
TRH >C34-C40	100	mg/kg	-	-	< 100	< 100
Heavy Metals						
Arsenic	2	mg/kg	6.0	< 2	4.4	2.1
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	2.3
Chromium	5	mg/kg	130	< 5	27	8.9
Cobalt	5	mg/kg	39	8.0	9.9	42
Copper	5	mg/kg	23	36	19	12
Lead	5	mg/kg	15	< 5	5.0	6.1
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	50	18	30	6.8
Zinc	5	mg/kg	52	25	34	35
Titanium	10	mg/kg	48	510	< 10	220
% Moisture	0.1	%	23	6.2	14	11

Client Sample ID			BH35_(0.4-0.5M)	BH36_(0.0-0.2M)	BH37_(0.0-0.2M)	BH38_(0.0-0.2M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18769**	**S13-Fe18770**	**S13-Fe18772**	**S13-Fe18774**
Date Sampled			**Feb 18, 2013**	**Feb 20, 2013**	**Feb 21, 2013**	**Feb 21, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	-	< 10	< 10	< 10
TRH C10-C14	50	mg/kg	-	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	-	< 100	< 100	< 100
TRH C29-C36	100	mg/kg	-	100	< 100	< 100

Client Sample ID			BH35_(0.4-0.5M)	BH36_(0.0-0.2M)	BH37_(0.0-0.2M)	BH38_(0.0-0.2M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18769**	**S13-Fe18770**	**S13-Fe18772**	**S13-Fe18774**
Date Sampled			**Feb 18, 2013**	**Feb 20, 2013**	**Feb 21, 2013**	**Feb 21, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C10-36 (Total)	100	mg/kg	-	100	< 100	< 100
BTEX						
Benzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
m&p-Xylenes	1	mg/kg	-	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	mg/kg	-	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	-	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	-	91	89	90
Total Recoverable Hydrocarbons - Draft 2010 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	-	110	< 100	< 100
TRH >C34-C40	100	mg/kg	-	< 100	< 100	< 100
Polyaromatic Hydrocarbons (PAH)						
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)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	-	< 1	-	-
Benzo(g.h.i)perylene	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	1	mg/kg	-	< 1	-	-
2-Fluorobiphenyl (surr.)	1	%	-	108	-	-
p-Terphenyl-d14 (surr.)	1	%	-	97	-	-
Heavy Metals						
Arsenic	2	mg/kg	2.3	6.9	5.7	7.8
Cadmium	0.4	mg/kg	1.7	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	8.4	98	160	110
Cobalt	5	mg/kg	21	36	98	34
Copper	5	mg/kg	36	40	38	35
Lead	5	mg/kg	< 5	19	7.5	15
Mercury	0.05	mg/kg	< 0.05	0.06	< 0.05	< 0.05
Nickel	5	mg/kg	9.6	69	150	68
Zinc	5	mg/kg	24	95	43	72
Titanium	10	mg/kg	290	110	98	840

Client Sample ID			BH35_(0.4-0.5M)	BH36_(0.0-0.2M)	BH37_(0.0-0.2M)	BH38_(0.0-0.2M)
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18769**	**S13-Fe18770**	**S13-Fe18772**	**S13-Fe18774**
Date Sampled			**Feb 18, 2013**	**Feb 20, 2013**	**Feb 21, 2013**	**Feb 21, 2013**
Test/Reference	LOR	Unit				
% Moisture	0.1	%	11	22	22	20
Asbestos			-	-	see attached	see attached

Client Sample ID			BH38_(0.4-0.5M)	BH39_(0.0-0.2M)	BH40_(0.0-0.2M)	DUP2
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S13-Fe18775**	**S13-Fe18776**	**S13-Fe18778**	**S13-Fe18781**
Date Sampled			**Feb 21, 2013**	**Feb 21, 2013**	**Feb 21, 2013**	**Feb 18, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	-	-	-	< 10
TRH C10-C14	50	mg/kg	-	-	-	< 50
TRH C15-C28	100	mg/kg	-	-	-	< 100
TRH C29-C36	100	mg/kg	-	-	-	< 100
TRH C10-36 (Total)	100	mg/kg	-	-	-	< 100
BTEX						
Benzene	0.5	mg/kg	-	-	-	< 0.5
Toluene	0.5	mg/kg	-	-	-	< 0.5
Ethylbenzene	0.5	mg/kg	-	-	-	< 0.5
m&p-Xylenes	1	mg/kg	-	-	-	< 1
o-Xylene	0.5	mg/kg	-	-	-	< 0.5
Xylenes - Total	1.5	mg/kg	-	-	-	< 1.5
Total BTEX	1.5	mg/kg	-	-	-	< 1.5
4-Bromofluorobenzene (surr.)	1	%	-	-	-	88
Total Recoverable Hydrocarbons - Draft 2010 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
Heavy Metals						
Arsenic	2	mg/kg	2.5	4.1	3.1	< 2
Cadmium	0.4	mg/kg	0.6	< 0.4	< 0.4	4.1
Chromium	5	mg/kg	190	92	50	19
Cobalt	5	mg/kg	71	47	26	79
Copper	5	mg/kg	47	48	30	45
Lead	5	mg/kg	16	8.5	7.9	< 5
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	120	83	40	140
Zinc	5	mg/kg	72	49	26	50
Titanium	10	mg/kg	490	84	53	590
% Moisture	0.1	%	22	16	15	16

Client Sample ID			DUP3	DUP5	TB1	TB2
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S13-Fe18782	S13-Fe18784	S13-Fe18792	S13-Fe18794
Date Sampled			Feb 19, 2013	Feb 19, 2013	Feb 15, 2013	Feb 15, 2013
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	-	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	-	-	-
TRH C15-C28	100	mg/kg	< 100	-	-	-
TRH C29-C36	100	mg/kg	< 100	-	-	-
TRH C10-36 (Total)	100	mg/kg	< 100	-	-	-
BTEX						
Benzene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
m&p-Xylenes	1	mg/kg	< 1	-	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Xylenes - Total	1.5	mg/kg	< 1.5	-	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	-	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	88	-	92	89
Total Recoverable Hydrocarbons - Draft 2010 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	-	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-
Total PCB	0.5	mg/kg	< 0.5	-	-	-
Dibutylchlorendate (surr.)	1	%	87	-	-	-
Organochlorine Pesticides (OC)						
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.2	mg/kg	< 0.2	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
a-Chlordane	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	-	-	-

Client Sample ID			DUP3	DUP5	TB1	TB2
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S13-Fe18782	S13-Fe18784	S13-Fe18792	S13-Fe18794
Date Sampled			Feb 19, 2013	Feb 19, 2013	Feb 15, 2013	Feb 15, 2013
Test/Reference	LOR	Unit				
Organochlorine Pesticides (OC)						
g-Chlordane	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Dibutylchlorendate (surr.)	1	%	87	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	99	-	-	-
Polyaromatic Hydrocarbons (PAH)						
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)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	-	-	-
Benzo(g.h.i)perylene	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	1	mg/kg	< 1	-	-	-
2-Fluorobiphenyl (surr.)	1	%	101	-	-	-
p-Terphenyl-d14 (surr.)	1	%	102	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	< 2	7.2	-	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	-
Chromium	5	mg/kg	8.9	7.6	-	-
Cobalt	5	mg/kg	< 5	10.0	-	-
Copper	5	mg/kg	20	40	-	-
Lead	5	mg/kg	< 5	11	-	-
Mercury	0.05	mg/kg	< 0.05	< 0.05	-	-
Nickel	5	mg/kg	5.7	18	-	-
Zinc	5	mg/kg	13	61	-	-
Titanium	10	mg/kg	300	< 10	-	-
% Moisture	0.1	%	13	13	-	-

Client Sample ID			TS2	TS3	SED1	SED2
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S13-Fe18795	S13-Fe18797	S13-Fe18798	S13-Fe18799
Date Sampled			Feb 20, 2013	Feb 20, 2013	Feb 21, 2013	Feb 21, 2013
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	95%	104%	< 10	< 10
TRH C10-C14	50	mg/kg	-	-	< 50	< 50
TRH C15-C28	100	mg/kg	-	-	< 100	< 100
TRH C29-C36	100	mg/kg	-	-	< 100	< 100
TRH C10-36 (Total)	100	mg/kg	-	-	< 100	< 100
BTEX						
Benzene	0.5	mg/kg	96%	89%	< 0.5	< 0.5
Toluene	0.5	mg/kg	96%	94%	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	96%	98%	< 0.5	< 0.5
m&p-Xylenes	1	mg/kg	96%	97%	< 1	< 1
o-Xylene	0.5	mg/kg	97%	96%	< 0.5	< 0.5
Xylenes - Total	1.5	mg/kg	96%	97%	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	96%	95%	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	85	104	76	71
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	-	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	< 20
TRH >C10-C16	50	mg/kg	-	-	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	< 50
TRH >C16-C34	100	mg/kg	-	-	< 100	< 100
TRH >C34-C40	100	mg/kg	-	-	< 100	< 100
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	-
Total PCB	0.5	mg/kg	-	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	-	-	123	-
Organochlorine Pesticides (OC)						
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDT	0.2	mg/kg	-	-	< 0.2	-
a-BHC	0.05	mg/kg	-	-	< 0.05	-
a-Chlordane	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	-

Client Sample ID			TS2	TS3	SED1	SED2
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S13-Fe18795	S13-Fe18797	S13-Fe18798	S13-Fe18799
Date Sampled			Feb 20, 2013	Feb 20, 2013	Feb 21, 2013	Feb 21, 2013
Test/Reference	LOR	Unit				
Organochlorine Pesticides (OC)						
g-Chlordane	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.2	mg/kg	-	-	< 0.2	-
Dibutylchlorendate (surr.)	1	%	-	-	123	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	70	-
Polyaromatic Hydrocarbons (PAH)						
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)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	-	-	< 1	-
Benzo(g.h.i)perylene	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	1	mg/kg	-	-	< 1	-
2-Fluorobiphenyl (surr.)	1	%	-	-	99	-
p-Terphenyl-d14 (surr.)	1	%	-	-	94.5	-
Heavy Metals						
Arsenic	2	mg/kg	-	-	< 2	< 2
Cadmium	0.4	mg/kg	-	-	< 0.4	< 0.4
Chromium	5	mg/kg	-	-	12	65
Cobalt	5	mg/kg	-	-	6.1	16
Copper	5	mg/kg	-	-	17	21
Lead	5	mg/kg	-	-	6.5	< 5
Mercury	0.05	mg/kg	-	-	< 0.05	< 0.05
Nickel	5	mg/kg	-	-	11	42
Zinc	5	mg/kg	-	-	44	32
Titanium	10	mg/kg	-	-	90	190
% Moisture	0.1	%	-	-	32	17

Client Sample ID			SED3
Sample Matrix			Soil
mgt-LabMark Sample No.			S13-Fe18800
Date Sampled			Feb 21, 2013
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	10	mg/kg	< 10
TRH C10-C14	50	mg/kg	< 50
TRH C15-C28	100	mg/kg	860
TRH C29-C36	100	mg/kg	< 100
TRH C10-36 (Total)	100	mg/kg	860
BTEX			
Benzene	0.5	mg/kg	< 0.5
Toluene	0.5	mg/kg	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5
m&p-Xylenes	1	mg/kg	< 1
o-Xylene	0.5	mg/kg	< 0.5
Xylenes - Total	1.5	mg/kg	< 1.5
Total BTEX	1.5	mg/kg	< 1.5
4-Bromofluorobenzene (surr.)	1	%	70
Total Recoverable Hydrocarbons - Draft 2010 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	890
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	890
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
Heavy Metals			
Arsenic	2	mg/kg	< 2
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	31
Cobalt	5	mg/kg	76
Copper	5	mg/kg	84
Lead	5	mg/kg	5.2
Mercury	0.05	mg/kg	< 0.05
Nickel	5	mg/kg	73
Zinc	5	mg/kg	86
Titanium	10	mg/kg	280
% Moisture	0.1	%	54

Sample History

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Feb 26, 2013	14 Day
- Method: E004 Petroleum Hydrocarbons (TPH)			
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions	Sydney	Feb 26, 2013	14 Day
- Method: LM-LTM-ORG2010			
BTEX	Sydney	Feb 26, 2013	14 Day
- Method: E029/E016 BTEX			
Polychlorinated Biphenyls (PCB)	Sydney	Feb 26, 2013	14 Day
- Method: E013 Polychlorinated Biphenyls (PCB)			
Organochlorine Pesticides (OC)	Sydney	Feb 26, 2013	14 Day
- Method: E013 Organochlorine Pesticides (OC)			
Polyaromatic Hydrocarbons (PAH)	Sydney	Feb 26, 2013	14 Day
- Method: E007 Polyaromatic Hydrocarbons (PAH)			
Heavy Metals	Sydney	Feb 26, 2013	180 Day
- Method: E022 Acid Extractable metals in Soils			
% Moisture	Sydney	Feb 26, 2013	28 Day
- Method: E005 Moisture Content			

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NATA # 1261 Site # 18217

Brisbane
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Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Company Name:	Coffey Environments Pty Ltd NSW	**Order No.:**	
Address:	Level 20, Tower B, Citadel Tower 799 Pacific Highway Chatswood NSW 2067	**Report #:** **Phone:** **Fax:**	370054 +61 2 9406 1000 +61 2 9406 1004
Client Job No.:	BRICKWORKS PROSPECT ENAURHOD04463AA		

Received:	Feb 25, 2013 5:19 PM
Due:	Mar 4, 2013
Priority:	4 Day
Contact Name:	Edward Wu

mgt-LabMark Client Manager: Jean Heng

Sample Detail	% Moisture	Arsenic	Arsenic (filtered)	Asbestos	Cadmium	Cadmium (filtered)	Chromium	Chromium (filtered)	Cobalt	Cobalt (filtered)	Copper	Copper (filtered)	HOLD	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel	Nickel (filtered)	Titanium	Titanium (filtered)	TRH C6-C9	Zinc	Zinc (filtered)	BTEX	Polychlorinated Biphenyls (PCB)	Organochlorine Pesticides (OC)	Polyaromatic Hydrocarbons (PAH)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																													
Melbourne Laboratory - NATA Site # 1254 & 14271																													
Sydney Laboratory - NATA Site # 18217	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																													
External Laboratory				X																									
Sample ID / **Sample Date** / **Sampling Time** / **Matrix** / **LAB ID**																													
BH1_(0.0-0.2M) / Feb 20, 2013 / / Soil / S13-Fe18699	X	X		X	X		X		X		X			X		X		X		X			X		X			X	X
BH1_(0.4-0.5M) / Feb 20, 2013 / / Soil / S13-Fe18700													X																
BH2_(0.0-0.2M) / Feb 19, 2013 / / Soil / S13-Fe18701	X	X			X		X		X		X			X		X		X		X			X					X	
BH3_(0.0-0.2M) / Feb 20, 2013 / / Soil / S13-Fe18702	X	X			X		X		X		X			X		X		X		X			X					X	
BH4_(0.0-0.1M) / Feb 20, 2013 / / Soil / S13-Fe18703	X	X			X		X		X		X			X		X		X		X			X		X	X	X	X	X
BH4_(0.4-0.5M) / Feb 20, 2013 / / Soil / S13-Fe18704													X																

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Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
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Client Job No.: BRICKWORKS PROSPECT ENAURHOD04463AA

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Report #: 370054
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Received: Feb 25, 2013 5:19 PM
Due: Mar 4, 2013
Priority: 4 Day
Contact Name: Edward Wu

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Arsenic	Arsenic (filtered)	Asbestos	Cadmium	Cadmium (filtered)	Chromium	Chromium (filtered)	Cobalt	Cobalt (filtered)	Copper	Copper (filtered)	HOLD	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel	Nickel (filtered)	Titanium	Titanium (filtered)	TRH C6-C9	Zinc	Zinc (filtered)	BTEX	Polychlorinated Biphenyls (PCB)	Organochlorine Pesticides (OC)	Polyaromatic Hydrocarbons (PAH)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																																
Melbourne Laboratory - NATA Site # 1254 & 14271																																
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH5_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18705	X	X		X	X		X		X		X			X		X		X		X		X						
BH6_(0.16-0.26M)	Feb 18, 2013		Soil	S13-Fe18706	X	X		X	X		X		X		X			X		X		X		X		X		X				X
BH6_(0.4-0.5M)	Feb 19, 2013		Soil	S13-Fe18707													X																
BH6_(1.0-1.1M)	Feb 19, 2013		Soil	S13-Fe18708	X	X			X		X		X		X			X		X		X		X		X							
BH6_(1.9-2.0M)	Feb 19, 2013		Soil	S13-Fe18709													X																
BH7_(0.08-0.13M)	Feb 18, 2013		Soil	S13-Fe18710	X	X			X		X		X		X			X		X		X		X		X							
BH7_(0.2-0.3M)	Feb 18, 2013		Soil	S13-Fe18711	X	X			X		X		X		X			X		X		X		X		X		X	X	X	X	X

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Sample Detail					% Moisture	Arsenic	Arsenic (filtered)	Asbestos	Cadmium	Cadmium (filtered)	Chromium	Chromium (filtered)	Cobalt	Cobalt (filtered)	Copper	Copper (filtered)	HOLD	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel	Nickel (filtered)	Titanium	Titanium (filtered)	TRH C6-C9	Zinc	Zinc (filtered)	BTEX	Polychlorinated Biphenyls (PCB)	Organochlorine Pesticides (OC)	Polyaromatic Hydrocarbons (PAH)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																																	
Melbourne Laboratory - NATA Site # 1254 & 14271																																	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																	
External Laboratory								X																									
BH7_(0.4-0.5M)	Feb 18, 2013		Soil	S13-Fe18712	X	X			X		X		X		X			X		X		X		X			X						
BH8_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18713	X	X		X	X		X		X		X			X		X		X		X			X		X	X	X	X	X
BH9_(0.0-0.1M)	Feb 20, 2013		Soil	S13-Fe18714	X	X		X	X		X		X		X			X		X		X		X			X		X	X	X	X	X
BH9_(0.4-0.5M)	Feb 20, 2013		Soil	S13-Fe18715													X																	
BH10_(0.16-0.26M)	Feb 20, 2013		Soil	S13-Fe18716	X	X			X		X		X		X			X		X		X		X			X		X				X
BH11_(0.19-0.29M)	Feb 20, 2013		Soil	S13-Fe18717	X	X			X		X		X		X			X		X		X		X			X		X				X
BH12_(0.23-0.33M)	Feb 20, 2013		Soil	S13-Fe18718													X																	

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Laboratory where analysis is conducted																																
Melbourne Laboratory - NATA Site # 1254 & 14271																																
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH12_(0.4-0.5M)	Feb 20, 2013		Soil	S13-Fe18719	X	X			X		X		X		X			X		X		X		X			X		X				X
BH13_(0.13-0.23M)	Feb 20, 2013		Soil	S13-Fe18720	X	X		X	X		X		X		X			X		X		X		X			X		X				X
BH13_(0.4-0.5M)	Feb 20, 2013		Soil	S13-Fe18721													X																
BH14_(0.19-0.29M)	Feb 18, 2013		Soil	S13-Fe18722	X	X			X		X		X		X			X		X		X		X			X		X				X
BH14_(0.4-0.5M)	Feb 18, 2013		Soil	S13-Fe18723													X																
BH15_(0.15-0.25M)	Feb 18, 2013		Soil	S13-Fe18724	X	X			X		X		X		X			X		X		X		X			X		X				X
BH15_(0.4-0.5M)	Feb 18, 2013		Soil	S13-Fe18725													X																

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NATA # 1261
Site # 1254 & 14271

Sydney
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NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
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NATA # 1261 Site # 20794

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Client Job No.: BRICKWORKS PROSPECT ENAURHOD04463AA

Order No.:
Report #: 370054
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Feb 25, 2013 5:19 PM
Due: Mar 4, 2013
Priority: 4 Day
Contact Name: Edward Wu

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Arsenic	Arsenic (filtered)	Asbestos	Cadmium	Cadmium (filtered)	Chromium	Chromium (filtered)	Cobalt	Cobalt (filtered)	Copper	Copper (filtered)	HOLD	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel	Nickel (filtered)	Titanium	Titanium (filtered)	TRH C6-C9	Zinc	Zinc (filtered)	BTEX	Polychlorinated Biphenyls (PCB)	Organochlorine Pesticides (OC)	Polyaromatic Hydrocarbons (PAH)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																																	
Melbourne Laboratory - NATA Site # 1254 & 14271																																	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																	
External Laboratory								X																									
BH16_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18726	X	X		X	X		X		X		X			X		X		X		X			X		X				X
BH17_(0.08-0.18M)	Feb 19, 2013		Soil	S13-Fe18727													X																	
BH17_(0.5-0.6M)	Feb 19, 2013		Soil	S13-Fe18728	X	X		X	X		X		X		X			X		X		X		X			X		X	X	X	X	X
BH17_(0.9-1.0M)	Feb 19, 2013		Soil	S13-Fe18729													X																	
BH17_(2.0-2.1M)	Feb 19, 2013		Soil	S13-Fe18730													X																	
BH17_(3.0-3.1M)	Feb 19, 2013		Soil	S13-Fe18731													X																	
BH17_(3.8-3.9M)	Feb 19, 2013		Soil	S13-Fe18732													X																	

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Company Name:	Coffey Environments Pty Ltd NSW	**Order No.:**	
Address:	Level 20, Tower B, Citadel Tower 799 Pacific Highway Chatswood NSW 2067	**Report #:** **Phone:** **Fax:**	370054 +61 2 9406 1000 +61 2 9406 1004
Client Job No.:	BRICKWORKS PROSPECT ENAURHOD04463AA		

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mgt-LabMark Client Manager: Jean Heng

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Laboratory where analysis is conducted																																
Melbourne Laboratory - NATA Site # 1254 & 14271																																
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH18_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18733	X	X		X	X		X		X		X			X		X		X		X			X				X	
BH19_(0.0-0.15M)	Feb 19, 2013		Soil	S13-Fe18734													X																
BH19_(0.4-0.5M)	Feb 19, 2013		Soil	S13-Fe18735	X	X		X	X		X		X		X			X		X		X		X			X		X	X	X		X
BH19_(1.0-1.1M)	Feb 19, 2013		Soil	S13-Fe18736	X	X			X		X		X		X			X		X		X		X			X						
BH20_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18737	X	X		X	X		X		X		X			X		X		X		X			X					X	
BH21_(0.0-0.2M)	Feb 19, 2013		Soil	S13-Fe18738	X	X		X	X		X		X		X			X		X		X		X			X			X	X	X	
BH21_(0.5-0.6M)	Feb 19, 2013		Soil	S13-Fe18739													X																

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Contact Name: Edward Wu

mgt-LabMark Client Manager: Jean Heng

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Laboratory where analysis is conducted																																
Melbourne Laboratory - NATA Site # 1254 & 14271																																
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH21_(1.0-1.1M)	Feb 19, 2013		Soil	S13-Fe18740	X	X			X		X		X		X			X		X		X		X			X					
BH21_(2.0-2.1M)	Feb 19, 2013		Soil	S13-Fe18741													X																
BH21_(3.0-3.1M)	Feb 19, 2013		Soil	S13-Fe18742	X	X			X		X		X		X			X		X		X		X			X		X				X
BH21_(3.9-4.0M)	Feb 19, 2013		Soil	S13-Fe18743	X	X			X		X		X		X			X		X		X		X			X						
BH22_(0.0-0.1M)	Feb 19, 2013		Soil	S13-Fe18744	X	X		X	X		X		X		X			X		X		X		X			X						
BH23_(0.08-0.18M)	Feb 19, 2013		Soil	S13-Fe18745	X	X			X		X		X		X			X		X		X		X			X		X				X
BH23_(0.5-0.6M)	Feb 19, 2013		Soil	S13-Fe18746	X	X			X		X		X		X			X		X		X		X			X		X				X

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Client Job No.:	BRICKWORKS PROSPECT ENAURHOD04463AA		

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Laboratory where analysis is conducted																																	
Melbourne Laboratory - NATA Site # 1254 & 14271																																	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																	
External Laboratory								X																									
BH23_(1.0-1.1M)	Feb 19, 2013		Soil	S13-Fe18747													X																
BH24_(0.08-0.18M)	Feb 19, 2013		Soil	S13-Fe18748	X	X			X		X		X		X			X		X		X		X			X		X				X
BH24_(0.5-0.6M)	Feb 19, 2013		Soil	S13-Fe18749	X	X			X		X		X		X			X		X		X		X			X						
BH24_(1.1-1.2M)	Feb 19, 2013		Soil	S13-Fe18750	X	X			X		X		X		X			X		X		X		X			X		X				X
BH25_(0.19-0.29M)	Feb 18, 2013		Soil	S13-Fe18751	X	X			X		X		X		X			X		X		X		X			X		X	X	X	X	X
BH26_(0.18-0.28M)	Feb 18, 2013		Soil	S13-Fe18752	X	X			X		X		X		X			X		X		X		X			X		X				X
BH27_(0.17-0.27M)	Feb 18, 2013		Soil	S13-Fe18753	X	X			X		X		X		X			X		X		X		X			X		X	X	X	X	X

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mgt-LabMark Client Manager: Jean Heng

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Laboratory where analysis is conducted																																
Melbourne Laboratory - NATA Site # 1254 & 14271																																
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH27_(0.4-0.5M)	Feb 18, 2013		Soil	S13-Fe18754	X	X			X		X		X		X			X		X		X		X			X		X				X
BH27_(1.0-1.1M)	Feb 19, 2013		Soil	S13-Fe18755													X																
BH28_(0.16-0.26M)	Feb 18, 2013		Soil	S13-Fe18756	X	X			X		X		X		X			X		X		X		X			X		X			X	X
BH29_(0.19-0.29M)	Feb 18, 2013		Soil	S13-Fe18757	X	X			X		X		X		X			X		X		X		X			X		X			X	X
BH29_(0.4-0.5M)	Feb 18, 2013		Soil	S13-Fe18758													X																
BH30_(0.19-0.29M)	Feb 18, 2013		Soil	S13-Fe18759	X	X			X		X		X		X			X		X		X		X			X		X				X
BH31_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18760	X	X			X		X		X		X			X		X		X		X			X		X				X

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Laboratory where analysis is conducted																																
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Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH31_(0.4-0.5M)	Feb 20, 2013		Soil	S13-Fe18761	X																							X				X
BH32_(0.08-0.18M)	Feb 20, 2013		Soil	S13-Fe18762	X	X			X		X		X		X			X		X		X		X			X					
BH33_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18763	X	X			X		X		X		X			X		X		X		X			X					
BH33_(0.4-0.5M)	Feb 20, 2013		Soil	S13-Fe18764													X																
BH34_(0.09-0.19M)	Feb 19, 2013		Soil	S13-Fe18765	X	X			X		X		X		X			X		X		X		X			X					
BH34_(0.5-0.6M)	Feb 19, 2013		Soil	S13-Fe18766													X																
BH34_(1.0-1.1M)	Feb 19, 2013		Soil	S13-Fe18767	X	X			X		X		X		X			X		X		X		X			X		X				X

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Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH35_(0.08-0.18M)	Feb 18, 2013		Soil	S13-Fe18768	X	X			X		X		X		X			X		X		X		X			X		X				X
BH35_(0.4-0.5M)	Feb 18, 2013		Soil	S13-Fe18769	X	X			X		X		X		X			X		X		X		X			X						
BH36_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18770	X	X			X		X		X		X			X		X		X		X			X		X			X	X
BH36_(0.4-0.5M)	Feb 20, 2013		Soil	S13-Fe18771													X																
BH37_(0.0-0.2M)	Feb 21, 2013		Soil	S13-Fe18772	X	X		X	X		X		X		X			X		X		X		X			X		X				X
BH37_(0.4-0.5M)	Feb 21, 2013		Soil	S13-Fe18773													X																
BH38_(0.0-0.2M)	Feb 21, 2013		Soil	S13-Fe18774	X	X		X	X		X		X		X			X		X		X		X			X		X				X

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Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH38_(0.4-0.5M)	Feb 21, 2013		Soil	S13-Fe18775	X	X			X		X		X		X			X		X		X		X			X					
BH39_(0.0-0.2M)	Feb 21, 2013		Soil	S13-Fe18776	X	X			X		X		X		X			X		X		X		X			X					
BH39_(0.4-0.5M)	Feb 21, 2013		Soil	S13-Fe18777													X																
BH40_(0.0-0.2M)	Feb 21, 2013		Soil	S13-Fe18778	X	X			X		X		X		X			X		X		X		X			X					
BH40_(0.4-0.5M)	Feb 21, 2013		Soil	S13-Fe18779													X																
DUP1	Feb 18, 2013		Soil	S13-Fe18780													X																
DUP2	Feb 18, 2013		Soil	S13-Fe18781	X	X			X		X		X		X			X		X		X		X			X		X				X
DUP3	Feb 19, 2013		Soil	S13-Fe18782	X	X			X		X		X		X			X		X		X		X			X		X	X	X	X	X

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Client Job No.: BRICKWORKS PROSPECT ENAURHOD04463AA

Order No.:
Report #: 370054
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Feb 25, 2013 5:19 PM
Due: Mar 4, 2013
Priority: 4 Day
Contact Name: Edward Wu

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Arsenic	Arsenic (filtered)	Asbestos	Cadmium	Cadmium (filtered)	Chromium	Chromium (filtered)	Cobalt	Cobalt (filtered)	Copper	Copper (filtered)	HOLD	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel	Nickel (filtered)	Titanium	Titanium (filtered)	TRH C6-C9	Zinc	Zinc (filtered)	BTEX	Polychlorinated Biphenyls (PCB)	Organochlorine Pesticides (OC)	Polyaromatic Hydrocarbons (PAH)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																																
Melbourne Laboratory - NATA Site # 1254 & 14271																																
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
DUP4	Feb 19, 2013		Soil	S13-Fe18783													X																
DUP5	Feb 19, 2013		Soil	S13-Fe18784	X	X			X		X		X		X			X		X		X		X			X						
DUP6	Feb 20, 2013		Soil	S13-Fe18785													X																
DUP7	Feb 20, 2013		Soil	S13-Fe18786													X																
DUP8	Feb 20, 2013		Soil	S13-Fe18787													X																
DUP9	Feb 21, 2013		Soil	S13-Fe18788													X																
RB1	Feb 19, 2013		Water	S13-Fe18789													X																
RB2	Feb 20, 2013		Water	S13-Fe18790													X																
RB3	Feb 21, 2013		Water	S13-Fe18791			X			X		X		X		X			X		X		X		X			X	X	X	X	X	X
TB1	Feb 15, 2013		Soil	S13-Fe18792																						X			X				
TS1	Feb 15, 2013		Soil	S13-Fe18793													X																

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

Company Name:	Coffey Environments Pty Ltd NSW	**Order No.:**	
Address:	Level 20, Tower B, Citadel Tower 799 Pacific Highway Chatswood NSW 2067	**Report #:** **Phone:** **Fax:**	370054 +61 2 9406 1000 +61 2 9406 1004
Client Job No.:	BRICKWORKS PROSPECT ENAURHOD04463AA		

Received:	Feb 25, 2013 5:19 PM
Due:	Mar 4, 2013
Priority:	4 Day
Contact Name:	Edward Wu

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Arsenic	Arsenic (filtered)	Asbestos	Cadmium	Cadmium (filtered)	Chromium	Chromium (filtered)	Cobalt	Cobalt (filtered)	Copper	Copper (filtered)	HOLD	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel	Nickel (filtered)	Titanium	Titanium (filtered)	TRH C6-C9	Zinc	Zinc (filtered)	BTEX	Polychlorinated Biphenyls (PCB)	Organochlorine Pesticides (OC)	Polyaromatic Hydrocarbons (PAH)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																																
Melbourne Laboratory - NATA Site # 1254 & 14271																																
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
TB2	Feb 15, 2013		Soil	S13-Fe18794																						X			X				
TS2	Feb 20, 2013		Soil	S13-Fe18795																						X			X				
TB3	Feb 15, 2013		Soil	S13-Fe18796													X																
TS3	Feb 20, 2013		Soil	S13-Fe18797																						X			X				
SED1	Feb 21, 2013		Soil	S13-Fe18798	X	X			X		X		X		X			X		X		X		X			X		X	X	X	X	X
SED2	Feb 21, 2013		Soil	S13-Fe18799	X	X			X		X		X		X			X		X		X		X			X		X				X
SED3	Feb 21, 2013		Soil	S13-Fe18800	X	X			X		X		X		X			X		X		X		X			X		X				X
SW1	Feb 21, 2013		Water	S13-Fe18801		X			X		X		X		X			X		X		X		X			X		X			X	X
SW2	Feb 21, 2013		Water	S13-Fe18802		X			X		X		X		X			X		X		X		X			X		X			X	X
SW3	Feb 21, 2013		Water	S13-Fe18803		X			X		X		X		X			X		X		X		X			X		X			X	X
TS1LAB	Feb 15, 2013		Soil	S13-Fe18804													X																

mgt-LabMark Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

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

UNITS

mg/kg: milligrams per Kilogram

ug/l: micrograms per litre

ppb: Parts per billion

org/100ml: Organisms per 100 millilitres

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

mg/l: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Units

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environment Protection Authority
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene 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 Arochlor 1260 in Matrix Spikes and LCS's.
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 RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	mg/kg	< 10			10	Pass	
TRH C10-C14	mg/kg	< 50			50	Pass	
TRH C15-C28	mg/kg	< 100			100	Pass	
TRH C29-C36	mg/kg	< 100			100	Pass	
Method Blank							
BTEX E029/E016 BTEX							
Benzene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 1			1	Pass	
o-Xylene	mg/kg	< 0.5			0.5	Pass	
Xylenes - Total	mg/kg	< 1.5			1.5	Pass	
Total BTEX	mg/kg	< 1.5			1.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions LM-LTM-ORG2010							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH C6-C10 less BTEX (F1)	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							
Polychlorinated Biphenyls (PCB) E013 Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides (OC) E013 Organochlorine Pesticides (OC)							
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	< 0.2			0.2	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
a-Chlordane	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
g-Chlordane	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
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)fluoranthene & Benzo(k)fluoranthene	mg/kg	< 1			1	Pass	
Benzo(g.h.i)perylene	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							
Heavy Metals E022 Acid Extractable metals in Soils							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Cobalt	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Titanium	mg/kg	< 10			10	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	%	93			70-130	Pass	
TRH C10-C14	%	99			70-130	Pass	
LCS - % Recovery							
BTEX E029/E016 BTEX							
Benzene	%	90			70-130	Pass	
Toluene	%	99			70-130	Pass	
Ethylbenzene	%	97			70-130	Pass	
m&p-Xylenes	%	96			70-130	Pass	
o-Xylene	%	96			70-130	Pass	
Xylenes - Total	%	96			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions LM-LTM-ORG2010							
Naphthalene	%	91			70-130	Pass	
TRH C6-C10	%	121			70-130	Pass	
TRH >C10-C16	%	105			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls (PCB) E013 Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	84			70-130	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Organochlorine Pesticides (OC) E013 Organochlorine Pesticides (OC)							
4.4'-DDD	%	91			70-130	Pass	
4.4'-DDE	%	92			70-130	Pass	
4.4'-DDT	%	91			70-130	Pass	
a-BHC	%	96			70-130	Pass	
a-Chlordane	%	90			70-130	Pass	
Aldrin	%	97			70-130	Pass	
b-BHC	%	99			70-130	Pass	
d-BHC	%	92			70-130	Pass	
Dieldrin	%	93			70-130	Pass	
Endosulfan I	%	95			70-130	Pass	
Endosulfan II	%	92			70-130	Pass	
Endosulfan sulphate	%	86			70-130	Pass	
Endrin	%	92			70-130	Pass	
Endrin aldehyde	%	90			70-130	Pass	
Endrin ketone	%	91			70-130	Pass	
g-BHC (Lindane)	%	93			70-130	Pass	
g-Chlordane	%	93			70-130	Pass	
Heptachlor	%	98			70-130	Pass	
Heptachlor epoxide	%	95			70-130	Pass	
Hexachlorobenzene	%	102			70-130	Pass	
Methoxychlor	%	91			70-130	Pass	
LCS - % Recovery							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	%	107			70-130	Pass	
Acenaphthylene	%	100			70-130	Pass	
Anthracene	%	108			70-130	Pass	
Benz(a)anthracene	%	91			70-130	Pass	
Benzo(a)pyrene	%	91			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	%	95			70-130	Pass	
Benzo(g.h.i)perylene	%	91			70-130	Pass	
Chrysene	%	109			70-130	Pass	
Dibenz(a.h)anthracene	%	90			70-130	Pass	
Fluoranthene	%	97			70-130	Pass	
Fluorene	%	102			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	90			70-130	Pass	
Naphthalene	%	110			70-130	Pass	
Phenanthrene	%	100			70-130	Pass	
Pyrene	%	103			70-130	Pass	
LCS - % Recovery							
Heavy Metals E022 Acid Extractable metals in Soils							
Arsenic	%	82			70-130	Pass	
Cadmium	%	97			70-130	Pass	
Chromium	%	86			70-130	Pass	
Cobalt	%	92			70-130	Pass	
Copper	%	119			70-130	Pass	
Lead	%	93			70-130	Pass	
Mercury	%	97			70-130	Pass	
Nickel	%	90			70-130	Pass	
Zinc	%	101			70-130	Pass	
Titanium	%	75			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C6-C9	S13-Fe18699	CP	%	84			70-130	Pass	
TRH C10-C14	S13-Fe18699	CP	%	100			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S13-Fe18699	CP	%	94			70-130	Pass	
Toluene	S13-Fe18699	CP	%	92			70-130	Pass	
Ethylbenzene	S13-Fe18699	CP	%	92			70-130	Pass	
m&p-Xylenes	S13-Fe18699	CP	%	93			70-130	Pass	
o-Xylene	S13-Fe18699	CP	%	93			70-130	Pass	
Xylenes - Total	S13-Fe18699	CP	%	93			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1					
Naphthalene	S13-Fe18699	CP	%	89			70-130	Pass	
TRH C6-C10	S13-Fe18699	CP	%	86			70-130	Pass	
TRH >C10-C16	S13-Fe18699	CP	%	107			70-130	Pass	
Spike - % Recovery									
Polyaromatic Hydrocarbons (PAH)				Result 1					
Acenaphthene	S13-Fe20489	NCP	%	121			70-130	Pass	
Acenaphthylene	S13-Fe20489	NCP	%	113			70-130	Pass	
Anthracene	S13-Fe20489	NCP	%	112			70-130	Pass	
Benz(a)anthracene	S13-Fe20489	NCP	%	108			70-130	Pass	
Benzo(a)pyrene	S13-Fe20489	NCP	%	104			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S13-Fe20489	NCP	%	107			70-130	Pass	
Benzo(g.h.i)perylene	S13-Fe20489	NCP	%	101			70-130	Pass	
Chrysene	S13-Fe20489	NCP	%	114			70-130	Pass	
Dibenz(a.h)anthracene	S13-Fe20489	NCP	%	99			70-130	Pass	
Fluoranthene	S13-Fe20489	NCP	%	113			70-130	Pass	
Fluorene	S13-Fe20489	NCP	%	118			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S13-Fe20489	NCP	%	106			70-130	Pass	
Naphthalene	S13-Fe20489	NCP	%	113			70-130	Pass	
Phenanthrene	S13-Fe20489	NCP	%	115			70-130	Pass	
Pyrene	S13-Fe20489	NCP	%	113			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S13-Fe18699	CP	%	86			70-130	Pass	
Cadmium	S13-Fe18699	CP	%	95			70-130	Pass	
Chromium	S13-Fe18699	CP	%	80			70-130	Pass	
Cobalt	S13-Fe18699	CP	%	90			70-130	Pass	
Lead	S13-Fe18699	CP	%	91			70-130	Pass	
Mercury	S13-Fe18699	CP	%	91			70-130	Pass	
Nickel	S13-Fe18699	CP	%	77			70-130	Pass	
Zinc	S13-Fe18699	CP	%	105			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S13-Fe18713	CP	%	106			70-130	Pass	
Cadmium	S13-Fe18713	CP	%	89			70-130	Pass	
Cobalt	S13-Fe18713	CP	%	89			70-130	Pass	
Mercury	S13-Fe18713	CP	%	81			70-130	Pass	
Nickel	S13-Fe18713	CP	%	108			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S13-Fe18722	CP	%	101			70-130	Pass	
Toluene	S13-Fe18722	CP	%	94			70-130	Pass	
Ethylbenzene	S13-Fe18722	CP	%	93			70-130	Pass	
m&p-Xylenes	S13-Fe18722	CP	%	92			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
o-Xylene	S13-Fe18722	CP	%	91			70-130	Pass	
Xylenes - Total	S13-Fe18722	CP	%	92			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1					
Naphthalene	S13-Fe18722	CP	%	87			70-130	Pass	
TRH C6-C10	S13-Fe18722	CP	%	88			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S13-Fe18733	CP	%	84			70-130	Pass	
Cadmium	S13-Fe18733	CP	%	90			70-130	Pass	
Chromium	S13-Fe18733	CP	%	77			70-130	Pass	
Cobalt	S13-Fe18733	CP	%	88			70-130	Pass	
Lead	S13-Fe18733	CP	%	84			70-130	Pass	
Mercury	S13-Fe18733	CP	%	97			70-130	Pass	
Nickel	S13-Fe18733	CP	%	91			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S13-Fe18742	CP	%	95			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1					
TRH >C10-C16	S13-Fe18742	CP	%	105			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S13-Fe18746	CP	%	76			70-130	Pass	
Cadmium	S13-Fe18746	CP	%	90			70-130	Pass	
Chromium	S13-Fe18746	CP	%	128			70-130	Pass	
Cobalt	S13-Fe18746	CP	%	84			70-130	Pass	
Copper	S13-Fe18746	CP	%	113			70-130	Pass	
Mercury	S13-Fe18746	CP	%	105			70-130	Pass	
Nickel	S13-Fe18746	CP	%	91			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S13-Fe18751	CP	%	105			70-130	Pass	
Toluene	S13-Fe18751	CP	%	100			70-130	Pass	
Ethylbenzene	S13-Fe18751	CP	%	91			70-130	Pass	
m&p-Xylenes	S13-Fe18751	CP	%	99			70-130	Pass	
o-Xylene	S13-Fe18751	CP	%	95			70-130	Pass	
Xylenes - Total	S13-Fe18751	CP	%	98			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1					
Naphthalene	S13-Fe18751	CP	%	86			70-130	Pass	
TRH C6-C10	S13-Fe18751	CP	%	93			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S13-Fe18757	CP	%	98			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1					
TRH >C10-C16	S13-Fe18757	CP	%	103			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Cadmium	S13-Fe18759	CP	%	92			70-130	Pass	
Chromium	S13-Fe18759	CP	%	80			70-130	Pass	
Cobalt	S13-Fe18759	CP	%	115			70-130	Pass	
Copper	S13-Fe18759	CP	%	100			70-130	Pass	
Mercury	S13-Fe18759	CP	%	99			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Nickel	S13-Fe18759	CP	%	79			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S13-Fe18768	CP	%	105			70-130	Pass	
Toluene	S13-Fe18768	CP	%	99			70-130	Pass	
Ethylbenzene	S13-Fe18768	CP	%	90			70-130	Pass	
m&p-Xylenes	S13-Fe18768	CP	%	98			70-130	Pass	
o-Xylene	S13-Fe18768	CP	%	94			70-130	Pass	
Xylenes - Total	S13-Fe18768	CP	%	97			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1					
Naphthalene	S13-Fe18768	CP	%	85			70-130	Pass	
TRH C6-C10	S13-Fe18768	CP	%	92			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Cadmium	S13-Fe18774	CP	%	97			70-130	Pass	
Chromium	S13-Fe18774	CP	%	108			70-130	Pass	
Cobalt	S13-Fe18774	CP	%	110			70-130	Pass	
Copper	S13-Fe18774	CP	%	101			70-130	Pass	
Lead	S13-Fe18774	CP	%	87			70-130	Pass	
Mercury	S13-Fe18774	CP	%	99			70-130	Pass	
Nickel	S13-Fe18774	CP	%	82			70-130	Pass	
Zinc	S13-Fe18774	CP	%	92			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S13-Fe18782	CP	%	102			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1					
TRH >C10-C16	S13-Fe18782	CP	%	108			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls (PCB)				Result 1					
Aroclor-1260	S13-Fe18782	CP	%	88			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	S13-Fe18699	CP	mg/kg	< 10	< 10	<1	30%	Pass	
TRH C10-C14	S13-Fe18699	CP	mg/kg	< 50	< 50	3.0	30%	Pass	
TRH C15-C28	S13-Fe18699	CP	mg/kg	< 100	< 100	11	30%	Pass	
TRH C29-C36	S13-Fe18699	CP	mg/kg	< 100	< 100	25	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	S13-Fe18699	CP	mg/kg	< 1	< 1	<1	30%	Pass	
o-Xylene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes - Total	S13-Fe18699	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Total BTEX	S13-Fe18699	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S13-Fe18699	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S13-Fe18699	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S13-Fe18699	CP	mg/kg	< 50	< 50	6.0	30%	Pass	
TRH >C16-C34	S13-Fe18699	CP	mg/kg	< 100	< 100	25	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C34-C40	S13-Fe18699	CP	mg/kg	< 100	< 100	1.0	30%	Pass	
Duplicate									
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD			
Acenaphthene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S13-Fe18699	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzo(g.h.i)perylene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S13-Fe18699	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S13-Fe18699	CP	mg/kg	< 2	< 2	46	30%	Fail	Q15
Cadmium	S13-Fe18699	CP	mg/kg	< 0.4	< 0.4	65	30%	Fail	Q15
Chromium	S13-Fe18699	CP	mg/kg	< 5	< 5	6.0	30%	Pass	
Cobalt	S13-Fe18699	CP	mg/kg	< 5	< 5	4.0	30%	Pass	
Copper	S13-Fe18699	CP	mg/kg	13	19	41	30%	Fail	Q15
Lead	S13-Fe18699	CP	mg/kg	< 5	< 5	29	30%	Pass	
Mercury	S13-Fe18699	CP	mg/kg	< 0.05	< 0.05	110	30%	Fail	
Nickel	S13-Fe18699	CP	mg/kg	< 5	< 5	13	30%	Pass	
Zinc	S13-Fe18699	CP	mg/kg	11	14	25	30%	Pass	
Titanium	S13-Fe18699	CP	mg/kg	220	230	3.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S13-Fe18713	CP	mg/kg	< 2	2.4	200	30%	Fail	Q15
Cadmium	S13-Fe18713	CP	mg/kg	0.5	0.4	27	30%	Pass	
Chromium	S13-Fe18713	CP	mg/kg	41	41	2.0	30%	Pass	
Cobalt	S13-Fe18713	CP	mg/kg	6.8	7.3	6.0	30%	Pass	
Copper	S13-Fe18713	CP	mg/kg	61	41	40	30%	Fail	Q15
Lead	S13-Fe18713	CP	mg/kg	68	59	14	30%	Pass	
Mercury	S13-Fe18713	CP	mg/kg	0.39	0.47	18	30%	Pass	
Nickel	S13-Fe18713	CP	mg/kg	31	31	<1	30%	Pass	
Zinc	S13-Fe18713	CP	mg/kg	190	180	5.0	30%	Pass	
Titanium	S13-Fe18713	CP	mg/kg	310	310	3.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S13-Fe18719	CP	mg/kg	< 50	< 50	5.0	30%	Pass	
TRH C15-C28	S13-Fe18719	CP	mg/kg	< 100	< 100	5.0	30%	Pass	
TRH C29-C36	S13-Fe18719	CP	mg/kg	120	140	18	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S13-Fe18719	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S13-Fe18719	CP	mg/kg	180	200	14	30%	Pass	
TRH >C34-C40	S13-Fe18719	CP	mg/kg	< 100	< 100	10	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S13-Fe18722	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S13-Fe18722	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S13-Fe18722	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	S13-Fe18722	CP	mg/kg	< 1	< 1	<1	30%	Pass	
o-Xylene	S13-Fe18722	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes - Total	S13-Fe18722	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Total BTEX	S13-Fe18722	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S13-Fe18722	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S13-Fe18722	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S13-Fe18722	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S13-Fe18733	CP	mg/kg	3.3	2.8	16	30%	Pass	
Cadmium	S13-Fe18733	CP	mg/kg	< 0.4	< 0.4	4.0	30%	Pass	
Chromium	S13-Fe18733	CP	mg/kg	15	15	5.0	30%	Pass	
Cobalt	S13-Fe18733	CP	mg/kg	7.8	9.2	16	30%	Pass	
Copper	S13-Fe18733	CP	mg/kg	22	23	2.0	30%	Pass	
Lead	S13-Fe18733	CP	mg/kg	13	15	13	30%	Pass	
Mercury	S13-Fe18733	CP	mg/kg	< 0.05	< 0.05	11	30%	Pass	
Nickel	S13-Fe18733	CP	mg/kg	19	19	1.0	30%	Pass	
Zinc	S13-Fe18733	CP	mg/kg	50	57	14	30%	Pass	
Titanium	S13-Fe18733	CP	mg/kg	110	110	6.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S13-Fe18742	CP	mg/kg	< 50	< 50	16	30%	Pass	
TRH C15-C28	S13-Fe18742	CP	mg/kg	< 100	< 100	16	30%	Pass	
TRH C29-C36	S13-Fe18742	CP	mg/kg	< 100	< 100	6.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S13-Fe18742	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S13-Fe18742	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S13-Fe18742	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S13-Fe18746	CP	mg/kg	6.1	3.9	44	30%	Fail	Q15
Cadmium	S13-Fe18746	CP	mg/kg	< 0.4	< 0.4	28	30%	Pass	
Chromium	S13-Fe18746	CP	mg/kg	31	33	8.0	30%	Pass	
Cobalt	S13-Fe18746	CP	mg/kg	22	22	<1	30%	Pass	
Copper	S13-Fe18746	CP	mg/kg	35	38	7.0	30%	Pass	
Lead	S13-Fe18746	CP	mg/kg	13	6.0	71	30%	Fail	Q15
Mercury	S13-Fe18746	CP	mg/kg	< 0.05	< 0.05	18	30%	Pass	
Nickel	S13-Fe18746	CP	mg/kg	65	100	42	30%	Fail	Q15
Zinc	S13-Fe18746	CP	mg/kg	66	56	17	30%	Pass	
Titanium	S13-Fe18746	CP	mg/kg	57	46	20	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S13-Fe18751	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S13-Fe18751	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S13-Fe18751	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	S13-Fe18751	CP	mg/kg	< 1	< 1	<1	30%	Pass	
o-Xylene	S13-Fe18751	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes - Total	S13-Fe18751	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Total BTEX	S13-Fe18751	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S13-Fe18751	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S13-Fe18751	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S13-Fe18751	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S13-Fe18757	CP	mg/kg	< 50	< 50	6.0	30%	Pass	
TRH C15-C28	S13-Fe18757	CP	mg/kg	< 100	< 100	8.0	30%	Pass	
TRH C29-C36	S13-Fe18757	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S13-Fe18757	CP	mg/kg	< 50	< 50	6.0	30%	Pass	
TRH >C16-C34	S13-Fe18757	CP	mg/kg	< 100	< 100	18	30%	Pass	
TRH >C34-C40	S13-Fe18757	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD			
Acenaphthene	S13-Fe18757	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S13-Fe18757	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S13-Fe18757	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S13-Fe18757	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S13-Fe18757	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S13-Fe18757	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzo(g.h.i)perylene	S13-Fe18757	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S13-Fe18757	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S13-Fe18757	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S13-Fe18757	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S13-Fe18757	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S13-Fe18757	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S13-Fe18757	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S13-Fe18757	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S13-Fe18757	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S13-Fe18759	CP	mg/kg	23	16	36	30%	Fail	Q15
Cadmium	S13-Fe18759	CP	mg/kg	0.4	0.5	8.0	30%	Pass	
Chromium	S13-Fe18759	CP	mg/kg	19	19	3.0	30%	Pass	
Cobalt	S13-Fe18759	CP	mg/kg	14	15	11	30%	Pass	
Copper	S13-Fe18759	CP	mg/kg	33	32	4.0	30%	Pass	
Lead	S13-Fe18759	CP	mg/kg	190	170	10	30%	Pass	
Mercury	S13-Fe18759	CP	mg/kg	0.23	0.24	5.0	30%	Pass	
Nickel	S13-Fe18759	CP	mg/kg	27	31	14	30%	Pass	
Zinc	S13-Fe18759	CP	mg/kg	93	88	5.0	30%	Pass	
Titanium	S13-Fe18759	CP	mg/kg	19	32	53	30%	Fail	Q15
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S13-Fe18768	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S13-Fe18768	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S13-Fe18768	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	S13-Fe18768	CP	mg/kg	< 1	< 1	<1	30%	Pass	
o-Xylene	S13-Fe18768	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes - Total	S13-Fe18768	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Total BTEX	S13-Fe18768	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S13-Fe18768	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C10	S13-Fe18768	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S13-Fe18768	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S13-Fe18774	CP	mg/kg	7.8	6.0	26	30%	Pass	
Cadmium	S13-Fe18774	CP	mg/kg	< 0.4	< 0.4	43	30%	Fail	Q15
Chromium	S13-Fe18774	CP	mg/kg	110	120	4.0	30%	Pass	
Cobalt	S13-Fe18774	CP	mg/kg	34	33	<1	30%	Pass	
Copper	S13-Fe18774	CP	mg/kg	35	38	6.0	30%	Pass	
Lead	S13-Fe18774	CP	mg/kg	15	16	6.0	30%	Pass	
Mercury	S13-Fe18774	CP	mg/kg	< 0.05	< 0.05	10	30%	Pass	
Nickel	S13-Fe18774	CP	mg/kg	68	69	2.0	30%	Pass	
Zinc	S13-Fe18774	CP	mg/kg	72	76	5.0	30%	Pass	
Titanium	S13-Fe18774	CP	mg/kg	840	700	18	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S13-Fe18782	CP	mg/kg	< 50	< 50	15	30%	Pass	
TRH C15-C28	S13-Fe18782	CP	mg/kg	< 100	< 100	20	30%	Pass	
TRH C29-C36	S13-Fe18782	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S13-Fe18782	CP	mg/kg	< 50	< 50	11	30%	Pass	
TRH >C16-C34	S13-Fe18782	CP	mg/kg	< 100	< 100	24	30%	Pass	
TRH >C34-C40	S13-Fe18782	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD			
Aroclor-1016	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1232	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides (OC)				Result 1	Result 2	RPD			
4.4'-DDD	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S13-Fe18782	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
a-BHC	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-Chlordane	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-Chlordane	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S13-Fe18782	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S13-Fe18782	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD			
Acenaphthene	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S13-Fe18782	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzo(g.h.i)perylene	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S13-Fe18782	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Comments

Asbestos analysed by: ASET, NATA accreditation no. 14484, report reference ASET32453/ 35633 / 1 - 15.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

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.
Q15	The RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
Laura Schofield	Senior Analyst-Volatile (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
James Norford	Senior Analyst-Metal (NSW)

Dr. Bob Symons

Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

mgt LabMark ENVIRONMENTAL LABORATORIES

Certificate of Analysis

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Attention: **Edward Wu**

Report **370054-W**
Client Reference BRICKWORKS PROSPECT ENAURHOD04463AA
Received Date Feb 25, 2013

Client Sample ID			**RB3**	**SW1**	**SW2**	**SW3**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
mgt-LabMark Sample No.			**S13-Fe18791**	**S13-Fe18801**	**S13-Fe18802**	**S13-Fe18803**
Date Sampled			**Feb 21, 2013**	**Feb 21, 2013**	**Feb 21, 2013**	**Feb 21, 2013**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total BTEX	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Bromofluorobenzene (surr.)	1	%	95	95	95	95
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene[N02]	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.005	mg/L	< 0.005	-	-	-
Aroclor-1232	0.005	mg/L	< 0.005	-	-	-
Aroclor-1242	0.005	mg/L	< 0.005	-	-	-
Aroclor-1248	0.005	mg/L	< 0.005	-	-	-
Aroclor-1254	0.005	mg/L	< 0.005	-	-	-
Aroclor-1260	0.005	mg/L	< 0.005	-	-	-
Total PCB	0.005	mg/L	< 0.005	-	-	-
Dibutylchlorendate (surr.)	1	%	96	-	-	-
Organochlorine Pesticides (OC)						
4.4'-DDD	0.0005	mg/L	< 0.0005	-	-	-
4.4'-DDE	0.0005	mg/L	< 0.0005	-	-	-
4.4'-DDT	0.002	mg/L	< 0.002	-	-	-
a-BHC	0.0005	mg/L	< 0.0005	-	-	-

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Client Sample ID			RB3	SW1	SW2	SW3
Sample Matrix			Water	Water	Water	Water
mgt-LabMark Sample No.			S13-Fe18791	S13-Fe18801	S13-Fe18802	S13-Fe18803
Date Sampled			Feb 21, 2013	Feb 21, 2013	Feb 21, 2013	Feb 21, 2013
Test/Reference	LOR	Unit				
Organochlorine Pesticides (OC)						
a-Chlordane	0.0005	mg/L	< 0.0005	-	-	-
Aldrin	0.0005	mg/L	< 0.0005	-	-	-
b-BHC	0.0005	mg/L	< 0.0005	-	-	-
d-BHC	0.0005	mg/L	< 0.0005	-	-	-
Dieldrin	0.0005	mg/L	< 0.0005	-	-	-
Endosulfan I	0.0005	mg/L	< 0.0005	-	-	-
Endosulfan II	0.0005	mg/L	< 0.0005	-	-	-
Endosulfan sulphate	0.0005	mg/L	< 0.0005	-	-	-
Endrin	0.0005	mg/L	< 0.0005	-	-	-
Endrin aldehyde	0.0005	mg/L	< 0.0005	-	-	-
Endrin ketone	0.0005	mg/L	< 0.0005	-	-	-
g-BHC (Lindane)	0.0005	mg/L	< 0.0005	-	-	-
g-Chlordane	0.0005	mg/L	< 0.0005	-	-	-
Heptachlor	0.0005	mg/L	< 0.0005	-	-	-
Heptachlor epoxide	0.0005	mg/L	< 0.0005	-	-	-
Hexachlorobenzene	0.0005	mg/L	< 0.0005	-	-	-
Methoxychlor	0.002	mg/L	< 0.002	-	-	-
Dibutylchlorendate (surr.)	1	%	96	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	93	-	-	-
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene & Benzo(k)fluoranthene	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
2-Fluorobiphenyl (surr.)	1	%	90	103	110	100
p-Terphenyl-d14 (surr.)	1	%	96	115	119	107
Heavy Metals						
Arsenic	0.005	mg/L	-	< 0.005	0.023	< 0.005
Cadmium	0.0005	mg/L	-	< 0.0005	0.0009	< 0.0005
Chromium	0.005	mg/L	-	< 0.005	0.16	< 0.005
Cobalt	0.005	mg/L	-	< 0.005	0.033	< 0.005
Copper	0.005	mg/L	-	< 0.005	0.31	< 0.005
Lead	0.005	mg/L	-	< 0.005	0.077	< 0.005
Mercury	0.0001	mg/L	-	< 0.0001	< 0.0001	< 0.0001
Nickel	0.005	mg/L	-	< 0.005	0.15	< 0.005
Zinc	0.005	mg/L	-	< 0.005	2.0	< 0.005
Titanium	0.005	mg/L	-	0.006	5.5	0.016

Client Sample ID			RB3	SW1	SW2	SW3
Sample Matrix			Water	Water	Water	Water
mgt-LabMark Sample No.			S13-Fe18791	S13-Fe18801	S13-Fe18802	S13-Fe18803
Date Sampled			Feb 21, 2013	Feb 21, 2013	Feb 21, 2013	Feb 21, 2013
Test/Reference	LOR	Unit				
Heavy Metals						
Lead (filtered)	0.001	mg/L	< 0.001	-	-	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	-	-	-
Nickel (filtered)	0.001	mg/L	< 0.001	-	-	-
Arsenic (filtered)	0.001	mg/L	< 0.001	-	-	-
Cadmium (filtered)	0.0001	mg/L	< 0.0001	-	-	-
Chromium (filtered)	0.001	mg/L	< 0.001	-	-	-
Cobalt (filtered)	0.001	mg/L	< 0.001	-	-	-
Copper (filtered)	0.001	mg/L	< 0.001	-	-	-
Zinc (filtered)	0.005	mg/L	< 0.005	-	-	-
Titanium (filtered)	0.005	mg/L	< 0.005	-	-	-

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Feb 27, 2013	7 Day
- Method: E004 Petroleum Hydrocarbons (TPH)			
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions	Sydney	Feb 27, 2013	7 Day
- Method: LM-LTM-ORG2010			
BTEX	Sydney	Feb 26, 2013	14 Day
- Method: E029/E016 BTEX			
Polychlorinated Biphenyls (PCB)	Sydney	Feb 27, 2013	7 Day
- Method: E013 Polychlorinated Biphenyls (PCB)			
Organochlorine Pesticides (OC)	Sydney	Feb 27, 2013	7 Day
- Method: E013 Organochlorine Pesticides (OC)			
Polyaromatic Hydrocarbons (PAH)	Sydney	Feb 27, 2013	7 Day
- Method: E007 Polyaromatic Hydrocarbons (PAH)			
Heavy Metals	Sydney	Feb 26, 2013	180 Day
- Method: E022/E030 Unfiltered Metals in Water			
Heavy Metals (filtered)	Sydney	Feb 26, 2013	180 Day
- Method: E020/E030 Filtered Metals in Water			
Mobil Metals : Metals M15	Sydney	Feb 26, 2013	28 Day
- Method: E022/E030 Unfiltered Metals in Water & E026 Mercury			

mgt LabMark ENVIRONMENTAL LABORATORIES
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Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Company Name:	Coffey Environments Pty Ltd NSW	**Order No.:**	
Address:	Level 20, Tower B, Citadel Tower 799 Pacific Highway Chatswood NSW 2067	**Report #:** **Phone:** **Fax:**	370054 +61 2 9406 1000 +61 2 9406 1004
Client Job No.:	BRICKWORKS PROSPECT ENAURHOD04463AA		

Received:	Feb 25, 2013 5:19 PM
Due:	Mar 4, 2013
Priority:	4 Day
Contact Name:	Edward Wu

mgt-LabMark Client Manager: Jean Heng

Sample Detail	% Moisture	Arsenic	Arsenic (filtered)	Asbestos	Cadmium	Cadmium (filtered)	Chromium	Chromium (filtered)	Cobalt	Cobalt (filtered)	Copper	Copper (filtered)	HOLD	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel	Nickel (filtered)	Titanium	Titanium (filtered)	TRH C6-C9	Zinc	Zinc (filtered)	BTEX	Polychlorinated Biphenyls (PCB)	Organochlorine Pesticides (OC)	Polyaromatic Hydrocarbons (PAH)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																													
Melbourne Laboratory - NATA Site # 1254 & 14271																													
Sydney Laboratory - NATA Site # 18217	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																													
External Laboratory				X																									
Sample ID / **Sample Date** / **Sampling Time** / **Matrix** / **LAB ID**																													
BH1_(0.0-0.2M) / Feb 20, 2013 / / Soil / S13-Fe18699	X	X		X	X		X		X		X			X		X		X		X			X		X			X	X
BH1_(0.4-0.5M) / Feb 20, 2013 / / Soil / S13-Fe18700													X																
BH2_(0.0-0.2M) / Feb 19, 2013 / / Soil / S13-Fe18701	X	X			X		X		X		X			X		X		X		X			X					X	
BH3_(0.0-0.2M) / Feb 20, 2013 / / Soil / S13-Fe18702	X	X			X		X		X		X			X		X		X		X			X					X	
BH4_(0.0-0.1M) / Feb 20, 2013 / / Soil / S13-Fe18703	X	X			X		X		X		X			X		X		X		X			X		X	X	X	X	X
BH4_(0.4-0.5M) / Feb 20, 2013 / / Soil / S13-Fe18704													X																

mgt LabMark ENVIRONMENTAL LABORATORIES
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NATA # 1261 Site # 20794

Company Name:	Coffey Environments Pty Ltd NSW	**Order No.:**	
Address:	Level 20, Tower B, Citadel Tower 799 Pacific Highway Chatswood NSW 2067	**Report #:** **Phone:** **Fax:**	370054 +61 2 9406 1000 +61 2 9406 1004
Client Job No.:	BRICKWORKS PROSPECT ENAURHOD04463AA		

Received:	Feb 25, 2013 5:19 PM
Due:	Mar 4, 2013
Priority:	4 Day
Contact Name:	Edward Wu

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Arsenic	Arsenic (filtered)	Asbestos	Cadmium	Cadmium (filtered)	Chromium	Chromium (filtered)	Cobalt	Cobalt (filtered)	Copper	Copper (filtered)	HOLD	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel	Nickel (filtered)	Titanium	Titanium (filtered)	TRH C6-C9	Zinc	Zinc (filtered)	BTEX	Polychlorinated Biphenyls (PCB)	Organochlorine Pesticides (OC)	Polyaromatic Hydrocarbons (PAH)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																																
Melbourne Laboratory - NATA Site # 1254 & 14271																																
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH5_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18705	X	X		X	X		X		X		X			X		X		X		X			X					
BH6_(0.16-0.26M)	Feb 18, 2013		Soil	S13-Fe18706	X	X		X	X		X		X		X			X		X		X		X			X		X			X
BH6_(0.4-0.5M)	Feb 19, 2013		Soil	S13-Fe18707													X																
BH6_(1.0-1.1M)	Feb 19, 2013		Soil	S13-Fe18708	X	X			X		X		X		X			X		X		X		X			X						
BH6_(1.9-2.0M)	Feb 19, 2013		Soil	S13-Fe18709													X																
BH7_(0.08-0.13M)	Feb 18, 2013		Soil	S13-Fe18710	X	X			X		X		X		X			X		X		X		X			X						
BH7_(0.2-0.3M)	Feb 18, 2013		Soil	S13-Fe18711	X	X			X		X		X		X			X		X		X		X			X		X	X	X	X	X

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Laboratory where analysis is conducted																																	
Melbourne Laboratory - NATA Site # 1254 & 14271																																	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																	
External Laboratory								X																									
BH7_(0.4-0.5M)	Feb 18, 2013		Soil	S13-Fe18712	X	X			X		X		X		X			X		X		X		X			X						
BH8_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18713	X	X		X	X		X		X		X			X		X		X		X			X		X	X	X	X	X
BH9_(0.0-0.1M)	Feb 20, 2013		Soil	S13-Fe18714	X	X		X	X		X		X		X			X		X		X		X			X		X	X	X	X	X
BH9_(0.4-0.5M)	Feb 20, 2013		Soil	S13-Fe18715													X																	
BH10_(0.16-0.26M)	Feb 20, 2013		Soil	S13-Fe18716	X	X			X		X		X		X			X		X		X		X			X		X				X
BH11_(0.19-0.29M)	Feb 20, 2013		Soil	S13-Fe18717	X	X			X		X		X		X			X		X		X		X			X		X				X
BH12_(0.23-0.33M)	Feb 20, 2013		Soil	S13-Fe18718													X																	

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Laboratory where analysis is conducted																																	
Melbourne Laboratory - NATA Site # 1254 & 14271																																	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																	
External Laboratory								X																									
BH12_(0.4-0.5M)	Feb 20, 2013		Soil	S13-Fe18719	X	X			X		X		X		X			X		X		X		X			X		X				X
BH13_(0.13-0.23M)	Feb 20, 2013		Soil	S13-Fe18720	X	X		X	X		X		X		X			X		X		X		X			X		X				X
BH13_(0.4-0.5M)	Feb 20, 2013		Soil	S13-Fe18721													X																	
BH14_(0.19-0.29M)	Feb 18, 2013		Soil	S13-Fe18722	X	X			X		X		X		X			X		X		X		X			X		X				X
BH14_(0.4-0.5M)	Feb 18, 2013		Soil	S13-Fe18723													X																	
BH15_(0.15-0.25M)	Feb 18, 2013		Soil	S13-Fe18724	X	X			X		X		X		X			X		X		X		X			X		X				X
BH15_(0.4-0.5M)	Feb 18, 2013		Soil	S13-Fe18725													X																	

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Laboratory where analysis is conducted																																
Melbourne Laboratory - NATA Site # 1254 & 14271																																
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH16_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18726	X	X		X	X		X		X		X			X		X		X		X			X		X				X
BH17_(0.08-0.18M)	Feb 19, 2013		Soil	S13-Fe18727													X																
BH17_(0.5-0.6M)	Feb 19, 2013		Soil	S13-Fe18728	X	X		X	X		X		X		X			X		X		X		X			X		X	X	X	X	X
BH17_(0.9-1.0M)	Feb 19, 2013		Soil	S13-Fe18729													X																
BH17_(2.0-2.1M)	Feb 19, 2013		Soil	S13-Fe18730													X																
BH17_(3.0-3.1M)	Feb 19, 2013		Soil	S13-Fe18731													X																
BH17_(3.8-3.9M)	Feb 19, 2013		Soil	S13-Fe18732													X																

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Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH18_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18733	X	X		X	X		X		X		X			X		X		X		X			X				X	
BH19_(0.0-0.15M)	Feb 19, 2013		Soil	S13-Fe18734													X																
BH19_(0.4-0.5M)	Feb 19, 2013		Soil	S13-Fe18735	X	X		X	X		X		X		X			X		X		X		X			X		X	X	X		X
BH19_(1.0-1.1M)	Feb 19, 2013		Soil	S13-Fe18736	X	X			X		X		X		X			X		X		X		X			X						
BH20_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18737	X	X		X	X		X		X		X			X		X		X		X			X					X	
BH21_(0.0-0.2M)	Feb 19, 2013		Soil	S13-Fe18738	X	X		X	X		X		X		X			X		X		X		X			X			X	X	X	
BH21_(0.5-0.6M)	Feb 19, 2013		Soil	S13-Fe18739													X																

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Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH21_(1.0-1.1M)	Feb 19, 2013		Soil	S13-Fe18740	X	X			X		X		X		X			X		X		X		X			X					
BH21_(2.0-2.1M)	Feb 19, 2013		Soil	S13-Fe18741													X																
BH21_(3.0-3.1M)	Feb 19, 2013		Soil	S13-Fe18742	X	X			X		X		X		X			X		X		X		X			X		X				X
BH21_(3.9-4.0M)	Feb 19, 2013		Soil	S13-Fe18743	X	X			X		X		X		X			X		X		X		X			X						
BH22_(0.0-0.1M)	Feb 19, 2013		Soil	S13-Fe18744	X	X		X	X		X		X		X			X		X		X		X			X						
BH23_(0.08-0.18M)	Feb 19, 2013		Soil	S13-Fe18745	X	X			X		X		X		X			X		X		X		X			X		X				X
BH23_(0.5-0.6M)	Feb 19, 2013		Soil	S13-Fe18746	X	X			X		X		X		X			X		X		X		X			X		X				X

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Brisbane Laboratory - NATA Site # 20794																																	
External Laboratory								X																									
BH23_(1.0-1.1M)	Feb 19, 2013		Soil	S13-Fe18747													X																	
BH24_(0.08-0.18M)	Feb 19, 2013		Soil	S13-Fe18748	X	X			X		X		X		X			X		X		X		X			X		X				X
BH24_(0.5-0.6M)	Feb 19, 2013		Soil	S13-Fe18749	X	X			X		X		X		X			X		X		X		X			X						
BH24_(1.1-1.2M)	Feb 19, 2013		Soil	S13-Fe18750	X	X			X		X		X		X			X		X		X		X			X		X				X
BH25_(0.19-0.29M)	Feb 18, 2013		Soil	S13-Fe18751	X	X			X		X		X		X			X		X		X		X			X		X	X	X	X	X
BH26_(0.18-0.28M)	Feb 18, 2013		Soil	S13-Fe18752	X	X			X		X		X		X			X		X		X		X			X		X				X
BH27_(0.17-0.27M)	Feb 18, 2013		Soil	S13-Fe18753	X	X			X		X		X		X			X		X		X		X			X		X	X	X	X	X

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Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																	
External Laboratory								X																									
BH27_(0.4-0.5M)	Feb 18, 2013		Soil	S13-Fe18754	X	X			X		X		X		X			X		X		X		X			X		X				X
BH27_(1.0-1.1M)	Feb 19, 2013		Soil	S13-Fe18755													X																
BH28_(0.16-0.26M)	Feb 18, 2013		Soil	S13-Fe18756	X	X			X		X		X		X			X		X		X		X			X		X			X	X
BH29_(0.19-0.29M)	Feb 18, 2013		Soil	S13-Fe18757	X	X			X		X		X		X			X		X		X		X			X		X			X	X
BH29_(0.4-0.5M)	Feb 18, 2013		Soil	S13-Fe18758													X																
BH30_(0.19-0.29M)	Feb 18, 2013		Soil	S13-Fe18759	X	X			X		X		X		X			X		X		X		X			X		X				X
BH31_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18760	X	X			X		X		X		X			X		X		X		X			X		X				X

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Company Name:	Coffey Environments Pty Ltd NSW	**Order No.:**	
Address:	Level 20, Tower B, Citadel Tower 799 Pacific Highway Chatswood NSW 2067	**Report #:** **Phone:** **Fax:**	370054 +61 2 9406 1000 +61 2 9406 1004
Client Job No.:	BRICKWORKS PROSPECT ENAURHOD04463AA		

Received:	Feb 25, 2013 5:19 PM
Due:	Mar 4, 2013
Priority:	4 Day
Contact Name:	Edward Wu

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Arsenic	Arsenic (filtered)	Asbestos	Cadmium	Cadmium (filtered)	Chromium	Chromium (filtered)	Cobalt	Cobalt (filtered)	Copper	Copper (filtered)	HOLD	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel	Nickel (filtered)	Titanium	Titanium (filtered)	TRH C6-C9	Zinc	Zinc (filtered)	BTEX	Polychlorinated Biphenyls (PCB)	Organochlorine Pesticides (OC)	Polyaromatic Hydrocarbons (PAH)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																																
Melbourne Laboratory - NATA Site # 1254 & 14271																																
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH31_(0.4-0.5M)	Feb 20, 2013		Soil	S13-Fe18761	X																							X				X
BH32_(0.08-0.18M)	Feb 20, 2013		Soil	S13-Fe18762	X	X			X		X		X		X			X		X		X		X			X					
BH33_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18763	X	X			X		X		X		X			X		X		X		X			X					
BH33_(0.4-0.5M)	Feb 20, 2013		Soil	S13-Fe18764													X																
BH34_(0.09-0.19M)	Feb 19, 2013		Soil	S13-Fe18765	X	X			X		X		X		X			X		X		X		X			X					
BH34_(0.5-0.6M)	Feb 19, 2013		Soil	S13-Fe18766													X																
BH34_(1.0-1.1M)	Feb 19, 2013		Soil	S13-Fe18767	X	X			X		X		X		X			X		X		X		X			X		X				X

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Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH35_(0.08-0.18M)	Feb 18, 2013		Soil	S13-Fe18768	X	X			X		X		X		X			X		X		X		X			X		X				X
BH35_(0.4-0.5M)	Feb 18, 2013		Soil	S13-Fe18769	X	X			X		X		X		X			X		X		X		X			X						
BH36_(0.0-0.2M)	Feb 20, 2013		Soil	S13-Fe18770	X	X			X		X		X		X			X		X		X		X			X		X			X	X
BH36_(0.4-0.5M)	Feb 20, 2013		Soil	S13-Fe18771													X																
BH37_(0.0-0.2M)	Feb 21, 2013		Soil	S13-Fe18772	X	X		X	X		X		X		X			X		X		X		X			X		X				X
BH37_(0.4-0.5M)	Feb 21, 2013		Soil	S13-Fe18773													X																
BH38_(0.0-0.2M)	Feb 21, 2013		Soil	S13-Fe18774	X	X		X	X		X		X		X			X		X		X		X			X		X				X

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Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
BH38_(0.4-0.5M)	Feb 21, 2013		Soil	S13-Fe18775	X	X			X		X		X		X			X		X		X		X			X					
BH39_(0.0-0.2M)	Feb 21, 2013		Soil	S13-Fe18776	X	X			X		X		X		X			X		X		X		X			X					
BH39_(0.4-0.5M)	Feb 21, 2013		Soil	S13-Fe18777													X																
BH40_(0.0-0.2M)	Feb 21, 2013		Soil	S13-Fe18778	X	X			X		X		X		X			X		X		X		X			X					
BH40_(0.4-0.5M)	Feb 21, 2013		Soil	S13-Fe18779													X																
DUP1	Feb 18, 2013		Soil	S13-Fe18780													X																
DUP2	Feb 18, 2013		Soil	S13-Fe18781	X	X			X		X		X		X			X		X		X		X			X		X				X
DUP3	Feb 19, 2013		Soil	S13-Fe18782	X	X			X		X		X		X			X		X		X		X			X		X	X	X	X	X

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Brisbane Laboratory - NATA Site # 20794																																
External Laboratory								X																								
DUP4	Feb 19, 2013		Soil	S13-Fe18783													X																
DUP5	Feb 19, 2013		Soil	S13-Fe18784	X	X			X		X		X		X			X		X		X		X			X						
DUP6	Feb 20, 2013		Soil	S13-Fe18785													X																
DUP7	Feb 20, 2013		Soil	S13-Fe18786													X																
DUP8	Feb 20, 2013		Soil	S13-Fe18787													X																
DUP9	Feb 21, 2013		Soil	S13-Fe18788													X																
RB1	Feb 19, 2013		Water	S13-Fe18789													X																
RB2	Feb 20, 2013		Water	S13-Fe18790													X																
RB3	Feb 21, 2013		Water	S13-Fe18791			X			X		X		X		X			X		X		X		X			X	X	X	X	X	X
TB1	Feb 15, 2013		Soil	S13-Fe18792																						X			X				
TS1	Feb 15, 2013		Soil	S13-Fe18793													X																

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Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																																	
External Laboratory								X																									
TB2	Feb 15, 2013		Soil	S13-Fe18794																						X			X				
TS2	Feb 20, 2013		Soil	S13-Fe18795																						X			X				
TB3	Feb 15, 2013		Soil	S13-Fe18796													X																
TS3	Feb 20, 2013		Soil	S13-Fe18797																						X			X				
SED1	Feb 21, 2013		Soil	S13-Fe18798	X	X			X		X		X		X			X		X		X		X			X		X	X	X	X	X
SED2	Feb 21, 2013		Soil	S13-Fe18799	X	X			X		X		X		X			X		X		X		X			X		X				X
SED3	Feb 21, 2013		Soil	S13-Fe18800	X	X			X		X		X		X			X		X		X		X			X		X				X
SW1	Feb 21, 2013		Water	S13-Fe18801		X			X		X		X		X			X		X		X		X			X		X			X	X
SW2	Feb 21, 2013		Water	S13-Fe18802		X			X		X		X		X			X		X		X		X			X		X			X	X
SW3	Feb 21, 2013		Water	S13-Fe18803		X			X		X		X		X			X		X		X		X			X		X			X	X
TS1LAB	Feb 15, 2013		Soil	S13-Fe18804													X																

mgt-LabMark Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

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

UNITS

mg/kg: milligrams per Kilogram

ug/l: micrograms per litre

ppb: Parts per billion

org/100ml: Organisms per 100 millilitres

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

mg/l: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Units

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environment Protection Authority
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene 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 Arochlor 1260 in Matrix Spikes and LCS's.
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 RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX E029/E016 BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Total BTEX	mg/L	< 0.01			0.01	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions LM-LTM-ORG2010							
Naphthalene	mg/L	< 0.005			0.005	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH C6-C10 less BTEX (F1)	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB) E013 Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/L	< 0.005			0.005	Pass	
Aroclor-1232	mg/L	< 0.005			0.005	Pass	
Aroclor-1242	mg/L	< 0.005			0.005	Pass	
Aroclor-1248	mg/L	< 0.005			0.005	Pass	
Aroclor-1254	mg/L	< 0.005			0.005	Pass	
Aroclor-1260	mg/L	< 0.005			0.005	Pass	
Total PCB	mg/L	< 0.005			0.005	Pass	
Method Blank							
Organochlorine Pesticides (OC) E013 Organochlorine Pesticides (OC)							
4.4'-DDD	mg/L	< 0.0005			0.0005	Pass	
4.4'-DDE	mg/L	< 0.0005			0.0005	Pass	
4.4'-DDT	mg/L	< 0.002			0.002	Pass	
a-BHC	mg/L	< 0.0005			0.0005	Pass	
a-Chlordane	mg/L	< 0.0005			0.0005	Pass	
Aldrin	mg/L	< 0.0005			0.0005	Pass	
b-BHC	mg/L	< 0.0005			0.0005	Pass	
d-BHC	mg/L	< 0.0005			0.0005	Pass	
Dieldrin	mg/L	< 0.0005			0.0005	Pass	
Endosulfan I	mg/L	< 0.0005			0.0005	Pass	
Endosulfan II	mg/L	< 0.0005			0.0005	Pass	
Endosulfan sulphate	mg/L	< 0.0005			0.0005	Pass	
Endrin	mg/L	< 0.0005			0.0005	Pass	
Endrin aldehyde	mg/L	< 0.0005			0.0005	Pass	
Endrin ketone	mg/L	< 0.0005			0.0005	Pass	
g-BHC (Lindane)	mg/L	< 0.0005			0.0005	Pass	
g-Chlordane	mg/L	< 0.0005			0.0005	Pass	
Heptachlor	mg/L	< 0.0005			0.0005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor epoxide	mg/L	< 0.0005			0.0005	Pass	
Hexachlorobenzene	mg/L	< 0.0005			0.0005	Pass	
Methoxychlor	mg/L	< 0.002			0.002	Pass	
Method Blank							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	mg/L	< 0.002			0.002	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Heavy Metals E022/E030 Unfiltered Metals in Water							
Arsenic	mg/L	< 0.005			0.005	Pass	
Cadmium	mg/L	< 0.0005			0.0005	Pass	
Chromium	mg/L	< 0.005			0.005	Pass	
Cobalt	mg/L	< 0.005			0.005	Pass	
Copper	mg/L	< 0.005			0.005	Pass	
Lead	mg/L	< 0.005			0.005	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.005			0.005	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Titanium	mg/L	< 0.005			0.005	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0001			0.0001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Cobalt (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
Titanium (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	%	95			70-130	Pass	
TRH C10-C14	%	106			70-130	Pass	
LCS - % Recovery							
BTEX E029/E016 BTEX							
Benzene	%	101			70-130	Pass	
Toluene	%	102			70-130	Pass	
Ethylbenzene	%	102			70-130	Pass	
m&p-Xylenes	%	102			70-130	Pass	
o-Xylene	%	102			70-130	Pass	
Xylenes - Total	%	102			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions LM-LTM-ORG2010							
Naphthalene	%	97			70-130	Pass	
TRH C6-C10	%	97			70-130	Pass	
TRH >C10-C16	%	109			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls (PCB) E013 Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	103			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides (OC) E013 Organochlorine Pesticides (OC)							
4.4'-DDD	%	106			70-130	Pass	
4.4'-DDE	%	104			70-130	Pass	
4.4'-DDT	%	104			70-130	Pass	
a-BHC	%	102			70-130	Pass	
a-Chlordane	%	106			70-130	Pass	
Aldrin	%	106			70-130	Pass	
b-BHC	%	102			70-130	Pass	
d-BHC	%	98			70-130	Pass	
Dieldrin	%	101			70-130	Pass	
Endosulfan I	%	105			70-130	Pass	
Endosulfan II	%	112			70-130	Pass	
Endosulfan sulphate	%	103			70-130	Pass	
Endrin	%	103			70-130	Pass	
Endrin aldehyde	%	106			70-130	Pass	
Endrin ketone	%	101			70-130	Pass	
g-BHC (Lindane)	%	107			70-130	Pass	
g-Chlordane	%	105			70-130	Pass	
Heptachlor	%	111			70-130	Pass	
Heptachlor epoxide	%	106			70-130	Pass	
Hexachlorobenzene	%	111			70-130	Pass	
Methoxychlor	%	95			70-130	Pass	
LCS - % Recovery							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	%	127			70-130	Pass	
Acenaphthylene	%	111			70-130	Pass	
Anthracene	%	127			70-130	Pass	
Benz(a)anthracene	%	121			70-130	Pass	
Benzo(a)pyrene	%	114			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	%	117			70-130	Pass	
Benzo(g.h.i)perylene	%	119			70-130	Pass	
Chrysene	%	125			70-130	Pass	
Dibenz(a.h)anthracene	%	120			70-130	Pass	
Fluoranthene	%	129			70-130	Pass	
Fluorene	%	126			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	120			70-130	Pass	
Naphthalene	%	124			70-130	Pass	
Phenanthrene	%	128			70-130	Pass	
Pyrene	%	129			70-130	Pass	
LCS - % Recovery							
Heavy Metals E022/E030 Unfiltered Metals in Water							
Arsenic	%	97			70-130	Pass	
Cadmium	%	93			70-130	Pass	
Chromium	%	96			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Cobalt	%	94			70-130	Pass	
Copper	%	94			70-130	Pass	
Lead	%	89			70-130	Pass	
Mercury	%	117			70-130	Pass	
Nickel	%	95			70-130	Pass	
Zinc	%	95			70-130	Pass	
Titanium	%	105			70-130	Pass	
Lead (filtered)	%	93			70-130	Pass	
Mercury (filtered)	%	95			70-130	Pass	
Nickel (filtered)	%	108			70-130	Pass	
Arsenic (filtered)	%	110			70-130	Pass	
Cadmium (filtered)	%	96			70-130	Pass	
Chromium (filtered)	%	111			70-130	Pass	
Cobalt (filtered)	%	107			70-130	Pass	
Copper (filtered)	%	105			70-130	Pass	
Zinc (filtered)	%	116			70-130	Pass	
Titanium (filtered)	%	118			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S13-Fe18059	NCP	%	87			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S13-Fe18059	NCP	%	97			70-130	Pass	
Toluene	S13-Fe18059	NCP	%	98			70-130	Pass	
Ethylbenzene	S13-Fe18059	NCP	%	96			70-130	Pass	
m&p-Xylenes	S13-Fe18059	NCP	%	94			70-130	Pass	
o-Xylene	S13-Fe18059	NCP	%	94			70-130	Pass	
Xylenes - Total	S13-Fe18059	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1					
Naphthalene	S13-Fe18059	NCP	%	89			70-130	Pass	
TRH C6-C10	S13-Fe18059	NCP	%	88			70-130	Pass	
Spike - % Recovery									
Heavy Metals (filtered)				Result 1					
Lead (filtered)	S13-Fe18791	CP	%	94			70-130	Pass	
Mercury (filtered)	S13-Fe19042	NCP	%	99			70-130	Pass	
Nickel (filtered)	S13-Fe18791	CP	%	108			70-130	Pass	
Arsenic (filtered)	S13-Fe18791	CP	%	110			70-130	Pass	
Cadmium (filtered)	S13-Fe18791	CP	%	98			70-130	Pass	
Chromium (filtered)	S13-Fe18791	CP	%	108			70-130	Pass	
Cobalt (filtered)	S13-Fe18791	CP	%	107			70-130	Pass	
Copper (filtered)	S13-Fe18791	CP	%	106			70-130	Pass	
Zinc (filtered)	S13-Fe18791	CP	%	116			70-130	Pass	
Titanium (filtered)	S13-Fe18791	CP	%	114			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Mercury	S13-Fe18903	NCP	%	115			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S13-Fe18802	CP	%	107			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1					
TRH >C10-C16	S13-Fe18802	CP	%	111			70-130	Pass	

Test	Lab Sample ID	QA	Units	Result 1			Acceptance	Pass	Qualifying

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	S13-Fe18056	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S13-Fe18056	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S13-Fe18056	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S13-Fe18056	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S13-Fe18056	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S13-Fe18056	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	S13-Fe18056	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Total BTEX	S13-Fe18056	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S13-Fe18056	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
TRH C6-C10	S13-Fe18056	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S13-Fe18056	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Heavy Metals (filtered)				Result 1	Result 2	RPD			
Lead (filtered)	S13-Fe18791	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	S13-Fe19036	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S13-Fe18791	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Arsenic (filtered)	S13-Fe18791	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	S13-Fe18791	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Chromium (filtered)	S13-Fe18791	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cobalt (filtered)	S13-Fe18791	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S13-Fe18791	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc (filtered)	S13-Fe18791	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Titanium (filtered)	S13-Fe18791	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S13-Fe18801	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S13-Fe18801	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S13-Fe18801	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S13-Fe18801	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S13-Fe18801	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S13-Fe18801	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD			
Acenaphthene	S13-Fe18801	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	S13-Fe18801	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	S13-Fe18801	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	S13-Fe18801	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	S13-Fe18801	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S13-Fe18801	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Benzo(g.h.i)perylene	S13-Fe18801	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	S13-Fe18801	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	S13-Fe18801	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	S13-Fe18801	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	S13-Fe18801	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S13-Fe18801	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	S13-Fe18801	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	S13-Fe18801	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD			
Pyrene	S13-Fe18801	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Mercury	S13-Fe18902	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.

Authorised By

Jean Heng	Client Services
Laura Schofield	Senior Analyst-Volatile (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
James Norford	Senior Analyst-Metal (NSW)

Dr. Bob Symons
Laboratory Manager

- Indicates Not Requested

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

Uncertainty data is available on request

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD
ABN 36 088 095 112

Our ref: ASET32453/ 35633 / 1 - 15
Your ref: 370054
NATA Accreditation No: 14484

27 February 2013

Eurofins | mgt
Unit F3, 16 Mars Road
Lane Cove NSW 2066

Attn: Dr Robert Symons
Laboratory & Technical Manager

Dear Robert

Asbestos Identification
This report presents the results of fifteen samples, forwarded by Eurofins | mgt on 26 February 2013, for analysis for asbestos.

1.Introduction: Fifteen samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results :

Sample No. 1. ASET32453 / 35633 / 1. BH1 - 0.0-0.2m - Fe18699
Approx dimensions 6.1 cm x 5.5 cm x 2.1 cm
The sample consisted of a mixture of soil, stones, fragments of plaster and glass.
No asbestos detected.

Sample No. 2. ASET32453 / 35633 / 2. BH5 - 0.0-0.2m - Fe18705
Approx dimensions 5.4 cm x 5.1 cm x 2.4 cm
The sample consisted of a mixture of soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 3. ASET32453 / 35633 / 3. BH6 - 0.16-0.26m - Fe18706
Approx dimensions 5.1 cm x 5.0 cm x 2.5 cm
The sample consisted of a mixture of soil and stones and fragments of plaster.
No asbestos detected.

Sample No. 4. ASET32453 / 35633 / 4. BH8 - 0.0-0.2m - Fe18713
Approx dimensions 5.5 cm x 5.4 cm x 2.5 cm
The sample consisted of a mixture of soil, stones, fibres^, plant matter, fragments of plaster, brick and corroded metal.
Chrysotile^ asbestos and Amosite^ asbestos detected.

Sample No. 5. ASET32453 / 35633 / 5. BH9 - 0.0-0.1m - Fe18714
Approx dimensions 5.5 cm x 5.3 cm x 2.5 cm
The sample consisted of a mixture of clayish sandy soil, stones, plant matter, fragments of plaster, brick and metal pieces.
No asbestos detected.

Sample No. 6. ASET32453 / 35633 / 6. BH13 - 0.13-0.23m - Fe18720
Approx dimensions 5.4 cm x 5.4 cm x 2.3 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 7. ASET32453 / 35633 / 7. BH16 - 0.0-0.2m - Fe18726
Approx dimensions 5.2 cm x 5.3 cm x 2.7 cm
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster, brick and shale.
No asbestos detected.

Sample No. 8. ASET32453 / 35633 / 8. BH17 - 0.5-0.6m - Fe18728
Approx dimensions 5.5 cm x 5.2 cm x 2.4 cm
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 9. ASET32453 / 35633 / 9. BH18 - 0.0-0.2m - Fe18733
Approx dimensions 5.5 cm x 5.4 cm x 2.4 cm
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster and cement.
No asbestos detected.

Sample No. 10. ASET32453 / 35633 / 10. BH19 - 0.4-0.5m - Fe18735
Approx dimensions 6.0 cm x 5.5 cm x 2.5 cm
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster, cement and glass.
No asbestos detected.

Sample No. 11. ASET32453 / 35633 / 11. BH20 - 0.0-0.2m - Fe18737
Approx dimensions 5.2 cm x 5.1 cm x 2.6 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 12. ASET32453 / 35633 / 12. BH21 - 0.0-0.2m - Fe18738
Approx dimensions 6.1 cm x 5.8 cm x 2.5 cm
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 13. ASET32453 / 35633 / 13. BH22 - 0.0-0.1m - Fe18744
Approx dimensions 5.8 cm x 5.5 cm x 2.6 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 14. ASET32453 / 35633 / 14. BH37 – 0.0-0.2m - Fe18772
Approx dimensions 4.5 cm x 4.4 cm x 2.1 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 15. ASET32453 / 35633 / 15. BH38 - 0.0-0.2m - Fe18774
Approx dimensions 5.0 cm x 4.5 cm x 2.4 cm
The sample consisted of a mixture of soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Analysed and reported by,

Nisansala Maddage. BSc(Hons)
Environmental Scientist/Approved Identifier

Mahen De Silva . BSc. MSc. Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Signatory

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

mgt LabMark
ENVIRONMENTAL LABORATORIES

Certificate of Analysis

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Edward Wu**

Report **369625-W**
Client Reference ENAURHOD04463AA
Received Date Feb 21, 2013

Client Sample ID			**SW1**	**SW2**	**SW3**
Sample Matrix			**Water**	**Water**	**Water**
mgt-LabMark Sample No.			**S13-Fe15982**	**S13-Fe15983**	**S13-Fe15984**
Date Sampled			**Feb 21, 2013**	**Feb 21, 2013**	**Feb 21, 2013**
Test/Reference	LOR	Unit			
Conductivity (at 25°C)	1	uS/cm	350	610	890
pH	0.1	units	6.9	9.0	7.5

Sample History

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

Description	Testing Site	Extracted	Holding Time
Conductivity (at 25°C)	Sydney	Feb 21, 2013	28 Day
- Method: E032 Electrical conductivity (EC)			
pH	Sydney	Feb 21, 2013	1 Day
- Method: E018 pH ** Samples analysed outside holding time. Analysis should be performed in situ. Results for reference only.			

mgt LabMark ENVIRONMENTAL LABORATORIES

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Site # 1254 & 14271

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16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Company Name:	Coffey Environments Pty Ltd NSW	**Order No.:**		**Received:**	Feb 21, 2013 2:30 PM
Address:	Level 20, Tower B, Citadel Tower 799 Pacific Highway Chatswood NSW 2067	**Report #:**	369625	**Due:**	Feb 21, 2013
		Phone:	+61 2 9406 1000	**Priority:**	Same day
		Fax:	+61 2 9406 1004	**Contact Name:**	Edward Wu
Client Job No.:	ENAURHOD04463AA				

mgt-LabMark Client Manager: Jean Heng

Sample Detail					Conductivity (at 25°C)	pH
Laboratory where analysis is conducted						
Melbourne Laboratory - NATA Site # 1254 & 14271						
Sydney Laboratory - NATA Site # 18217					X	X
Brisbane Laboratory - NATA Site # 20794						
External Laboratory						
Sample ID	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
SW1	Feb 21, 2013		Water	S13-Fe15982	X	X
SW2	Feb 21, 2013		Water	S13-Fe15983	X	X
SW3	Feb 21, 2013		Water	S13-Fe15984	X	X

mgt-LabMark Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

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

UNITS

mg/kg: milligrams per Kilogram

ug/l: micrograms per litre

ppb: Parts per billion

org/100ml: Organisms per 100 millilitres

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

mg/l: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Units

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environment Protection Authority
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene 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 Arochlor 1260 in Matrix Spikes and LCS's.
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 RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (at 25°C)	S13-Fe15982	CP	uS/cm	350	360	3.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Authorised By

Jean Heng	Client Services
Bob Symons	Senior Analyst-Inorganic (NSW)

Dr. Bob Symons

Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

mgt LabMark ENVIRONMENTAL LABORATORIES

ABN – 50 005 085 521 e.mail : enviro@mgtlabmark.com.au web : www.mgtlabmark.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh Vic 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F6, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Sample Receipt Advice

Company name: **Coffey Environments Pty Ltd NSW**

Contact name: Edward Wu
Client job number: BRICKWORKS PROSPECT ENAURHOD04463AA
COC number: 107211-17
Turn around time: 4 Day
Date/Time received: Feb 25, 2013 5:19 PM
mgt-LabMark reference: **370054**

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 mgt-LabMark Sample Receipt : 4 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.

☑ Organic samples had Teflon liners.

☑ Sample containers for volatile analysis received with zero headspace.

☑ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Notes

Asbestos conducted at ASET| DUP 1A, DUP 3A, DUP 5A, DUP 7A, DUP 9A forwarded to Envirolab as requested| Amber bottle for SW1, SW2 and SW3 also used in report 369625| Slight labelling discrepency: COC- W1 Bottle- SW1. We have labelled as per the bottles|Depth discrepency: COC- BH32_(0.08-0.18M) Jar- BH32_ (0.08-0.28).We have labelled as per the COC unless requested otherwise
Samples received by the laboratory after 4pm are deemed to have been received the following working day.

Contact notes

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

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: jean.heng@mgtlabmark.com.au

Results will be delivered electronically via e.mail to Edward Wu - edward_wu@coffey.com.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

 107211

coffey environments
SPECIALISTS IN ENVIRONMENTAL, SOCIAL AND SAFETY PERFORMANCE

Consigning Office: Chatswood
Report Results to: Edward Wu — Mobile: 0447446130 — Email: edward_wu @coffey.com
Invoices to: Edward Wu — Phone: — Email: edward_wu @coffey.com

Project No: ENAURHOD04463AA Task No:
Project Name: Brickworks Project Laboratory: Eurofins MGT
Sampler's Name: Priya Dass Project Manager: Edward Wu
Special Instructions: metals 10 = As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, Ti, Co

Analysis Request Section: Metals 10 | TPH+BTEX | PAH | OCP+PCB | Asbestos | NOTES

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil...etc)	Container Type & Preservative*	T-A-T (specify)	Metals 10	TPH+BTEX	PAH	OCP+PCB	Asbestos
fe											
18699	BH1 (0.0-0.2M)	20/2/13		Soil	1X 250ml glass jar + 1 ziplock bag	~~Standard~~ 4 day	✓	✓	✓		✓
00	BH1 (0.4-0.5M)	↓		↓	↓	↓					
01	BH2 (0.0-0.2M)	19/2/13					✓		✓		
02	BH3 (0.0-0.2M)	20/2/13					✓		✓		
03	BH4 (0.0-0.1M)						✓	✓	✓	✓	
04	BH4 (0.4-0.5M)	↓									
05	BH5 (0.0-0.2M)						✓			✓	
06	BH6 (0.16-0.26M)	18/2/13					✓	✓		✓	
07	BH6 (0.4-0.5M)	19/2/13									
08	BH6 (1.0-1.1M)						✓				
09	BH6 (1.9-2.0M)	↓									
10	BH7 (0.08-0.13M)	18/2/13					✓				
11	BH7 (0.2-0.3M)						✓	✓	✓	✓	
12	BH7 (0.4-0.5M)	↓					✓				
13	BH8 (0.0-0.2M)	20/2/13					✓	✓	✓	✓	✓
14	BH9 (0.0-0.1M)						✓	✓	✓	✓	✓
15	BH9 (0.4-0.5M)	↓									
16	BH10 (0.16-0.26M)	↓		↓	↓	↓	✓	✓			

RELINQUISHED BY

Name: Priya Dass — Date: 21/2/13 — Time: 1:30 p.m.
Coffey Environments

Name: — Date: — Time:
Company:

RECEIVED BY

Name: Sue — Date: 21/2/13 — Time: 1:30 pm
Company: MGT

Name: Sean O. — Date: 25/2 — Time: 5:19
Company: Eurofins mgt

Sample Receipt Advice: (Lab Use Only)
All Samples Recieved in Good Condition ☑
All Documentation is in Proper Order ☑
Samples Received Properly Chilled ☑
Lab. Ref/Batch No. 370054

*Container Type & Preservation Codes: P - Plastic, G- Glass Bottle, J - Glass Jar, V- Vial, Z - Ziplock Bag, N - Nitric Acid Preserved, C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice, ST - Sodium Thiosulfate, NP - No Preservative, OP - Other Preservative

GOWANS PRINTING (02) 9755 3545

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

 107212

coffey environments
SPECIALISTS IN ENVIRONMENTAL, SOCIAL AND SAFETY PERFORMANCE

Consigning Office: Chatswood
Report Results to: Edward Wu — Mobile: — Email: edward_wu @coffey.com
Invoices to: Edward Wu — Phone: — Email: edward_wu @coffey.com

Project No: ENAURHOD04463AA Task No:
Project Name: Brickworks Prospect Laboratory: Eurofins MGT
Sampler's Name: Priya Dass Project Manager: Edward Wu
Special Instructions: Metals 10 = As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, Ti, Co

Analysis Request Section: Metals 10; TPH + BTEX; PAH; OCP + PCB; Asbestos

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil...etc)	Container Type & Preservative*	T-A-T (specify)	NOTES
17	BH11 (0.19 – 0.29m)					~~Standard~~ 4 day	
18	BH12 (0.23 – 0.33m)						
19	BH12 (0.4 – 0.5m)						
20	BH13 (0.13 – 0.23m)						
21	BH13 (0.4 – 0.5m)						
22	BH14 (0.19 – 0.29m)	18/2/13					
23	BH14 (0.4 – 0.5m)						
24	BH15 (0.15 – 0.25m)						
25	BH15 (0.4 – 0.5m)						
26	BH16 (0.0 – 0.2m)	20/2/13					
27	BH17 (0.08 – 0.18m)	19/2/13					
28	BH17 (0.5 – 0.6m)						
29	BH17 (0.9 – 1.0m)						
30	BH17 (2.0 – 2.1m)						
31	BH17 (3.0 – 3.1m)						
32	BH17 (3.8 – 3.9m)						
33	BH18 (0.0 – 0.2m)	20/2/13					
34	BH19 (0.0 – 0.15m)	19/2/13					

RELINQUISHED BY

Name: Priya Dass — Date: 21/2/13 — Time: 1:30 p.m.
Coffey Environments

Name: — Date: — Time:
Company:

RECEIVED BY

Name: Sue — Date: 21/2/13 — Time: 1:30pm
Company: mgt

Name: Sean O — Date: 25/2 — Time: 5:19
Company: Eurofins mgt

Sample Receipt Advice: (Lab Use Only)

- All Samples Recieved in Good Condition ☑
- All Documentation is in Proper Order ☑
- Samples Received Properly Chilled ☑

Lab. Ref/Batch No. 370054

*Container Type & Preservation Codes: P - Plastic, G- Glass Bottle, J - Glass Jar, V- Vial, Z - Ziplock Bag, N - Nitric Acid Preserved, C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice, ST - Sodium Thiosulfate, NP - No Preservative, OP - Other Preservative

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

 107213

coffey environments
SPECIALISTS IN ENVIRONMENTAL, SOCIAL AND SAFETY PERFORMANCE

Consigning Office: Chatswood
Report Results to: Edward Wu — Mobile: — Email: ~~pm~~ edward_wu @coffey.com
Invoices to: Edward Wu — Phone: — Email: edward_wu @coffey.com

Project No: ENAURHOD04463AA Task No:
Project Name: Brickworks Prospect Laboratory: Eurofins MGT
Sampler's Name: Priya Doss Project Manager: Edward Wu
Special Instructions:

Analysis Request Section: Metals 10 | TPH + BTEX | PAH | OCP + PCB | Asbestos | NOTES

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil...etc)	Container Type & Preservative*	T-A-T (specify)
35	BH19 (0.4-0.5m)	↓				~~Standard~~
36	BH19 (1.0-1.1m)	↓				4 day
37	BH20 (0.0-0.2m)	20/2/13				
38	BH21 (0.0-0.2m)	19/2/13				
39	BH21 (0.5-0.6m)					
40	BH21 (1.0-1.1m)					
41	BH21 (2.0-2.1m)					
42	BH21 (3.0-3.1m)					
43	BH21 (3.9-4.0m)					
44	BH22 (0.0-0.1m)					
45	BH23 (0.08-0.18m)					
46	BH23 (0.5-0.6m)					
47	BH23 (1.0-1.1m)					
48	BH24 (0.08-0.18m)					
49	BH24 (0.5-0.6m)					
50	BH24 (1.1-1.2m)	↓				
51	BH25 (0.19-0.29m)	18/2/13				
52	BH26 (0.18-0.28m)	↓				

RELINQUISHED BY

Name: Priya Doss Date: 21/2/13
Coffey Environments Time: 1:30 p.m.

Name: Date:
Company: Time:

RECEIVED BY

Name: Sue Date: 21/2/13
Company: mgT Time: 1:30 pm

Name: Sean O. Date: 25/2
Company: Eurofins mgt Time: 5:19

Sample Receipt Advice: (Lab Use Only)

All Samples Recieved in Good Condition ☑
All Documentation is in Proper Order ☑
Samples Received Properly Chilled ☑
Lab. Ref/Batch No. 370054

*Container Type & Preservation Codes: P - Plastic, G- Glass Bottle, J - Glass Jar, V- Vial, Z - Ziplock Bag, N - Nitric Acid Preserved, C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice, ST - Sodium Thiosulfate, NP - No Preservative, OP - Other Preservative

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

 107214

coffey environments
SPECIALISTS IN ENVIRONMENTAL, SOCIAL AND SAFETY PERFORMANCE

Consigning Office: Chatswood
Report Results to: Edward Wu — Mobile: — Email: edward_wu @coffey.com
Invoices to: Edward Wu — Phone: — Email: edward_wu @coffey.com

Project No: ENAURHOD04463AA Task No:
Project Name: Brickworks Prospect Laboratory: Eurofins MGT
Sampler's Name: Priya Dass Project Manager: Edward Wu
Special Instructions:

Analysis Request Section: metals / TPH + BTEX / PAH / OCP + PCB / Asbestos

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil...etc)	Container Type & Preservative*	T-A-T (specify)	NOTES
53	BH27 (0.17 – 0.27m)	↓				~~Standard~~	
54	BH27 (0.4 – 0.5m)	↓				4 day	
55	BH27 (1.0 – 1.1m)	19/2/13					
56	BH28 (0.16 – 0.26m)	18/2/13					
57	BH29 (0.19 – 0.29m)	↓					
58	BH29 (0.4 – 0.5m)	↓					
59	BH30 (0.19 – 0.29m)	↓					
60	BH31 (0.0 – 0.2m)	20/2/13					
61	BH31 (0.4 – 0.5m)	↓					
62	BH32 (0.08 – 0.18m)	↓					
63	BH33 (0.0 – 0.2m)	↓					
64	BH33 (0.4 – 0.5m)	↓					
65	BH34 (0.09 – 0.19m)	19/2/13					
66	BH34 (0.5 – 0.6m)	↓					
67	BH34 (1.0 – 1.1m)	↓					
68	BH35 (0.08 – 0.18m)	18/2/13					
69	BH35 (0.4 – 0.5m)	↓					
70	BH36 (0.0 – 0.2m)	20/2/13					

RELINQUISHED BY

Name: Priya Dass Date: 21/2/13
Coffey Environments Time: 1:30 p.m.

Name: Date:
Company: Time:

RECEIVED BY

Name: Sue Date: 21/2/13
Company: mgt Time: 1:30pm

Name: Sean. Date: 25/2
Company: Eurofins Mgt Time: 5:19

Sample Receipt Advice: (Lab Use Only)

All Samples Recieved in Good Condition ☑
All Documentation is in Proper Order ☐
Samples Received Properly Chilled ☐
Lab. Ref/Batch No. 370054

*Container Type & Preservation Codes: P - Plastic, G- Glass Bottle, J - Glass Jar, V- Vial, Z - Ziplock Bag, N - Nitric Acid Preserved, C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice, ST - Sodium Thiosulfate, NP - No Preservative, OP - Other Preservative

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

 107215

coffey environments
SPECIALISTS IN ENVIRONMENTAL, SOCIAL AND SAFETY PERFORMANCE

Consigning Office: Chatswood
Report Results to: Edward Wu — Mobile: — Email: edward_wu @coffey.com
Invoices to: Edward Wu — Phone: — Email: edward_wu @coffey.com

Project No: ENAURHOD04463AA Task No:
Project Name: Brickworks Prospect — Laboratory: Eurofins MGT
Sampler's Name: Priya Dass — Project Manager: Edward Wu
Special Instructions: Metals 10 = As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, Ti, Co

Analysis Request Section

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil...etc)	Container Type & Preservative*	T-A-T (specify)	Metals 10	TPH + BTEX	PAH	OCP + PCB	Asbestos	NOTES
71	BH36 (0.4 – 0.5m)	↓				~~Standard~~						
72	BH37 (0.0 – 0.2m)	21/2/13				4day	/	/		/		
73	BH37 (0.4 – 0.5m)						/	/		/		
74	BH38 (0.0 – 0.2m)						/					
75	BH38 (0.4 – 0.5m)						/					
76	BH39 (0.0 – 0.2m)											
77	BH39 (0.4 – 0.5m)						/					
78	BH40 (0.0 – 0.2m)											
79	BH40 (0.4 – 0.5m)	↓			↓							
80	DUP1	18/2/13			1x250ml glass jar							Send to Enviolab
	DUP1A	↓			↓							
81	DUP2						/	/	###			
82	DUP3	19/2/13					/	/	/	/		Send to Enviolab
	DUP3A						/	/	/	/		
83	DUP4						/					
84	DUP5						/					Send to Enviolab
	DUP5A	↓					/	/				
85	DUP6	20/2/13		↓	↓	↓						

RELINQUISHED BY

Name: Priya Dass — Date: 21/2/13 — Time: 1:30 p.m.
Coffey Environments

Name: — Date: — Time:
Company:

RECEIVED BY

Name: Shel — Date: 21/2/13 — Time: 1:30 pm
Company: mgt

Name: Sean O. — Date: 25/2 — Time: 5:19
Company: Eurofins MGT

Sample Receipt Advice: (Lab Use Only)

All Samples Recieved in Good Condition ☐✓
All Documentation is in Proper Order ☐
Samples Received Properly Chilled ☑
Lab. Ref/Batch No. 370054

*Container Type & Preservation Codes: P - Plastic, G- Glass Bottle, J - Glass Jar, V- Vial, Z - Ziplock Bag, N - Nitric Acid Preserved, C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice, ST - Sodium Thiosulfate, NP - No Preservative, OP - Other Preservative

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

 107216

coffey environments
SPECIALISTS IN ENVIRONMENTAL, SOCIAL AND SAFETY PERFORMANCE

Consigning Office: Chatswood
Report Results to: Edward Wu — Mobile: — Email: edward_wu @coffey.com
Invoices to: Edward Wu — Phone: — Email: edward_wu @coffey.com

Project No: ENAURHOD04463AA Task No:
Project Name: Brickworks Prospect Laboratory: Eurofins MGT
Sampler's Name: Priya Dass Project Manager: Edward Wu
Special Instructions: Metals 10 = As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, Ti, Co

Analysis Request Section: metals 10 | TPH + BTEX | PAH | OCP + PCB | Asbestos | NOTES

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil...etc)	Container Type & Preservative*	T-A-T (specify)	metals 10	TPH + BTEX	PAH	OCP + PCB	Asbestos	NOTES
86	DUP7					~~Standard~~ 4 day	✓					
	DUP7A											Send to Enviro lab
87	DUP8											
88	DUP9	21/2/13										
	DUP9A											Send to Enviro lab
89	RB1	19/2/13		Water	1L Amber, 2x vials, 1x plastic HNO3							
90	RB2	20/2/13										
91	RB3	21/2/13					✓	✓	✓	✓		
92	TB1	18/2/13		Soil	2x125ml glass jar			✓				
93	TS1											
94	TB2	19/2/13						✓				
95	TS2							✓				
96	TB3	20/2/13										
97	TS3							✓				
98	SED1	21/3/13			1x250ml GJ		✓	✓	✓	✓		
99	SED2						✓	✓				
00	SED3						✓	✓				
01	W1			Water	1L Amber + 2V + 1PN		✓	✓	✓			

RELINQUISHED BY		RECEIVED BY	
Name: Priya Dass	Date: 21/2/13	Name: Sue	Date: 21/2/13
Coffey Environments	Time: 1:30 p.m.	Company: mgt	Time: 1:30pm
Name:	Date:	Name: Sean O.	Date: 25/2
Company:	Time:	Company: Eurofins mgt	Time: 5:19

Sample Receipt Advice: (Lab Use Only)
All Samples Recieved in Good Condition ☑
All Documentation is in Proper Order ☐
Samples Received Properly Chilled ☑
Lab. Ref/Batch No. 370054

*Container Type & Preservation Codes: P - Plastic, G- Glass Bottle, J - Glass Jar, V- Vial, Z - Ziplock Bag, N - Nitric Acid Preserved, C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice, ST - Sodium Thiosulfate, NP - No Preservative, OP - Other Preservative

GOWANS PRINTING (02) 9755 3545

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

 107217

coffey environments
SPECIALISTS IN ENVIRONMENTAL, SOCIAL AND SAFETY PERFORMANCE

Consigning Office: Chatswood
Report Results to: Edward Wu — Mobile: — Email: edward_wu @coffey.com
Invoices to: Edward Wu — Phone: — Email: edward_wu @coffey.com

Project No: ENAURHOD05463AA Task No:
Project Name: Brickworks Prospect Laboratory: Eurofins MGT
Sampler's Name: Priya Dass Project Manager: Edward Wu
Special Instructions:

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil...etc)	Container Type & Preservative*	T-A-T (specify)	Analysis Request Section: Metals 10	TPH + BTEX	PAH	OCP + PCB	Asbestos	NOTES
02	SW2	↓		↓	↓	4day Standard	✓	✓	✓			
03	SW3					4day	✓	✓	✓			

RELINQUISHED BY

Name: Priya Dass Date: 21/2/13
Coffey Environments Time: 1:30 p.m.

Name: Date:
Company: Time:

RECEIVED BY

Name: Sue Date: 21/2/13
Company: mgt Time: 1:30pm

Name: Sea.O. Date: 25/2
Company: Eurofins MGT Time: 5:19

Sample Receipt Advice: (Lab Use Only)

All Samples Recieved in Good Condition ☑
All Documentation is in Proper Order ☑
Samples Received Properly Chilled ☑
Lab. Ref/Batch No. 370054

*Container Type & Preservation Codes: P - Plastic, G- Glass Bottle, J - Glass Jar, V- Vial, Z - Ziplock Bag, N - Nitric Acid Preserved, C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice, ST - Sodium Thiosulfate, NP - No Preservative, OP - Other Preservative

#370054
Sent

From: Edward Wu [mailto:Edward_Wu@coffey.com]
Sent: Monday, 25 February 2013 5:19 PM
To: Jean Heng
Cc: Priya Dass; Sample Receipt 1 Syd; Enviro Syd
Subject: RE: ENAURHOD04463AA samples arriving this afternoon

Hi Jean,

COC and analysis request attached for your action. Thank you.

Regards
Edward

From: Edward Wu
Sent: Thursday, 21 February 2013 1:31 PM
To: 'Jean Heng'
Cc: Priya Dass; Sample Receipt 1 Syd; 'Enviro Syd'
Subject: ENAURHOD04463AA samples arriving this afternoon

Hi Jean,

Sue is picking up some samples from Priya at a site in Prospect this afternoon. Unfortunately we won't have the COC ready in time. There are three water samples (SW1 SW2 and SW3) requiring pH and EC analysis. Due to the holding time, could you arrange them to be done today?

We will forward the COC and the rest of analysis requests to you tomorrow. I trust this is ok with you.

Regards,

EDWARD WU
Senior Associate

Coffey Environments
Level 19, Tower B – Citadel Tower
799 Pacific Highway Chatswood NSW 2067 Australia
T +61 2 94061000 F +61 2 94061004 M +61 4 13276891
coffey.com

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Attention: **Fiona Wong**

Report **373350-S**
Client Reference ADDITIONAL: BRICKWORKS PROSPECT ENAURHOD04463AA
Received Date Mar 22, 2013

Client Sample ID			**SED3**
Sample Matrix			**Soil**
Eurofins | mgt Sample No.			**S13-Ma19687**
Date Sampled			**Feb 21, 2013**
Test/Reference	LOR	Unit	
GC-MS Scan (Semivolatile)	0	mg/kg	[M11]see attached

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

Description	Testing Site	Extracted	Holding Time

eurofins | mgt

ABN – 50 005 085 521 e.mail : enviro@mgtlabmark.com.au web : www.mgtlabmark.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F6, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Company Name:	Coffey Environments Pty Ltd NSW	**Order No.:**		**Received:**	Mar 22, 2013 12:44 PM
Address:	Level 20, Tower B, Citadel Tower 799 Pacific Highway Chatswood NSW 2067	**Report #:** **Phone:** **Fax:**	373350 +61 2 9406 1000 +61 2 9406 1004	**Due:** **Priority:** **Contact Name:**	Mar 25, 2013 1 Day Fiona Wong
Client Job No.:	ADDITIONAL: BRICKWORKS PROSPECT ENAURHOD04463AA				

Eurofins | mgt Client Manager: Jean Heng

Sample Detail					GC-MS Scan (Semivolatile)
Laboratory where analysis is conducted					
Melbourne Laboratory - NATA Site # 1254 & 14271					
Sydney Laboratory - NATA Site # 18217					X
Brisbane Laboratory - NATA Site # 20794					
External Laboratory					
Sample ID	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**	
SED3	Feb 21, 2013		Soil	S13-Ma19687	X

Eurofins | mgt Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

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

UNITS

mg/kg: milligrams per Kilogram

ug/l: micrograms per litre

ppb: Parts per billion

org/100ml: Organisms per 100 millilitres

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

mg/l: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Units

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environment Protection Authority
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene 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 Arochlor 1260 in Matrix Spikes and LCS's.
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 RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	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
M11	NATA accreditation does not cover the performance of this service.

Authorised By

Jean Heng	Client Services
Ryan Hamilton	Senior Analyst-Organic (NSW)

Dr. Bob Symons
Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

Unit F6, Building F
16 Mars Road
Lane Cove West, NSW, 2066
Telephone (02) 8215 6222
Facsimile (02) 9420 2977

CERTIFICATE OF ANALYSIS

Job Reference: 373350: ADDITIONAL: BRICKWORKS PROSPECT

Attention: Fiona Wong

Client: **Coffey Environments**
Level 19, Citadel Tower,
799 Pacific Highway,
Chatswood NSW 2067

Samples: Semi-volatile Analysis

Date: 2 April 2013

All samples were analysed as received. This report relates specifically to the samples as received. Results relate to the source material only to the extent that the samples as supplied are truly representative of the sample source.

Methodology

GC-MS SCAN OF SEMI-VOLATILE ORGANIC COMPOUNDS

The sample was received in soil jars specifically prepared. The sample was extracted according to standard procedures and analysed using full scan electron impact ionisation mode Gas Chromatography/Mass Spectrometry (GC-MS) based upon US EPA Methods 8270 for semi-volatile components.

For samples containing components not associated with the calibration standards, a library search was made for the purpose of tentative identification. After visual comparison of sample spectra with the nearest library searches a tentative identification were assigned based upon a quality match (Qual) >80. Guidelines for tentative identification are:

(1) Relative intensities of major ions in the reference spectrum (ions > 10% of the most abundant ion) should be present in the sample spectrum.
(2) The relative intensities of the major ions should agree within ± 20%. (Example: For an ion with an abundance of 50% in the standard spectrum, the corresponding sample ion abundance must be between 30 and 70%.)
(3) Molecular ions present in the reference spectrum should be present in the sample spectrum.
(4) Ions present in the sample spectrum but not in the reference spectrum were reviewed for possible background contamination or presence of co-eluting compounds.
(5) Ions present in the reference spectrum but not in the sample spectrum were reviewed for possible subtraction from the sample spectrum because of background contamination or co-eluting peaks. Data system library reduction programs can sometimes create these discrepancies.

The major peaks detected in the GC-MS chromatogram were analysed by computerised library matching of their mass spectra, using the NIST / EPA / NIH (National Institute of Standards and

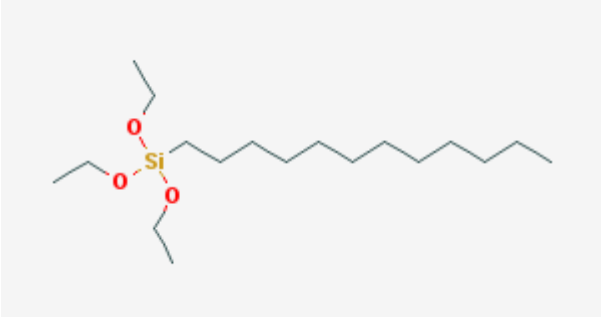
Unit F6, Building F
16 Mars Road
Lane Cove West, NSW, 2066
Telephone (02) 8215 6222
Facsimile (02) 9420 2977

Technology) library according to the guidelines described above. Library match is a percentage of the accuracy of the ion present in the sample against the NIST library record. The library contains ~ 75,000 spectra.

This scan is a representation of analytes present in the sample and is NOT a NATA certified test.

Results

The Total Ion Chromatogram (TIC) revealed a single major peak that was tentatively identified, as described above, as dodecyltriethoxy-silane CAS No. 018536-91-9 Match Quality 90.

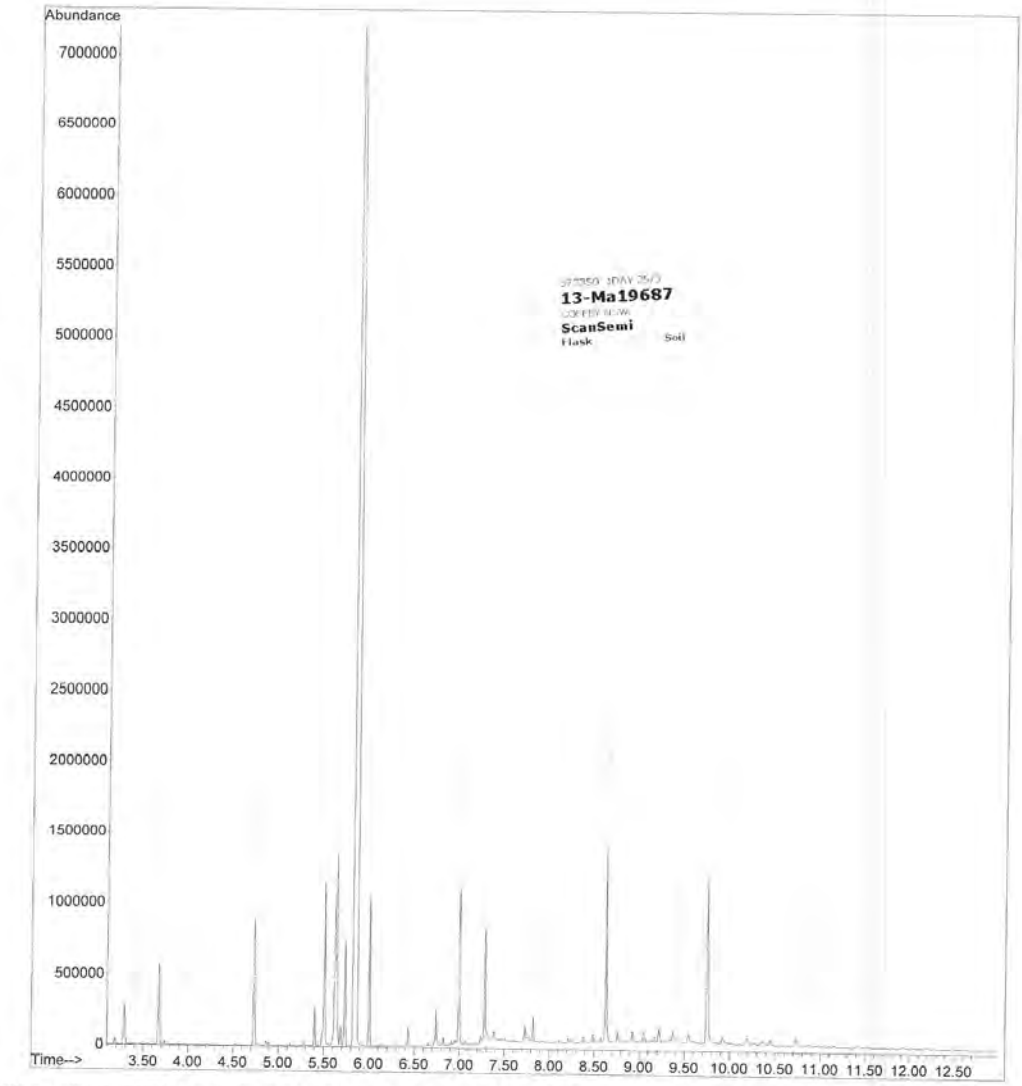


Kind regards,

Dr. Bob Symons

Laboratory and Technical Manager NSW

Unit F6, Building F
16 Mars Road
Lane Cove West, NSW, 2066
Telephone (02) 8215 6222
Facsimile (02) 9420 2977



eurofins | mgt

ABN – 50 005 085 521 e.mail : enviro@mgtlabmark.com.au web : www.mgtlabmark.com.au

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Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Sample Receipt Advice

Company name:	**Coffey Environments Pty Ltd NSW**
Contact name:	Fiona Wong
Client job number:	ADDITIONAL: BRICKWORKS PROSPECT ENAURHOD04463AA
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Mar 22, 2013 12:44 PM
Eurofins | mgt reference:	**373350**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 4 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.

☑ Organic samples had Teflon liners.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Notes

Original Report #370054

Contact notes

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

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: jean.heng@mgtlabmark.com.au

Results will be delivered electronically via e.mail to Fiona Wong - fiona_wong@coffey.com.

Note: A copy of these results will also be delivered to the general Coffey Environments Pty Ltd NSW email address.

#373350.
Ma19687

Website: www.mgtLabMark.com.au

From: Fiona Wong [mailto:Fiona_Wong@coffey.com]
Sent: Friday, 22 March 2013 12:44 PM
To: Bob Symons
Cc: Jean Heng; Edward Wu
Subject: FW: Request for chromatogram - Report No 370054
Importance: High

Hi Bob,

It will be good if you can run the test for us. I presume the cost will be doubled if we ask for 1 day TAT. Can you confirm?

Regards, Fiona

FIONA WONG
Associate

Coffey Environments
Level 19, Citadel Tower, 799 Pacific Highway, Chatswood NSW 2067
T +61 2 9406 1000 D +61 2 9406 1213 F +61 2 9406 1004 M + 61 409 367 752
coffey.com

From: Bob Symons [mailto:Bob.Symons@mgtlabmark.com.au]
Sent: Friday, 22 March 2013 12:36 PM
To: Fiona Wong
Cc: Edward Wu; Jean Heng; Ryan Hamilton; Enviro Syd
Subject: RE: Request for chromatogram - Report No 370054
Importance: High

Hi Fiona,

The chromatogram is very weird with just a single peak. The price for a GC/MS scan is $76.00 for standard TAT but we can get something back to you on Monday if required. Please note that the library match is tentative and can only confirmed with running an authentic standard of the best match. See qualifier below:

For samples containing components not associated with the calibration standards, a library search was made for the purpose of tentative identification. After visual comparison of sample spectra with the nearest library searches a tentative identification were assigned based upon a quality match (Qual) >80. Guidelines for tentative identification are:
(1) Relative intensities of major ions in the reference spectrum (ions > 10% of the most abundant ion) should be present in the sample spectrum.
(2) The relative intensities of the major ions should agree within ± 20%. (Example: For an ion with an abundance of 50% in the standard spectrum, the corresponding sample ion abundance must be between 30 and 70%.)
(3) Molecular ions present in the reference spectrum should be present in the sample spectrum.
(4) Ions present in the sample spectrum but not in the reference spectrum were reviewed for possible background contamination or presence of co-eluting compounds.

(5) Ions present in the reference spectrum but not in the sample spectrum were reviewed for possible subtraction from the sample spectrum because of background contamination or co-eluting peaks. Data system library reduction programs can sometimes create these discrepancies.
The major peaks detected in the GC-MS chromatogram were analysed by computerised library matching of their mass spectra, using the NIST / EPA / NIH (National Institute of Standards and Technology) library according to the guidelines described above. Library match is a percentage of the accuracy of the ion present in the sample against the NIST library record. The library contains ~ 75,000 spectra.

This scan is a representation of analytes present in the sample and is NOT a NATA certified test.

Let me know what you require and I will get this logged in.

Dr Bob Symons
Laboratory Manager | NSW

Eurofins | mgt
Unit F3, Parkview Building
16 Mars Road,
Lane Cove West, NSW 2066, Australia
Phone: +61 2 9900 8400
Direct: +61 2 9900 8405
Mobile: +61 488 965 444
Fax: +61 2 9420 2977

Email: bob.symons@mgtlabmark.com.au
Website: www.mgtLabMark.com.au

From: Fiona Wong [mailto:Fiona_Wong@coffey.com]
Sent: Friday, 22 March 2013 12:12 PM
To: Bob Symons
Cc: Edward Wu; Jean Heng
Subject: FW: Request for chromatogram - Report No 370054

Hi Bob,

As discussed please could you have a look at this chromatogram for us.

Please let me know the cost and the turnaround time to re-run the test, and more importantly, how certain we will be able to get information out of the re-run.

I will be out of office after 3:30pm, but contactable on my mobile if necessary.

Many thanks, Fiona

FIONA WONG
Associate

Coffey Environments
Level 19, Citadel Tower, 799 Pacific Highway, Chatswood NSW 2067
T +61 2 9406 1000 D +61 2 9406 1213 F +61 2 9406 1004 M + 61 409 367 752
coffey.com

From: Jean Heng [mailto:Jean.Heng@mgtlabmark.com.au]
Sent: Thursday, 21 March 2013 3:18 PM
To: Fiona Wong
Cc: Edward Wu
Subject: RE: Request for chromatogram - Report No 370054

Hey Fiona,

Please find attached the chromatogram requested.

That peak that showed up along the C15-28 fraction is definitely not a petroleum-based hydrocarbon. But I am not able to tell you which compound it is unless we are to run it on the MS scan and through a library.

Jean Heng
Client Manager | NSW

Eurofins | mgt
Unit F3-F6, Parkview Building
16 Mars Road,
Lane Cove West, NSW 2066, Australia
Phone: +61 2 9900 8400
Direct: +61 2 9900 8460
Mobile: +61 403 637 214
Fax: +61 2 9420 2977

Email: Jean.Heng@mgtlabmark.com.au
Website: http://www.mgtlabmark.com.au

From: Fiona Wong [mailto:Fiona_Wong@coffey.com]
Sent: Thursday, March 21, 2013 12:00 PM
To: Jean Heng
Cc: Edward Wu
Subject: Request for chromatogram - Report No 370054

Hi Jean,

Can you please send me the chromatogram for sample ID SED3 from the above report. The project name is Prospect Brickworks.

Much appreciated if you can ask your organic chemist to provide his/her opinion about the source of the TPH.

Any questions, please give me a call. It will be good if you can send it to me today.

Thanks and regards,

FIONA WONG
Associate

Coffey Environments
Level 19, Citadel Tower, 799 Pacific Highway, Chatswood NSW 2067
T +61 2 9406 1000 D +61 2 9406 1213 F +61 2 9406 1004 M + 61 409 367 752
coffey.com

This email has been scanned by the Symantec Email Security.cloud service.
For more information please visit http://www.symanteccloud.com

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2012.0.2240 / Virus Database: 2641/5695 - Release Date: 03/21/13

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 86398

Client:
Coffey Environment
Level 19, Tower B, Citadel Tower
799 Pacific Hwy
Chatswood
NSW 2067

Attention: Edward Wu

Sample log in details:

Your Reference:	**ENAURHODO4463AA, Brickworks Prospect**
No. of samples:	5 Soils
Date samples received / completed instructions received	26/02/13 / 26/02/13

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	4/03/13 / 1/03/13
Date of Preliminary Report:	Not issued

NATA accreditation number 2901. This document shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:

Rhian Morgan
Reporting Supervisor

Hinoko Miyazaki
Chemist

Alex MacLean
Chemist

Jeremy Faircloth
Chemist

NATA ACCREDITED FOR TECHNICAL COMPETENCE

vTRH(C6-C10)/BTEXN in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	86398-2 DUP3A 19/02/2013 Soil	86398-3 DUP5A 19/02/2013 Soil
Date extracted	-	27/02/2013	27/02/2013
Date analysed	-	28/02/2013	28/02/2013
TRH C_6 - C_9	mg/kg	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
naphthalene	mg/kg	<1	<1
Surrogate aaa-Trifluorotoluene	%	97	106

svTRH (C10-C40) in Soil			
Our Reference:	UNITS	86398-2	86398-3
Your Reference	----------	DUP3A	DUP5A
Date Sampled	----------	19/02/2013	19/02/2013
Type of sample		Soil	Soil
Date extracted	-	27/02/2013	27/02/2013
Date analysed	-	28/02/2013	28/02/2013
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100
Surrogate o-Terphenyl	%	98	100

PAHs in Soil		
Our Reference:	UNITS	86398-2
Your Reference	----------	DUP3A
Date Sampled	----------	19/02/2013
Type of sample		Soil
Date extracted	-	27/02/2013
Date analysed	-	28/02/2013
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+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Benzo(a)pyrene TEQ	mg/kg	<0.5
Surrogate p-Terphenyl-d_{14}	%	107

Organochlorine Pesticides in soil		
Our Reference:	UNITS	86398-2
Your Reference	----------	DUP3A
Date Sampled	----------	19/02/2013
Type of sample		Soil
Date extracted	-	27/02/2013
Date analysed	-	28/02/2013
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
Surrogate TCMX	%	102

PCBs in Soil		
Our Reference:	UNITS	86398-2
Your Reference	----------	DUP3A
Date Sampled	----------	19/02/2013
Type of sample		Soil
Date extracted	-	27/02/2013
Date analysed	-	28/02/2013
Arochlor 1016	mg/kg	<0.1
Arochlor 1221	mg/kg	<0.1
Arochlor 1232	mg/kg	<0.1
Arochlor 1242	mg/kg	<0.1
Arochlor 1248	mg/kg	<0.1
Arochlor 1254	mg/kg	<0.1
Arochlor 1260	mg/kg	<0.1
Surrogate TCLMX	%	102

Acid Extractable metals in soil				
Our Reference:	UNITS	86398-2	86398-3	86398-4
Your Reference	----------	DUP3A	DUP5A	DUP7A
Date Sampled	----------	19/02/2013	19/02/2013	20/02/2013
Type of sample		Soil	Soil	Soil
Date digested	-	27/02/2013	27/02/2013	27/02/2013
Date analysed	-	27/02/2013	27/02/2013	27/02/2013
Arsenic	mg/kg	<4	<4	4
Cadmium	mg/kg	<0.4	<0.4	<0.4
Chromium	mg/kg	7	54	49
Copper	mg/kg	14	49	22
Lead	mg/kg	4	7	13
Nickel	mg/kg	5	150	42
Zinc	mg/kg	12	52	38
Mercury	mg/kg	<0.1	<0.1	<0.1
Titanium	mg/kg	230	260	84
Cobalt	mg/kg	2	33	15

Moisture Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	86398-2 DUP3A 19/02/2013 Soil	86398-3 DUP5A 19/02/2013 Soil	86398-4 DUP7A 20/02/2013 Soil
Date prepared	-	27/02/13	27/02/13	27/02/13
Date analysed	-	28/02/13	28/02/13	28/02/13
Moisture	%	20	13	9.8

Method ID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 draft Guideline on Investigation Levels for Soil and Groundwater.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 draft Guideline on Investigation Levels for Soil and Groundwater.
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM draft B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			27/02/2013	[NT]	[NT]	LCS-4	27/02/2013
Date analysed	-			28/02/2013	[NT]	[NT]	LCS-4	28/02/2013
TRH C_6 - C_9	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-4	122%
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-4	122%
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	25	Org-016	[NT]	[NT]	[NT]	[NR]	[NR]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	LCS-4	130%
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	LCS-4	119%
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-4	113%
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	LCS-4	125%
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-4	127%
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	110	[NT]	[NT]	LCS-4	112%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			27/02/2013	[NT]	[NT]	LCS-4	27/02/2013
Date analysed	-			28/02/2013	[NT]	[NT]	LCS-4	28/02/2013
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-4	97%
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-4	92%
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-4	88%
TRH>C_{10}-C_{16}	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-4	97%
TRH>C_{10} - C_{16} less Naphthalene (F2)	mg/kg	50	Org-003	[NT]	[NT]	[NT]	[NR]	[NR]
TRH>C_{16}-C_{34}	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-4	92%
TRH>C_{34}-C_{40}	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-4	88%
Surrogate o-Terphenyl	%		Org-003	100	[NT]	[NT]	LCS-4	81%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			27/02/2013	[NT]	[NT]	LCS-4	27/02/2013
Date analysed	-			28/02/2013	[NT]	[NT]	LCS-4	28/02/2013
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-4	100%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-4	99%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-4	101%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-4	103%
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-4	107%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-4	96%
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	[NT]	[NT]	LCS-4	92%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene TEQ	mg/kg	0.5	Org-012 subset	[NT]	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		Org-012 subset	119	[NT]	[NT]	LCS-4	105%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			27/02/2013	[NT]	[NT]	LCS-4	27/02/2013
Date analysed	-			27/02/2013	[NT]	[NT]	LCS-4	27/02/2013
HCB	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	100%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	109%
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	101%
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	113%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	104%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	103%
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	101%
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	104%
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	105%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-4	110%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%		Org-005	102	[NT]	[NT]	LCS-4	103%

QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			27/02/2013	[NT]	[NT]	LCS-4	27/02/2013
Date analysed	-			27/02/2013	[NT]	[NT]	LCS-4	27/02/2013
Arochlor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	LCS-4	106%
Arochlor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		Org-006	102	[NT]	[NT]	LCS-4	116%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date digested	-			27/02/2013	[NT]	[NT]	LCS-2	27/02/2013
Date analysed	-			27/02/2013	[NT]	[NT]	LCS-2	27/02/2013
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	LCS-2	95%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	LCS-2	90%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-2	97%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-2	97%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-2	94%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-2	96%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-2	93%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	LCS-2	91%
Titanium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-2	101%
Cobalt	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-2	98%

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

Report Comments:

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.
Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.
Spikes for Physical and Aggregate Tests are not applicable.
For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

SAMPLE RECEIPT ADVICE

Client:

Coffey Environment
Level 19, Tower B, Citadel Tower
Chatswood NSW 2067

ph: 02 9406 1000
Fax: 02 9406 1002

Attention: Edward Wu

Sample log in details:

Your reference:	**ENAURHODO4463AA, Brickworks Prospect**
Envirolab Reference:	**86398**
Date received:	26/02/13
Date results expected to be reported:	**4/03/13**

Samples received in appropriate condition for analysis:	YES
No. of samples provided	5 Soils
Turnaround time requested:	Standard
Temperature on receipt	Ambient
Cooling Method:	None
Sampling Date Provided:	YES

Comments:

Samples will be held for 1 month for water samples and 2 months for soil samples from date of receipt of samples.

Contact details:

Please direct any queries to Aileen Hie or Jacinta Hurst
ph: 02 9910 6200 fax: 02 9910 6201
email: ahie@envirolabservices.com.au or jhurst@envirolabservices.com.au

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

 107215

coffey environments
SPECIALISTS IN ENVIRONMENTAL, SOCIAL AND SAFETY PERFORMANCE

Consigning Office: Chatswood
Report Results to: Edward Wu — Mobile: — Email: edward_wu @coffey.com
Invoices to: Edward Wu — Phone: — Email: edward_wu @coffey.com

Project No: ENAURHOD04463AA Task No:
Project Name: Brickworks Prospect Laboratory: Eurofins MGT
Sampler's Name: Priya Dass Project Manager: Edward Wu
Special Instructions: Metals 10 = As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, Ti, Co

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil...etc)	Container Type & Preservative*	T-A-T (specify)	Metals 10	TPH + BTEX	PAH	OCP + PCB	Asbestos	NOTES
	BH36 (0.4 – 0.5m)	↓				~~Standard~~						
	BH37 (0.0 – 0.2m)	21/2/13				4day	/	/		/		
	BH37 (0.4 – 0.5m)											
	BH38 (0.0 – 0.2m)						/	/		/		
	BH38 (0.4 – 0.5m)						/					
	BH39 (0.0 – 0.2m)						/					
	BH39 (0.4 – 0.5m)											
	BH40 (0.0 – 0.2m)						/					
	BH40 (0.4 – 0.5m)	↓			↓							
	DUP1	18/2/13			1x250ml glass							
1	DUP1A				jar							Send to Enviolab
	DUP2	↓					/	/	###			
	DUP3	19/2/13					/	/	/	/		
2	DUP3A						/	/	/	/		Send to Enviolab
	DUP4											
	DUP5						/					
3	DUP5A	↓					/	/				Send to Enviolab
	DUP6	20/2/13		↓	↓	↓						

Analysis Request Section

ENVIROLAB — Environmental Laboratories
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 86398
Date Received: 26/2/13
Time Received: 15:45
Received by: D.F
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

RELINQUISHED BY

Name: Priya Dass — Date: 21/2/13 → — Time: 1:30 p.m.
Coffey Environments

Name: Sean O. — Date: 26/2 → — Time: 1100
Company: Eurofins mgt

RECEIVED BY

Name: Sue — Date: 21/2/13 — Time: 1:30 pm
Company: mgt

Name: Daniel Ford — Date: 26/2/13 — Time: 15:45
Company: EAS

Sample Receipt Advice: (Lab Use Only)

All Samples Recieved in Good Condition ☐
All Documentation is in Proper Order ☐
Samples Received Properly Chilled ☐
Lab. Ref/Batch No.

*Container Type & Preservation Codes: P - Plastic, G- Glass Bottle, J - Glass Jar, V- Vial, Z - Ziplock Bag, N - Nitric Acid Preserved, C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice, ST - Sodium Thiosulfate, NP - No Preservative, OP - Other Preservative

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

 107216

coffey environments
SPECIALISTS IN ENVIRONMENTAL, SOCIAL AND SAFETY PERFORMANCE

Consigning Office: Chatswood
Report Results to: Edward Wu Mobile: Email: edward_wu @coffey.com
Invoices to: Edward Wu Phone: Email: edward_wu @coffey.com

Project No: ENAURHOD04463AA Task No:
Project Name: Brickworks Prospect Laboratory: Eurofins MGT
Sampler's Name: Priya Dass Project Manager: Edward Wu
Special Instructions: Metals 10 = As, Cd, Cr, Cu, Pb, Ni, Zn, Hg, Ti, Co

Analysis Request Section

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil...etc)	Container Type & Preservative*	T-A-T (specify)	Metals 10	TPH + BTEX	PAH	OCP + PCB	Asbestos	NOTES
	DUP7	↓		↓	↓	~~Standard~~						
4	DUP7A					4 day	✓					Send to Enviro lab
	DUP8	↓										
	DUP9	21/2/13										
5	DUP9A	↓		↓	↓							Send to Enviro lab
	RB1	19/2/13		Water	1L Amber, 2x vials,							
	RB2	20/2/13		↓	1x plastic HNO_3							
	RB3	21/2/13		↓	↓		✓	✓	✓	✓		
	TB1	18/2/13		Soil	2x125ml glass			✓				
	TS1	↓		↓	jar							
	TB2	19/2/13		↓	↓			✓				
	TS2	↓		↓	↓			✓				
	TB3	20/2/13		↓	↓							
	TS3	↓		↓	↓			✓				
	SED1	21/3/13		↓	1x250ml GJ		✓	✓	✓	✓		
	SED2	↓		↓	↓		✓	✓				
	SED3	↓		↓	↓		✓	✓				
	W1	↓		Water	1L Amber + 2V + 1PN		✓	✓	✓			

RELINQUISHED BY

Name: Priya Dass Date: 21/2/13 Time: 1:30 p.m.
Coffey Environments

Name: Sea O, Date: 26/2 Time: 1:00
Company: Eurofins MGT

RECEIVED BY

Name: Sue Date: 21/2/13 Time: 1:30 p.m.
Company: mgt

Name: Daniel Ford Date: 26/2/13 Time: 15:48
Company: ELS

Sample Receipt Advice: (Lab Use Only)

All Samples Recieved in Good Condition ☐
All Documentation is in Proper Order ☐
Samples Received Properly Chilled ☐
Lab. Ref/Batch No.

*Container Type & Preservation Codes: P - Plastic, G- Glass Bottle, J - Glass Jar, V- Vial, Z - Ziplock Bag, N - Nitric Acid Preserved, C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice, ST - Sodium Thiosulfate, NP - No Preservative, OP - Other Preservative

12 Ashley Street, Chatswood, NSW 2067
tel: +61 2 9910 6200

email: sydney@envirolab.com.au
envirolab.com.au

Envirolab Services Pty Ltd Sydney | ABN 37 112 535 645

CERTIFICATE OF ANALYSIS 161686

Client:

DLA Environmental Services Pty Ltd
Unit 3, 38 Leighton Pl
Hornsby
NSW 2077

Attention: Jack

Sample log in details:

Your Reference:	**DL4032, Prospect**		
No. of samples:	74 soils		
Date samples received / completed instructions received	10/02/17	/	10/02/17

This report replaces the R00 due to addition of results for samples#71-74.

Analysis Details:

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

Report Details:

Date results requested by: / Issue Date:	17/02/17	/	28/02/17
Date of Preliminary Report:	Not Issued		

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

Results Approved By:

David Springer
General Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	161686-1	161686-2	161686-3	161686-4	161686-5
Your Reference	---------- -	BH1	BH1	BH2	BH2	BH3
Depth	----------	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	97	104	93	111	106

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	161686-6	161686-7	161686-8	161686-9	161686-10
Your Reference	---------- -	BH3	BH4	BH4	BH4	HA5
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	5.9-6.0	0.2-0.3
Date Sampled		8/02/2017	7/02/2017	7/02/2017	7/02/2017	9/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	102	99	96	110	108

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	161686-11	161686-12	161686-13	161686-14	161686-15
Your Reference	---------- -	HA5	BH6	BH6	BH7	BH7
Depth	----------	0.4-0.5	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		9/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	101	100	106	97	95

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	161686-16	161686-17	161686-18	161686-19	161686-20
Your Reference	---------- -	BH8	BH8	BH9	BH9	BH10
Depth	----------	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	99	113	108	101	104

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	161686-21	161686-22	161686-23	161686-24	161686-25
Your Reference	---------- -	BH10	BH11	BH11	BH12	BH12
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	90	95	94	98	99

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	161686-26	161686-27	161686-28	161686-29	161686-30
Your Reference	---------- -	BH13	BH13	BH13	BH14	BH14
Depth	----------	0.5-0.6	2.5-2.6	7.4-7.5	0.5-0.6	1.9-2.0
Date Sampled		7/02/2017	7/02/2017	7/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	94	94	97	100	97

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	161686-31	161686-32	161686-33	161686-34	161686-35
Your Reference	---------- -	HA15	HA15	BH16	BH16	BH17
Depth	----------	0-0.2	0.2-0.4	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	91	99	100	99	97

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	161686-36	161686-37	161686-38	161686-39	161686-40
Your Reference	---------- -	BH17	BH18	BH18	BH19	BH19
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	92	99	101	95	94

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	161686-41	161686-42	161686-43	161686-44	161686-45
Your Reference	---------- -	HA20	HA20	BH21	BH21	BH22
Depth	----------	0.2-0.3	0.5-0.6	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		9/02/2017	9/02/2017	8/02/2017	8/02/2017	7/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	15/02/2017	15/02/2017	15/02/2017	15/02/2017	15/02/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	89	89	99	89	97

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	161686-46	161686-47	161686-48	161686-49	161686-50
Your Reference	---------- -	BH22	HA23	HA23	BH24	BH24
Depth	----------	1.9-2.0	0.1-0.2	0.2-0.3	0.5-0.6	1.9-2.0
Date Sampled		7/02/2017	9/02/2017	9/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	15/02/2017	15/02/2017	15/02/2017	15/02/2017	15/02/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	94	80	82	93	85

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	161686-51	161686-52	161686-53	161686-54	161686-55
Your Reference	---------- -	BH25	BH25	BH26	BH26	BH27
Depth	----------	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	7/02/2017	7/02/2017	7/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	15/02/2017	15/02/2017	15/02/2017	15/02/2017	15/02/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	80	99	106	87	84

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	161686-56	161686-57	161686-58	161686-59	161686-60
Your Reference	---------- -	BH27	BH28	BH28	BH29	BH29
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		7/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	15/02/2017	15/02/2017	15/02/2017	15/02/2017	15/02/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	85	99	101	85	87

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	161686-61	161686-62	161686-63	161686-64	161686-65
Your Reference	---------- -	BH30	BH30	BH31	BH31	BH32
Depth	----------	0.5-0.6	5.9-6.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		7/02/2017	7/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	15/02/2017	15/02/2017	15/02/2017	15/02/2017	15/02/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	99	104	95	90	87

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	161686-66	161686-67	161686-68	161686-69	161686-70
Your Reference	---------- -	BH32	QC105	QC101	QC102	QC104
Depth	----------	1.9-2.0	-	-	-	-
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	15/02/2017	15/02/2017	15/02/2017	15/02/2017	15/02/2017
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	86	101	96	101	97

vTRH(C6-C10)/BTEXN in Soil					
Our Reference:	UNITS	161686-71	161686-72	161686-73	161686-74
Your Reference	----------	TS	TB	TS	TB
Depth	----------	-	-	-	-
Date Sampled		7/02/2017	7/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Date analysed	-	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Benzene	mg/kg	100%	<0.2	105%	<0.2
Toluene	mg/kg	99%	<0.5	104%	<0.5
Ethylbenzene	mg/kg	96%	<1	102%	<1
m+p-xylene	mg/kg	95%	<2	101%	<2
o-Xylene	mg/kg	95%	<1	100%	<1
Total +ve Xylenes	mg/kg	[NA]	<1	[NA]	<1
naphthalene	mg/kg	[NA]	<1	[NA]	<1
Surrogate aaa-Trifluorotoluene	%	76	99	79	96

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	161686-1	161686-2	161686-3	161686-4	161686-5
Your Reference	---------- -	BH1	BH1	BH2	BH2	BH3
Depth	----------	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	95	91	86	85	85

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	161686-6	161686-7	161686-8	161686-9	161686-10
Your Reference	---------- -	BH3	BH4	BH4	BH4	HA5
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	5.9-6.0	0.2-0.3
Date Sampled		8/02/2017	7/02/2017	7/02/2017	7/02/2017	9/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	93	96	96	85	95

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	161686-11	161686-12	161686-13	161686-14	161686-15
Your Reference	---------- -	HA5	BH6	BH6	BH7	BH7
Depth	----------	0.4-0.5	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		9/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	94	95	93	94	93

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	161686-16	161686-17	161686-18	161686-19	161686-20
Your Reference	---------- -	BH8	BH8	BH9	BH9	BH10
Depth	----------	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	94	85	92	94	94

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	161686-21	161686-22	161686-23	161686-24	161686-25
Your Reference	---------- -	BH10	BH11	BH11	BH12	BH12
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	97	91	93	94	100

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	161686-26	161686-27	161686-28	161686-29	161686-30
Your Reference	---------- -	BH13	BH13	BH13	BH14	BH14
Depth	----------	0.5-0.6	2.5-2.6	7.4-7.5	0.5-0.6	1.9-2.0
Date Sampled		7/02/2017	7/02/2017	7/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	98	102	90	97	100

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	161686-31	161686-32	161686-33	161686-34	161686-35
Your Reference	---------- -	HA15	HA15	BH16	BH16	BH17
Depth	----------	0-0.2	0.2-0.4	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	120	110	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	320	370	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	310	330	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	320	410	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	630	740	<50	<50	<50
Surrogate o-Terphenyl	%	98	99	101	90	90

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	161686-36	161686-37	161686-38	161686-39	161686-40
Your Reference	---------- -	BH17	BH18	BH18	BH19	BH19
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	95	103	90	88	90

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	161686-41	161686-42	161686-43	161686-44	161686-45
Your Reference	---------- -	HA20	HA20	BH21	BH21	BH22
Depth	----------	0.2-0.3	0.5-0.6	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		9/02/2017	9/02/2017	8/02/2017	8/02/2017	7/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	94	105	94	96	102

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	161686-46	161686-47	161686-48	161686-49	161686-50
Your Reference	---------- -	BH22	HA23	HA23	BH24	BH24
Depth	----------	1.9-2.0	0.1-0.2	0.2-0.3	0.5-0.6	1.9-2.0
Date Sampled		7/02/2017	9/02/2017	9/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	102	106	98	102	91

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	161686-51	161686-52	161686-53	161686-54	161686-55
Your Reference	---------- -	BH25	BH25	BH26	BH26	BH27
Depth	----------	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	7/02/2017	7/02/2017	7/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	101	92	100	100	103

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	161686-56	161686-57	161686-58	161686-59	161686-60
Your Reference	---------- -	BH27	BH28	BH28	BH29	BH29
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		7/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	91	101	92	96	100

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	161686-61	161686-62	161686-63	161686-64	161686-65
Your Reference	---------- -	BH30	BH30	BH31	BH31	BH32
Depth	----------	0.5-0.6	5.9-6.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		7/02/2017	7/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	94	104	98	101	99

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	161686-66	161686-67	161686-68	161686-69	161686-70
Your Reference	---------- -	BH32	QC105	QC101	QC102	QC104
Depth	----------	1.9-2.0	-	-	-	-
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	97	101	93	103	99

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- - ---------- 	161686-1 BH1 0.5-0.6 8/02/2017 Soil	161686-2 BH1 1.9-2.0 8/02/2017 Soil	161686-3 BH2 0.5-0.6 8/02/2017 Soil	161686-4 BH2 1.9-2.0 8/02/2017 Soil	161686-5 BH3 0.5-0.6 8/02/2017 Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	86	90	81	82	88

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- - ---------- 	161686-6 BH3 1.9-2.0 8/02/2017 Soil	161686-7 BH4 0.5-0.6 7/02/2017 Soil	161686-8 BH4 1.9-2.0 7/02/2017 Soil	161686-9 BH4 5.9-6.0 7/02/2017 Soil	161686-10 HA5 0.2-0.3 9/02/2017 Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	91	83	85	87	82

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- - ---------- 	161686-11 HA5 0.4-0.5 9/02/2017 Soil	161686-12 BH6 0.5-0.6 8/02/2017 Soil	161686-13 BH6 1.9-2.0 8/02/2017 Soil	161686-14 BH7 0.5-0.6 8/02/2017 Soil	161686-15 BH7 1.9-2.0 8/02/2017 Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	84	82	88	85	82

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- - ---------- 	161686-16 BH8 0.5-0.6 8/02/2017 Soil	161686-17 BH8 1.9-2.0 8/02/2017 Soil	161686-18 BH9 0.5-0.6 8/02/2017 Soil	161686-19 BH9 1.9-2.0 8/02/2017 Soil	161686-20 BH10 0.5-0.6 8/02/2017 Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	88	84	82	81	79

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- - ---------- 	161686-21 BH10 1.9-2.0 8/02/2017 Soil	161686-22 BH11 0.5-0.6 8/02/2017 Soil	161686-23 BH11 1.9-2.0 8/02/2017 Soil	161686-24 BH12 0.5-0.6 8/02/2017 Soil	161686-25 BH12 1.9-2.0 8/02/2017 Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	83	87	86	85	75

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- - ---------- 	161686-26 BH13 0.5-0.6 7/02/2017 Soil	161686-27 BH13 2.5-2.6 7/02/2017 Soil	161686-28 BH13 7.4-7.5 7/02/2017 Soil	161686-29 BH14 0.5-0.6 8/02/2017 Soil	161686-30 BH14 1.9-2.0 8/02/2017 Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	81	91	83	82	82

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- - ---------- 	161686-31 HA15 0-0.2 8/02/2017 Soil	161686-32 HA15 0.2-0.4 8/02/2017 Soil	161686-33 BH16 0.5-0.6 8/02/2017 Soil	161686-34 BH16 1.9-2.0 8/02/2017 Soil	161686-35 BH17 0.5-0.6 8/02/2017 Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.4	0.4	0.2	0.1	<0.1
Anthracene	mg/kg	0.2	0.2	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	1.3	1.2	<0.1	<0.1	<0.1
Pyrene	mg/kg	1.4	1.4	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.8	0.7	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.6	0.8	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	1	2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.78	0.94	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	0.6	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.8	0.9	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	1.3	1.2	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	1.3	1.2	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	1.3	1.2	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	8.5	8.8	0.2	0.1	<0.05
Surrogate p-Terphenyl-d14	%	104	82	78	85	82

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- - ---------- 	161686-36 BH17 1.9-2.0 8/02/2017 Soil	161686-37 BH18 0.5-0.6 8/02/2017 Soil	161686-38 BH18 1.9-2.0 8/02/2017 Soil	161686-39 BH19 0.5-0.6 8/02/2017 Soil	161686-40 BH19 1.9-2.0 8/02/2017 Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	86	81	77	83	89

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- - ---------- 	161686-41 HA20 0.2-0.3 9/02/2017 Soil	161686-42 HA20 0.5-0.6 9/02/2017 Soil	161686-43 BH21 0.5-0.6 8/02/2017 Soil	161686-44 BH21 1.9-2.0 8/02/2017 Soil	161686-45 BH22 0.5-0.6 7/02/2017 Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	0.1	0.1	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	80	90	84	87	86

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- - ---------- 	161686-46 BH22 1.9-2.0 7/02/2017 Soil	161686-47 HA23 0.1-0.2 9/02/2017 Soil	161686-48 HA23 0.2-0.3 9/02/2017 Soil	161686-49 BH24 0.5-0.6 8/02/2017 Soil	161686-50 BH24 1.9-2.0 8/02/2017 Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	83	87	81	83	81

PAHs in Soil Our Reference: Your Reference	UNITS ----------	161686-51 BH25	161686-52 BH25	161686-53 BH26	161686-54 BH26	161686-55 BH27
Depth	----------	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	7/02/2017	7/02/2017	7/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	88	85	87	79	86

PAHs in Soil Our Reference: Your Reference	UNITS ----------	161686-56 BH27	161686-57 BH28	161686-58 BH28	161686-59 BH29	161686-60 BH29
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		7/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.06	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	0.5	<0.05	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	81	87	80	94	93

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- - ---------- 	161686-61 BH30 0.5-0.6 7/02/2017 Soil	161686-62 BH30 5.9-6.0 7/02/2017 Soil	161686-63 BH31 0.5-0.6 8/02/2017 Soil	161686-64 BH31 1.9-2.0 8/02/2017 Soil	161686-65 BH32 0.5-0.6 8/02/2017 Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	86	92	83	87	90

PAHs in Soil Our Reference: Your Reference	UNITS ----------	161686-66 BH32	161686-67 QC105	161686-68 QC101	161686-69 QC102	161686-70 QC104
Depth	----------	1.9-2.0	-	-	-	-
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	0.3	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	0.3	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	0.09	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	1.1	<0.05
Surrogate p-Terphenyl-d14	%	89	84	86	88	87

Organochlorine Pesticides in soil						
Our Reference:	UNITS	161686-1	161686-3	161686-5	161686-7	161686-10
Your Reference	----------	BH1	BH2	BH3	BH4	HA5
	-					
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0.2-0.3
Date Sampled		8/02/2017	8/02/2017	8/02/2017	7/02/2017	9/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	106	96	99	99	101

Organochlorine Pesticides in soil						
Our Reference:	UNITS	161686-12	161686-14	161686-16	161686-18	161686-20
Your Reference	----------	BH6	BH7	BH8	BH9	BH10
	-					
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	97	99	99	96	103

Organochlorine Pesticides in soil						
Our Reference:	UNITS	161686-22	161686-24	161686-26	161686-29	161686-31
Your Reference	----------	BH11	BH12	BH13	BH14	HA15
	-					
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0-0.2
Date Sampled		8/02/2017	8/02/2017	7/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	95	97	104	108	102

Organochlorine Pesticides in soil						
Our Reference:	UNITS	161686-33	161686-35	161686-37	161686-39	161686-41
Your Reference	---------- -	BH16	BH17	BH18	BH19	HA20
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0.2-0.3
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	9/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	104	113	105	101	105

Organochlorine Pesticides in soil						
Our Reference:	UNITS	161686-43	161686-45	161686-47	161686-49	161686-51
Your Reference	----------	BH21	BH22	HA23	BH24	BH25
	-					
Depth	----------	0.5-0.6	0.5-0.6	0.1-0.2	0.5-0.6	0.5-0.6
Date Sampled		8/02/2017	7/02/2017	9/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	105	103	101	104	102

Organochlorine Pesticides in soil						
Our Reference:	UNITS	161686-53	161686-55	161686-57	161686-59	161686-61
Your Reference	----------	BH26	BH27	BH28	BH29	BH30
	-					
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6
Date Sampled		7/02/2017	7/02/2017	8/02/2017	8/02/2017	7/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	115	108	107	105	103

Organochlorine Pesticides in soil						
Our Reference:	UNITS	161686-63	161686-65	161686-67	161686-69	161686-70
Your Reference	---------- -	BH31	BH32	QC105	QC102	QC104
Depth	----------	0.5-0.6	0.5-0.6	-	-	-
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	103	104	111	105	105

Organophosphorus Pesticides						
Our Reference:	UNITS	161686-1	161686-3	161686-5	161686-7	161686-10
Your Reference	----------	BH1	BH2	BH3	BH4	HA5
	-					
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0.2-0.3
Date Sampled		8/02/2017	8/02/2017	8/02/2017	7/02/2017	9/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	106	96	99	99	101

Organophosphorus Pesticides						
Our Reference:	UNITS	161686-12	161686-14	161686-16	161686-18	161686-20
Your Reference	----------	BH6	BH7	BH8	BH9	BH10
	-					
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	97	99	99	96	103

Organophosphorus Pesticides						
Our Reference:	UNITS	161686-22	161686-24	161686-26	161686-29	161686-31
Your Reference	---------- -	BH11	BH12	BH13	BH14	HA15
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0-0.2
Date Sampled		8/02/2017	8/02/2017	7/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	95	97	104	108	102

Organophosphorus Pesticides						
Our Reference:	UNITS	161686-33	161686-35	161686-37	161686-39	161686-41
Your Reference	---------- -	BH16	BH17	BH18	BH19	HA20
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0.2-0.3
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	9/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	104	113	105	101	105

Organophosphorus Pesticides						
Our Reference:	UNITS	161686-43	161686-45	161686-47	161686-49	161686-51
Your Reference	---------- -	BH21	BH22	HA23	BH24	BH25
Depth	----------	0.5-0.6	0.5-0.6	0.1-0.2	0.5-0.6	0.5-0.6
Date Sampled		8/02/2017	7/02/2017	9/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	105	103	101	104	102

Organophosphorus Pesticides						
Our Reference:	UNITS	161686-53	161686-55	161686-57	161686-59	161686-61
Your Reference	---------- -	BH26	BH27	BH28	BH29	BH30
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6
Date Sampled		7/02/2017	7/02/2017	8/02/2017	8/02/2017	7/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	115	108	107	105	103

Organophosphorus Pesticides Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- - ---------- 	161686-63 BH31 0.5-0.6 8/02/2017 Soil	161686-65 BH32 0.5-0.6 8/02/2017 Soil	161686-67 QC105 - 8/02/2017 Soil	161686-69 QC102 - 8/02/2017 Soil	161686-70 QC104 - 8/02/2017 Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	103	104	111	105	105

PCBs in Soil						
Our Reference:	UNITS	161686-1	161686-3	161686-5	161686-7	161686-10
Your Reference	----------	BH1	BH2	BH3	BH4	HA5
	-					
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0.2-0.3
Date Sampled		8/02/2017	8/02/2017	8/02/2017	7/02/2017	9/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	106	96	99	99	101

PCBs in Soil						
Our Reference:	UNITS	161686-12	161686-14	161686-16	161686-18	161686-20
Your Reference	----------	BH6	BH7	BH8	BH9	BH10
	-					
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	97	99	99	96	103

PCBs in Soil						
Our Reference:	UNITS	161686-22	161686-24	161686-26	161686-29	161686-31
Your Reference	----------	BH11	BH12	BH13	BH14	HA15
	-					
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0-0.2
Date Sampled		8/02/2017	8/02/2017	7/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	95	97	104	108	102

PCBs in Soil						
Our Reference:	UNITS	161686-33	161686-35	161686-37	161686-39	161686-41
Your Reference	----------	BH16	BH17	BH18	BH19	HA20
	-					
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0.2-0.3
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	9/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	104	113	105	101	105

PCBs in Soil						
Our Reference:	UNITS	161686-43	161686-45	161686-47	161686-49	161686-51
Your Reference	----------	BH21	BH22	HA23	BH24	BH25
	-					
Depth	----------	0.5-0.6	0.5-0.6	0.1-0.2	0.5-0.6	0.5-0.6
Date Sampled		8/02/2017	7/02/2017	9/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	105	103	101	104	102

PCBs in Soil						
Our Reference:	UNITS	161686-53	161686-55	161686-57	161686-59	161686-61
Your Reference	----------	BH26	BH27	BH28	BH29	BH30
	-					
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6
Date Sampled		7/02/2017	7/02/2017	8/02/2017	8/02/2017	7/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	115	108	107	105	103

PCBs in Soil Our Reference: Your Reference	UNITS ----------	161686-63 BH31	161686-65 BH32	161686-67 QC105	161686-69 QC102	161686-70 QC104
Depth	----------	0.5-0.6	0.5-0.6	-	-	-
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	103	104	111	105	105

Acid Extractable metals in soil						
Our Reference:	UNITS	161686-1	161686-2	161686-3	161686-4	161686-5
Your Reference	---------- -	BH1	BH1	BH2	BH2	BH3
Depth	----------	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Arsenic	mg/kg	<4	18	4	7	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	200	15	46	13	130
Copper	mg/kg	24	84	41	32	38
Lead	mg/kg	12	19	12	13	13
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	81	22	130	17	140
Zinc	mg/kg	26	60	37	48	45

Acid Extractable metals in soil						
Our Reference:	UNITS	161686-6	161686-7	161686-8	161686-9	161686-10
Your Reference	---------- -	BH3	BH4	BH4	BH4	HA5
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	5.9-6.0	0.2-0.3
Date Sampled		8/02/2017	7/02/2017	7/02/2017	7/02/2017	9/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Arsenic	mg/kg	<4	<4	<4	9	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	29	12	53	9	24
Copper	mg/kg	19	67	14	39	30
Lead	mg/kg	13	4	8	15	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	58	56	52	15	33
Zinc	mg/kg	56	33	21	55	58

Acid Extractable metals in soil						
Our Reference:	UNITS	161686-11	161686-12	161686-13	161686-14	161686-15
Your Reference	---------- -	HA5	BH6	BH6	BH7	BH7
Depth	----------	0.4-0.5	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		9/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Arsenic	mg/kg	5	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	25	67	46	20	50
Copper	mg/kg	35	48	39	16	37
Lead	mg/kg	15	10	10	15	12
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	44	69	61	22	110
Zinc	mg/kg	59	45	47	17	48

Acid Extractable metals in soil						
Our Reference:	UNITS	161686-16	161686-17	161686-18	161686-19	161686-20
Your Reference	---------- -	BH8	BH8	BH9	BH9	BH10
Depth	----------	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	70	76	46	57	19
Copper	mg/kg	44	45	17	40	130
Lead	mg/kg	4	4	4	4	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	240	250	74	280	35
Zinc	mg/kg	56	57	26	54	61

Acid Extractable metals in soil						
Our Reference:	UNITS	161686-21	161686-22	161686-23	161686-24	161686-25
Your Reference	---------- -	BH10	BH11	BH11	BH12	BH12
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	220	7	140	25	12
Copper	mg/kg	42	62	43	39	24
Lead	mg/kg	4	5	4	17	13
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	220	5	120	69	19
Zinc	mg/kg	57	18	38	130	49

Acid Extractable metals in soil						
Our Reference:	UNITS	161686-26	161686-27	161686-28	161686-29	161686-30
Your Reference	---------- -	BH13	BH13	BH13	BH14	BH14
Depth	----------	0.5-0.6	2.5-2.6	7.4-7.5	0.5-0.6	1.9-2.0
Date Sampled		7/02/2017	7/02/2017	7/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Arsenic	mg/kg	<4	<4	6	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	62	19	9	58	53
Copper	mg/kg	45	36	43	46	40
Lead	mg/kg	4	16	17	3	3
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	160	45	20	310	360
Zinc	mg/kg	45	82	62	54	47

Acid Extractable metals in soil						
Our Reference:	UNITS	161686-31	161686-32	161686-33	161686-34	161686-35
Your Reference	---------- -	HA15	HA15	BH16	BH16	BH17
Depth	----------	0-0.2	0.2-0.4	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Arsenic	mg/kg	<4	<4	7	4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	10	15	21	290
Copper	mg/kg	47	40	44	44	31
Lead	mg/kg	21	28	13	18	4
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	22	25	28	28	240
Zinc	mg/kg	42	40	53	55	45

Acid Extractable metals in soil						
Our Reference:	UNITS	161686-36	161686-37	161686-38	161686-39	161686-40
Your Reference	---------- -	BH17	BH18	BH18	BH19	BH19
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Arsenic	mg/kg	<4	4	5	<4	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	1
Chromium	mg/kg	230	11	12	38	9
Copper	mg/kg	48	36	37	37	33
Lead	mg/kg	5	15	14	9	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	250	31	32	56	260
Zinc	mg/kg	59	62	58	41	200

Acid Extractable metals in soil						
Our Reference:	UNITS	161686-41	161686-42	161686-43	161686-44	161686-45
Your Reference	----------	HA20	HA20	BH21	BH21	BH22
	-					
Depth	----------	0.2-0.3	0.5-0.6	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		9/02/2017	9/02/2017	8/02/2017	8/02/2017	7/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Arsenic	mg/kg	7	5	19	7	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	21	14	13	14
Copper	mg/kg	43	44	34	28	22
Lead	mg/kg	19	16	18	14	4
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	39	42	23	23	9
Zinc	mg/kg	79	68	63	61	16

Acid Extractable metals in soil						
Our Reference:	UNITS	161686-46	161686-47	161686-48	161686-49	161686-50
Your Reference	----------	BH22	HA23	HA23	BH24	BH24
	-					
Depth	----------	1.9-2.0	0.1-0.2	0.2-0.3	0.5-0.6	1.9-2.0
Date Sampled		7/02/2017	9/02/2017	9/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Arsenic	mg/kg	<4	<4	<4	<4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	100	160	190	17	74
Copper	mg/kg	22	25	26	42	38
Lead	mg/kg	6	17	11	13	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	65	65	110	29	80
Zinc	mg/kg	22	34	29	47	55

Acid Extractable metals in soil						
Our Reference:	UNITS	161686-51	161686-52	161686-53	161686-54	161686-55
Your Reference	----------	BH25	BH25	BH26	BH26	BH27
	-					
Depth	----------	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	7/02/2017	7/02/2017	7/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Arsenic	mg/kg	<4	5	<4	5	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	12	60	19	160
Copper	mg/kg	57	21	34	18	18
Lead	mg/kg	11	15	11	16	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	49	9	62	10	48
Zinc	mg/kg	58	25	39	16	25

Acid Extractable metals in soil						
Our Reference:	UNITS	161686-56	161686-57	161686-58	161686-59	161686-60
Your Reference	----------	BH27	BH28	BH28	BH29	BH29
	-					
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		7/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	110	31	12	100	160
Copper	mg/kg	52	57	22	43	37
Lead	mg/kg	14	11	8	5	5
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	56	68	9	270	130
Zinc	mg/kg	59	35	15	60	33

Acid Extractable metals in soil						
Our Reference:	UNITS	161686-61	161686-62	161686-63	161686-64	161686-65
Your Reference	----------	BH30	BH30	BH31	BH31	BH32
	-					
Depth	----------	0.5-0.6	5.9-6.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		7/02/2017	7/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	130	10	19	7
Copper	mg/kg	16	26	36	34	22
Lead	mg/kg	4	9	6	18	4
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	59	12	25	4
Zinc	mg/kg	14	62	19	70	13

Acid Extractable metals in soil						
Our Reference:	UNITS	161686-66	161686-67	161686-68	161686-69	161686-70
Your Reference	----------	BH32	QC105	QC101	QC102	QC104
	-					
Depth	----------	1.9-2.0	-	-	-	-
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	200	29	33	57	46
Copper	mg/kg	34	24	35	37	32
Lead	mg/kg	4	14	14	12	19
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	140	35	52	65	41
Zinc	mg/kg	35	22	69	44	41

Moisture						
Our Reference:	UNITS	161686-1	161686-2	161686-3	161686-4	161686-5
Your Reference	----------	BH1	BH1	BH2	BH2	BH3
	-					
Depth	----------	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Moisture	%	21	12	23	12	25

Moisture						
Our Reference:	UNITS	161686-6	161686-7	161686-8	161686-9	161686-10
Your Reference	----------	BH3	BH4	BH4	BH4	HA5
	-					
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	5.9-6.0	0.2-0.3
Date Sampled		8/02/2017	7/02/2017	7/02/2017	7/02/2017	9/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Moisture	%	28	8.6	27	12	12

Moisture						
Our Reference:	UNITS	161686-11	161686-12	161686-13	161686-14	161686-15
Your Reference	----------	HA5	BH6	BH6	BH7	BH7
	-					
Depth	----------	0.4-0.5	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		9/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Moisture	%	8.9	14	11	17	15

Moisture						
Our Reference:	UNITS	161686-16	161686-17	161686-18	161686-19	161686-20
Your Reference	----------	BH8	BH8	BH9	BH9	BH10
	-					
Depth	----------	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Moisture	%	12	8.5	14	13	20

Moisture						
Our Reference:	UNITS	161686-21	161686-22	161686-23	161686-24	161686-25
Your Reference	----------	BH10	BH11	BH11	BH12	BH12
	-					
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Moisture	%	23	14	23	11	5.8

Moisture						
Our Reference:	UNITS	161686-26	161686-27	161686-28	161686-29	161686-30
Your Reference	----------	BH13	BH13	BH13	BH14	BH14
	-					
Depth	----------	0.5-0.6	2.5-2.6	7.4-7.5	0.5-0.6	1.9-2.0
Date Sampled		7/02/2017	7/02/2017	7/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Moisture	%	17	17	6.7	14	16

Moisture						
Our Reference:	UNITS	161686-31	161686-32	161686-33	161686-34	161686-35
Your Reference	----------	HA15	HA15	BH16	BH16	BH17
	-					
Depth	----------	0-0.2	0.2-0.4	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Moisture	%	9.4	12	6.7	6.7	30

Moisture						
Our Reference:	UNITS	161686-36	161686-37	161686-38	161686-39	161686-40
Your Reference	----------	BH17	BH18	BH18	BH19	BH19
	-					
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Moisture	%	27	6.1	5.2	17	22

Moisture						
Our Reference:	UNITS	161686-41	161686-42	161686-43	161686-44	161686-45
Your Reference	----------	HA20	HA20	BH21	BH21	BH22
	-					
Depth	----------	0.2-0.3	0.5-0.6	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		9/02/2017	9/02/2017	8/02/2017	8/02/2017	7/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Moisture	%	14	14	7.3	8.1	15

Moisture						
Our Reference:	UNITS	161686-46	161686-47	161686-48	161686-49	161686-50
Your Reference	----------	BH22	HA23	HA23	BH24	BH24
	-					
Depth	----------	1.9-2.0	0.1-0.2	0.2-0.3	0.5-0.6	1.9-2.0
Date Sampled		7/02/2017	9/02/2017	9/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Moisture	%	17	19	21	17	23

Moisture						
Our Reference:	UNITS	161686-51	161686-52	161686-53	161686-54	161686-55
Your Reference	----------	BH25	BH25	BH26	BH26	BH27
	-					
Depth	----------	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	7/02/2017	7/02/2017	7/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Moisture	%	11	14	7.6	18	15

Moisture						
Our Reference:	UNITS	161686-56	161686-57	161686-58	161686-59	161686-60
Your Reference	----------	BH27	BH28	BH28	BH29	BH29
	-					
Depth	----------	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0
Date Sampled		7/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Moisture	%	24	13	19	18	28

Moisture Our Reference: Your Reference	UNITS ----------	161686-61 BH30	161686-62 BH30	161686-63 BH31	161686-64 BH31	161686-65 BH32
Depth	----------	0.5-0.6	5.9-6.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		7/02/2017	7/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Moisture	%	11	22	16	8.1	16

Moisture Our Reference: Your Reference	UNITS ----------	161686-66 BH32	161686-67 QC105	161686-68 QC101	161686-69 QC102	161686-70 QC104
Depth	----------	1.9-2.0	-	-	-	-
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/02/2017	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date analysed	-	14/02/2017	14/02/2017	14/02/2017	14/02/2017	14/02/2017
Moisture	%	24	17	17	10	[NT]

Asbestos ID - soils						
Our Reference:	UNITS	161686-1	161686-3	161686-5	161686-7	161686-10
Your Reference	---------- -	BH1	BH2	BH3	BH4	HA5
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0.2-0.3
Date Sampled		8/02/2017	8/02/2017	8/02/2017	7/02/2017	9/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/02/2017	16/02/2017	16/02/2017	16/02/2017	16/02/2017
Sample mass tested	g	Approx. 40g	Approx. 35g	Approx. 35g	Approx. 60g	Approx. 40g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	161686-12	161686-16	161686-18	161686-20	161686-21
Your Reference	---------- -	BH6	BH8	BH9	BH10	BH10
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	1.9-2.0
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/02/2017	16/02/2017	16/02/2017	16/02/2017	16/02/2017
Sample mass tested	g	Approx. 35g	Approx. 55g	Approx. 45g	Approx. 35g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	161686-22	161686-23	161686-24	161686-25	161686-26
Your Reference	---------- -	BH11	BH11	BH12	BH12	BH13
Depth	----------	0.5-0.6	1.9-2.0	0.5-0.6	1.9-2.0	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	7/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/02/2017	16/02/2017	16/02/2017	16/02/2017	16/02/2017
Sample mass tested	g	Approx. 35g	Approx. 35g	Approx. 40g	Approx. 45g	Approx. 45g
Sample Description	-	Beige coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	161686-29	161686-31	161686-33	161686-35	161686-37
Your Reference	---------- -	BH14	HA15	BH16	BH17	BH18
Depth	----------	0.5-0.6	0-0.2	0.5-0.6	0.5-0.6	0.5-0.6
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/02/2017	16/02/2017	16/02/2017	16/02/2017	16/02/2017
Sample mass tested	g	Approx. 40g	Approx. 35g	Approx. 45g	Approx. 35g	Approx. 50g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	161686-39	161686-41	161686-43	161686-47	161686-51
Your Reference	---------- -	BH19	HA20	BH21	HA23	BH25
Depth	----------	0.5-0.6	0.2-0.3	0.5-0.6	0.1-0.2	0.5-0.6
Date Sampled		8/02/2017	9/02/2017	8/02/2017	9/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/02/2017	16/02/2017	16/02/2017	16/02/2017	16/02/2017
Sample mass tested	g	Approx. 40g	Approx. 35g	Approx. 45g	Approx. 35g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	161686-53	161686-55	161686-57	161686-59	161686-61
Your Reference	---------- -	BH26	BH27	BH28	BH29	BH30
Depth	----------	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6	0.5-0.6
Date Sampled		7/02/2017	7/02/2017	8/02/2017	8/02/2017	7/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/02/2017	16/02/2017	16/02/2017	16/02/2017	16/02/2017
Sample mass tested	g	Approx. 45g	Approx. 35g	Approx. 35g	Approx. 35g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Beige coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	161686-63	161686-65	161686-68	161686-69	161686-70
Your Reference	---------- -	BH31	BH32	QC101	QC102	QC104
Depth	----------	0.5-0.6	0.5-0.6	-	-	-
Date Sampled		8/02/2017	8/02/2017	8/02/2017	8/02/2017	8/02/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/02/2017	16/02/2017	16/02/2017	16/02/2017	16/02/2017
Sample mass tested	g	Approx. 35g	Approx. 35g	Approx. 40g	Approx. 40g	Approx. 40g
Sample Description	-	Beige coarse-grained soil & rocks	Beige coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Method ID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'TEQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'TEQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'TEQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
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.

Method ID	Methodology Summary
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
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.

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base || Duplicate || %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			13/02/2017	161686-1	13/02/2017 || 13/02/2017	LCS-2	13/02/2017
Date analysed	-			15/02/2017	161686-1	14/02/2017 || 14/02/2017	LCS-2	14/02/2017
TRHC$_6$ - C$_9$	mg/kg	25	Org-016	<25	161686-1	<25 || <25	LCS-2	94%
TRHC$_6$ - C$_{10}$	mg/kg	25	Org-016	<25	161686-1	<25 || <25	LCS-2	94%
Benzene	mg/kg	0.2	Org-016	<0.2	161686-1	<0.2 || <0.2	LCS-2	84%
Toluene	mg/kg	0.5	Org-016	<0.5	161686-1	<0.5 || <0.5	LCS-2	93%
Ethylbenzene	mg/kg	1	Org-016	<1	161686-1	<1 || <1	LCS-2	95%
m+p-xylene	mg/kg	2	Org-016	<2	161686-1	<2 || <2	LCS-2	100%
o-Xylene	mg/kg	1	Org-016	<1	161686-1	<1 || <1	LCS-2	98%
naphthalene	mg/kg	1	Org-014	<1	161686-1	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	97	161686-1	97 || 103 || RPD: 6	LCS-2	93%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base || Duplicate || %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			13/02/2017	161686-1	13/02/2017 || 13/02/2017	LCS-2	13/02/2017
Date analysed	-			14/02/2017	161686-1	13/02/2017 || 13/02/2017	LCS-2	13/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	50	Org-003	<50	161686-1	<50 || <50	LCS-2	116%
TRHC$_{15}$ - C$_{28}$	mg/kg	100	Org-003	<100	161686-1	<100 || <100	LCS-2	109%
TRHC$_{29}$ - C$_{36}$	mg/kg	100	Org-003	<100	161686-1	<100 || <100	LCS-2	104%
TRH>C$_{10}$-C$_{16}$	mg/kg	50	Org-003	<50	161686-1	<50 || <50	LCS-2	116%
TRH>C$_{16}$-C$_{34}$	mg/kg	100	Org-003	<100	161686-1	<100 || <100	LCS-2	109%
TRH>C$_{34}$-C$_{40}$	mg/kg	100	Org-003	<100	161686-1	<100 || <100	LCS-2	104%
Surrogate o-Terphenyl	%		Org-003	111	161686-1	95 || 88 || RPD: 8	LCS-2	120%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base || Duplicate || %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			13/02/2017	161686-1	13/02/2017 || 13/02/2017	LCS-2	13/02/2017
Date analysed	-			14/02/2017	161686-1	14/02/2017 || 14/02/2017	LCS-2	14/02/2017
Naphthalene	mg/kg	0.1	Org-012	<0.1	161686-1	<0.1 || <0.1	LCS-2	99%
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012	<0.1	161686-1	<0.1 || <0.1	LCS-2	104%
Phenanthrene	mg/kg	0.1	Org-012	<0.1	161686-1	<0.1 || <0.1	LCS-2	112%
Anthracene	mg/kg	0.1	Org-012	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	161686-1	<0.1 || <0.1	LCS-2	98%
Pyrene	mg/kg	0.1	Org-012	<0.1	161686-1	<0.1 || <0.1	LCS-2	105%
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012	<0.1	161686-1	<0.1 || <0.1	LCS-2	105%
Benzo(b,j +k)fluoranthene	mg/kg	0.2	Org-012	<0.2	161686-1	<0.2 || <0.2	[NR]	[NR]

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	161686-1	<0.05 || <0.05	LCS-2	93%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012	92	161686-1	86 || 90 || RPD: 5	LCS-2	119%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			13/02/2017	161686-1	13/02/2017 || 13/02/2017	LCS-2	13/02/2017
Date analysed	-			14/02/2017	161686-1	14/02/2017 || 14/02/2017	LCS-2	14/02/2017
HCB	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	LCS-2	83%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	LCS-2	91%
Heptachlor	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	LCS-2	86%
delta-BHC	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	LCS-2	87%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	LCS-2	92%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	LCS-2	91%
Dieldrin	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	LCS-2	99%
Endrin	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	LCS-2	122%
pp-DDD	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	LCS-2	86%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	LCS-2	80%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-005	102	161686-1	106 || 106 || RPD: 0	LCS-2	129%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			13/02/2017	161686-1	13/02/2017 || 13/02/2017	LCS-2	13/02/2017
Date analysed	-			14/02/2017	161686-1	14/02/2017 || 14/02/2017	LCS-2	14/02/2017
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	161686-1	<0.1 || <0.1	LCS-2	111%
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Diazinon	mg/kg	0.1	Org-008	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Dichlorvos	mg/kg	0.1	Org-008	<0.1	161686-1	<0.1 || <0.1	LCS-2	103%
Dimethoate	mg/kg	0.1	Org-008	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	161686-1	<0.1 || <0.1	LCS-2	99%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	161686-1	<0.1 || <0.1	LCS-2	102%
Malathion	mg/kg	0.1	Org-008	<0.1	161686-1	<0.1 || <0.1	LCS-2	94%
Parathion	mg/kg	0.1	Org-008	<0.1	161686-1	<0.1 || <0.1	LCS-2	99%
Ronnel	mg/kg	0.1	Org-008	<0.1	161686-1	<0.1 || <0.1	LCS-2	94%
Surrogate TCMX	%		Org-008	102	161686-1	106 || 106 || RPD: 0	LCS-2	98%

QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			13/02/2017	161686-1	13/02/2017 || 13/02/2017	LCS-2	13/02/2017
Date analysed	-			14/02/2017	161686-1	14/02/2017 || 14/02/2017	LCS-2	14/02/2017
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	161686-1	<0.1 || <0.1	LCS-2	103%
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	161686-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-006	102	161686-1	106 || 106 || RPD: 0	LCS-2	98%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			13/02/2017	161686-1	13/02/2017 || 13/02/2017	LCS-2	13/02/2017
Date analysed	-			14/02/2017	161686-1	14/02/2017 || 14/02/2017	LCS-2	14/02/2017
Arsenic	mg/kg	4	Metals-020	<4	161686-1	<4 || <4	LCS-2	118%
Cadmium	mg/kg	0.4	Metals-020	<0.4	161686-1	<0.4 || <0.4	LCS-2	103%
Chromium	mg/kg	1	Metals-020	<1	161686-1	200 || 190 || RPD: 5	LCS-2	113%
Copper	mg/kg	1	Metals-020	<1	161686-1	24 || 22 || RPD: 9	LCS-2	115%
Lead	mg/kg	1	Metals-020	<1	161686-1	12 || 12 || RPD: 0	LCS-2	108%
Mercury	mg/kg	0.1	Metals-021	<0.1	161686-1	<0.1 || <0.1	LCS-2	94%
Nickel	mg/kg	1	Metals-020	<1	161686-1	81 || 56 || RPD: 36	LCS-2	103%
Zinc	mg/kg	1	Metals-020	<1	161686-1	26 || 24 || RPD: 8	LCS-2	105%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-11	13/02/2017 || 13/02/2017	LCS-3	13/02/2017
Date analysed	-	161686-11	14/02/2017 || 14/02/2017	LCS-3	14/02/2017
$TRHC_6$ - C_9	mg/kg	161686-11	<25 || <25	LCS-3	97%
$TRHC_6$ - C_{10}	mg/kg	161686-11	<25 || <25	LCS-3	97%
Benzene	mg/kg	161686-11	<0.2 || <0.2	LCS-3	89%
Toluene	mg/kg	161686-11	<0.5 || <0.5	LCS-3	96%
Ethylbenzene	mg/kg	161686-11	<1 || <1	LCS-3	98%
m+p-xylene	mg/kg	161686-11	<2 || <2	LCS-3	101%
o-Xylene	mg/kg	161686-11	<1 || <1	LCS-3	102%
naphthalene	mg/kg	161686-11	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	161686-11	101 || 105 || RPD: 4	LCS-3	98%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-11	13/02/2017 || 13/02/2017	LCS-3	13/02/2017
Date analysed	-	161686-11	13/02/2017 || 13/02/2017	LCS-3	13/02/2017
$TRHC_{10}$ - C_{14}	mg/kg	161686-11	<50 || <50	LCS-3	130%
$TRHC_{15}$ - C_{28}	mg/kg	161686-11	<100 || <100	LCS-3	122%
$TRHC_{29}$ - C_{36}	mg/kg	161686-11	<100 || <100	LCS-3	121%
$TRH>C_{10}$-C_{16}	mg/kg	161686-11	<50 || <50	LCS-3	130%
$TRH>C_{16}$-C_{34}	mg/kg	161686-11	<100 || <100	LCS-3	122%
$TRH>C_{34}$-C_{40}	mg/kg	161686-11	<100 || <100	LCS-3	121%
Surrogate o-Terphenyl	%	161686-11	94 || 95 || RPD: 1	LCS-3	120%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-11	13/02/2017 || 13/02/2017	LCS-3	13/02/2017
Date analysed	-	161686-11	14/02/2017 || 14/02/2017	LCS-3	14/02/2017
Naphthalene	mg/kg	161686-11	<0.1 || <0.1	LCS-3	97%
Acenaphthylene	mg/kg	161686-11	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	161686-11	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	161686-11	<0.1 || <0.1	LCS-3	99%
Phenanthrene	mg/kg	161686-11	<0.1 || <0.1	LCS-3	110%
Anthracene	mg/kg	161686-11	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	161686-11	<0.1 || <0.1	LCS-3	97%
Pyrene	mg/kg	161686-11	<0.1 || <0.1	LCS-3	103%
Benzo(a)anthracene	mg/kg	161686-11	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	161686-11	<0.1 || <0.1	LCS-3	104%
Benzo(b,j+k)fluoranthene	mg/kg	161686-11	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	161686-11	<0.05 || <0.05	LCS-3	90%
Indeno(1,2,3-c,d)pyrene	mg/kg	161686-11	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	161686-11	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	161686-11	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	161686-11	84 || 80 || RPD: 5	LCS-3	118%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	LCS-3	13/02/2017
Date analysed	-	[NT]	[NT]	LCS-3	14/02/2017
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	LCS-3	81%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	LCS-3	89%
Heptachlor	mg/kg	[NT]	[NT]	LCS-3	81%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	LCS-3	86%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	LCS-3	90%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	LCS-3	90%
Dieldrin	mg/kg	[NT]	[NT]	LCS-3	98%
Endrin	mg/kg	[NT]	[NT]	LCS-3	118%
pp-DDD	mg/kg	[NT]	[NT]	LCS-3	89%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	LCS-3	77%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	LCS-3	128%
QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	LCS-3	13/02/2017
Date analysed	-	[NT]	[NT]	LCS-3	14/02/2017
Azinphos-methyl (Guthion)	mg/kg	[NT]	[NT]	[NR]	[NR]
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos	mg/kg	[NT]	[NT]	LCS-3	111%
Chlorpyriphos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dichlorvos	mg/kg	[NT]	[NT]	LCS-3	99%
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	LCS-3	100%
Fenitrothion	mg/kg	[NT]	[NT]	LCS-3	102%
Malathion	mg/kg	[NT]	[NT]	LCS-3	85%
Parathion	mg/kg	[NT]	[NT]	LCS-3	97%
Ronnel	mg/kg	[NT]	[NT]	LCS-3	95%
Surrogate TCMX	%	[NT]	[NT]	LCS-3	102%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	LCS-3	13/02/2017
Date analysed	-	[NT]	[NT]	LCS-3	14/02/2017
Aroclor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	mg/kg	[NT]	[NT]	LCS-3	107%
Aroclor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	LCS-3	102%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	161686-11	13/02/2017 || 13/02/2017	LCS-3	13/02/2017
Date analysed	-	161686-11	14/02/2017 || 14/02/2017	LCS-3	14/02/2017
Arsenic	mg/kg	161686-11	5 || 5 || RPD: 0	LCS-3	121%
Cadmium	mg/kg	161686-11	<0.4 || <0.4	LCS-3	106%
Chromium	mg/kg	161686-11	25 || 32 || RPD: 25	LCS-3	117%
Copper	mg/kg	161686-11	35 || 36 || RPD: 3	LCS-3	116%
Lead	mg/kg	161686-11	15 || 18 || RPD: 18	LCS-3	110%
Mercury	mg/kg	161686-11	<0.1 || <0.1	LCS-3	98%
Nickel	mg/kg	161686-11	44 || 50 || RPD: 13	LCS-3	105%
Zinc	mg/kg	161686-11	59 || 62 || RPD: 5	LCS-3	108%
QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-21	13/02/2017 || 13/02/2017	LCS-4	13/02/2017
Date analysed	-	161686-21	14/02/2017 || 14/02/2017	LCS-4	15/02/2017
$TRHC_6$ - C_9	mg/kg	161686-21	<25 || <25	LCS-4	80%
$TRHC_6$ - C_{10}	mg/kg	161686-21	<25 || <25	LCS-4	80%
Benzene	mg/kg	161686-21	<0.2 || <0.2	LCS-4	73%
Toluene	mg/kg	161686-21	<0.5 || <0.5	LCS-4	78%
Ethylbenzene	mg/kg	161686-21	<1 || <1	LCS-4	81%
m+p-xylene	mg/kg	161686-21	<2 || <2	LCS-4	84%
o-Xylene	mg/kg	161686-21	<1 || <1	LCS-4	83%
naphthalene	mg/kg	161686-21	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	161686-21	90 || 90 || RPD: 0	LCS-4	82%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-21	13/02/2017 || 13/02/2017	LCS-4	13/02/2017
Date analysed	-	161686-21	14/02/2017 || 14/02/2017	LCS-4	14/02/2017
$TRHC_{10}$ - C_{14}	mg/kg	161686-21	<50 || <50	LCS-4	128%
$TRHC_{15}$ - C_{28}	mg/kg	161686-21	<100 || <100	LCS-4	128%
$TRHC_{29}$ - C_{36}	mg/kg	161686-21	<100 || <100	LCS-4	121%
$TRH>C_{10}$-C_{16}	mg/kg	161686-21	<50 || <50	LCS-4	128%
$TRH>C_{16}$-C_{34}	mg/kg	161686-21	<100 || <100	LCS-4	128%
$TRH>C_{34}$-C_{40}	mg/kg	161686-21	<100 || <100	LCS-4	121%
Surrogate o-Terphenyl	%	161686-21	97 || 96 || RPD: 1	LCS-4	125%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-21	13/02/2017 || 13/02/2017	LCS-4	13/02/2017
Date analysed	-	161686-21	14/02/2017 || 14/02/2017	LCS-4	14/02/2017
Naphthalene	mg/kg	161686-21	<0.1 || <0.1	LCS-4	100%
Acenaphthylene	mg/kg	161686-21	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	161686-21	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	161686-21	<0.1 || <0.1	LCS-4	101%
Phenanthrene	mg/kg	161686-21	<0.1 || <0.1	LCS-4	113%
Anthracene	mg/kg	161686-21	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	161686-21	<0.1 || <0.1	LCS-4	106%
Pyrene	mg/kg	161686-21	<0.1 || <0.1	LCS-4	116%
Benzo(a)anthracene	mg/kg	161686-21	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	161686-21	<0.1 || <0.1	LCS-4	107%
Benzo(b,j+k)fluoranthene	mg/kg	161686-21	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	161686-21	<0.05 || <0.05	LCS-4	108%
Indeno(1,2,3-c,d)pyrene	mg/kg	161686-21	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	161686-21	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	161686-21	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	161686-21	83 || 82 || RPD: 1	LCS-4	128%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	161686-21	13/02/2017 || 13/02/2017	LCS-4	13/02/2017
Date analysed	-	161686-21	14/02/2017 || 14/02/2017	LCS-4	14/02/2017
Arsenic	mg/kg	161686-21	<4 || <4	LCS-4	121%
Cadmium	mg/kg	161686-21	<0.4 || <0.4	LCS-4	104%
Chromium	mg/kg	161686-21	220 || 230 || RPD: 4	LCS-4	117%
Copper	mg/kg	161686-21	42 || 44 || RPD: 5	LCS-4	116%
Lead	mg/kg	161686-21	4 || 4 || RPD: 0	LCS-4	107%
Mercury	mg/kg	161686-21	<0.1 || <0.1	LCS-4	97%
Nickel	mg/kg	161686-21	220 || 240 || RPD: 9	LCS-4	105%
Zinc	mg/kg	161686-21	57 || 60 || RPD: 5	LCS-4	108%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-31	13/02/2017 || 13/02/2017	LCS-5	13/02/2017
Date analysed	-	161686-31	14/02/2017 || 14/02/2017	LCS-5	15/02/2017
$TRHC_6$ - C_9	mg/kg	161686-31	<25 || <25	LCS-5	81%
$TRHC_6$ - C_{10}	mg/kg	161686-31	<25 || <25	LCS-5	81%
Benzene	mg/kg	161686-31	<0.2 || <0.2	LCS-5	75%
Toluene	mg/kg	161686-31	<0.5 || <0.5	LCS-5	82%
Ethylbenzene	mg/kg	161686-31	<1 || <1	LCS-5	81%
m+p-xylene	mg/kg	161686-31	<2 || <2	LCS-5	83%
o-Xylene	mg/kg	161686-31	<1 || <1	LCS-5	83%
naphthalene	mg/kg	161686-31	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	161686-31	91 || 99 || RPD: 8	LCS-5	81%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-31	13/02/2017 || 13/02/2017	LCS-5	13/02/2017
Date analysed	-	161686-31	14/02/2017 || 14/02/2017	LCS-5	14/02/2017
$TRHC_{10}$ - C_{14}	mg/kg	161686-31	<50 || <50	LCS-5	120%
$TRHC_{15}$ - C_{28}	mg/kg	161686-31	120 || <100	LCS-5	127%
$TRHC_{29}$ - C_{36}	mg/kg	161686-31	320 || 230 || RPD: 33	LCS-5	121%
$TRH>C_{10}$-C_{16}	mg/kg	161686-31	<50 || <50	LCS-5	120%
$TRH>C_{16}$-C_{34}	mg/kg	161686-31	310 || 200 || RPD: 43	LCS-5	127%
$TRH>C_{34}$-C_{40}	mg/kg	161686-31	320 || 290 || RPD: 10	LCS-5	121%
Surrogate o-Terphenyl	%	161686-31	98 || 89 || RPD: 10	LCS-5	124%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-31	13/02/2017 || 13/02/2017	LCS-5	13/02/2017
Date analysed	-	161686-31	14/02/2017 || 14/02/2017	LCS-5	14/02/2017
Naphthalene	mg/kg	161686-31	<0.1 || <0.1	LCS-5	94%
Acenaphthylene	mg/kg	161686-31	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	161686-31	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	161686-31	<0.1 || <0.1	LCS-5	100%
Phenanthrene	mg/kg	161686-31	0.4 || 0.4 || RPD: 0	LCS-5	112%
Anthracene	mg/kg	161686-31	0.2 || 0.1 || RPD: 67	[NR]	[NR]
Fluoranthene	mg/kg	161686-31	1.3 || 1.2 || RPD: 8	LCS-5	101%
Pyrene	mg/kg	161686-31	1.4 || 1.2 || RPD: 15	LCS-5	108%
Benzo(a)anthracene	mg/kg	161686-31	0.8 || 0.5 || RPD: 46	[NR]	[NR]
Chrysene	mg/kg	161686-31	0.6 || 0.7 || RPD: 15	LCS-5	105%
Benzo(b,j+k)fluoranthene	mg/kg	161686-31	1 || 1 || RPD: 0	[NR]	[NR]
Benzo(a)pyrene	mg/kg	161686-31	0.78 || 0.62 || RPD: 23	LCS-5	94%
Indeno(1,2,3-c,d)pyrene	mg/kg	161686-31	0.5 || 0.5 || RPD: 0	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	161686-31	0.2 || <0.1	[NR]	[NR]

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(g,h,i)perylene	mg/kg	161686-31	0.8 || 0.8 || RPD: 0	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	161686-31	104 || 77 || RPD: 30	LCS-5	123%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-31	13/02/2017 || 13/02/2017
Date analysed	-	161686-31	14/02/2017 || 14/02/2017
HCB	mg/kg	161686-31	<0.1 || <0.1
alpha-BHC	mg/kg	161686-31	<0.1 || <0.1
gamma-BHC	mg/kg	161686-31	<0.1 || <0.1
beta-BHC	mg/kg	161686-31	<0.1 || <0.1
Heptachlor	mg/kg	161686-31	<0.1 || <0.1
delta-BHC	mg/kg	161686-31	<0.1 || <0.1
Aldrin	mg/kg	161686-31	<0.1 || <0.1
Heptachlor Epoxide	mg/kg	161686-31	<0.1 || <0.1
gamma-Chlordane	mg/kg	161686-31	<0.1 || <0.1
alpha-chlordane	mg/kg	161686-31	<0.1 || <0.1
Endosulfan I	mg/kg	161686-31	<0.1 || <0.1
pp-DDE	mg/kg	161686-31	<0.1 || <0.1
Dieldrin	mg/kg	161686-31	<0.1 || <0.1
Endrin	mg/kg	161686-31	<0.1 || <0.1
pp-DDD	mg/kg	161686-31	<0.1 || <0.1
Endosulfan II	mg/kg	161686-31	<0.1 || <0.1
pp-DDT	mg/kg	161686-31	<0.1 || <0.1
Endrin Aldehyde	mg/kg	161686-31	<0.1 || <0.1
Endosulfan Sulphate	mg/kg	161686-31	<0.1 || <0.1
Methoxychlor	mg/kg	161686-31	<0.1 || <0.1
Surrogate TCMX	%	161686-31	102 || 109 || RPD: 7

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-31	13/02/2017 || 13/02/2017
Date analysed	-	161686-31	14/02/2017 || 14/02/2017
Azinphos-methyl (Guthion)	mg/kg	161686-31	<0.1 || <0.1
Bromophos-ethyl	mg/kg	161686-31	<0.1 || <0.1
Chlorpyriphos	mg/kg	161686-31	<0.1 || <0.1
Chlorpyriphos-methyl	mg/kg	161686-31	<0.1 || <0.1
Diazinon	mg/kg	161686-31	<0.1 || <0.1
Dichlorvos	mg/kg	161686-31	<0.1 || <0.1
Dimethoate	mg/kg	161686-31	<0.1 || <0.1
Ethion	mg/kg	161686-31	<0.1 || <0.1
Fenitrothion	mg/kg	161686-31	<0.1 || <0.1
Malathion	mg/kg	161686-31	<0.1 || <0.1
Parathion	mg/kg	161686-31	<0.1 || <0.1
Ronnel	mg/kg	161686-31	<0.1 || <0.1
Surrogate TCMX	%	161686-31	102 || 109 || RPD: 7

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-31	13/02/2017 || 13/02/2017
Date analysed	-	161686-31	14/02/2017 || 14/02/2017
Aroclor 1016	mg/kg	161686-31	<0.1 || <0.1
Aroclor 1221	mg/kg	161686-31	<0.1 || <0.1
Aroclor 1232	mg/kg	161686-31	<0.1 || <0.1
Aroclor 1242	mg/kg	161686-31	<0.1 || <0.1
Aroclor 1248	mg/kg	161686-31	<0.1 || <0.1
Aroclor 1254	mg/kg	161686-31	<0.1 || <0.1
Aroclor 1260	mg/kg	161686-31	<0.1 || <0.1
Surrogate TCLMX	%	161686-31	102 || 109 || RPD: 7

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	161686-31	13/02/2017 || 13/02/2017	LCS-5	13/02/2017
Date analysed	-	161686-31	14/02/2017 || 14/02/2017	LCS-5	14/02/2017
Arsenic	mg/kg	161686-31	<4 || <4	LCS-5	119%
Cadmium	mg/kg	161686-31	<0.4 || <0.4	LCS-5	102%
Chromium	mg/kg	161686-31	9 || 11 || RPD: 20	LCS-5	113%
Copper	mg/kg	161686-31	47 || 46 || RPD: 2	LCS-5	114%
Lead	mg/kg	161686-31	21 || 23 || RPD: 9	LCS-5	107%
Mercury	mg/kg	161686-31	<0.1 || <0.1	LCS-5	98%
Nickel	mg/kg	161686-31	22 || 31 || RPD: 34	LCS-5	103%
Zinc	mg/kg	161686-31	42 || 38 || RPD: 10	LCS-5	104%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-41	13/02/2017 || 13/02/2017	161686-2	13/02/2017
Date analysed	-	161686-41	15/02/2017 || 15/02/2017	161686-2	14/02/2017
$TRHC_6$ - C_9	mg/kg	161686-41	<25 || <25	161686-2	111%
$TRHC_6$ - C_{10}	mg/kg	161686-41	<25 || <25	161686-2	111%
Benzene	mg/kg	161686-41	<0.2 || <0.2	161686-2	102%
Toluene	mg/kg	161686-41	<0.5 || <0.5	161686-2	105%
Ethylbenzene	mg/kg	161686-41	<1 || <1	161686-2	111%
m+p-xylene	mg/kg	161686-41	<2 || <2	161686-2	118%
o-Xylene	mg/kg	161686-41	<1 || <1	161686-2	124%
naphthalene	mg/kg	161686-41	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	161686-41	89 || 83 || RPD: 7	161686-2	94%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-41	13/02/2017 || 13/02/2017	161686-2	13/02/2017
Date analysed	-	161686-41	14/02/2017 || 14/02/2017	161686-2	13/02/2017
$TRHC_{10}$ - C_{14}	mg/kg	161686-41	<50 || <50	161686-2	93%
$TRHC_{15}$ - C_{28}	mg/kg	161686-41	<100 || <100	161686-2	87%
$TRHC_{29}$ - C_{36}	mg/kg	161686-41	<100 || <100	161686-2	127%
$TRH>C_{10}$-C_{16}	mg/kg	161686-41	<50 || <50	161686-2	93%
$TRH>C_{16}$-C_{34}	mg/kg	161686-41	<100 || <100	161686-2	87%
$TRH>C_{34}$-C_{40}	mg/kg	161686-41	<100 || <100	161686-2	127%
Surrogate o-Terphenyl	%	161686-41	94 || 95 || RPD: 1	161686-2	96%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-41	13/02/2017 || 13/02/2017	161686-2	13/02/2017
Date analysed	-	161686-41	14/02/2017 || 14/02/2017	161686-2	14/02/2017
Naphthalene	mg/kg	161686-41	<0.1 || <0.1	161686-2	97%
Acenaphthylene	mg/kg	161686-41	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	161686-41	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	161686-41	<0.1 || <0.1	161686-2	97%
Phenanthrene	mg/kg	161686-41	0.1 || 0.1 || RPD: 0	161686-2	98%
Anthracene	mg/kg	161686-41	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	161686-41	<0.1 || <0.1	161686-2	89%
Pyrene	mg/kg	161686-41	<0.1 || <0.1	161686-2	102%
Benzo(a)anthracene	mg/kg	161686-41	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	161686-41	<0.1 || <0.1	161686-2	98%
Benzo(b,j+k)fluoranthene	mg/kg	161686-41	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	161686-41	<0.05 || <0.05	161686-2	90%
Indeno(1,2,3-c,d)pyrene	mg/kg	161686-41	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	161686-41	<0.1 || <0.1	[NR]	[NR]

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(g,h,i)perylene	mg/kg	161686-41	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	161686-41	80 || 82 || RPD: 2	161686-2	117%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-41	13/02/2017 || 13/02/2017
Date analysed	-	161686-41	14/02/2017 || 14/02/2017
HCB	mg/kg	161686-41	<0.1 || <0.1
alpha-BHC	mg/kg	161686-41	<0.1 || <0.1
gamma-BHC	mg/kg	161686-41	<0.1 || <0.1
beta-BHC	mg/kg	161686-41	<0.1 || <0.1
Heptachlor	mg/kg	161686-41	<0.1 || <0.1
delta-BHC	mg/kg	161686-41	<0.1 || <0.1
Aldrin	mg/kg	161686-41	<0.1 || <0.1
Heptachlor Epoxide	mg/kg	161686-41	<0.1 || <0.1
gamma-Chlordane	mg/kg	161686-41	<0.1 || <0.1
alpha-chlordane	mg/kg	161686-41	<0.1 || <0.1
Endosulfan I	mg/kg	161686-41	<0.1 || <0.1
pp-DDE	mg/kg	161686-41	<0.1 || <0.1
Dieldrin	mg/kg	161686-41	<0.1 || <0.1
Endrin	mg/kg	161686-41	<0.1 || <0.1
pp-DDD	mg/kg	161686-41	<0.1 || <0.1
Endosulfan II	mg/kg	161686-41	<0.1 || <0.1
pp-DDT	mg/kg	161686-41	<0.1 || <0.1
Endrin Aldehyde	mg/kg	161686-41	<0.1 || <0.1
Endosulfan Sulphate	mg/kg	161686-41	<0.1 || <0.1
Methoxychlor	mg/kg	161686-41	<0.1 || <0.1
Surrogate TCMX	%	161686-41	105 || 103 || RPD: 2

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-41	13/02/2017 || 13/02/2017
Date analysed	-	161686-41	14/02/2017 || 14/02/2017
Azinphos-methyl (Guthion)	mg/kg	161686-41	<0.1 || <0.1
Bromophos-ethyl	mg/kg	161686-41	<0.1 || <0.1
Chlorpyriphos	mg/kg	161686-41	<0.1 || <0.1
Chlorpyriphos-methyl	mg/kg	161686-41	<0.1 || <0.1
Diazinon	mg/kg	161686-41	<0.1 || <0.1
Dichlorvos	mg/kg	161686-41	<0.1 || <0.1
Dimethoate	mg/kg	161686-41	<0.1 || <0.1
Ethion	mg/kg	161686-41	<0.1 || <0.1
Fenitrothion	mg/kg	161686-41	<0.1 || <0.1
Malathion	mg/kg	161686-41	<0.1 || <0.1
Parathion	mg/kg	161686-41	<0.1 || <0.1
Ronnel	mg/kg	161686-41	<0.1 || <0.1
Surrogate TCMX	%	161686-41	105 || 103 || RPD: 2

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-41	13/02/2017 || 13/02/2017
Date analysed	-	161686-41	14/02/2017 || 14/02/2017
Aroclor 1016	mg/kg	161686-41	<0.1 || <0.1
Aroclor 1221	mg/kg	161686-41	<0.1 || <0.1
Aroclor 1232	mg/kg	161686-41	<0.1 || <0.1
Aroclor 1242	mg/kg	161686-41	<0.1 || <0.1
Aroclor 1248	mg/kg	161686-41	<0.1 || <0.1
Aroclor 1254	mg/kg	161686-41	<0.1 || <0.1
Aroclor 1260	mg/kg	161686-41	<0.1 || <0.1
Surrogate TCLMX	%	161686-41	105 || 103 || RPD: 2

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	161686-41	13/02/2017 || 13/02/2017	161686-2	13/02/2017
Date analysed	-	161686-41	14/02/2017 || 14/02/2017	161686-2	14/02/2017
Arsenic	mg/kg	161686-41	7 || 7 || RPD: 0	161686-2	92%
Cadmium	mg/kg	161686-41	<0.4 || <0.4	161686-2	86%
Chromium	mg/kg	161686-41	19 || 18 || RPD: 5	161686-2	101%
Copper	mg/kg	161686-41	43 || 39 || RPD: 10	161686-2	99%
Lead	mg/kg	161686-41	19 || 16 || RPD: 17	161686-2	83%
Mercury	mg/kg	161686-41	<0.1 || <0.1	161686-2	92%
Nickel	mg/kg	161686-41	39 || 33 || RPD: 17	161686-2	85%
Zinc	mg/kg	161686-41	79 || 75 || RPD: 5	161686-2	73%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-51	13/02/2017 || 13/02/2017
Date analysed	-	161686-51	15/02/2017 || 15/02/2017
TRHC$_6$ - C$_9$	mg/kg	161686-51	<25 || <25
TRHC$_6$ - C$_{10}$	mg/kg	161686-51	<25 || <25
Benzene	mg/kg	161686-51	<0.2 || <0.2
Toluene	mg/kg	161686-51	<0.5 || <0.5
Ethylbenzene	mg/kg	161686-51	<1 || <1
m+p-xylene	mg/kg	161686-51	<2 || <2
o-Xylene	mg/kg	161686-51	<1 || <1
naphthalene	mg/kg	161686-51	<1 || <1
Surrogate aaa-Trifluorotoluene	%	161686-51	80 || 91 || RPD: 13

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-51	13/02/2017 || 13/02/2017
Date analysed	-	161686-51	14/02/2017 || 14/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	161686-51	<50 || <50
TRHC$_{15}$ - C$_{28}$	mg/kg	161686-51	<100 || <100
TRHC$_{29}$ - C$_{36}$	mg/kg	161686-51	<100 || <100
TRH>C$_{10}$-C$_{16}$	mg/kg	161686-51	<50 || <50
TRH>C$_{16}$-C$_{34}$	mg/kg	161686-51	<100 || <100
TRH>C$_{34}$-C$_{40}$	mg/kg	161686-51	<100 || <100
Surrogate o-Terphenyl	%	161686-51	101 || 107 || RPD: 6

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-51	13/02/2017 || 13/02/2017
Date analysed	-	161686-51	14/02/2017 || 14/02/2017
Naphthalene	mg/kg	161686-51	<0.1 || <0.1
Acenaphthylene	mg/kg	161686-51	<0.1 || <0.1
Acenaphthene	mg/kg	161686-51	<0.1 || <0.1
Fluorene	mg/kg	161686-51	<0.1 || <0.1
Phenanthrene	mg/kg	161686-51	<0.1 || <0.1
Anthracene	mg/kg	161686-51	<0.1 || <0.1
Fluoranthene	mg/kg	161686-51	<0.1 || <0.1
Pyrene	mg/kg	161686-51	<0.1 || <0.1
Benzo(a)anthracene	mg/kg	161686-51	<0.1 || <0.1
Chrysene	mg/kg	161686-51	<0.1 || <0.1
Benzo(b,j+k)fluoranthene	mg/kg	161686-51	<0.2 || <0.2
Benzo(a)pyrene	mg/kg	161686-51	<0.05 || <0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	161686-51	<0.1 || <0.1
Dibenzo(a,h)anthracene	mg/kg	161686-51	<0.1 || <0.1

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Benzo(g,h,i)perylene	mg/kg	161686-51	<0.1 || <0.1
Surrogate p-Terphenyl-d14	%	161686-51	88 || 85 || RPD: 3

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-51	13/02/2017 || 13/02/2017	161686-3	13/02/2017
Date analysed	-	161686-51	14/02/2017 || 14/02/2017	161686-3	14/02/2017
HCB	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	161686-51	<0.1 || <0.1	161686-3	82%
gamma-BHC	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	161686-51	<0.1 || <0.1	161686-3	87%
Heptachlor	mg/kg	161686-51	<0.1 || <0.1	161686-3	76%
delta-BHC	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	161686-51	<0.1 || <0.1	161686-3	86%
Heptachlor Epoxide	mg/kg	161686-51	<0.1 || <0.1	161686-3	88%
gamma-Chlordane	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	161686-51	<0.1 || <0.1	161686-3	91%
Dieldrin	mg/kg	161686-51	<0.1 || <0.1	161686-3	98%
Endrin	mg/kg	161686-51	<0.1 || <0.1	161686-3	92%
pp-DDD	mg/kg	161686-51	<0.1 || <0.1	161686-3	90%
Endosulfan II	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	161686-51	<0.1 || <0.1	161686-3	75%
Methoxychlor	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	161686-51	102 || 104 || RPD: 2	161686-3	100%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-51	13/02/2017 || 13/02/2017	161686-3	13/02/2017
Date analysed	-	161686-51	14/02/2017 || 14/02/2017	161686-3	14/02/2017
Azinphos-methyl (Guthion)	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Bromophos-ethyl	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	161686-51	<0.1 || <0.1	161686-3	107%
Chlorpyriphos-methyl	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Diazinon	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Dichlorvos	mg/kg	161686-51	<0.1 || <0.1	161686-3	95%
Dimethoate	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	161686-51	<0.1 || <0.1	161686-3	94%
Fenitrothion	mg/kg	161686-51	<0.1 || <0.1	161686-3	89%
Malathion	mg/kg	161686-51	<0.1 || <0.1	161686-3	66%
Parathion	mg/kg	161686-51	<0.1 || <0.1	161686-3	109%
Ronnel	mg/kg	161686-51	<0.1 || <0.1	161686-3	91%
Surrogate TCMX	%	161686-51	102 || 104 || RPD: 2	161686-3	98%

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-51	13/02/2017 || 13/02/2017	161686-3	13/02/2017
Date analysed	-	161686-51	14/02/2017 || 14/02/2017	161686-3	14/02/2017
Aroclor 1016	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Aroclor 1221	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Aroclor 1232	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Aroclor 1242	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Aroclor 1248	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Aroclor 1254	mg/kg	161686-51	<0.1 || <0.1	161686-3	108%
Aroclor 1260	mg/kg	161686-51	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	161686-51	102 || 104 || RPD: 2	161686-3	98%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date prepared	-	161686-51	13/02/2017 || 13/02/2017
Date analysed	-	161686-51	14/02/2017 || 14/02/2017
Arsenic	mg/kg	161686-51	<4 || <4
Cadmium	mg/kg	161686-51	<0.4 || <0.4
Chromium	mg/kg	161686-51	13 || 14 || RPD: 7
Copper	mg/kg	161686-51	57 || 67 || RPD: 16
Lead	mg/kg	161686-51	11 || 9 || RPD: 20
Mercury	mg/kg	161686-51	<0.1 || <0.1
Nickel	mg/kg	161686-51	49 || 60 || RPD: 20
Zinc	mg/kg	161686-51	58 || 53 || RPD: 9

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-61	13/02/2017 || 13/02/2017	161686-22	13/02/2017
Date analysed	-	161686-61	15/02/2017 || 15/02/2017	161686-22	14/02/2017
$TRHC_6$ - C_9	mg/kg	161686-61	<25 || <25	161686-22	100%
$TRHC_6$ - C_{10}	mg/kg	161686-61	<25 || <25	161686-22	100%
Benzene	mg/kg	161686-61	<0.2 || <0.2	161686-22	90%
Toluene	mg/kg	161686-61	<0.5 || <0.5	161686-22	105%
Ethylbenzene	mg/kg	161686-61	<1 || <1	161686-22	99%
m+p-xylene	mg/kg	161686-61	<2 || <2	161686-22	102%
o-Xylene	mg/kg	161686-61	<1 || <1	161686-22	103%
naphthalene	mg/kg	161686-61	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	161686-61	99 || 89 || RPD: 11	161686-22	98%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-61	13/02/2017 || 13/02/2017	161686-22	13/02/2017
Date analysed	-	161686-61	14/02/2017 || 14/02/2017	161686-22	14/02/2017
$TRHC_{10}$ - C_{14}	mg/kg	161686-61	<50 || <50	161686-22	112%
$TRHC_{15}$ - C_{28}	mg/kg	161686-61	<100 || <100	161686-22	104%
$TRHC_{29}$ - C_{36}	mg/kg	161686-61	<100 || <100	161686-22	106%
$TRH>C_{10}$-C_{16}	mg/kg	161686-61	<50 || <50	161686-22	112%
$TRH>C_{16}$-C_{34}	mg/kg	161686-61	<100 || <100	161686-22	104%
$TRH>C_{34}$-C_{40}	mg/kg	161686-61	<100 || <100	161686-22	106%
Surrogate o-Terphenyl	%	161686-61	94 || 100 || RPD: 6	161686-22	91%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-61	13/02/2017 || 13/02/2017	161686-22	13/02/2017
Date analysed	-	161686-61	14/02/2017 || 14/02/2017	161686-22	14/02/2017
Naphthalene	mg/kg	161686-61	<0.1 || <0.1	161686-22	91%
Acenaphthylene	mg/kg	161686-61	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	161686-61	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	161686-61	<0.1 || <0.1	161686-22	93%
Phenanthrene	mg/kg	161686-61	<0.1 || <0.1	161686-22	95%
Anthracene	mg/kg	161686-61	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	161686-61	<0.1 || <0.1	161686-22	84%
Pyrene	mg/kg	161686-61	<0.1 || <0.1	161686-22	93%
Benzo(a)anthracene	mg/kg	161686-61	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	161686-61	<0.1 || <0.1	161686-22	92%
Benzo(b,j+k)fluoranthene	mg/kg	161686-61	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	161686-61	<0.05 || <0.05	161686-22	78%
Indeno(1,2,3-c,d)pyrene	mg/kg	161686-61	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	161686-61	<0.1 || <0.1	[NR]	[NR]

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(g,h,i)perylene	mg/kg	161686-61	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	161686-61	86 || 85 || RPD: 1	161686-22	111%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-61	13/02/2017 || 13/02/2017
Date analysed	-	161686-61	14/02/2017 || 14/02/2017
HCB	mg/kg	161686-61	<0.1 || <0.1
alpha-BHC	mg/kg	161686-61	<0.1 || <0.1
gamma-BHC	mg/kg	161686-61	<0.1 || <0.1
beta-BHC	mg/kg	161686-61	<0.1 || <0.1
Heptachlor	mg/kg	161686-61	<0.1 || <0.1
delta-BHC	mg/kg	161686-61	<0.1 || <0.1
Aldrin	mg/kg	161686-61	<0.1 || <0.1
Heptachlor Epoxide	mg/kg	161686-61	<0.1 || <0.1
gamma-Chlordane	mg/kg	161686-61	<0.1 || <0.1
alpha-chlordane	mg/kg	161686-61	<0.1 || <0.1
Endosulfan I	mg/kg	161686-61	<0.1 || <0.1
pp-DDE	mg/kg	161686-61	<0.1 || <0.1
Dieldrin	mg/kg	161686-61	<0.1 || <0.1
Endrin	mg/kg	161686-61	<0.1 || <0.1
pp-DDD	mg/kg	161686-61	<0.1 || <0.1
Endosulfan II	mg/kg	161686-61	<0.1 || <0.1
pp-DDT	mg/kg	161686-61	<0.1 || <0.1
Endrin Aldehyde	mg/kg	161686-61	<0.1 || <0.1
Endosulfan Sulphate	mg/kg	161686-61	<0.1 || <0.1
Methoxychlor	mg/kg	161686-61	<0.1 || <0.1
Surrogate TCMX	%	161686-61	103 || 103 || RPD: 0

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-61	13/02/2017 || 13/02/2017
Date analysed	-	161686-61	14/02/2017 || 14/02/2017
Azinphos-methyl (Guthion)	mg/kg	161686-61	<0.1 || <0.1
Bromophos-ethyl	mg/kg	161686-61	<0.1 || <0.1
Chlorpyriphos	mg/kg	161686-61	<0.1 || <0.1
Chlorpyriphos-methyl	mg/kg	161686-61	<0.1 || <0.1
Diazinon	mg/kg	161686-61	<0.1 || <0.1
Dichlorvos	mg/kg	161686-61	<0.1 || <0.1
Dimethoate	mg/kg	161686-61	<0.1 || <0.1
Ethion	mg/kg	161686-61	<0.1 || <0.1
Fenitrothion	mg/kg	161686-61	<0.1 || <0.1
Malathion	mg/kg	161686-61	<0.1 || <0.1
Parathion	mg/kg	161686-61	<0.1 || <0.1
Ronnel	mg/kg	161686-61	<0.1 || <0.1
Surrogate TCMX	%	161686-61	103 || 103 || RPD: 0

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-61	13/02/2017 || 13/02/2017
Date analysed	-	161686-61	14/02/2017 || 14/02/2017
Aroclor 1016	mg/kg	161686-61	<0.1 || <0.1
Aroclor 1221	mg/kg	161686-61	<0.1 || <0.1
Aroclor 1232	mg/kg	161686-61	<0.1 || <0.1
Aroclor 1242	mg/kg	161686-61	<0.1 || <0.1
Aroclor 1248	mg/kg	161686-61	<0.1 || <0.1
Aroclor 1254	mg/kg	161686-61	<0.1 || <0.1
Aroclor 1260	mg/kg	161686-61	<0.1 || <0.1
Surrogate TCLMX	%	161686-61	103 || 103 || RPD: 0

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	161686-61	13/02/2017 || 13/02/2017	161686-22	13/02/2017
Date analysed	-	161686-61	14/02/2017 || 14/02/2017	161686-22	14/02/2017
Arsenic	mg/kg	161686-61	<4 || <4	161686-22	104%
Cadmium	mg/kg	161686-61	<0.4 || <0.4	161686-22	92%
Chromium	mg/kg	161686-61	16 || 23 || RPD: 36	161686-22	99%
Copper	mg/kg	161686-61	16 || 18 || RPD: 12	161686-22	105%
Lead	mg/kg	161686-61	4 || 4 || RPD: 0	161686-22	96%
Mercury	mg/kg	161686-61	<0.1 || <0.1	161686-22	92%
Nickel	mg/kg	161686-61	11 || 13 || RPD: 17	161686-22	89%
Zinc	mg/kg	161686-61	14 || 12 || RPD: 15	161686-22	94%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	161686-42	13/02/2017
Date analysed	-	[NT]	[NT]	161686-42	15/02/2017
TRHC6 - C9	mg/kg	[NT]	[NT]	161686-42	89%
TRHC6 - C10	mg/kg	[NT]	[NT]	161686-42	89%
Benzene	mg/kg	[NT]	[NT]	161686-42	82%
Toluene	mg/kg	[NT]	[NT]	161686-42	94%
Ethylbenzene	mg/kg	[NT]	[NT]	161686-42	92%
m+p-xylene	mg/kg	[NT]	[NT]	161686-42	89%
o-Xylene	mg/kg	[NT]	[NT]	161686-42	89%
naphthalene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	[NT]	[NT]	161686-42	87%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	161686-42	13/02/2017
Date analysed	-	[NT]	[NT]	161686-42	14/02/2017
TRHC10 - C14	mg/kg	[NT]	[NT]	161686-42	125%
TRHC15 - C28	mg/kg	[NT]	[NT]	161686-42	124%
TRHC29 - C36	mg/kg	[NT]	[NT]	161686-42	91%
TRH>C10-C16	mg/kg	[NT]	[NT]	161686-42	125%
TRH>C16-C34	mg/kg	[NT]	[NT]	161686-42	124%
TRH>C34-C40	mg/kg	[NT]	[NT]	161686-42	91%
Surrogate o-Terphenyl	%	[NT]	[NT]	161686-42	105%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	161686-42	13/02/2017
Date analysed	-	[NT]	[NT]	161686-42	14/02/2017
Naphthalene	mg/kg	[NT]	[NT]	161686-42	93%
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	161686-42	97%
Phenanthrene	mg/kg	[NT]	[NT]	161686-42	93%
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	161686-42	85%
Pyrene	mg/kg	[NT]	[NT]	161686-42	96%
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	161686-42	93%
Benzo(b,j+k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	161686-42	84%
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	[NT]	[NT]	161686-42	111%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-47	13/02/2017 || 13/02/2017
Date analysed	-	161686-47	14/02/2017 || 14/02/2017
HCB	mg/kg	161686-47	<0.1 || <0.1
alpha-BHC	mg/kg	161686-47	<0.1 || <0.1
gamma-BHC	mg/kg	161686-47	<0.1 || <0.1
beta-BHC	mg/kg	161686-47	<0.1 || <0.1
Heptachlor	mg/kg	161686-47	<0.1 || <0.1
delta-BHC	mg/kg	161686-47	<0.1 || <0.1
Aldrin	mg/kg	161686-47	<0.1 || <0.1
Heptachlor Epoxide	mg/kg	161686-47	<0.1 || <0.1
gamma-Chlordane	mg/kg	161686-47	<0.1 || <0.1
alpha-chlordane	mg/kg	161686-47	<0.1 || <0.1
Endosulfan I	mg/kg	161686-47	<0.1 || <0.1
pp-DDE	mg/kg	161686-47	<0.1 || <0.1
Dieldrin	mg/kg	161686-47	<0.1 || <0.1
Endrin	mg/kg	161686-47	<0.1 || <0.1
pp-DDD	mg/kg	161686-47	<0.1 || <0.1
Endosulfan II	mg/kg	161686-47	<0.1 || <0.1
pp-DDT	mg/kg	161686-47	<0.1 || <0.1
Endrin Aldehyde	mg/kg	161686-47	<0.1 || <0.1
Endosulfan Sulphate	mg/kg	161686-47	<0.1 || <0.1
Methoxychlor	mg/kg	161686-47	<0.1 || <0.1
Surrogate TCMX	%	161686-47	101 || 102 || RPD: 1

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-47	13/02/2017 || 13/02/2017
Date analysed	-	161686-47	14/02/2017 || 14/02/2017
Azinphos-methyl (Guthion)	mg/kg	161686-47	<0.1 || <0.1
Bromophos-ethyl	mg/kg	161686-47	<0.1 || <0.1
Chlorpyriphos	mg/kg	161686-47	<0.1 || <0.1
Chlorpyriphos-methyl	mg/kg	161686-47	<0.1 || <0.1
Diazinon	mg/kg	161686-47	<0.1 || <0.1
Dichlorvos	mg/kg	161686-47	<0.1 || <0.1
Dimethoate	mg/kg	161686-47	<0.1 || <0.1
Ethion	mg/kg	161686-47	<0.1 || <0.1
Fenitrothion	mg/kg	161686-47	<0.1 || <0.1
Malathion	mg/kg	161686-47	<0.1 || <0.1
Parathion	mg/kg	161686-47	<0.1 || <0.1
Ronnel	mg/kg	161686-47	<0.1 || <0.1
Surrogate TCMX	%	161686-47	101 || 102 || RPD: 1

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	161686-47	13/02/2017 || 13/02/2017
Date analysed	-	161686-47	14/02/2017 || 14/02/2017
Aroclor 1016	mg/kg	161686-47	<0.1 || <0.1
Aroclor 1221	mg/kg	161686-47	<0.1 || <0.1
Aroclor 1232	mg/kg	161686-47	<0.1 || <0.1
Aroclor 1242	mg/kg	161686-47	<0.1 || <0.1
Aroclor 1248	mg/kg	161686-47	<0.1 || <0.1
Aroclor 1254	mg/kg	161686-47	<0.1 || <0.1
Aroclor 1260	mg/kg	161686-47	<0.1 || <0.1
Surrogate TCLMX	%	161686-47	101 || 102 || RPD: 1

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	[NT]	[NT]	161686-42	13/02/2017
Date analysed	-	[NT]	[NT]	161686-42	14/02/2017
Arsenic	mg/kg	[NT]	[NT]	161686-42	94%
Cadmium	mg/kg	[NT]	[NT]	161686-42	86%
Chromium	mg/kg	[NT]	[NT]	161686-42	92%
Copper	mg/kg	[NT]	[NT]	161686-42	105%
Lead	mg/kg	[NT]	[NT]	161686-42	85%
Mercury	mg/kg	[NT]	[NT]	161686-42	98%
Nickel	mg/kg	[NT]	[NT]	161686-42	79%
Zinc	mg/kg	[NT]	[NT]	161686-42	88%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-24	13/02/2017 || 13/02/2017	161686-49	13/02/2017
Date analysed	-	161686-24	14/02/2017 || 14/02/2017	161686-49	14/02/2017
HCB	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	161686-24	<0.1 || <0.1	161686-49	85%
gamma-BHC	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	161686-24	<0.1 || <0.1	161686-49	97%
Heptachlor	mg/kg	161686-24	<0.1 || <0.1	161686-49	83%
delta-BHC	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	161686-24	<0.1 || <0.1	161686-49	93%
Heptachlor Epoxide	mg/kg	161686-24	<0.1 || <0.1	161686-49	97%
gamma-Chlordane	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	161686-24	<0.1 || <0.1	161686-49	97%
Dieldrin	mg/kg	161686-24	<0.1 || <0.1	161686-49	106%
Endrin	mg/kg	161686-24	<0.1 || <0.1	161686-49	96%
pp-DDD	mg/kg	161686-24	<0.1 || <0.1	161686-49	94%
Endosulfan II	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	161686-24	<0.1 || <0.1	161686-49	75%
Methoxychlor	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	161686-24	97 || 107 || RPD: 10	161686-49	104%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-24	13/02/2017 || 13/02/2017	161686-49	13/02/2017
Date analysed	-	161686-24	14/02/2017 || 14/02/2017	161686-49	14/02/2017
Azinphos-methyl (Guthion)	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Bromophos-ethyl	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	161686-24	<0.1 || <0.1	161686-49	103%
Chlorpyriphos-methyl	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Diazinon	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Dichlorvos	mg/kg	161686-24	<0.1 || <0.1	161686-49	97%
Dimethoate	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	161686-24	<0.1 || <0.1	161686-49	91%
Fenitrothion	mg/kg	161686-24	<0.1 || <0.1	161686-49	86%
Malathion	mg/kg	161686-24	<0.1 || <0.1	161686-49	81%
Parathion	mg/kg	161686-24	<0.1 || <0.1	161686-49	104%
Ronnel	mg/kg	161686-24	<0.1 || <0.1	161686-49	87%
Surrogate TCMX	%	161686-24	97 || 107 || RPD: 10	161686-49	100%

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-24	13/02/2017 || 13/02/2017	161686-49	13/02/2017
Date analysed	-	161686-24	14/02/2017 || 14/02/2017	161686-49	14/02/2017
Aroclor 1016	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Aroclor 1221	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Aroclor 1232	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Aroclor 1242	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Aroclor 1248	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Aroclor 1254	mg/kg	161686-24	<0.1 || <0.1	161686-49	104%
Aroclor 1260	mg/kg	161686-24	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	161686-24	97 || 107 || RPD: 10	161686-49	100%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	161686-62	13/02/2017
Date analysed	-	[NT]	[NT]	161686-62	15/02/2017
$TRHC_6$ - C_9	mg/kg	[NT]	[NT]	161686-62	84%
$TRHC_6$ - C_{10}	mg/kg	[NT]	[NT]	161686-62	84%
Benzene	mg/kg	[NT]	[NT]	161686-62	77%
Toluene	mg/kg	[NT]	[NT]	161686-62	86%
Ethylbenzene	mg/kg	[NT]	[NT]	161686-62	84%
m+p-xylene	mg/kg	[NT]	[NT]	161686-62	86%
o-Xylene	mg/kg	[NT]	[NT]	161686-62	85%
naphthalene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	[NT]	[NT]	161686-62	83%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	161686-62	13/02/2017
Date analysed	-	[NT]	[NT]	161686-62	14/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	[NT]	[NT]	161686-62	126%
TRHC$_{15}$ - C$_{28}$	mg/kg	[NT]	[NT]	161686-62	123%
TRHC$_{29}$ - C$_{36}$	mg/kg	[NT]	[NT]	161686-62	111%
TRH>C$_{10}$-C$_{16}$	mg/kg	[NT]	[NT]	161686-62	126%
TRH>C$_{16}$-C$_{34}$	mg/kg	[NT]	[NT]	161686-62	123%
TRH>C$_{34}$-C$_{40}$	mg/kg	[NT]	[NT]	161686-62	111%
Surrogate o-Terphenyl	%	[NT]	[NT]	161686-62	104%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	161686-68	13/02/2017 || 13/02/2017	161686-62	13/02/2017
Date analysed	-	161686-68	14/02/2017 || 14/02/2017	161686-62	14/02/2017
Naphthalene	mg/kg	161686-68	<0.1 || <0.1	161686-62	95%
Acenaphthylene	mg/kg	161686-68	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	161686-68	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	161686-68	<0.1 || <0.1	161686-62	98%
Phenanthrene	mg/kg	161686-68	<0.1 || <0.1	161686-62	100%
Anthracene	mg/kg	161686-68	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	161686-68	<0.1 || <0.1	161686-62	94%
Pyrene	mg/kg	161686-68	<0.1 || <0.1	161686-62	107%
Benzo(a)anthracene	mg/kg	161686-68	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	161686-68	<0.1 || <0.1	161686-62	98%
Benzo(b,j+k)fluoranthene	mg/kg	161686-68	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	161686-68	<0.05 || <0.05	161686-62	95%
Indeno(1,2,3-c,d)pyrene	mg/kg	161686-68	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	161686-68	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	161686-68	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	161686-68	86 || 84 || RPD: 2	161686-62	123%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	[NT]	[NT]	161686-62	13/02/2017
Date analysed	-	[NT]	[NT]	161686-62	14/02/2017
Arsenic	mg/kg	[NT]	[NT]	161686-62	70%
Cadmium	mg/kg	[NT]	[NT]	161686-62	77%
Chromium	mg/kg	[NT]	[NT]	161686-62	104%
Copper	mg/kg	[NT]	[NT]	161686-62	118%
Lead	mg/kg	[NT]	[NT]	161686-62	90%
Mercury	mg/kg	[NT]	[NT]	161686-62	111%
Nickel	mg/kg	[NT]	[NT]	161686-62	#
Zinc	mg/kg	[NT]	[NT]	161686-62	76%

Report Comments:

Asbestos: A portion of the supplied samples were sub-sampled for asbestos analysis according to Envirolab procedures.
We cannot guarantee that these sub-samples are indicative of the entire sample.
Envirolab recommends supplying 40-50g of sample in its own container.
Note: Samples requested for asbestos testing were sub-sampled from jars provided by the client.

Acid Extractable Metals in Soil: # Percent recovery is not possible to report due to the inhomogeneous nature of the element/s in the sample/s.
However an acceptable recovery was obtained for the LCS.

Asbestos ID was analysed by Approved Identifier: Matt Tang
Asbestos ID was authorised by Approved Signatory: Paul Ching

INS: Insufficient sample for this test
NR: Test not required
<: Less than
PQL: Practical Quantitation Limit
RPD: Relative Percent Difference
>: Greater than
NT: Not tested
NA: Test not required
LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.
Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.
Spikes for Physical and Aggregate Tests are not applicable.
For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
Ph 02 9910 6200 / sydney@envirolab.com.au

Combo1=TRH/BTEX/Pb
Combo2=TRH/BTEX/PAH/Pb
Combo3=TRH/BTEX/PAH/Met
Combo4=TRH/BTEX/PAH/Met/Phen
Combo5=TRH/BTEX/PAH/OC/PCB/Met
Combo6=TRH/BTEX/PAH/OC/OP/PCB/Met
Combo7=TRH/BTEX/PAH/OC/PCB/Met/Phen
Combo8=TRH/BTEX/PAH/OC/OP/PCB/Met/Phen
Combo9=TRH/BTEX/PAH/OC/PCB/Met/Phen/CN
Combo10=TRH/BTEX/PAH/OC/OP/PCB/Met/Phen/CN
Combo11=TRH/BTEX/PAH/OC/PCB/12met/Phen/CN
Combo12=TRH/BTEX/PAH/OC/PCB/Met/TCLP-PAH ,6 Met
Combo13=TRH/BTEX/PAH/OC/OP/PCB/Met/TCLP-PAH ,6Met

A Combo with an 'A' indicates Asbestos is also needed.

Client: DLA	**Client Project Name / Number / Site etc (ie report title):** DL 4032
Contact Person: Jack	**PO No.:** Prospect
Project Mgr: Jack	**Envirolab Quote No. :**
Sampler: Amy	**Date results required:**
Address: Unit 3/38 Leighton Place, Hornsby	**Or choose:** (standard) / same day / 1 day / 2 day / 3 day *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone: **Mob:**	**Report format:** esdat / equis /
Email: Sydney@dlaenvironmental.com.au	**Lab Comments:**

Sample information					Tests Required														Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Combo 3	Combo 6	Asbestos												Provide as much information about the sample as you can
1	BH1_0.5-0.6	0.5-0.6	8/2/17	soil		X	X												
2	BH1_1.9-2.0	1.9-2.0			X														
3	BH2_0.5-0.6	0.5-0.6				X	X												
4	BH2_1.9-2.0	1.9-2.0			X														
5	BH3_0.5-0.6	0.5-0.6				X	X												
6	BH3_1.9-2.0	1.9-2.0			X														
7	BH4_0.5-0.6	0.5-0.6	7/2/17			X	X												
8	BH4_1.9-2.0	1.9-2.0	7/2/17		X														
9	BH4_5.9-6.0	5.9-6.0	7/2/17		X														
10	HA5_0.2-0.3	0.2-0.3	9/2/17			X	X												
11	HA5_0.4-0.5	0.4-0.5	9/2/17		X														
12	BH6_0.5-0.6	0.5-0.6	8/2/17			X	X												
13	BH6_1.9-2.0	1.9-2.0			X														
14	BH7_0.5-0.6	0.5-0.6				X	X												
15	BH7_1.9-2.0	1.9-2.0			X														

ENVIROLAB GROUP
Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 161686
Date Received: 10/2/17
Time Received: 14:00
Received by: JYH.
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Relinquished by (Company):	DLA	**Received by (Company):**	ELS
Print Name:	Amy	**Print Name:**	JYH
Date & Time:	10/2/17	**Date & Time:**	10/2/17 14:00
Signature:		**Signature:**	

Lab use only:
Samples Received: Cool or Ambient (circle one)
Temperature Received at: 3.0 **(if applicable)**
Transported by: Hand delivered / courier

CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
Ph 02 9910 6200 / sydney@envirolab.com.au

Combo1=TRH/BTEX/Pb
Combo2=TRH/BTEX/PAH/Pb
Combo3=TRH/BTEX/PAH/Met
Combo4=TRH/BTEX/PAH/Met/Phen
Combo5=TRH/BTEX/PAH/OC/PCB/Met
Combo6=TRH/BTEX/PAH/OC/OP/PCB/Met
Combo7=TRH/BTEX/PAH/OC/PCB/Met/Phen
Combo8=TRH/BTEX/PAH/OC/OP/PCB/Met/Phen
Combo9=TRH/BTEX/PAH/OC/PCB/Met/Phen/CN
Combo10=TRH/BTEX/PAH/OC/OP/PCB/Met/Phen/CN
Combo11=TRH/BTEX/PAH/OC/PCB/Met/Phen/CN
Combo12=TRH/BTEX/PAH/OC/PCB/Met/TCLP-PAH ,6 Met
Combo13=TRH/BTEX/PAH/OC/OP/PCB/Met/TCLP-PAH ,6Met

A Combo with an 'A' indicates Asbestos is also needed.

Client: DLA	**Client Project Name / Number / Site etc (ie report title):** DL 4032
Contact Person: Jack	**PO No.:** Prospect
Project Mgr: Jack	**Envirolab Quote No. :**
Sampler: Amy	**Date results required:**
Address: Unit 3/38 Leighton Place, Hornsby	**Or choose:** (standard) / same day / 1 day / 2 day / 3 day *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone: **Mob:**	**Report format:** esdat / equis /
Email: Sydney@dlaenvironmental.com.au	**Lab Comments:**

Sample information					Tests Required				Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Combo 3	Combo 6	Asbestos		Provide as much information about the sample as you can
161686									
16	BH8_0.5-0.6	0.5-0.6	8/2/17	soil		X	X		
17	BH8_1.9-2.0	1.9-2.0			X				
18	BH9_0.5-0.6	0.5-0.6				X	X		
19	BH9_1.9-2.0	1.9-2.0			X				
20	BH10_0.5-0.6	0.5-0.6				X	X		
21	BH10_1.9-2.0	1.9-2.0			X		X		
22	BH11_0.5-0.6	0.5-0.6				X	X		
23	BH11_1.9-2.0	1.9-2.0			X		X		
24	BH12_0.5-0.6	0.5-0.6				X	X		
25	BH12_1.9-2.0	1.9-2.0	"		X		X		
26	BH13_0.5-0.6	0.5-0.6	7/2/17			X	X		
27	BH13_2.5-2.6	2.5-2.6	7/2/17		X				
28	BH13_7.4-7.5	7.4-7.5	7/2/17		X				
29	BH14_0.5-0.6	0.5-0.6	8/2/17			X	X		
30	BH14_1.9-2.0	1.9-2.0	"	"	X				

Relinquished by (Company): DLA	**Received by (Company):** ELS	***Lab use only:***	
Print Name: Amy	**Print Name:** JYH	**Samples Received:** Cool or Ambient (circle one)	
Date & Time: 10/2/17	**Date & Time:** 10/2/17. 14:00	**Temperature Received at:**	**(if applicable)**
Signature:	**Signature:**	**Transported by:** Hand delivered / courier	

White - Lab copy / Blue - Client copy / Pink - Retain in Book

CHAIN OF CUSTODY - Client

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Combo4=TRH/BTEX/PAH/Met/Phen
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Combo6=TRH/BTEX/PAH/OC/OP/PCB/Met
Combo7=TRH/BTEX/PAH/OC/PCB/Met/Phen
Combo8=TRH/BTEX/PAH/OC/OP/PCB/Met/Phen
Combo9=TRH/BTEX/PAH/OC/PCB/Met/Phen/CN
Combo10=TRH/BTEX/PAH/OC/OP/PCB/Met/Phen/CN
Combo11=TRH/BTEX/PAH/OC/PCB/Met/Phen/CN
Combo12=TRH/BTEX/PAH/OC/PCB/Met/TCLP-PAH ,6 Met
Combo13=TRH/BTEX/PAH/OC/OP/PCB/Met/TCLP-PAH ,6Met

A Combo with an 'A' indicates Asbestos is also needed.

Client: DLA
Contact Person: Jack
Project Mgr: Jack
Sampler: Amy
Address: Unit 3/38 Leighton Place, Hornsby
Phone: **Mob:**
Email: Sydney@dlaenvironmental.com.au

Client Project Name / Number / Site etc (ie report title): DL 4032
PO No.: Prospect
Envirolab Quote No. :
Date results required:
Or choose: (standard) / same day / 1 day / 2 day / 3 day
Note: Inform lab in advance if urgent turnaround is required - surcharges apply
Report format: esdat / equis /
Lab Comments:

Envirolab Sample ID 161686	Client Sample ID or information	Depth	Date sampled	Type of sample	Combo 3	Combo 6	Asbestos	Comments
31	HA15_0-0.2	0-0.2	8/2/17	soil		X	X	
32	HA15_0.2-0.4	0.2-0.4			X			
33	BH16_0.5-0.6	0.5-0.6				X	X	
34	BH16_1.9-2.0	1.9-2.0			X			
35	BH17_0.5-0.6	0.5-0.6				X	X	
36	BH17_1.9-2.0	1.9-2.0			X			
37	BH18_0.5-0.6	0.5-0.6				X	X	
38	BH18_1.9-2.0	1.9-2.0			X			
39	BH19_0.5-0.6	0.5-0.6				X	X	
40	BH19_1.9-2.0	1.9-2.0	↓		X			
41	HA20_0.2-0.3	0.2-0.3	9/2/17			X	X	
42	HA20_0.5-0.6	0.5-0.6	9/2/17		X			
43	BH21_0.5-0.6	0.5-0.6	8/2/17			X	X	
44	BH21_1.9-2.0	1.9-2.0	↓		X			
45	BH22_0.5-0.6	0.5-0.6	7/2/17	↓		X		

Relinquished by (Company): DLA
Print Name: Amy
Date & Time: 10/2/17
Signature:

Received by (Company): ELS
Print Name: JYH
Date & Time: 10/2/17 14:00.
Signature:

Lab use only:
Samples Received: Cool or Ambient (circle one)
Temperature Received at: (if applicable)
Transported by: Hand delivered / courier

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Combo7=TRH/BTEX/PAH/OC/PCB/Met/Phen
Combo8=TRH/BTEX/PAH/OC/OP/PCB/Met/Phen
Combo9=TRH/BTEX/PAH/OC/PCB/Met/Phen/CN
Combo10=TRH/BTEX/PAH/OC/OP/PCB/Met/Phen/CN
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Combo13=TRH/BTEX/PAH/OC/OP/PCB/Met/TCLP-PAH ,6Met

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Client: DLA
Contact Person: Jack
Project Mgr: Jack
Sampler: Amy
Address: Unit 3/38 Leighton Place, Hornsby
Phone: **Mob:**
Email: Sydney@dlaenvironmental.com.au

Client Project Name / Number / Site etc (ie report title): DL 4032
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Or choose: (standard) / same day / 1 day / 2 day / 3 day
Note: Inform lab in advance if urgent turnaround is required - surcharges apply
Report format: esdat / equis /
Lab Comments:

Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Combo 3	Combo 6	Asbestos	Comments
161686								Provide as much information about the sample as you can
46	BH22_1.9-2.0	1.9-2.0	7/2/17	soil	X			
47	HA23_0.1-0.2	0.1-0.2	9/2/17			X	X	
48	HA23_0.2-0.3	0.2-0.3	9/2/17		X			
49	BH24_0.5-0.6	0.5-0.6	8/2/17			X		
50	BH24_1.9-2.0	1.9-2.0			X			
51	BH25_0.5-0.6	0.5-0.6				X	X	
52	BH25_1.9-2.0	1.9-2.0			X			
53	BH26_0.5-0.6	0.5-0.6	7/2/17			X	X	
54	BH26_1.9-2.0	1.9-2.0	7/2/17		X			
55	BH27_0.5-0.6	0.5-0.6	7/2/17			X	X	
56	BH27_1.9-2.0	1.9-2.0	7/2/17		X			
57	BH28_0.5-0.6	0.5-0.6	8/2/17			X	X	
58	BH28_1.9-2.0	1.9-2.0			X			
59	BH29_0.5-0.6	0.5-0.6				X	X	
60	BH29_1.9-2.0	1.9-2.0			X			

JA labelled HA23

Relinquished by (Company): DLA
Print Name: Amy
Date & Time: 10/2/17
Signature:

Received by (Company): ECS
Print Name: JYH
Date & Time: 10/2/17 1400
Signature:

Lab use only:
Samples Received: Cool or Ambient (circle one)
Temperature Received at: (if applicable)
Transported by: Hand delivered / courier

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PO No.: Prospect
Envirolab Quote No. :
Date results required:
Or choose: standard / same day / 1 day / 2 day / 3 day
Note: Inform lab in advance if urgent turnaround is required - surcharges apply
Report format: esdat / equis /
Lab Comments:

Envirolab Sample ID 161686.	Client Sample ID or information	Depth	Date sampled	Type of sample	Combo 3	Combo 6	Asbestos	Comments
61	BH30_ 0.5-0.6	0.5-0.6	7/2/17	soil		X	X	Provide as much information about the sample as you can
62	BH30_ 5.9-6.0	5.9-6.0	7/2/17		X			
63	BH31_ 0.5-0.6	0.5-0.6	8/2/17			X	X	
64	BH31_ 1.9-2.0	1.9-2.0			X			
65	BH32_ 0.5-0.6	0.5-0.6				X	X	
66	BH32_ 1.9-2.0	1.9-2.0			X			
67	QC105	0.5-0.6				X		
68	QC101	2.5-2.6			X		X	
69	QC102	0.5-0.6				X	X	
70	QC104	0.5-0.6				X	X	
71/72	TS/TB		7/2/17					
73/74	TS/TB		8/2/17					

Relinquished by (Company): DLA
Print Name: Amy
Date & Time: 10/2/17
Signature:

Received by (Company): ELS
Print Name: JYH
Date & Time: 10/2/17. 1400
Signature:

Lab use only:
Samples Received: Cool or Ambient (circle one)
Temperature Received at: (if applicable)
Transported by: Hand delivered / courier

White - Lab copy / Blue - Client copy / Pink - Retain in Book

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Sydney Office
Client	DLA ENVIRONMENTAL SERVICES PTY LTD
Address	Unit 3 38 Leighton Pl NSW 2077
Telephone	61 2 98700900
Facsimile	61 2 98700999
Email	sydney@dlaenvironmental.com.au
Project	**DL4032 Prospect**
Order Number	**Prospect**
Samples	2

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE161937 R0**
Date Received	13/2/2017
Date Reported	16/2/2017

COMMENTS

Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(4354).

No respirable fibres detected in all soil samples using trace analysis technique.

A portion of the sample supplied has been sub-sampled for asbestos according to SGS In-house procedures.
We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied.
SGS Environment, Health and Safety recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES

Bennet Lo
Senior Organic Chemist/Metals Chemist

Kamrul Ahsan
Senior Chemist

Ly Kim Ha
Organic Section Head

Ravee Sivasubramaniam
Hygiene Team Leader

VOC's in Soil [AN433] Tested: 14/2/2017

PARAMETER	UOM	LOR	QC103 SOIL - 7/2/2017 SE161937.001	QC106 SOIL - 8/2/2017 SE161937.002
Benzene	mg/kg	0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 14/2/2017

PARAMETER	UOM	LOR	QC103 SOIL - 7/2/2017 SE161937.001	QC106 SOIL - 8/2/2017 SE161937.002
TRH C6-C9	mg/kg	20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 14/2/2017

PARAMETER	UOM	LOR	QC103 SOIL - 7/2/2017 SE161937.001	QC106 SOIL - 8/2/2017 SE161937.002
TRH C10-C14	mg/kg	20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100
TRH >C10-C16 (F2)	mg/kg	25	<25	<25
TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110
TRH C10-C40 Total	mg/kg	210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 14/2/2017

PARAMETER	UOM	LOR	QC103 SOIL - 7/2/2017 SE161937.001	QC106 SOIL - 8/2/2017 SE161937.002
Naphthalene	mg/kg	0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8

OC Pesticides in Soil [AN420] Tested: 14/2/2017

PARAMETER	UOM	LOR	QC103 SOIL - 7/2/2017 SE161937.001	QC106 SOIL - 8/2/2017 SE161937.002
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1

OP Pesticides in Soil [AN420] Tested: 14/2/2017

PARAMETER	UOM	LOR	QC103 SOIL - 7/2/2017 SE161937.001	QC106 SOIL - 8/2/2017 SE161937.002
Dichlorvos	mg/kg	0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2

PCBs in Soil [AN420] Tested: 14/2/2017

PARAMETER	UOM	LOR	QC103 SOIL - 7/2/2017 SE161937.001	QC106 SOIL - 8/2/2017 SE161937.002
Arochlor 1016	mg/kg	0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 14/2/2017

PARAMETER	UOM	LOR	QC103 SOIL - 7/2/2017 SE161937.001	QC106 SOIL - 8/2/2017 SE161937.002
Arsenic, As	mg/kg	3	**4**	**4**
Cadmium, Cd	mg/kg	0.3	**0.4**	<0.3
Chromium, Cr	mg/kg	0.3	**63**	**20**
Copper, Cu	mg/kg	0.5	**39**	**18**
Lead, Pb	mg/kg	1	**15**	**12**
Nickel, Ni	mg/kg	0.5	**78**	**10**
Zinc, Zn	mg/kg	0.5	**58**	**13**

Mercury in Soil [AN312] Tested: 15/2/2017

PARAMETER	UOM	LOR	QC103 SOIL - 7/2/2017 SE161937.001	QC106 SOIL - 8/2/2017 SE161937.002
Mercury	mg/kg	0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 15/2/2017

PARAMETER	UOM	LOR	QC103 SOIL - 7/2/2017 SE161937.001	QC106 SOIL - 8/2/2017 SE161937.002
% Moisture	%w/w	0.5	**16**	**18**

Fibre Identification in soil [AN602] Tested: 15/2/2017

PARAMETER	UOM	LOR	QC103 SOIL - 7/2/2017 SE161937.001	QC106 SOIL - 8/2/2017 SE161937.002
Asbestos Detected	No unit	-	No	No

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Petroleum Hydrocarbons (TPH) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf).
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : http://www.sgs.com.au/~/media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Sydney Office
Client	DLA ENVIRONMENTAL SERVICES PTY LTD
Address	Unit 3 38 Leighton Pl NSW 2077
Telephone	61 2 98700900
Facsimile	61 2 98700999
Email	sydney@dlaenvironmental.com.au
Project	**DL4032 Prospect**
Order Number	**Prospect**
Samples	2

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE161937 R0**
Date Received	13 Feb 2017
Date Reported	16 Feb 2017

COMMENTS

Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(4354).

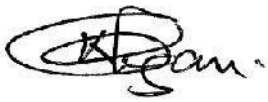
No respirable fibres detected in all soil samples using trace analysis technique.

A portion of the sample supplied has been sub-sampled for asbestos according to SGS In-house procedures.
We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied.
SGS Environment, Health and Safety recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES

Bennet Lo
Senior Organic Chemist/Metals Chemis



Kamrul Ahsan
Senior Chemist

Ly Kim Ha
Organic Section Head

Ravee Sivasubramaniam
Hygiene Team Leader

ANALYTICAL REPORT

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification
SE161937.001	QC103	Soil	55g Clay, Rocks	07 Feb 2017	No Asbestos Found
SE161937.002	QC106	Soil	76g Clay, Rocks	08 Feb 2017	No Asbestos Found

METHOD SUMMARY

SE161937 R0

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf).
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AN602	The sample can be reported “no asbestos found at the reporting limit of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service .
Amphiboles	-	Amosite and/or Crocidolite	**	-	Indicative data, theoretical holding time exceeded.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Sampled by the client.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.
Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining.
Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos -containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : http://www.sgs.com.au/~/media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

161686

CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
Ph 02 9910 6200 / sydney@envirolab.com.au

Combo1=TRH/BTEX/Pb
Combo2=TRH/BTEX/PAH/Pb
Combo3=TRH/BTEX/PAH/Met
Combo4=TRH/BTEX/PAH/Met/Phen
Combo5=TRH/BTEX/PAH/OC/PCB/Met
Combo6=TRH/BTEX/PAH/OC/OP/PCB/Met
Combo7=TRH/BTEX/PAH/OC/PCB/Met/Phen
Combo8=TRH/BTEX/PAH/OC/OP/PCB/Met/Phen
Combo9=TRH/BTEX/PAH/OC/PCB/Met/Phen/CN
Combo10=TRH/BTEX/PAH/OC/OP/PCB/Met/Phen/CN
Combo11=TRH/BTEX/PAH/OC/PCB/Met/Phen/CN
Combo12=TRH/BTEX/PAH/OC/PCB/Met/TCLP-PAH ,6 Met
Combo13=TRH/BTEX/PAH/OC/OP/PCB/Met/TCLP-PAH ,6Met

A Combo with an 'A' indicates Asbestos is also needed.

Client: DLA	**Client Project Name / Number / Site etc (ie report title):** DL 4032
Contact Person: Jack	
Project Mgr: Jack	**PO No.:** Prospect
Sampler: Amy	**Envirolab Quote No. :**
Address: Unit 3/38 Leighton Place, Hornsby	**Date results required:** Or choose: (standard) / same day / 1 day / 2 day / 3 day. *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone:	**Mob:**	**Report format:** esdat / equis /
Email: Sydney@dlaenvironmental.com.au	**Lab Comments:**

Sample information					Tests Required																Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	combo 3	combo 8	Asbestos														Provide as much information about the sample as you can
1	QC103	0.5-0.6	7/2/17	soil	} please send to SGS																
2	QC106	0.5-0.6	8/2/17		} for CL17 suite & asbestos pres/ads																

SGS EHS Alexandria Laboratory
SE161937 COC
Received: 13 – Feb – 2017

Relinquished by (Company):	DLA	ELS	**Received by (Company):** ELS (161686)
Print Name:	Amy	James	**Print Name:** JYH
Date & Time:	10/2/17	13.2 3:40	**Date & Time:** 10/2/17 1400.
Signature:			**Signature:**

Lab use only:
Samples Received: Cool or Ambient (circle one)
Temperature Received at: 16.0 (if applicable)
Transported by: Hand delivered / courier

White - Lab copy / Blue - Client copy / Pink - Retain in Book

Page No:

13/2/17 4 of 5

12 Ashley Street, Chatswood, NSW 2067
tel: +61 2 9910 6200

email: sydney@envirolab.com.au
envirolab.com.au

Envirolab Services Pty Ltd Sydney | ABN 37 112 535 645

CERTIFICATE OF ANALYSIS 161636

Client:

DLA Environmental Services Pty Ltd
Unit 3, 38 Leighton Pl
Hornsby
NSW 2077

Attention: Jack, Amy

Sample log in details:

Your Reference:	**DL4032, Prospect**
No. of samples:	3 sediments 3 waters
Date samples received / completed instructions received	09/02/17 / 09/02/17

Analysis Details:

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

Report Details:

Date results requested by: / Issue Date:	16/02/17 / 15/02/17
Date of Preliminary Report:	Not Issued

NATA accreditation number 2901. This document shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 17025 - Testing **Tests not covered by NATA are denoted with *.**

Results Approved By:

David Springer
General Manager

vTRH(C6-C10)/BTEXN in Soil				
Our Reference:	UNITS	161636-1	161636-2	161636-3
Your Reference	---------- -	SD2	SD3	QC SED
Date Sampled	----------	9/02/2017	9/02/2017	9/02/2017
Type of sample		Sediment	Sediment	Sediment
Date extracted	-	10/02/2017	10/02/2017	10/02/2017
Date analysed	-	13/02/2017	13/02/2017	13/02/2017
TRH C_6 - C_9	mg/kg	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	78	70	78

svTRH (C10-C40) in Soil				
Our Reference:	UNITS	161636-1	161636-2	161636-3
Your Reference	----------	SD2	SD3	QCSED
	-			
Date Sampled	----------	9/02/2017	9/02/2017	9/02/2017
Type of sample		Sediment	Sediment	Sediment
Date extracted	-	10/02/2017	10/02/2017	10/02/2017
Date analysed	-	11/02/2017	11/02/2017	11/02/2017
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	250	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	240	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	120	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	360	<50
Surrogate o-Terphenyl	%	90	107	91

PAHs in Soil Our Reference: Your Reference	UNITS ----------	161636-1 SD2	161636-2 SD3	161636-3 QC SED
Date Sampled	- ----------	9/02/2017	9/02/2017	9/02/2017
Type of sample		Sediment	Sediment	Sediment
Date extracted	-	10/02/2017	10/02/2017	10/02/2017
Date analysed	-	13/02/2017	13/02/2017	13/02/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05
Surrogate p-Terphenyl-d14	%	80	89	81

Organochlorine Pesticides in soil				
Our Reference:	UNITS	161636-1	161636-2	161636-3
Your Reference	----------	SD2	SD3	QCSED
	-			
Date Sampled	----------	9/02/2017	9/02/2017	9/02/2017
Type of sample		Sediment	Sediment	Sediment
Date extracted	-	10/02/2017	10/02/2017	10/02/2017
Date analysed	-	10/02/2017	10/02/2017	10/02/2017
HCB	mg/kg	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	106	123	107

Organophosphorus Pesticides				
Our Reference:	UNITS	161636-1	161636-2	161636-3
Your Reference	----------	SD2	SD3	QCSED
	-			
Date Sampled	----------	9/02/2017	9/02/2017	9/02/2017
Type of sample		Sediment	Sediment	Sediment
Date extracted	-	10/02/2017	10/02/2017	10/02/2017
Date analysed	-	10/02/2017	10/02/2017	10/02/2017
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	106	123	107

PCBs in Soil Our Reference: Your Reference	UNITS ----------	161636-1 SD2	161636-2 SD3	161636-3 QCSED
	-			
Date Sampled	----------	9/02/2017	9/02/2017	9/02/2017
Type of sample		Sediment	Sediment	Sediment
Date extracted	-	10/02/2017	10/02/2017	10/02/2017
Date analysed	-	10/02/2017	10/02/2017	10/02/2017
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCLMX	%	106	123	107

Acid Extractable metals in soil				
Our Reference:	UNITS	161636-1	161636-2	161636-3
Your Reference	----------	SD2	SD3	QCSED
	-			
Date Sampled	----------	9/02/2017	9/02/2017	9/02/2017
Type of sample		Sediment	Sediment	Sediment
Date prepared	-	10/02/2017	10/02/2017	10/02/2017
Date analysed	-	10/02/2017	10/02/2017	10/02/2017
Arsenic	mg/kg	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4
Chromium	mg/kg	50	20	42
Copper	mg/kg	60	20	56
Lead	mg/kg	7	6	6
Mercury	mg/kg	<0.1	<0.1	<0.1
Nickel	mg/kg	32	24	27
Zinc	mg/kg	57	220	50

Moisture				
Our Reference:	UNITS	161636-1	161636-2	161636-3
Your Reference	----------	SD2	SD3	QCSED
	-			
Date Sampled	----------	9/02/2017	9/02/2017	9/02/2017
Type of sample		Sediment	Sediment	Sediment
Date prepared	-	10/02/2017	10/02/2017	10/02/2017
Date analysed	-	13/02/2017	13/02/2017	13/02/2017
Moisture	%	42	67	42

vTRH(C6-C10)/BTEXN in Water				
Our Reference:	UNITS	161636-4	161636-5	161636-6
Your Reference	----------	SP2	SP3	QC W
	-			
Date Sampled	----------	9/02/2017	9/02/2017	9/02/2017
Type of sample		water	water	water
Date extracted	-	10/02/2017	10/02/2017	10/02/2017
Date analysed	-	13/02/2017	10/02/2017	13/02/2017
TRHC6 - C9	µg/L	<100	<10	<100
TRHC6 - C10	µg/L	<100	<10	<100
TRHC6 - C10 less BTEX (F1)	µg/L	[NA]	<10	[NA]
Benzene	µg/L	<10	<1	<10
Toluene	µg/L	<10	<1	<10
Ethylbenzene	µg/L	<10	<1	<10
m+p-xylene	µg/L	<20	<2	<20
o-xylene	µg/L	<10	<1	<10
Naphthalene	µg/L	<10	<1	<10
Surrogate Dibromofluoromethane	%	100	104	101
Surrogate toluene-d8	%	96	97	97
Surrogate 4-BFB	%	92	96	91

svTRH (C10-C40) in Water Our Reference: Your Reference	UNITS ----------	161636-4 SP2	161636-5 SP3	161636-6 QCW
Date Sampled	-	9/02/2017	9/02/2017	9/02/2017
Type of sample	----------	water	water	water
Date extracted	-	10/02/2017	10/02/2017	10/02/2017
Date analysed	-	11/02/2017	11/02/2017	11/02/2017
TRHC$_{10}$ - C$_{14}$	µg/L	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	µg/L	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	µg/L	<100	<100	<100
TRH>C$_{10}$ - C$_{16}$	µg/L	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	µg/L	<50	<50	<50
TRH>C$_{16}$ - C$_{34}$	µg/L	<100	<100	<100
TRH>C$_{34}$ - C$_{40}$	µg/L	<100	<100	<100
Surrogate o-Terphenyl	%	106	89	82

PAHs in Water Our Reference: Your Reference	UNITS ----------	161636-4 SP2	161636-5 SP3	161636-6 QC W
Date Sampled	-	9/02/2017	9/02/2017	9/02/2017
Type of sample	----------	water	water	water
Date extracted	-	10/02/2017	10/02/2017	10/02/2017
Date analysed	-	13/02/2017	13/02/2017	13/02/2017
Naphthalene	µg/L	<1	<1	<1
Acenaphthylene	µg/L	<1	<1	<1
Acenaphthene	µg/L	<1	<1	<1
Fluorene	µg/L	<1	<1	<1
Phenanthrene	µg/L	<1	<1	<1
Anthracene	µg/L	<1	<1	<1
Fluoranthene	µg/L	<1	<1	<1
Pyrene	µg/L	<1	<1	<1
Benzo(a)anthracene	µg/L	<1	<1	<1
Chrysene	µg/L	<1	<1	<1
Benzo(b,j+k)fluoranthene	µg/L	<2	<2	<2
Benzo(a)pyrene	µg/L	<1	<1	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1	<1	<1
Dibenzo(a,h)anthracene	µg/L	<1	<1	<1
Benzo(g,h,i)perylene	µg/L	<1	<1	<1
Benzo(a)pyrene TEQ	µg/L	<5	<5	<5
Total +ve PAH's	µg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	116	101	92

HM in water - dissolved Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- - ---------- 	161636-4 SP2 9/02/2017 water	161636-5 SP3 9/02/2017 water	161636-6 QC W 9/02/2017 water
Date prepared	-	09/02/2017	09/02/2017	09/02/2017
Date analysed	-	09/02/2017	09/02/2017	09/02/2017
Arsenic-Dissolved	µg/L	<1	<1	<1
Cadmium-Dissolved	µg/L	<0.1	<0.1	<0.1
Chromium-Dissolved	µg/L	3	<1	3
Copper-Dissolved	µg/L	6	<1	6
Lead-Dissolved	µg/L	<1	<1	<1
Mercury-Dissolved	µg/L	<0.05	<0.05	<0.05
Nickel-Dissolved	µg/L	<1	<1	<1
Zinc-Dissolved	µg/L	<1	4	<1

Miscellaneous Inorganics				
Our Reference:	UNITS	161636-4	161636-5	161636-6
Your Reference	----------	SP2	SP3	QC W
	-			
Date Sampled	----------	9/02/2017	9/02/2017	9/02/2017
Type of sample		water	water	water
Date prepared	-	09/02/2017	09/02/2017	09/02/2017
Date analysed	-	09/02/2017	09/02/2017	09/02/2017
pH	pH Units	8.2	7.3	8.1
Electrical Conductivity	µS/cm	800	110	800

Method ID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'TEQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'TEQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'TEQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
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.

Method ID	Methodology Summary
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Org-013	Water samples are analysed directly by purge and trap GC-MS.
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.
Metals-022	Determination of various metals by ICP-MS.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell at 25°C in accordance with APHA latest edition 2510 and Rayment & Lyons.

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	PQL	METHOD	Blank
Date extracted	-			10/02/2017
Date analysed	-			13/02/2017
$TRHC_6$ - C_9	mg/kg	25	Org-016	<25
$TRHC_6$ - C_{10}	mg/kg	25	Org-016	<25
Benzene	mg/kg	0.2	Org-016	<0.2
Toluene	mg/kg	0.5	Org-016	<0.5
Ethylbenzene	mg/kg	1	Org-016	<1
m+p-xylene	mg/kg	2	Org-016	<2
o-Xylene	mg/kg	1	Org-016	<1
naphthalene	mg/kg	1	Org-014	<1
Surrogate aaa-Trifluorotoluene	%		Org-016	101

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	PQL	METHOD	Blank
Date extracted	-			10/02/2017
Date analysed	-			11/02/2017
$TRHC_{10}$ - C_{14}	mg/kg	50	Org-003	<50
$TRHC_{15}$ - C_{28}	mg/kg	100	Org-003	<100
$TRHC_{29}$ - C_{36}	mg/kg	100	Org-003	<100
$TRH>C_{10}$-C_{16}	mg/kg	50	Org-003	<50
$TRH>C_{16}$-C_{34}	mg/kg	100	Org-003	<100
$TRH>C_{34}$-C_{40}	mg/kg	100	Org-003	<100
Surrogate o-Terphenyl	%		Org-003	101

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank
Date extracted	-			10/02/2017
Date analysed	-			13/02/2017
Naphthalene	mg/kg	0.1	Org-012	<0.1
Acenaphthylene	mg/kg	0.1	Org-012	<0.1
Acenaphthene	mg/kg	0.1	Org-012	<0.1
Fluorene	mg/kg	0.1	Org-012	<0.1
Phenanthrene	mg/kg	0.1	Org-012	<0.1
Anthracene	mg/kg	0.1	Org-012	<0.1
Fluoranthene	mg/kg	0.1	Org-012	<0.1
Pyrene	mg/kg	0.1	Org-012	<0.1
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1
Chrysene	mg/kg	0.1	Org-012	<0.1
Benzo(b,j+k) fluoranthene	mg/kg	0.2	Org-012	<0.2
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1
Surrogate p-Terphenyl-d14	%		Org-012	79

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank
Date extracted	-			10/02/2017
Date analysed	-			10/02/2017
HCB	mg/kg	0.1	Org-005	<0.1
alpha-BHC	mg/kg	0.1	Org-005	<0.1
gamma-BHC	mg/kg	0.1	Org-005	<0.1
beta-BHC	mg/kg	0.1	Org-005	<0.1
Heptachlor	mg/kg	0.1	Org-005	<0.1
delta-BHC	mg/kg	0.1	Org-005	<0.1
Aldrin	mg/kg	0.1	Org-005	<0.1
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1
alpha-chlordane	mg/kg	0.1	Org-005	<0.1
Endosulfan I	mg/kg	0.1	Org-005	<0.1
pp-DDE	mg/kg	0.1	Org-005	<0.1
Dieldrin	mg/kg	0.1	Org-005	<0.1
Endrin	mg/kg	0.1	Org-005	<0.1
pp-DDD	mg/kg	0.1	Org-005	<0.1
Endosulfan II	mg/kg	0.1	Org-005	<0.1
pp-DDT	mg/kg	0.1	Org-005	<0.1
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1
Methoxychlor	mg/kg	0.1	Org-005	<0.1
Surrogate TCMX	%		Org-005	116

QUALITY CONTROL Organophosphorus Pesticides	UNITS	PQL	METHOD	Blank
Date extracted	-			10/02/2017
Date analysed	-			10/02/2017
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1
Diazinon	mg/kg	0.1	Org-008	<0.1
Dichlorvos	mg/kg	0.1	Org-008	<0.1
Dimethoate	mg/kg	0.1	Org-008	<0.1
Ethion	mg/kg	0.1	Org-008	<0.1
Fenitrothion	mg/kg	0.1	Org-008	<0.1
Malathion	mg/kg	0.1	Org-008	<0.1
Parathion	mg/kg	0.1	Org-008	<0.1
Ronnel	mg/kg	0.1	Org-008	<0.1
Surrogate TCMX	%		Org-008	116
QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank
Date extracted	-			10/02/2017
Date analysed	-			10/02/2017
Aroclor 1016	mg/kg	0.1	Org-006	<0.1
Aroclor 1221	mg/kg	0.1	Org-006	<0.1
Aroclor 1232	mg/kg	0.1	Org-006	<0.1
Aroclor 1242	mg/kg	0.1	Org-006	<0.1
Aroclor 1248	mg/kg	0.1	Org-006	<0.1
Aroclor 1254	mg/kg	0.1	Org-006	<0.1
Aroclor 1260	mg/kg	0.1	Org-006	<0.1
Surrogate TCLMX	%		Org-006	116
QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank
Date prepared	-			10/02/2017
Date analysed	-			10/02/2017
Arsenic	mg/kg	4	Metals-020	<4
Cadmium	mg/kg	0.4	Metals-020	<0.4
Chromium	mg/kg	1	Metals-020	<1
Copper	mg/kg	1	Metals-020	<1
Lead	mg/kg	1	Metals-020	<1
Mercury	mg/kg	0.1	Metals-021	<0.1
Nickel	mg/kg	1	Metals-020	<1
Zinc	mg/kg	1	Metals-020	<1

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			10/02/2017	[NT]	[NT]	LCS-W1	10/02/2017
Date analysed	-			13/02/2017	[NT]	[NT]	LCS-W1	13/02/2017
$TRHC_6$ - C_9	µg/L	10	Org-016	<10	[NT]	[NT]	LCS-W1	91%
$TRHC_6$ - C_{10}	µg/L	10	Org-016	<10	[NT]	[NT]	LCS-W1	91%
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	91%
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	91%
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	91%
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	LCS-W1	92%
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	91%
Naphthalene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluoromethane	%		Org-016	100	[NT]	[NT]	LCS-W1	99%
Surrogate toluene-d8	%		Org-016	96	[NT]	[NT]	LCS-W1	100%
Surrogate 4-BFB	%		Org-016	97	[NT]	[NT]	LCS-W1	99%

QUALITY CONTROL svTRH (C10-C40) in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			13/02/2017	[NT]	[NT]	LCS-W1	10/02/2017
Date analysed	-			13/02/2017	[NT]	[NT]	LCS-W1	10/02/2017
$TRHC_{10}$ - C_{14}	µg/L	50	Org-003	<50	[NT]	[NT]	LCS-W1	97%
$TRHC_{15}$ - C_{28}	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W1	91%
$TRHC_{29}$ - C_{36}	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W1	99%
$TRH{>}C_{10}$ - C_{16}	µg/L	50	Org-003	<50	[NT]	[NT]	LCS-W1	97%
$TRH{>}C_{16}$ - C_{34}	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W1	91%
$TRH{>}C_{34}$ - C_{40}	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W1	99%
Surrogate o-Terphenyl	%		Org-003	107	[NT]	[NT]	LCS-W1	100%

QUALITY CONTROL PAHs in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			10/02/2017	[NT]	[NT]	LCS-W1	10/02/2017
Date analysed	-			13/02/2017	[NT]	[NT]	LCS-W1	13/02/2017
Naphthalene	µg/L	1	Org-012	<1	[NT]	[NT]	LCS-W1	81%
Acenaphthylene	µg/L	1	Org-012	<1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	µg/L	1	Org-012	<1	[NT]	[NT]	[NR]	[NR]
Fluorene	µg/L	1	Org-012	<1	[NT]	[NT]	LCS-W1	91%
Phenanthrene	µg/L	1	Org-012	<1	[NT]	[NT]	LCS-W1	107%
Anthracene	µg/L	1	Org-012	<1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	µg/L	1	Org-012	<1	[NT]	[NT]	LCS-W1	101%
Pyrene	µg/L	1	Org-012	<1	[NT]	[NT]	LCS-W1	99%
Benzo(a)anthracene	µg/L	1	Org-012	<1	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL PAHs in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Chrysene	µg/L	1	Org-012	<1	[NT]	[NT]	LCS-W1	95%
Benzo(b,j+k) fluoranthene	µg/L	2	Org-012	<2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	µg/L	1	Org-012	<1	[NT]	[NT]	LCS-W1	108%
Indeno(1,2,3-c,d)pyrene	µg/L	1	Org-012	<1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	µg/L	1	Org-012	<1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	µg/L	1	Org-012	<1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012	98	[NT]	[NT]	LCS-W1	100%
QUALITY CONTROL HM in water - dissolved	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			09/02/2017	[NT]	[NT]	LCS-W3	09/02/2017
Date analysed	-			09/02/2017	[NT]	[NT]	LCS-W3	09/02/2017
Arsenic-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	LCS-W3	97%
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	LCS-W3	99%
Chromium-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	LCS-W3	93%
Copper-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	LCS-W3	89%
Lead-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	LCS-W3	103%
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	[NT]	[NT]	LCS-W3	102%
Nickel-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	LCS-W3	95%
Zinc-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	LCS-W3	93%
QUALITY CONTROL Miscellaneous Inorganics	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			09/02/2017	[NT]	[NT]	LCS-W1	09/02/2017
Date analysed	-			09/02/2017	[NT]	[NT]	LCS-W1	09/02/2017
pH	pH Units		Inorg-001	[NT]	[NT]	[NT]	LCS-W1	102%
Electrical Conductivity	µS/cm	1	Inorg-002	<1	[NT]	[NT]	LCS-W1	102%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	LCS-4	10/02/2017
Date analysed	-	[NT]	[NT]	LCS-4	13/02/2017
TRH C_6 - C_9	mg/kg	[NT]	[NT]	LCS-4	108%
TRH C_6 - C_{10}	mg/kg	[NT]	[NT]	LCS-4	108%
Benzene	mg/kg	[NT]	[NT]	LCS-4	98%
Toluene	mg/kg	[NT]	[NT]	LCS-4	105%
Ethylbenzene	mg/kg	[NT]	[NT]	LCS-4	111%
m+p-xylene	mg/kg	[NT]	[NT]	LCS-4	112%
o-Xylene	mg/kg	[NT]	[NT]	LCS-4	113%
naphthalene	mg/kg	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Surrogate aaa-Trifluorotoluene	%	[NT]	[NT]	LCS-4	101%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	LCS-4	10/02/2017
Date analysed	-	[NT]	[NT]	LCS-4	11/02/2017
TRH C_{10} - C_{14}	mg/kg	[NT]	[NT]	LCS-4	100%
TRH C_{15} - C_{28}	mg/kg	[NT]	[NT]	LCS-4	100%
TRH C_{29} - C_{36}	mg/kg	[NT]	[NT]	LCS-4	94%
TRH >C_{10}-C_{16}	mg/kg	[NT]	[NT]	LCS-4	100%
TRH >C_{16}-C_{34}	mg/kg	[NT]	[NT]	LCS-4	100%
TRH >C_{34}-C_{40}	mg/kg	[NT]	[NT]	LCS-4	94%
Surrogate o-Terphenyl	%	[NT]	[NT]	LCS-4	124%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	LCS-4	10/02/2017
Date analysed	-	[NT]	[NT]	LCS-4	13/02/2017
Naphthalene	mg/kg	[NT]	[NT]	LCS-4	101%
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	LCS-4	107%
Phenanthrene	mg/kg	[NT]	[NT]	LCS-4	111%
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	LCS-4	104%
Pyrene	mg/kg	[NT]	[NT]	LCS-4	102%
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	LCS-4	103%
Benzo(b,j+k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	LCS-4	75%
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	[NT]	[NT]	LCS-4	116%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	LCS-4	10/02/2017
Date analysed	-	[NT]	[NT]	LCS-4	10/02/2017
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	LCS-4	87%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	LCS-4	111%
Heptachlor	mg/kg	[NT]	[NT]	LCS-4	90%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	LCS-4	100%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	LCS-4	103%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	LCS-4	117%
Dieldrin	mg/kg	[NT]	[NT]	LCS-4	114%
Endrin	mg/kg	[NT]	[NT]	LCS-4	109%
pp-DDD	mg/kg	[NT]	[NT]	LCS-4	97%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	LCS-4	84%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	LCS-4	125%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	LCS-4	10/02/2017
Date analysed	-	[NT]	[NT]	LCS-4	10/02/2017
Azinphos-methyl (Guthion)	mg/kg	[NT]	[NT]	[NR]	[NR]
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos	mg/kg	[NT]	[NT]	LCS-4	84%
Chlorpyriphos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dichlorvos	mg/kg	[NT]	[NT]	LCS-4	86%
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	LCS-4	98%
Fenitrothion	mg/kg	[NT]	[NT]	LCS-4	72%
Malathion	mg/kg	[NT]	[NT]	LCS-4	85%
Parathion	mg/kg	[NT]	[NT]	LCS-4	95%
Ronnel	mg/kg	[NT]	[NT]	LCS-4	70%
Surrogate TCMX	%	[NT]	[NT]	LCS-4	101%

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	LCS-4	10/02/2017
Date analysed	-	[NT]	[NT]	LCS-4	10/02/2017
Aroclor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	mg/kg	[NT]	[NT]	LCS-4	112%
Aroclor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	LCS-4	101%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	[NT]	[NT]	LCS-5	10/02/2017
Date analysed	-	[NT]	[NT]	LCS-5	10/02/2017
Arsenic	mg/kg	[NT]	[NT]	LCS-5	110%
Cadmium	mg/kg	[NT]	[NT]	LCS-5	100%
Chromium	mg/kg	[NT]	[NT]	LCS-5	110%
Copper	mg/kg	[NT]	[NT]	LCS-5	106%
Lead	mg/kg	[NT]	[NT]	LCS-5	99%
Mercury	mg/kg	[NT]	[NT]	LCS-5	86%
Nickel	mg/kg	[NT]	[NT]	LCS-5	99%
Zinc	mg/kg	[NT]	[NT]	LCS-5	100%

Report Comments:

BTEX in water:
PQL has been raised as the sample/s were foamy and required dilution.

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NR: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.
Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.
Spikes for Physical and Aggregate Tests are not applicable.
For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

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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.

CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
Ph 02 9910 6200 / sydney@envirolab.com.au

Combo1=TRH/BTEX/Pb
Combo2=TRH/BTEX/PAH/Pb
Combo3=TRH/BTEX/PAH/Met
Combo4=TRH/BTEX/PAH/Met/Phen
Combo5=TRH/BTEX/PAH/OC/PCB/Met
Combo6=TRH/BTEX/PAH/OC/OP/PCB/Met
Combo7=TRH/BTEX/PAH/OC/PCB/Met/Phen
Combo8=TRH/BTEX/PAH/OC/OP/PCB/Met/Phen
Combo9=TRH/BTEX/PAH/OC/PCB/Met/Phen/CN
Combo10=TRH/BTEX/PAH/OC/OP/PCB/Met/Phen/CN
Combo11=TRH/BTEX/PAH/OC/PCB/12met/Phen/CN
Combo12=TRH/BTEX/PAH/OC/PCB/Met/TCLP-PAH ,6 Met
Combo13=TRH/BTEX/PAH/OC/OP/PCB/Met/TCLP-PAH ,6Met

A Combo with an 'A' indicates Asbestos is also needed.

Client: DLA
Contact Person: Jack
Project Mgr: Jack
Sampler: Amy
Address: Unit 3/38 Leighton Place, Hornsby
Phone: **Mob:**
Email: Sydney@dlaenvironmental.com.au

Client Project Name / Number / Site etc (ie report title): DL 4032
PO No.: Prospect
Envirolab Quote No. :
Date results required:
Or choose: standard / same day / 1 day / 2 day / 3 day
Note: Inform lab in advance if urgent turnaround is required - surcharges apply
Report format: esdat / equis /
Lab Comments:

Sample information					Tests Required														Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Combo 3	pH/EC	Combo 6												Provide as much information about the sample as you can
1	SD1	NA	9/2/17	sediment			X												
2	SD3						X												
3	QC SED						X												
4	SW1			water	X	X	3	please filter for HM											
5	SW3				X	X													
6	QC W				X	X													

Envirolab Service
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No. 161636
Date Received: 9/2/2017
Time Received: 1700
Received by: RA
Temp: Cool/Ambient
Cooling: Ice/Icepack 16.2
Security: Intact/Broken/None

Relinquished by (Company): DLA
Print Name: Amy
Date & Time: 9/2/17
Signature:

Received by (Company): Envirolab
Print Name: RA
Date & Time: 9/2/2017 1700
Signature:

Lab use only:
Samples Received: Cool or Ambient (circle one)
Temperature Received at: (if applicable)
Transported by: Hand delivered / courier

White - Lab copy / Blue - Client copy / Pink - Retain in Book

12 Ashley Street, Chatswood, NSW 2067
tel: +61 2 9910 6200

email: sydney@envirolab.com.au
envirolab.com.au

Envirolab Services Pty Ltd Sydney | ABN 37 112 535 645

CERTIFICATE OF ANALYSIS 161636-A

Client:

DLA Environmental Services Pty Ltd
Unit 3, 38 Leighton Pl
Hornsby
NSW 2077

Attention: Jack, Amy

Sample log in details:

Your Reference:	**DL4032, Prospect**
No. of samples:	3 sediments 3 waters
Date samples received / completed instructions received	09/02/17 / 28/02/17

Analysis Details:

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

Report Details:

Date results requested by: / Issue Date:	28/02/17 / 28/02/17
Date of Preliminary Report:	Not Issued

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

Results Approved By:

David Springer
General Manager

Miscellaneous Inorganics			
Our Reference:	UNITS	161636-A-4	161636-A-6
Your Reference	----------	SP2	QC W
	-		
Date Sampled	----------	9/02/2017	9/02/2017
Type of sample		water	water
Date prepared	-	28/02/2017	28/02/2017
Date analysed	-	28/02/2017	28/02/2017
Hexavalent Chromium, Cr^{6+}	mg/L	<0.005	<0.005

Method ID	Methodology Summary
Inorg-024	Hexavalent Chromium (Cr6+) - determined colourimetrically.

QUALITY CONTROL Miscellaneous Inorganics	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			28/02/2017	[NT]	[NT]	LCS-W1	28/02/2017
Date analysed	-			28/02/2017	[NT]	[NT]	LCS-W1	28/02/2017
Hexavalent Chromium, Cr^{6+}	mg/L	0.005	Inorg-024	<0.005	[NT]	[NT]	LCS-W1	101%

Report Comments:

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NR: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

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LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

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Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.
Spikes for Physical and Aggregate Tests are not applicable.
For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

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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.

Nancy Zhang

From: Amy Dorrington <amy.dorrington@dlaenvironmental.com.au>
Sent: Tuesday, 28 February 2017 10:31 AM
To: Nancy Zhang
Subject: 161636 further analysis

Hi Nancy,

Just confirming hex chromium on SP2 and QC W, project 161636. Results today would be amazing ☺

Thanks!

If you have any questions, please feel free to contact our office.

Regards,

Amy Dorrington
Environmental Consultant

M: 0425 333 596
P: 02 9476 1765
E: amy.dorrington@dlaenvironmental.com.au

www.dlaenvironmental.com.au

12 Ashley Street, Chatswood, NSW 2067
tel: +61 2 9910 6200

email: sydney@envirolab.com.au
envirolab.com.au

Envirolab Services Pty Ltd Sydney | ABN 37 112 535 645

CERTIFICATE OF ANALYSIS 162047

Client:

DLA Environmental Services Pty Ltd
Unit 3, 38 Leighton Pl
Hornsby
NSW 2077

Attention: Jack

Sample log in details:

Your Reference:	**DL4032, Prospect**
No. of samples:	2 Waters
Date samples received / completed instructions received	16/02/2017 / 16/02/2017

Analysis Details:

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

Report Details:

Date results requested by: / Issue Date:	23/02/17 / 21/02/17
Date of Preliminary Report:	Not Issued

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

Results Approved By:

David Springer
General Manager

vTRH(C6-C10)/BTEXN in Water			
Our Reference:	UNITS	162047-1	162047-2
Your Reference	---------- -	MW30	QCGW
Date Sampled	----------	16/02/2017	16/02/2017
Type of sample		Water	Water
Date extracted	-	17/02/2017	17/02/2017
Date analysed	-	20/02/2017	20/02/2017
$TRHC_6$ - C_9	µg/L	<10	<10
$TRHC_6$ - C_{10}	µg/L	<10	<10
$TRHC_6$ - C_{10} less BTEX (F1)	µg/L	<10	<10
Benzene	µg/L	<1	<1
Toluene	µg/L	<1	<1
Ethylbenzene	µg/L	<1	<1
m+p-xylene	µg/L	<2	<2
o-xylene	µg/L	<1	<1
Naphthalene	µg/L	<1	<1
Surrogate Dibromofluoromethane	%	103	103
Surrogate toluene-d8	%	96	96
Surrogate 4-BFB	%	98	96

svTRH (C10-C40) in Water			
Our Reference:	UNITS	162047-1	162047-2
Your Reference	----------	MW30	QCGW
	-		
Date Sampled	----------	16/02/2017	16/02/2017
Type of sample		Water	Water
Date extracted	-	17/02/2017	17/02/2017
Date analysed	-	17/02/2017	17/02/2017
$TRHC_{10}$ - C_{14}	µg/L	<50	<50
$TRHC_{15}$ - C_{28}	µg/L	<100	<100
$TRHC_{29}$ - C_{36}	µg/L	<100	<100
$TRH>C_{10}$ - C_{16}	µg/L	<50	<50
$TRH>C_{10}$ - C_{16} less Naphthalene (F2)	µg/L	<50	<50
$TRH>C_{16}$ - C_{34}	µg/L	<100	<100
$TRH>C_{34}$ - C_{40}	µg/L	<100	<100
Surrogate o-Terphenyl	%	74	77

PAHs in Water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- - ---------- 	162047-1 MW30 16/02/2017 Water	162047-2 QCGW 16/02/2017 Water
Date extracted	-	17/02/2017	17/02/2017
Date analysed	-	17/02/2017	17/02/2017
Naphthalene	µg/L	<1	<1
Acenaphthylene	µg/L	<1	<1
Acenaphthene	µg/L	<1	<1
Fluorene	µg/L	<1	<1
Phenanthrene	µg/L	<1	<1
Anthracene	µg/L	<1	<1
Fluoranthene	µg/L	<1	<1
Pyrene	µg/L	<1	<1
Benzo(a)anthracene	µg/L	<1	<1
Chrysene	µg/L	<1	<1
Benzo(b,j+k)fluoranthene	µg/L	<2	<2
Benzo(a)pyrene	µg/L	<1	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1	<1
Dibenzo(a,h)anthracene	µg/L	<1	<1
Benzo(g,h,i)perylene	µg/L	<1	<1
Benzo(a)pyrene TEQ	µg/L	<5	<5
Total +ve PAH's	µg/L	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	71	70

HM in water - dissolved			
Our Reference:	UNITS	162047-1	162047-2
Your Reference	----------	MW30	QCGW
	-		
Date Sampled	----------	16/02/2017	16/02/2017
Type of sample		Water	Water
Date prepared	-	17/02/2017	17/02/2017
Date analysed	-	17/02/2017	17/02/2017
Arsenic-Dissolved	µg/L	<1	<1
Cadmium-Dissolved	µg/L	<0.1	<0.1
Chromium-Dissolved	µg/L	8	6
Copper-Dissolved	µg/L	4	4
Lead-Dissolved	µg/L	<1	<1
Mercury-Dissolved	µg/L	<0.05	<0.05
Nickel-Dissolved	µg/L	4	4
Zinc-Dissolved	µg/L	<1	<1

Miscellaneous Inorganics			
Our Reference:	UNITS	162047-1	162047-2
Your Reference	----------	MW30	QCGW
	-		
Date Sampled	----------	16/02/2017	16/02/2017
Type of sample		Water	Water
Date prepared	-	16/02/2017	16/02/2017
Date analysed	-	16/02/2017	16/02/2017
pH	pH Units	11.3	11.2
Electrical Conductivity	µS/cm	860	780

Method ID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-013	Water samples are analysed directly by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
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.
Metals-022	Determination of various metals by ICP-MS.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell at 25°C in accordance with APHA latest edition 2510 and Rayment & Lyons.

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/02/2017	[NT]	[NT]	LCS-W2	17/02/2017
Date analysed	-			20/02/2017	[NT]	[NT]	LCS-W2	20/02/2017
TRH C_6 - C_9	µg/L	10	Org-016	<10	[NT]	[NT]	LCS-W2	107%
TRH C_6 - C_{10}	µg/L	10	Org-016	<10	[NT]	[NT]	LCS-W2	107%
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W2	105%
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W2	106%
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W2	107%
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	LCS-W2	108%
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W2	107%
Naphthalene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluoromethane	%		Org-016	103	[NT]	[NT]	LCS-W2	100%
Surrogate toluene-d8	%		Org-016	95	[NT]	[NT]	LCS-W2	99%
Surrogate 4-BFB	%		Org-016	96	[NT]	[NT]	LCS-W2	100%

QUALITY CONTROL svTRH (C10-C40) in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/02/2017	[NT]	[NT]	LCS-W2	17/02/2017
Date analysed	-			17/02/2017	[NT]	[NT]	LCS-W2	17/02/2017
TRH C_{10} - C_{14}	µg/L	50	Org-003	<50	[NT]	[NT]	LCS-W2	115%
TRH C_{15} - C_{28}	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W2	105%
TRH C_{29} - C_{36}	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W2	83%
TRH>C_{10} - C_{16}	µg/L	50	Org-003	<50	[NT]	[NT]	LCS-W2	115%
TRH>C_{16} - C_{34}	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W2	105%
TRH>C_{34} - C_{40}	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W2	83%
Surrogate o-Terphenyl	%		Org-003	89	[NT]	[NT]	LCS-W2	93%

QUALITY CONTROL PAHs in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/02/2017	[NT]	[NT]	LCS-W2	17/02/2017
Date analysed	-			17/02/2017	[NT]	[NT]	LCS-W2	17/02/2017
Naphthalene	µg/L	1	Org-012	<1	[NT]	[NT]	LCS-W2	88%
Acenaphthylene	µg/L	1	Org-012	<1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	µg/L	1	Org-012	<1	[NT]	[NT]	[NR]	[NR]
Fluorene	µg/L	1	Org-012	<1	[NT]	[NT]	LCS-W2	99%
Phenanthrene	µg/L	1	Org-012	<1	[NT]	[NT]	LCS-W2	120%
Anthracene	µg/L	1	Org-012	<1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	µg/L	1	Org-012	<1	[NT]	[NT]	LCS-W2	98%
Pyrene	µg/L	1	Org-012	<1	[NT]	[NT]	LCS-W2	96%
Benzo(a)anthracene	µg/L	1	Org-012	<1	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL PAHs in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Chrysene	µg/L	1	Org-012	<1	[NT]	[NT]	LCS-W2	92%
Benzo(b,j +k)fluoranthene	µg/L	2	Org-012	<2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	µg/L	1	Org-012	<1	[NT]	[NT]	LCS-W2	99%
Indeno(1,2,3-c,d)pyrene	µg/L	1	Org-012	<1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	µg/L	1	Org-012	<1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	µg/L	1	Org-012	<1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012	73	[NT]	[NT]	LCS-W2	69%
QUALITY CONTROL HM in water - dissolved	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			17/02/2017	[NT]	[NT]	LCS-W3	17/02/2017
Date analysed	-			17/02/2017	[NT]	[NT]	LCS-W3	17/02/2017
Arsenic-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	LCS-W3	103%
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	LCS-W3	105%
Chromium-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	LCS-W3	100%
Copper-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	LCS-W3	92%
Lead-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	LCS-W3	106%
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	[NT]	[NT]	LCS-W3	98%
Nickel-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	LCS-W3	101%
Zinc-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	LCS-W3	92%
QUALITY CONTROL Miscellaneous Inorganics	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			16/02/2017	[NT]	[NT]	LCS-W1	16/02/2017
Date analysed	-			16/02/2017	[NT]	[NT]	LCS-W1	16/02/2017
pH	pH Units		Inorg-001	[NT]	[NT]	[NT]	LCS-W1	101%
Electrical Conductivity	µS/cm	1	Inorg-002	<1	[NT]	[NT]	LCS-W1	104%

Report Comments:

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NR: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.
Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.
Spikes for Physical and Aggregate Tests are not applicable.
For VOCs in water samples, three vials are required for duplicate or spike analysis.

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

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Measurement Uncertainty estimates are available for most tests upon request.

CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
Ph 02 9910 6200 / sydney@envirolab.com.au

Combo1=TRH/BTEX/Pb
Combo2=TRH/BTEX/PAH/Pb
Combo3=TRH/BTEX/PAH/Met
Combo4=TRH/BTEX/PAH/Met/Phen
Combo5=TRH/BTEX/PAH/OC/PCB/Met
Combo6=TRH/BTEX/PAH/OC/OP/PCB/Met
Combo7=TRH/BTEX/PAH/OC/PCB/Met/Phen
Combo8=TRH/BTEX/PAH/OC/OP/PCB/Met/Phen
Combo9=TRH/BTEX/PAH/OC/PCB/Met/Phen/CN
Combo10=TRH/BTEX/PAH/OC/OP/PCB/Met/Phen/CN
Combo11=TRH/BTEX/PAH/OC/PCB/12met/Phen/CN
Combo12=TRH/BTEX/PAH/OC/PCB/Met/TCLP-PAH ,6 Met
Combo13=TRH/BTEX/PAH/OC/OP/PCB/Met/TCLP-PAH ,6Met

A Combo with an `A' indicates Asbestos is also needed.

Client: DLA

Contact Person: Jack

Project Mgr: Jack

Sampler: Amy

Address: Unit 3/38 Leighton Place
Hornsby

Phone: **Mob:**

Email: Sydney@dlaenvironmental.com.au

Client Project Name / Number / Site etc (ie report title): Prospect DL 4032

PO No.:

Envirolab Quote No. :

Date results required:

Or choose: standard / same day / 1 day / 2 day / 3 day
Note: Inform lab in advance if urgent turnaround is required - surcharges apply

Report format: esdat / equis /

Lab Comments:

Sample information | **Tests Required** | **Comments**

Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Combo 3	pH/EC													Provide as much information about the sample as you can
1	MW30	–	16.2.17	water	X	X	} please filter for heavy metals												
2	QCGW	–	1	1	X	X	}												

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 162047
Date Received: 16/2
Time Received: 16:30
Received by: JAG
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Relinquished by (Company): DLA
Print Name: Amy
Date & Time: 16.2.17
Signature:

Received by (Company): ELS
Print Name: James
Date & Time: 16.2 16:30
Signature:

Lab use only:
Samples Received: Cool or Ambient (circle one)
Temperature Received at: **(if applicable)**
Transported by: Hand delivered / courier

White - Lab copy / Blue - Client copy / Pink - Retain in Book

12 Ashley Street, Chatswood, NSW 2067
tel: +61 2 9910 6200

email: sydney@envirolab.com.au
envirolab.com.au

Envirolab Services Pty Ltd Sydney | ABN 37 112 535 645

CERTIFICATE OF ANALYSIS 162047-A

Client:

DLA Environmental Services Pty Ltd
Unit 3, 38 Leighton Pl
Hornsby
NSW 2077

Attention: Jack

Sample log in details:

Your Reference:	**DL4032, Prospect**
No. of samples:	2 Waters
Date samples received / completed instructions received	16/02/2017 / 28/02/17

Analysis Details:

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

Report Details:

Date results requested by: / Issue Date:	28/02/17 / 28/02/17
Date of Preliminary Report:	Not Issued

NATA accreditation number 2901. This document shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 17025 - Testing **Tests not covered by NATA are denoted with *.**

Results Approved By:

David Springer
General Manager

Miscellaneous Inorganics			
Our Reference:	UNITS	162047-A-1	162047-A-2
Your Reference	----------	MW30	QCGW
	-		
Date Sampled	----------	16/02/2017	16/02/2017
Type of sample		Water	Water
Date prepared	-	28/02/2017	28/02/2017
Date analysed	-	28/02/2017	28/02/2017
Hexavalent Chromium, Cr^{6+}	mg/L	<0.005	<0.005

Method ID	Methodology Summary
Inorg-024	Hexavalent Chromium (Cr6+) - determined colourimetrically.

QUALITY CONTROL Miscellaneous Inorganics	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			28/02/2017	[NT]	[NT]	LCS-W1	28/02/2017
Date analysed	-			28/02/2017	[NT]	[NT]	LCS-W1	28/02/2017
Hexavalent Chromium, Cr^{6+}	mg/L	0.005	Inorg-024	<0.005	[NT]	[NT]	LCS-W1	101%

Report Comments:

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

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Nancy Zhang

From: Amy Dorrington <amy.dorrington@dlaenvironmental.com.au>
Sent: Tuesday, 28 February 2017 9:36 AM
To: Aileen Hie
Cc: Nancy Zhang
Subject: 162047 further analysis

Hi Aileen and Nancy,

Could I please get chromium VI on the 2 waters in project 162047? Would I be able to get a result today?

If you have any questions, please feel free to contact our office.

Regards,

Amy Dorrington
Environmental Consultant

M: 0425 333 596
P: 02 9476 1765
E: amy.dorrington@dlaenvironmental.com.au

www.dlaenvironmental.com.au

162047 A

Due 28/2

Document Distribution

Rev No.	Copies	Recipient	Date
A	1 x Electronic	David Lousick (Aliro Management Pty Ltd)	9/04/2020
0	1 x Electronic	David Lousick (Aliro Management Pty Ltd)	3/06/2020

Document Status

Rev No.	Author	Reviewer	Approved for Issue		
		Name	Name	Signature	Date
A	Chris Kauffman	Matthew Bennett	Matthew Bennett		9/04/2020
0	Chris Kauffman	Matthew Bennett	Matthew Bennett		3/06/2020

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